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Influences of different brand crisis on customer brand perceptions. Moderating influences of brand love

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Abstract

A crisis can have a devastating effect on a brand. In this study we have sought to find out what effect different kinds of crisis has on *consumers' attitude, purchase intention, performance risk and social risk* (dependent variables). We have also looked at what effect brand love has on the dependent variables. Finally, we have looked at what moderating effect brand love has on the relationship between crisis and the dependent variables. We have answered these research questions by doing an experiment where we have used a made-up brand and a made-up crisis. Our main findings are that a crisis that affects the core values of a brand has a larger effect on purchase intention than a crisis that is related to the performance of a product. Also, brand love was found to dampen the effect a crisis had on purchase intention.

Preface

This paper is the final thesis of my master degree in Marketing and Brand Management at the Norwegian School of Economics. I would like to thank my supervisor, Herbjørn Nysveen, who has given me valuable advice in writing this thesis. The process of writing this paper has been fun, frustrating and educational. Finally I would also like to thank my wife, Katrine, and daughter, Sofia for inspiration and support.

Table of contents:

3 Model and Hypothesis.............37

4 Method 43

5 Results 60

List of figures and tables:

1 Introduction

Apple recently launched the iPhone 6 and the iPhone 6 plus. Just days after the launch there was reports of the iPhone 6 plus bending very easily. Different media have widely reported on the alleged defect in the iPhone. Apple has dismissed the rumors, but it is still unclear what the long term effects might be. It is interesting studying cases such as these, to figure out what effect a product *crisis* has, as mentioned above, or a crisis that is related to the core values of the brand. It is also interesting to figure out if consumers who *love* their brand are reacting differently to crisis information than other consumers. Many consumers have a passionate relationship with a brand or a product. One example of this is the above mentioned Apple Inc. who has a large following with some consumers staying out for days to be first in line when a new product launches (Usanews, 2013). Even products that are not in sale anymore have many devoted fans. The Apple Newton PDA was discontinued in 1998 by Apple Inc., but seven years later, Muniz Jr & Schau (2005) found a community that was active, thriving, and still had an almost religious belief in the gadget. We can find similar characteristics with consumers who love brands like Harley-Davidson, NASCAR, Saab and Harry Potter (Ortiz, et al., 2013).

A company can be affected by both a brand crisis and a product crisis. A product crisis occur when a product is found to be defective or dangerous (Siomkos & Kurzbard, 1994, according to Dawar & Pillutla, 2000). This can do much harm to the company. One study found that a product crisis will negatively affect attitude and purchase intention (Lin, et al., 2011). Other studies have found that a product crisis will negatively affect brand evaluation and customer perceived value (Klein & Dawar, 2004; Ma, et al., 2014). A brand crisis occur when a key brand proposition turns out to be unsubstantiated or false (Dawar & Lei, 2009). This type of crisis has also been found to negatively affect attitude and purchase intention (Kisielius & Sternthal, 1986). Dawar & Lei (2009) also found that brand familiarity can act as a shield against a brand crisis, because a consumer will defend his or her prior attitude when receiving new information.

Brand love can be defined as "*the degree of passionate emotional attachment that a person has for a particular trade name*" Ahuvia (Carroll & Ahuvia, 2006, p. 61). There is a large amount of literature on love towards brands, but the literature on the

effects of brand love is scarcer, we will expand on this. Further, we will look closer at different kinds of crisis that can happen to a brand and a product, and if brand love can reduce the effect a crisis has on a company.

1.1 Research questions

This leads us to our research questions for our study. First, we will look at a crisis which is not related to the core values of the brand, where the product launched is lacking compared to what the consumer expected, this is also called a product-harm crisis (Dawar & Pillutla, 2000). Second, we will study a crisis which is related to the core values of the brand.

Research question 1: *What effect does a crisis that is related to the core values of the brand, and a crisis that is not related to the core values, have on consumers' attitude, purchase intention, performance risk and social risk?*

Research question 2: *What effect does brand love have on consumers' attitude, purchase intention, performance risk and social risk?*

Research question 3: *What moderating effect does brand love have on the relationship between the two type of crisis and the different dependent variables (attitude, purchase intention, performance risk and social risk)?*

1.2 Contributions of our study:

1.2.1 Theoretical contributions

We will expand on the effects of different crisis by also studying if they affect perceived risk along with attitude and purchase intention. Research on effects of *brand love* on *purchase intention is* limited. Becerra & Badrinarayanan (2013) found that *purchase intention* is positively influenced by *brand trust. However, brand trust* is not the same as *brand love,* therefore it can be interesting to study if *brand love* also influences *purchase intention.* Research on the effect of brand love on attitude and perceived risk is also limited, we will expand on this.

Ahluwalia, et al (2000) researched the effect of *brand commitment* on *product crisis*. They found that *commitment* was a strong moderator of consumer response to negative information about the product. The respondents would counter argue

negative information about the product if they had "high" commitment. We will expand on this by studying the effect when the consumer *loves* the brand.

1.2.2 Managerial contributions

The study will help practitioners to be aware of how different crisis can affect consumers who love their brand. This can give practitioners insight into how they should react and communicate to different consumer segments. Understanding how *brand love* affects *purchase intention* can also help practitioners to target consumers, who love the brand, in the marketing mix. Once a consumer becomes devoted he or she may evangelize about the product or the brand, exhibit expertize and participate in activities relating to the brand (Ortiz, et al., 2013). This can be valuable for the brand as it might draw new customers. In addition, it will helpful for a manager to know if brand love can act as a shield against a crisis.

1.2.3 Methodological contributions

Quantitative research is the most common method of doing research. Hunter & Leahey (2008) found that about 66% of research published in the two top American sociologist journals, between 1935 and 2005, used quantitative research. It is most common to observe or gather real life data. In our study we have used an experiment where we make use of a made-up brand and a made-up product. For the experiment we will be showing the respondents a video instead of written text. When doing an experiment it is hard to make the respondent relate to a hypothetical situation, especially when they are supposed to feel love towards a made-up brand. By using a video with images and narration it could make it easier for the respondent to relate to the situation in the experiment, and thus give us more reliable results. This can make it easier for a researcher to make an experiment with manipulations that the respondent easily can relate to.

1.3 Key terms

Throughout this study we will talk about two different types of crisis: product-harm crisis and brand crisis. A product-harm crisis occurs when a product is faulty (Dawar & Pillutla, 2000). This type of crisis does not necessarily have any connection to the brands core values, and it can also be called "performance-related" (Dutta & Pullig, 2011). In this paper we will call this type of crisis for "no core crisis". A brand crisis occurs when a core brand proposition turns out to be false (Dawar & Lei, 2009). This

type of crisis relates to the core values of the brand, and it can also be called "values-related" (Dutta & Pullig, 2011). We will call this type of crisis for "core crisis".

1.4 Outline

We will start by reviewing existing literature on *attitude, purchase intention, performance risk, social risk, brand love, "no core crisis"* and *"core crisis"*. This will place our study in a wider context, and show how our study supplements existing studies. Chapter three will be about our model and the different hypothesis for our experiment. Chapter four will describe the method we will use for our study. This will give the reader an overview of the reliability and validity of our methods. The fifth chapter will be about our findings. This is where we will present all the facts from our study. This will be followed by chapter six, which is the discussion. This will start with a conclusion of our study. We will also discuss the meaning of our results for further research and the implications for practitioners. Strengths and weaknesses with our study will also be discussed here.

2 Literature review

In this literature review we will look closer at some of the central concepts of this study; namely *attitude*, *purchase intention, performance risk, social risk, brand love, "no core crisis" and "core crisis"*.

We will start by explaining the model we will use in this study.
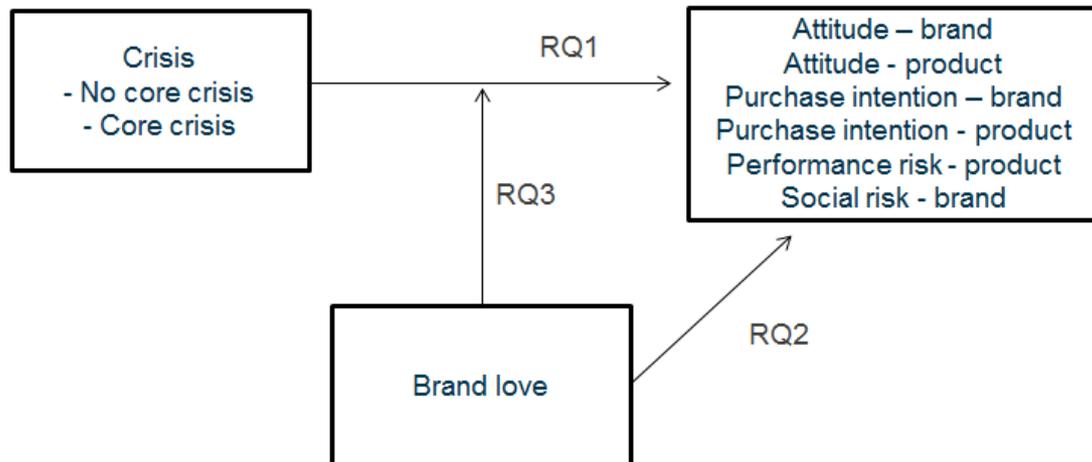
Figure 1: Research model

Research question one will answer if different kinds of crisis have an effect on attitude, purchase intention, performance risk and social risk. Research question two will answer if *brand love* has an effect on attitude, purchase intention, performance risk and social risk. Finally, research question three will answer if *brand love* moderates the relationship between the two types of crisis and the dependent variables. This literature review will help us to better understand the core concepts of these research questions.

2.1 Purchase intention

Wang & Tsai (2014, p. 29) define *purchase intention* as "*the likelihood that a customer will buy a particular product*". A greater willingness to buy a product means that there is a higher probability that there will be a purchase, but it does not mean that there for certain will be a purchase. We will look further into this concept to understand what the drivers of purchase intention are. *Purchase* can be seen as a *behavior.* Fishbein & Ajzen (1975, p. 12) define behavior intention as "*a person's subjective probability that he will perform some behavior*". According to Fishbein & Ajzen (1975) there are two factors that determine behavioral intentions: *attitude* and *subjective norm*. *Attitude* refers to a person's favorable or unfavorable evaluation of

an object. The *subjective norm* is the influence the social environment has on the behavior (Fishbein & Ajzen, 1975). This can be presented as an equation:

$$B \sim I = (A_B)W_1 + (SN)W_2$$

Where B is the behavior, I is the intention to perform behavior B. A_B is the *attitude* toward performing behavior B. SN is the *subjective norm*, and w_1 and w_2 are weights determined by the importance of each factor. It is called the "*theory of reasoned action*". It has gained considerable empirical support. Sheppard, et al. (1988) did a meta-analysis of past research on "*the theory of reasoned action*". They found that half of the previous research had used the model in situations it was not originally intended for. More specifically the model was used in situations like 1) the target behavior is not completely under the subjects' volitional control, 2) the situation involves a choice problem not explicitly addressed by Fishbein & Ajzen (1975), and/or 3) subjects' intentions are assessed when it is impossible for them to have all of the necessary information to form a completely confident intention (Sheppard, et al., 1988, p. 325). They expected that the model would not do well in these situations. However, they found that the model did very well even when it was used in situations it was not intended for. There was one area the model didn't perform well: when predicting *goals* the model was not sufficient. Sheppard, et al (1988) therefore suggested that the model should account for *goal intentions* as well. Ajzen (1985) added a third factor as a determinant of intention: *Perceived behavior control* (PBC). This third factor postulates that a person must have the required opportunities and resources to perform the behavior. Adding the last factor to the equation gives:

$$B \sim I = (A_B)W_1 + (SN)W_2 + (PBC) * W_3.$$

This is called *"theory of planned behavior"*. Ajzen (1991) also presents this as a model.
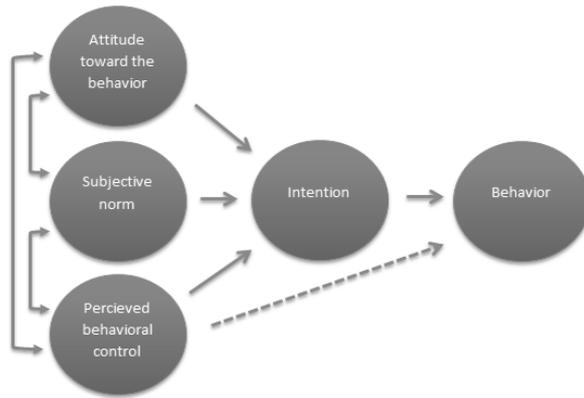
Figure 2 - Theory of planned behavior Ajzen (1991)

This model relates to *attitude* towards behaviors, not objects. Other studies indicate that the link between *attitude* toward the object and behavior is not always clear. In some studies there is a direct link (Bagozzi & Warshaw 1992; Bagozzi and Yi 1988, according to Spears & Singh, 2004) and in other studies there is not a direct link (Bagozzi 1981, 1992b, according to Spears & Singh, 2004). Our study is concerned with objects, and we will assume that there is a link between *attitude* toward the object and behavior.

2.1.1 Formation of attitudes

As mentioned above *attitude* represents a person's general feeling of favorableness or unfavorableness toward some stimulus object. *Attitudes* form from the *belief* people hold about the object (Ajzen, 1991). An example of this could be a new fish sauce that is launched on the market. You don't have any prior *attitude* to the product, so you remain neutral. Through an advertising campaign you learn that fish is good for you. Your *attitude* towards the product might now shift in a positive direction. However, if you have a prior negative association to *fish,* this could give you a negative *attitude* toward the new product. We learn to like objects we associate with positive things and we get negative feelings toward objects we associate with *bad* things (Fishbein & Ajzen, 1975). We automatically acquire an *attitude* toward a new object when we learn its associations with other objects to which we already have an *attitude*. These *attitudes* are a function of *beliefs* linking the attribute to other characteristics and evaluations of those characteristics (Fishbein & Ajzen, 1975).

A person might hold a large number of *beliefs* about different objects. However, it is likely that only a few *beliefs* are determinants of the *attitude* that is formed. This is largely because we are only capable of processing five to nine items of information at

a time (Woodworth & Schlosberg, 1954, according to Fishbein & Ajzen 1975). It therefore can be argued that an *attitude* is formed from five to nine different *beliefs*. When eliciting *beliefs* from a person, the five to nine first *beliefs* are salient, meaning they are the primary determinants of the *attitude*. An *attitude* can also be formed with a larger set of *beliefs* and a lesser set of *beliefs*. Five to nine *beliefs* are just a rule of thumb (Fishbein & Ajzen, 1975). There are challenges in determining the *attitude* from the *beliefs* that are elicited from a person. The person could change his opinion while being elicited, or he could simply remember something that is important to him. This will make it difficult to infer what the salient *beliefs* actually are. Fishbein & Ajzen (1975) sums this up in an expectancy-value model. The model deals with the relation between *beliefs* and *attitude*. The model is valid to any set of *beliefs*, salient or non-salient. The equation for the model is:

$$A = \sum_{i=0}^{n} b_i e_i$$

A is the *attitude* toward the object, action or event; *b* is the *belief* about the object's attributes or about the act's consequences; and *e* is the evaluations of the attributes or consequences. This means that a person's *attitude* toward an object can be estimated by multiplying his evaluation of each attribute associated with the object by his subjective probability that the object has that attribute and then summing the products for the total set of *beliefs*. It is worth noting that each additional salient *belief* will contribute less and less to the overall *attitude*. This happens because you are only capable of processing a certain number of beliefs (Fishbein & Ajzen, 1975). Figure 3 presents this graphically.
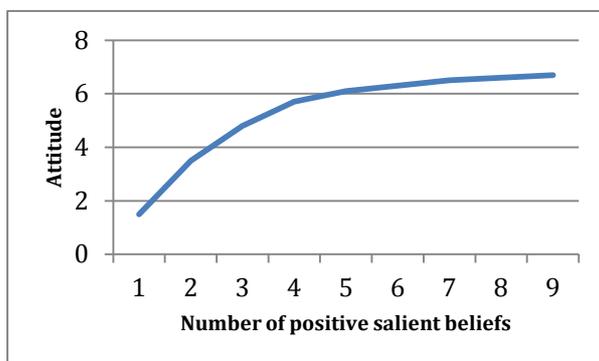
Figure 3 - Attitude as a function of positive number of beliefs, with attribute evaluation held constant

The expectancy model has wide empirical support. Nearly all standard *attitude* measures can be viewed with an expectancy-value formulation (Fishbein & Ajzen,

1975). Although expectancy-value models have significant results, the correlation between estimated and observed *attitudes* has varied. When *attitudes* are estimated based on salient *beliefs* correlation tends to be high, but when *beliefs* are selected in an intuitive fashion, many *beliefs* are non-salient and they might not be related to the underlying *attitude*, resulting to lower correlations (Fishbein & Ajzen, 1975).

Some research also suggests that *attitude* formation can be conditioned. One of the earliest studies on classical conditioning was performed by Pavlov (1927, according to (McSweeney & Bierley, 1984). Pavlov presented a conditioned stimulus (like a flute) to a dog and followed it with an unconditioned stimulus (food). As a result of this pairing he was able to get a response (like saliva) from the dog by just using the conditioned stimulus. In a later study by Staats & Staats (1958) they showed participants words of different nationalities (Swedish, Dutch, French, German, Italian and Greek), they paired the words with positive, negative and neutral emotions. They found that national names paired with positive emotions were more positively evaluated, and national names paired with negative emotions were more negatively evaluated (Staats & Staats, 1958). Similar results have been found in other studies as well (Fishbein & Ajzen, 1975). But there is a question about awareness, if subjects become aware of the pairing of the words, this could invalidate the results. In Staats & Staats (1958) study 18% of their subjects reported that they became aware of the pairing of the words, hence they were not used for the analysis. But other studies have found an even greater percentage of aware subjects. Page (1969, according to Fishbein & Ajzen, 1975) found that 36% of the subjects were aware of the pairing. However, in a later study by Kim, et al., (1998) they got more convincing results. They assessed the impact of *affect* on attitude formation using established conditioning procedures. Their conditioned stimuli (CS) was a picture of a pizza box with a made up pizza house logo. The unconditioned stimuli (US) were a picture of a kitten, which was chosen after pretesting. The pretest was done to make sure that the US presented positive affect but that there was no connection to the pizza house. To detract attention from the CS-US pairing that happened above, they used filler material. This will reduce hypothesis guessing and reduce the possibility of demand artifact interpretation of the results (Kim et al., 1996; Stuart et al., 1996, according to Kim et al., 1998). The filler material was three fictitious brands and various US that generated no affect and conveyed no systematic meaning. The results from the study

showed that the conditioning procedure had an effect on attitude toward the product via direct *affect* transfer without product beliefs (Kim, et al., 1998). This means that the respondents associated the product (pizza house) with the US (kitten) and enabled direct *affect* transfer even when there was no product beliefs involved. It is difficult to determine if the attitude formation was solely due to *affect*.

2.1.2 Subjective norms

The subjective norm is "*the person's perception that most people who are important to him think he should or should not perform the behavior in question*" (Fishbein & Ajzen, 1975, p. 302). The subjective norm is decided by the perceived expectations of individuals or groups and by the person's motivation to comply with those expectations. This can be presented with the following formula:

$$SN = \sum_{i=1}^{n} b_i m_i$$

Here b_i is the normative *belief*, m_i is the motivation to comply with referent i, and n is the number of relevant referents. Cialdini & Trost (1998, according to Trongmateerut & Sweeney, 2013) uses a similar definition: "*Subjective norms are the individual's interpretation of the opinions of important others regarding the behavior in question*". One could argue that normative *beliefs* may be considered a part of A_B, but theory suggests that it is best to maintain a distinction between *beliefs* about the consequence of performing a behavior and *beliefs* about expectations of relevant referents (Fishbein & Ajzen, 1975). Individuals often look to social norms to best interpret and respond to social situations, especially if they are uncertain (Cialdini & Goldstein, 2004). In addition social norms influence behaviors in many different situations like recycling, littering and tax evasion (Schultz 1999, Kallgren et al. 2000, Kahan 1997, according to Cialdini & Goldstein, 2004). Further Cialdini & Goldstein (2004) write that norms direct behavior only when they are in focus. This is in line with Fishbein & Ajzen (1975) who found that motivation to comply with the referent affects the subjective norm. The strength of the subjective norm will also differ depending on the situation. In a public setting it might be stronger because we are more sensitive to what other people think. In a private situation we might trust our own attitude more. Support for this can be found in Nysveen, et al., (2005) who found a significant, but moderate, effect of normative pressure on intention to use mobile services.

2.1.3 Perceived behavioral control (PBC)

PBC refers to "*the perceived ease or difficulty of performing the behavior and it is assumed to reflect past experience as well as anticipated impediments and obstacles*" (Ajzen, 1991, p. 188). This means that both resources and opportunities will affect the ability to perform the behavior. Resources are whether you have money or other resources to perform the behavior. Opportunity can be whether you have the time or other obstacles that might hinder you to perform a behavior. The formula for PBC is:

$$PBC = \sum_{i=1}^{n} c_i p_i$$

Where *c* is control *belief* and *p* is the perceived power. There is a difference between *actual behavioral control* and *perceived behavioral control*. One example could be that you might perceive that you would have control when driving a formula 1 car, but in reality the actual control would probably be different. Bandura (1982, p. 122) uses a similar definition: "Perceived *self-efficiency is concerned with judgments of how well one can execute courses of action required to deal with prospective situations*". His study also showed that people's behavior is affected by their confidence in their capacity to do it. The *perceived behavioral control* can also affect activities, choice of activities, preparation for an activity, effort during performance, thought patterns and emotional reactions (Ajzen, 1991).

2.1.4 External variables

There will also be external variables that can affect *purchase intention.* These variables can affect *purchase intention* directly or indirectly through *attitude, subjective norm* or *perceived behavioral control.* This is not an exhaustive list of external variables that could affect *purchase intention.* That would be outside the scope of this study. The following variables are related to *brand love,* which is a core concept in this study. They are similar because they describe a consumer's close relationship with a brand.

2.1.4.1 Brand Image

Brand can be defined as "*a name, term, design, symbol, or any other feature that identifies one seller's good or service as distinct from those of other sellers*" (American Marketing Association, 2014).

Keller (1993, p. 3) define *brand image* as *"perceptions about a brand as reflected by the brand associations held in consumer memory"*. Wang & Tsai (2014) did a study to examine the relationship between *brand image* and *purchase intentions.* They studied award winning mutual funds to see if investors *purchase intention* was greater for mutual funds that had a good *brand image,* than mutual funds with average *brand image.* Wang & Tsai (2014) found that *brand image* increased investors' *purchase intention*. It does so indirectly because *brand image* increases *perceived value* which in turn increases *purchase intention*. There is however weaknesses in their study. This was just tested for one product-category (mutual funds). The same effect might not be present elsewhere. Also, the participants in the study were between 21-30 years. This means that they might not have money to actually buy mutual funds. Other studies do support the findings of Wang & Tsai (2014). Aghekyan-Simonian, et al (2012) found that consumers are more likely to buy familiar brands with a good brand image, because those brands increase consumers' perceived value. Arguably one could say that *brand image* only affects *purchase intention* indirectly since some of the *brand image* will be made up of *attitude* towards the brand and the *subjective norm.* Meaning that in most cases you will have an *attitude* towards a brand and that what your friends think about that specific brand will influence how you view the *brand image.*

2.1.4.2 Brand familiarity

Brand familiarity is a continuous variable that reflects a consumer's direct and indirect experiences with a product (Alba & Hutchinson, 1987, according to (Kent & Allan, 1994, p. 98). In a study by Laroche, et al (1996) they found that *brand familiarity* indirectly influences *purchase intention* through *brand confidence*. In their study they found four different effects. 1 - A consumer's *confidence* about a brand increases as his *familiarity* with the brand increases. This is no surprise since you would expect that you gain knowledge about a brand the more you use it. 2 – A consumer's *attitude* toward a brand is positively affected by his *familiarity* with the brand. 3- A consumer's *confidence* about a brand positively influences his intention to purchase the brand. This finding also supports the findings of Bennet & Harrel (1975, according to Laroche, et al., 1996). 4 – Intention to purchase a brand is positively affected by a consumer's *attitude* toward the same brand and negatively affected by

his *attitude* toward other competing brands. This is not a surprise either. From our discussion about *attitude* we know that *attitude* is one of the determinants of behavior.

2.1.4.3 Brand trust and brand identification

Mayer, et al., (1995) suggested that *trust* consists of three factors: *ability, benevolence* and *integrity. Ability* is referring to "the group of skills, competencies and characteristics that enable a party to have influence within some specific domain". *Benevolence* is "the extent to which a trustee is believed to want to do good to the trustor, aside from an egocentric profit motive" (Mayer, et al., 1995, p. 719). Lastly, *integrity* means that the trustee adheres to a set of principles that the trustor finds acceptable. Brand trust is defined as "*the willingness of the average consumer to rely on the ability of the brand to provide its stated function*" (Chaudhuri & Holbrook, 2002, p.37, according to Becerra & Badrinarayanan, 2013). *Brand trust* has been found to be related to consumer's behavior in both online and offline environments (Becerra & Korgaonkar, 2011; Chadhuri & Hoolbrook, 2001, 2002; Delgado-Ballester et al., 2003, according to Becerra & Badrinarayanan, 2013). In Becerra & Badrinarayanan (2013) they found further support for this. Brand trust was found to influence purchase intention. But more surprisingly they found that *brand identification* was not directly related to purchase intention. *Brand identification* refers to consumer's "*psychological state of perceiving, feeling, or valuing his or her belongingness with a brand*" (Lam et al., 2010, p.129, according to Becerra & Badrinarayanan, 2013). Consumers who scored high on *brand identification* were more likely to engage in in actions supporting or defending their brand, rather than having high *purchase intention.*

2.2 Brand love

Early studies of *brand love* like Shimp & Madden (1988) adapt Sternberg's (1986) theory of interpersonal love. However, in the psychological literature many different types of interpersonal love exist, like romantic, compassionate and altruistic. This makes it difficult accurately adapt *love* to *brand love.* Batra, et al., (2012) suggest that *brand love* should be conceptualized from the ground up, built on a deep understanding of how consumers experience *brand love.* We will therefore start by exploring *love,* then *love towards objects* and finally further explore *brand love* and its consequences.

2.2.1 Love

There is vast literature on *love,* but we will primarily discuss *love* through Sternberg's (1986) triangular theory of love. The theory consists of three components: *intimacy, passion* and *decision/commitment. Intimacy* refers to feelings of closeness, connectedness and bondedness in loving relationships. According to Sternberg's (1986) research *intimacy* includes a) feelings of desire to promote the welfare of the loved one, b) experience happiness with the loved one, c) high regard for the loved one, d) being able to count on the loved one in times of need, e) mutual understanding with the loved one, f) sharing of one's self and one's possessions with the loved one, g) receipt of emotional support from the loved one, h) giving of emotional support of the loved one, i) intimate communication with the loved one and j) valuing the loved one in one's life. These are only a subset of feeling related to *intimacy.* Further, it is not necessary to experience all of them to experience love. One experiences the *intimacy* component of *love* when there are a sufficient number of these feelings involved. This number will vary from person to person. The feelings are usually not experienced independently, but rather as a whole (Sternberg, 1986).

Another finding was that *intimacy* does not differ from one loving relationship to another. This means that you might share the same level of *intimacy* with your wife or husband as with your best friend. This is in contrast to *passion* and *decision/commitment* where there will be differences with different loving relationships (Sternberg, 1986). The *passion* component refers to the drivers that lead to romance, physical attraction, sexual consummation, and related phenomena in loving relationships. Some of the needs that will contribute to passion are: sexual, self, esteem, succorance, nurturance, affiliation, dominance, submission and self-actualization. The strength of these needs will vary from person to person and for different loving relationships. For example sexual needs are likely to be strong in romantic relationships, but less so in a friendship (Sternberg, 1986). *Intimacy* and *passion* will to a large degree be covariant. In a relationship *intimacy* might be developed first and then it arouses *passion.* However it could also be the other way around, *passion* could be built first and then *intimacy* comes later. There will also be situations where *intimacy* and *passion* will be negatively covariant, as some persons view *intimacy* as hindering *passion* (Sternberg, 1986).

The *decision/commitment* component consists of two different aspects, a short term and a long term. In the short term it refers to the *decision* to love someone else, and in the long term, the *commitment* to maintain that love. These two components might not go together. A *decision* to love someone does not guarantee that you will also stay *committed* to that someone (Sternberg, 1986). Being *committed* to someone does not necessarily mean that you have made a *decision* to love someone. Many would not admit that they do love someone. However, in most situations *decision* will precede *commitment*. These two aspects interact with both *intimacy* and *passion*. For most people *decision/commitment* will result from *intimacy* and *passion*. However in some instances, like arranged marriages, *passionate* arousal can follow from *commitment* (Sternberg, 1986). In sum, all the three components of loving relationships are important. Their importance differs from one relationship to another, and they might also change over time. Some of the other studies on *love* have used a wider approach to define *love* by using lists of adjectives that can capture the feeling of *love*. Fehr (1988, according to Albert, et al., 2007) had a list of 68 different adjectives describing *love*. Like *trust, caring, honesty, friendship, respect, concern for other's well-being, loyalty, commitment, accepting the other* and *supportiveness*. Regan et al., (1998, according to Albert, et al., 2007) had a list of 119 different adjectives describing *love*.

2.2.2 Love towards objects

Love involves two people, but *love* towards an object is different because the object cannot love back or initiate a relationship. Shimp & Madden (1988) built a framework two explain love towards object by adapting Sternberg's (1986) theory discussed above, consisting of *intimacy, passion* and *decision/commitment*. *Intimacy* is also present in consumer-object relations. Proof of this can be found in Csikszentmihalyi & Rochberg-Halton (1981, according to Shimp & Madden, 1988). They interviewed individuals about the meaning and significance of various household objects had to them. Instead of calling it *intimacy* Shimp & Madden (1988) names it *liking*. It refers to feelings such as attachment to, fondness for, closeness, connectedness and bondedness. The fact that we have a *liking* towards objects is obvious. You can look at a child being inseparable from a doll, or an adult who do not want to part with a certain furniture or painting. It can become a part of the owner's personal identity, self-image and self-esteem (Schenk & Holman, 1980, according to Shimp & Madden, 1988). These are objects that are on the "strong positive" end of the *liking continuum*.

Most products are not liked nor disliked. They just provide you with a function. However you also have the opposite where you despise an object (Shimp & Madden, 1988).

As mentioned earlier, Sternberg (1986) says that *passion* refers to drives that lead to romance, physical attraction and sexual consummation. These phenomena does not relate to consumer-object relationships. Having said that there are other needs within the *passion* component that can be related to consumer-object relationships, like *self-esteem, succorance, nurturance, affiliation, dominance, submission* and *self-actualization.* An example of this could be a child that uses its teddy bear for comfort. Shimp & Madden (1988) calls this *yearning,* which is the counterpart to Sternberg's (1986) *passion. Yearning* used here means to having an earnest or strong desire for something. This could be a deep desire to learn to play the guitar, or the dream of owning a special kind of car. Just like with *liking* you can have an opposite where you may be revolted by the idea of driving a Volvo.

The last component is *decision/commitment* and it is relatively easy to draw comparisons to Sternberg's (1986) model. Shimp & Madden also calls it *decision/commitment* in their model. In the short term consumers might decide to buy a particular product because of an attribute or benefit of that product. In the long term consumers become committed to the product because of loyalty, inertia or other factors leading to repeat purchase behavior (Shimp & Madden, 1988). How strong the *commitment* is will vary from person to person.

2.2.3 Love towards brands
Fournier (1998) is one of the first studies that explicitly studied *brand love*. He found that consumers develop and maintain strong relationships with brands and he proposed six categories of relationships, including love and passion. Another study on *brand love* was performed by Caroll & Ahuvia (2006). They define love for a brand as "*the degree of passionate emotional attachment that a person has for a particular trade name*" (p. 81). Further they say that *brand love* includes: passion for the brand, attachment to the brand, positive evaluation of the brand, positive emotions in response to the brand, and declarations of love for the brand. It is important to differ between *brand liking, brand satisfaction* and *brand love* (Carroll & Ahuvia, 2006).

Brand love differs in that it has a stronger affective focus than *liking* and *satisfaction*. B*rand love* is also often a result of a long-term relationship with the brand. Finally, *brand love* includes a willingness to declare love and involves integration of the brand into the identity of self (Carroll & Ahuvia, 2006). In their study they found that *brand love* was high in hedonic product categories, and lower in utilitarian product categories (chocolate versus shoes). *Brand love* was also higher in product categories that offered a symbolic benefit. They also found that *brand love* had a direct effect on *word of mouth* and *brand loyalty*. *Word of mouth* is the degree to which the consumer praises the brand to others and *brand loyalty* being the degree to which the consumer is committed to repurchase of the brand (Carroll & Ahuvia, 2006).

Albert, et al. (2007) researched what dimensions characterizes the feeling of love toward a brand. They did this through an internet survey conducted in France. Improving on earlier studies they did not explicitly mention *love.* This helped them avoid bias towards the study. Eleven dimensions were found, which we further explain below the table.

Dimensions	Explanation	Source
Passion (for the brand).	Passion is an "intense longing for union with another".	Hatfield & Walster, 1978, p.9, according to Albert, et al., 2007.
Duration of the relationship	Linked to intimacy, which refers to how well you know the partner.	Sternberg, 1986
Self-congruity	Studies show that couples often are similar in social background, humor, physical aesthetics and personality.	Byrne et al., 1986; Cappella & Palmer, 1990, according to Albert, et al., 2007.
Dreams	Respondents often think about the brand or dream about the brand.	Albert, et al., 2007.
Memories	Can remind consumers of positive memories and link them to nostalgia	Albert, et al., 2007
Pleasure	Love is connected to positive emotions, and pleasure fosters affectionate love.	Fehr & Russel, 1991, according to Albert, et al., 2007
Attraction	Is an orientation toward or away from a person that has value (positive, negative or neutral).	Hendrick & Hendrick, 1992
Uniqueness	Respondents indicated that their preferred brand is unique.	Albert, et al., 2007
Beauty	Plays a role in favoring a relationship and in maintaining a relationship.	Hatfield & Sprecher, 1995; Sangrador & Yela, 2000
Trust	Respondents were rarely disappointed with the loved	Albert, et al., 2007

	brand.	
Declaration of affect	Respondents use words like *adore, amorous, love, appreciate* and *like* to describe the relationship	Albert, et al., 2007

Table 1: Dimensions of brand love

1 – Passion (for the brand). Earlier studies have shown that passion is often associated with feelings of love (Hatfield, 1988; Lee, 1977, according to Albert et al., 2007). Passion is an "intense longing for union with another" (Hatfield & Walster, 1978, p.9, according to Albert, et al., 2007).

2 - Duration of the relationship. The duration is often linked to intimacy, which refers to how well you know the partner (Sternberg, 1986).

3 - Self-congruity. Many studies show that couples often are similar concerning religion, social background, ethnic background, humor, physical aesthetics and personality (Byrne et al., 1986; Cappella & Palmer, 1990; Galton, 1984; Rushton, 1989, according to Albert et al., 2007). The concept of self-congruity is fairly similar in that there needs to be congruity between the self-image and the image of the brand. Love with the brand may be driven by both self-consistency and self-esteem motives (Albert, et al., 2007).

4 – Dreams. Consumers who are in love with a brand say that they often think about the brand or that they dream about the brand. In a relationship between two persons there is a clear link between love and thinking of the partner, which tells us that *dreams* or *thinking about the partner* is a good indicator for love (Shea & Adams, 1984; Ahuvia, 1993, according to Albert, et al., 2007).

5 – Memories. A brand can remind consumers of positive memories and link them to nostalgia.

6 – Pleasure. Fehr & Russel (1991, according to Albert, et al., 2007) showed that love is connected to positive emotions, and that pleasure fosters affectionate love. Regarding love toward a brand, pleasure has a positive influence on the duration of the relationship.

7 – Attraction. Is an orientation toward or away from a person that has value (positive, negative or neutral) (Hendrick & Hendrick, 1992, according to Albert, et al., 2007). The same is true for brands, but in our case it will predominantly be a positive orientation towards a brand.

8 – Uniqueness. The respondents of the study indicated that their preferred brand is different or unique. This is similar to an interpersonal relationship where lovers often consider their partners unique or different (Albert, et al., 2007).

9 – Beauty. It plays a role in favoring a relationship and in maintaining a relationship in the long term (Hatfield & Sprecher, 1995; Sangrador & Yela, 2000, according to Albert, et al., 2007).

10 – Trust. The respondents indicated that they had never been disappointed with the brand and that they also declare their satisfaction with the brand. Trust is also important in prototypical love (Fehr, 1988; Aron & Westbay, 1996, according to Albert, et al., 2007).

11 – Declaration of affect. The words consumers use to declare affect can be different. Words like *adore, amorous, love, appreciate* and *like* are frequently used.

All dimensions do not need to exist in order for a loving consumer-brand relationship to exist. The dimensions will also vary with different cultures. The study was conducted in both France and United States. Passion and pleasure is explicitly shared, while "declaration of affect" and "duration of relationship" is also shared. However, this study has a few weaknesses as well. It does not distinguish between affectionate love and attachment. The difference being that attachment is a "milder" form of *brand love*. This is important because a person who has repeatedly bought the same brand for years might be attached to the brand, but he might not have an affectionate love for the brand. The study also says that there is a need to study the consequences of *brand love,* not just the dimensions of *brand love*. Batra, et al., (2012) is one of the most recent studies on *brand love*. They studied the dimensions of *brand love* and briefly its consequences.

Batra, et al., (2012) initially asked respondents to categorize brands from a list. 89% put at least one brand into the *love* category. One of their important findings was that *brand love* was not unconditional, like it can be in interpersonal relationships. While some consumers will ignore or refuse to believe negative remarks about their loved brand, the love is not unconditional, and the consumer will only support the brand to a certain point. Batra, et al., (2012) found many of the same dimensions of *brand love* as Albert, et al., (2007), along with a few dimensions that Albert, et al., (2007) did not

find. The first dimension in Batra, et al., (2012) is *great quality/qualities.* This is the *brands* attractive qualities such as *exceptional performance, trustworthiness,* and *good looking design.* This is somewhat similar to what Albert, et al., (2007) calls *attraction.* The second dimension is *strongly held values and existential meaning.* Brands were more likely to be loved when they connected to something the respondent believed was deep, like self-actualization.

The third dimension is *intrinsic rewards.* A loved brand provides intrinsic rewards when it creates psychological states such as happiness (Batra, et al., 2012). The fourth dimension is *self-identity.* The brand needs to match how the consumer views self. This is similar to *self-congruity* in Albert, et al., (2007). The fifth dimension is *positive affect* which means the same as *declaration of affect* in Albert, et al., (2007). The sixth dimension is *passionate desire and sense of natural fit.* This is similar to *passion* in Albert, et al., (2007). The seventh dimension is *emotional bonding and anticipated heartbreak.* Consumer are likely to feel a strong need to keep their loved brands or objects in proximity, and that they even will feel *separation distress* when they are away from their objects (Hazan & Zeifman 1999; Park, et al., 2010; Thomson, et al., according to Batra, et al., 2012). The eight dimension is *willingness to invest.* Respondents said that they invested a lot time, energy and money into their loved brands. These investments further integrate the brand into the consumer's identity. The ninth dimension is *frequent thought and use.* Nearly all respondents considered how much time they spent using or thinking about a brand as a key determinant of how much they loved it. This is also in line with Fournier (1998), where she argues that for a brand to become a *relationship partner* the consumer must engage with it frequently. The tenth and last dimension is *length of use* which is similar to *duration of the relationship in* Albert, et al., (2007).

As mentioned Batra, et al., (2012) also briefly looked at the consequences of *brand love.* They found that the consequences were *greater brand repurchase intentions, willingness to pay a higher price, engagement in positive word of mouth, and resistance to negative information. Purchase intention* has already been discussed in this paper. *Willingness to pay a higher price* means that the consumer is willing to pay more to get a particular brand. *Engagement in positive word of mouth* means that the consumer says things about the brand that is favorable for the brand. *Resistance to*

negative information means that the consumer will defend the brand when someone makes a negative remark about the brand. It will also be hard to change their point of view (Batra, et al., 2012). Their results are also in line with (Carroll & Ahuvia, 2006) who also found that *brand loyalty* and *brand word of mouth* was a consequence of *brand love.*

2.2.4 Similar terms

Heightened forms of consumer-brand relationships are named in different ways, but their meanings are fairly similar; we will therefore discuss them as well. One heightened form is *brand evangelism,* Becerra & Badrinarayanan (2013) define it as *"the active behavioral and vocal support of a brand including actions such as purchasing the brand, disseminating positive brand referrals, and convincing others about a focal brand by disparaging competing brands"*. They divide *brand evangelism* into *purchase intentions, positive brand referrals* and *oppositional brand referrals. Purchase intention* is the consumers' propensity to purchase products of a specific brand. *Positive brand referrals* are the propensity to provide positive statements about a brand and *oppositional brand referrals* is the propensity to provide unfavorable statements about competing brands (Becerra & Badrinarayanan, 2013). Mohammed, et al., (2003) writes about the journey the consumer makes from being a regular consumer to being an evangelist (related to websites). It starts with functionality where the consumer experiences *ease of use, intuitive navigation* and *site reliability.* The next stage is *intimacy* which is characterized by *consistent experiences, personalization* and *increasing trust.* If these two are in place the consumer will go to the last stage which is *evangelism.* Here the consumer has a desire to take the message to other consumers and to take part in the community.

Another heightened form is *consumer devotion Ortiz*, et al., (2013, p. 11) define it as "*a state of passionate dedication to a product, brand, or experience through which the consumer in part defines him or herself."* They wanted to find commonalities that describe their behavior and affect. They hypothesized that they would include: *participation, expertise, evangelism, possession attachment, socializing, lack of guilt and family influence.* They found that *expertise, evangelizing, involvement, socializing* and *family influence* were positively related to consumer devotion. Nonetheless *guilt* was not related to consumer devotion. Lastly *possession*

attachment, which is defined as *"owned objects being used to maintain self-concept"*, was not positively related to consumer devotion. This was a surprise since extant literature and qualitative findings support this type of behavior (Ortiz, et al., 2013). They do however point to weaknesses in the study as a probable cause to this result.

2.3 Crisis

A crisis can have a devastating effect on a company, and there can be many different types of crisis. In our study we will focus on "no core crisis" and "core crisis" and the effects they bring.

2.3.1 "No core crisis"

Siomkos & Kurzbard (1994, according to Dawar & Pillutla, 2000, p.215) defines *product-harm crisis (no core crisis)* "*as discrete, well-publicized occurrences wherein products are found to be defective or dangerous*". In the future there will likely be more "no core crisis" because of greater complexity of products, more rigid legislation and more demanding customers (Dean 2004; Dahlen & Lange, 2006, according to Ma, et al., 2014). Dawar & Pillutla (2000) studied a coffee brand that had recently gone through a "no core crisis". Consumers had discovered fragments of glass in canisters of instant coffee. They wanted to see if consumer with prior expectations about a firm would be more likely to be aware of the crisis than consumers who had no prior expectations. Also, they wanted to see if consumers weighted different parts of the communication in their intentions for future purchase. Consumers who buy a product may try to minimize cognitive dissonance in a crisis by selectively processing information that is consistent with earlier purchases of the same brand (Kiesler et al., 1969, according to Dawar & Pillutla, 2000).

They collected the data through telephone interviews after the company had gone through the crisis. The sample consisted of 218 instant coffee buyers who had either purchased the brand in crisis or the competitor brand. Respondents were asked whether they had seen or heard anything in the news about the crisis. Those that had heard about it were categorized as "spontaneously aware" of the "no core crisis". All respondents were then informed about the crisis and asked about their perception of risk of buying the product now. The respondents were then informed about the brands response to the crisis and then asked whether the brand had acted responsibly. Finally, they measured intention to purchase the brand in the future. The results from the study

supported their hypothesis. Consumers who had previously bought the brand that had a "no core crisis" were more likely to be aware of the crisis than purchasers of other brands (39% versus 16%). The two groups also put different weight on the communication from the brand in crisis. Specifically, those that had previously bought the brand in crisis, paid more attention to what the brand communicated rather than the risk of the product. Those that bought a brand from a competitor focused more on the actual risk of using the product. This suggests that brands need to tailor their communication to different kinds of stakeholders. Existing customers need reassurance about the brands responsiveness, while potential customers need reassurance about the risk of consuming the product. This means that repeat customers can provide the brand with a form of insurance against the devastating result of a crisis. Further, the study showed that brands with repeat customers are remarkably resilient to a crisis situation (Dawar & Pillutla, 2000).

Ma, et al., (2014) looked specifically on how customer perceived value of the brand would change after a "no core crisis". They studied the crisis Toyota went through in 2009 and 2010. A family with a Toyota car had crashed because of a problem with the accelerator. Four people died and Toyota recalled 8.5 million vehicles. They found that customer perceived value and market position had been negatively affected. Functional performance, social value and emotional value were all affected negatively by the crisis. Competitors like Mazda and Honda were also negatively affected by the crisis. This was probably because they are Japanese brands and that they compete in the same segment. They also found that customer perceived value was different after the crisis for experienced consumers and inexperienced consumers. The crisis had mostly the same effect on all customers, but detailed data showed that inexperienced customers were affected even more (Ma, et al., 2014). This is probably because experience provides customers with more knowledge about the brand, which makes it easier to process brand-related information. Because of this, inexperienced customers are more affected by negative information during a product crisis (Ma, et al., 2014). One reason for this can be that experienced customers are able to identify and understand product-related attributes that are essential, while novices more rely on the accessibility of the information. Thereby, they will only get information from easy accessible sources like commercials (Alba & Hutchinson (1987, according to Ma, et al., 2014).

Finally, the study also showed that a product-harm crisis may be short-lived. It only took three years for Toyota to come back to the pre-crisis level of customer perceived value. However, this might also be because of good communication about the crisis to the customers.

In a study by Lin, et al., (2011) they found that in a "no core crisis" purchase intention was negatively affected indirectly through trust and negative publicity. They found that purchase intention is directly influenced by trust. This is not a surprise as we already discussed this in chapter 2.1.4.3. They use this definition of trust "the belief that the product or service provider can be relied on to behave in such a manner that the long-term interests of the consumers will be served (Crosby et al., 1990, according to Lin, et al., p.457, 2011). Other studies have also found that purchase intention is affected by trust (McCole & Palmer, 2001; Gefen & Straub, 2004, according to Lin, et al., 2011). Further, they found that negative publicity was negatively related to trust. Negative publicity refers to "publicity about a specific company's attributes that primarily calls into question a company's capability in providing functional benefits (Pullig et al., 2006, according to Lin, et al., p.459, 2011). Negative publicity is likely to gain distrust among consumers because it is seen as a credible source of information (Ahluwalia et al., 2000, according to Lin, et al., 2011). This means that when a brand is affected by a "no core crisis" they will in many cases get negative publicity which negatively affects trust which in turn will negatively affect purchase intention. This is in line with a study by Klein & Dawar (2004). They found that in a "no core crisis" consumers will construct attributions of blame which will affect brand evaluation, which in turn will affect purchase intentions.

2.3.2 "Core crisis"
Dawar & Lei (2009, p. 509) defines *brand crisis (core crisis)* as "*instances of well-publicized claims that a key brand proposition is unsubstantiated or false*". This can be devastating for a brand. As an example, Procter & Gamble had a drop in market share of 75% in Denmark, because it was rumored that their shampoo caused hair loss. However in many instances it is very hard to quantify the effects of a "core crisis". In their research, Dawar & Lei (2009) sought to find out more about these effects. Dawar & Lei (2009) build on *information integration theory*, meaning that external information (like a crisis) and memory-based associations together form an

impression of the brand for the consumer. Brand associations are the mental representation of a brand. It is the associations that are unique for a brand, and differentiate them from other brands (Aaker, 1991, 1996; MacInnis & Nakamoto, 1991, according to Dawar & Lei, 2009).

Associations can be categorized into *benefit-based associations* and *evaluative associations. Benefit-based associations* are what consumers think the product or service can do for them, while *evaluative associations* are consumers' overall evaluation of a brand (Keller, 1993, according to Dawar & Lei, 2009). *Benefit associations* are very important for consumer choice of brand. One example could be *ease of use* and *quality* for Apple Inc. Buyers who value these qualities will be attracted to the brand, and it is likely that the marketer also will use those qualities heavily in the marketing mix. Further, Dawar & Lei (2009) hypothesized that crisis information in a "core crisis" is initially processed at the level of *benefit associations.* This means that the effect of a crisis is influenced by how relevant it is to the brands *benefit associations.* An example would be that an issue with acceleration in Porsche would be more serious than an acceleration problem in a Volvo car.

Dawar & Lei (2009) also hypothesized that a "core crisis" would be moderated by *brand familiarity.* Earlier studies have shown that familiar brands are more noticeable in commercials and are better recalled than unfamiliar brands (Chattopadhyay, 1998; Dahlen, 2001; Rindfleisch & Inman, 1998, according to Dawar & Lei, 2009). In addition *brand familiarity* act as a shield against the effect of negative information about a brand. When a consumer receives new information he or she will first defend his or her prior attitude by searching for information that confirms this attitude (Pham & Muthukrishnan, 2002, according to Dawar & Lei, 2009). If a crisis were to happen in a familiar brand, consumers' experience with the brand will allow them to retrieve pro-attitudinal information which would reduce the influence of the crisis. Another study has shown that familiar brands are less harmed by negative word of mouth as well (Sundaram & Webster, 1999, according to Dawar & Lei, 2009). However, this may not be true in all instances. In a study by Helm & Tolsdorf (2013) they found that brands with good reputation were more affected than brands with bad reputation, in a crisis. Intuitively one might think that a brand with good reputation is shielded from a crisis for the same reasons as discussed above. However as Helm & Tolsdorf (2013)

discovered, a brand with good reputation is more affected by the crisis because people have higher expectations to that brand, than to a brand with bad reputation.

To test their hypothesis Dawar & Lei (2009) did an experiment where they first did a pretest to identify brands that had distinct brand associations. They identified two brands and then manipulated *crisis* while *familiarity* was measured. Familiarity was measured on a seven point scale. The respondents were then presented with a realistic recent newspaper article about a crisis in the brand they chose. They also manipulated the relevance of brand crisis to the brands core associations. They found that *crisis relevance* interacted with *brand familiarity* in its effect on brand evaluations, and that this interaction effect is mediated by perceived crisis seriousness. This means that for consumers that are unfamiliar with a brand their brand evaluation will be affected by crisis information both when the crisis is relevant for the brand and when the crisis is not relevant for the brand. A consumer that is familiar will be better able to assess the seriousness of the crisis and act accordingly.

Familiar consumers lowered their brand evaluations when the crisis was relevant, but not for an irrelevant crisis. The study also showed that when a crisis is relevant to the brand's core associations, brand evaluations of both familiar and unfamiliar consumers were lowered by the crisis information. However, they were affected for different reasons. Unfamiliar consumers were affected because they did not have any pro-attitudinal information about the brand. Familiar consumers were affected because of the perceived seriousness of the crisis. Finally, they found that when the crisis was irrelevant to the brand's benefit associations, consumers familiar with the brand did not lower their brand evaluations. This suggests that a crisis that does not affect a brands benefit-associations will be harmless to consumers who are familiar with the brand (Dawar & Lei, 2009).

A "core crisis" can also affect purchase intentions of a consumer. This can happen indirectly through the availability-valence hypothesis (Kisielius & Sternthal, 1986). The hypothesis states that judgments depend on the favorableness (valence) of the information that is available in memory (Kisielius & Sternthal, 1986). Availability refers to the ease with which an association can be accessed from memory. To predict the influence valence can have on judgment it is important to understand that there is

a cognitive limit to the active memory. This means that one can only consider a limited amount of information at any one time. When this limit is reached the judgment will depend on how favorable or unfavorable the new information is (Kisielius & Sternthal, 1986). In a crisis situation you get new (negative) information. If this information is stronger than the information that is already supplanted it will affect your judgment unfavorably toward the brand in crisis. This in turn will negatively affect your attitude to the brand, which in turn can negatively affect purchase intention.

There is also another way a "core crisis" can affect purchase intention of consumers. Creyer & Ross Jr (1997) did a study where they sought to find if consumers really cared if a company acted ethically. According to a utilitarian-based approach they define ethical behavior as "behavior is judged by its effect on the overall welfare of everyone involved" (Cavanaugh, et al., 1981, according to Creyer & Ross Jr, p.422, 1997). They found that ethicality of a company is an important consideration during the purchase decision. They also found that consumers will reward ethical behavior by a willingness to pay higher prices for a product, and that a consumer might buy something from an unethical company, but that will be at lower prices. This means that a brand that has a "core crisis, will risk that consumers buy other brands, or that they will demand lower prices.

2.4 Risk

One of the earliest remarks about risk in the field of consumer behavior was written by Raymond A. Bauer: "Consumer behavior involves risk in the sense that any action of a consumer will produce consequences which he cannot anticipate with anything approximating certainty, and some of which are likely to be unpleasant (Bauer, 1967, p 24, according to Grønhaug & Stone, 1993). When the behavior in question is *purchase* the consumer will attempt to reduce the risk through several alternative strategies, one of the most common is to become loyal to a particular brand Cunningham, 1967; Roselius, 1971, according to Lutz & Reilly, 1974. Risk is generally conceptualized as a multiplicative combination of "uncertainty" and "importance" (Lutz & Reilly, 1974). For example, brand loyalty can be seen as reducing uncertainty. Another way to reduce risk is to look for another product or another brand (Lutz & Reilly, 1974). It is important to distinguish how the risk

construct is different in disciplines such as psychology, statistical decision theory and game theory compared to consumer behavior. In the disciplines mentioned above, risk has traditionally been seen as both potentially negative and positive. A lottery involving possibilities of gain and loss would be an example of this. In the field of consumer behavior, risk, has always been related to potentially negative outcomes. To measure risk Kaplan, et al (1974) distinguished between five risk dimensions – financial, performance, psychological, physical and social risks. They found that the five risk dimensions could account for 61,5% of the total variance in the overall risk measure. Grønhaug & Stone (1993) expanded on this by adding "time" as a risk dimension. They define risk as "a subjective expectation of loss; the more certain one is of this loin, the greater the risk perceived by the individual" (Grønhaug & Stone, 1993, p. 42). They found that 88,8% of the variance in overall risk was captured. Further, all dimensions were significant (p = 0,05) except for "physical risk". In our experiment we will only measure social risk and performance risk.

2.4.1 Social risk

Zielke & Dobbelstein (2007, p. 113) define social risk as "a possible loss of image or prestige resulting from the purchase or use of certain products". These risks mainly exist with products that are consumed or used in public. One example could be using a certain cell phone brand in public. The product might be fine, but others judge the product as inferior. However this is not only true for products; a brand can also be affected by social risk (Mitchell, 1998). Meaning that consumers shy away from a certain brand because they are afraid of what other people will think of them if they use the brand. In a situation where the consumer perceives social risk to be "high" he will tend to seek information through word-of-mouth to reduce risk (Perry & Hamm, 1969; Roselius, 1971, according to Lutz & Reilly, 1974).This could be that the consumer asks friends or people near to him what they think of a specific brand or product. If they do not approve of the brand or product it is likely that he will find another brand or product, because other people's opinion is important.

2.4.2 Performance risk

Zielke & Dobbelstein (2007, p. 113) define functional risk (performance) as "the potential loss resulting from an inadequate product quality". These risks are relevant when the function of the product is important. One example could be a cell phone with worse battery life than you expected. Consumers tend to use more sources of

information when they are faced with increasing degrees of performance risk. Most often they will consult experts, or advise from independent sources to reduce risk (Lutz & Reilly, 1974). This is in contrast to social risk where you seek advice from people close to you.

3 Model and Hypothesis

As we presented earlier in the paper, the model below is what we build or research questions and hypothesis on. As already mentioned we use a hypothetical product and a hypothetical brand for our experiment. We have called the brand "Phone-Smart" and the product "myPhone".
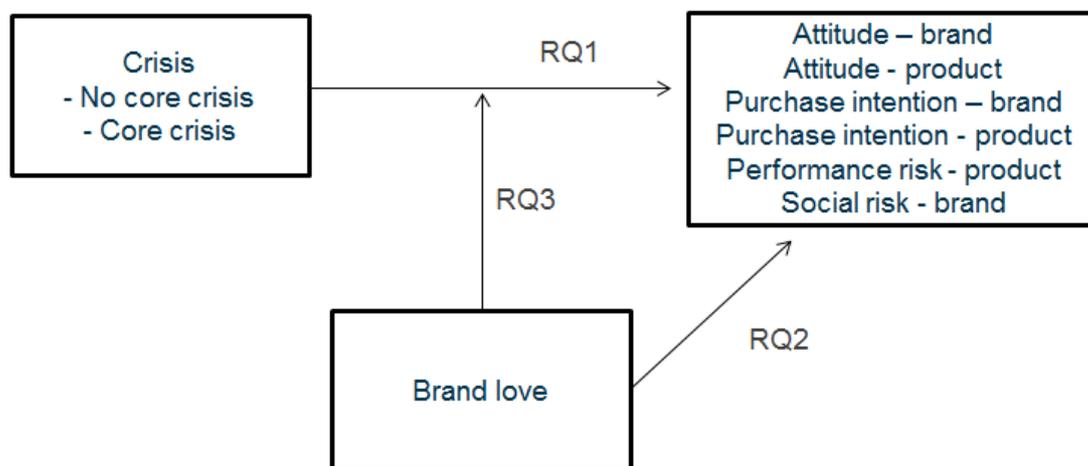
Figure 4: Research model

3.1 Hypothesis 1

One of the ways purchase intention can be formed is through attitude (Ajzen, 1991). An attitude can be formed through a person's general feeling of favorableness or unfavorableness toward some stimulus object (Ajzen, 1991). Loving a brand will include a favorable feeling toward the brand. We also know from our literature that *brand love* includes: passion for the brand, attachment to the brand, positive evaluation of the brand, positive emotions in response to the brand and declarations of love for the brand (Carroll & Ahuvia, 2006). These are all strong responses or feelings toward a brand. We can therefore expect that a consumer who loves a brand will have a higher intention to purchase a product from that brand than a regular consumer. From the literature review we also know that familiarity with a brand will cause you to have a higher intention to purchase (Laroche, et al., 1996). The same effect can be found with *brand trust* (Becerra & Badrinarayanan, 2013). *Brand love* spans wider than both of these concepts, we can therefore expect that a consumer who loves a brand will have a higher intention to purchase products from the brand than a regular consumer

    a) **Brand love has a positive influence on attitude and intention to purchase the brand (in the future).**

37

Theory does not suggest that there will be any difference for purchase intention when it comes to a specific product from a brand. We therefore expect the same effect that is mentioned above for a specific product from a brand.

   b) **Brand love has a positive influence on attitude and intention to purchase a specific product from the brand (in the future)**

As already mentioned, performance is defined as "the potential loss resulting from an inadequate product quality" (Zielke & Dobbelstein, 2007, p. 113). If brand love is sufficiently "high" it would likely overshadow the person's worry about performance risk, and thereby reducing performance risk.

   c) **Brand love has a negative influence on performance risk for a specific product from the brand (reducing risk)**

Social risk is defined as "a possible loss of image or prestige resulting from the purchase or use of certain products" (Zielke & Dobbelstein, 2007, p. 113). If brand love is sufficiently "high" it will likely overshadow the perceived social risk.

   d) **Brand love has a negative influence on social risk for the brand (reducing risk)**

3.2 Hypothesis 2

As mentioned earlier, attitude is formed through a persons' belief about a certain object (Ajzen, 1991). In this case there is a crisis which contains negative information about the brand. Unless the person has salient beliefs that are already dominant, it is likely that the person's belief will be negatively affected by the crisis information. According to the availability-valence hypothesis, judgments are a function of the favorableness/unfavorable or valence of available information (Kisielius & Sternthal, 1986). This can also translate to a crisis situation for a brand. Information about a crisis can negatively affect your judgment, which affects attitude, which in turn can affect purchase intention.

As discussed in chapter two, a study by Lin, et al., (2011) found that in a "no core crisis" purchase intention was negatively affected indirectly through trust and negative publicity. Purchase intention was directly influenced by trust. Other studies have also found that purchase intention is affected by trust (McCole & Palmer, 2001; Gefen & Straub, 2004, according to Lin, et al., 2011). Further, they found that negative publicity was negatively related to trust. This means that when a brand is affected by a "no core crisis" they will in many cases get negative publicity which negatively affects trust which in turn will negatively affect purchase intention. This is in line with a study by Klein & Dawar (2004). They found that in a "no core crisis" consumers will construct attributions of blame which will affect brand evaluation, which in turn will affect purchase intentions.

a) A crisis will have a negative influence on both attitude and purchase intention for the brand

Theory does not suggest that there will be any difference for purchase intention when it comes to a specific product from a brand. We therefore expect that a "no core crisis" will have a negative influence on attitude and purchase intention, as discussed in 2a. However, the effect might not be as strong if it is a "core crisis", because it is not directly related to the product. But we still expect that a "core crisis" will "spillover" to the product.

b) A crisis will have a negative influence on both attitude and purchase intention for a specific product from the brand

Dutta & Pullig (2011) found that a "no core crisis" will do more harm to consumer satisfaction and choice likelihood, than a "core crisis". One reason for this is that a "no core crisis" the consumer is directly affected because he is considering purchasing a product that may be faulty. In a crisis that is related to the brands' core values the consumer might not be directly affected. It is likely that both consumer satisfaction and choice likelihood will affect purchase intention. However, Skowronski & Carlston (1987) suggested that negative information is perceived to be higher in "morality" (like company values) compared to "ability" (like product

attributes). This suggests that the consumer might put more weight on negative information that concerns the core values of the brand.

   c) **A "no core crisis" will have larger negative effect on purchase intention than a "core crisis".**

A "no core crisis" will directly affect the product. Intuitively, we therefore also might expect that the crisis will negatively influence perceived performance risk. A "core crisis" is not directly related to the product, but we still would expect that the effect of the crisis will "spillover" to affect the performance risk associated with the specific product.

   d) **Both "core crisis" and "no core crisis" will have a positive influence on performance risk for a specific product from the brand**

A "core crisis" causes the company to be "untrue" to their core values, in many instances this will also be related to social risk, because the consumer feel that he can't trust the brand, and the consumer would potentially be afraid of other peoples' judgment if he used a brand that was "untrue" to their core values. For a "no core crisis" there would likely be a smaller effect, because it is not directly linked to the brand. However, we still expect that a "no core crisis" will "spillover" to influence perceived social risk.

   e) **Both "core crisis" and "no core crisis" will have a positive influence on social risk for the brand**

3.3 Hypothesis 3

Attitudes form from the *belief* people hold about the object (Ajzen, 1991).When a consumer receives new information he or she will first defend his or her prior attitude by searching for information that confirms this attitude (Pham & Muthukrishnan, 2002, according to Dawar & Lei, 2009). We therefore hypothesize that brand love will dampen the effect a "core crisis" has on attitude towards a specific product from the brand. We expect that the same effect will be prevalent when there is a "no core crisis" instead of a "core crisis". We also expect the same effect when we measure

attitude towards the brand instead of attitude towards a specific product from the brand, because theory is not suggesting that there should be a difference.

a) **Brand love will moderate the negative effect of both "core crisis" and "no core crisis" on attitude to brand and attitude to specific products from the brand. It will dampen the negative effect of the crisis.**

Brand familiarity can act as a shield against the effect of negative information about a brand. When a consumer receives new information; he or she will first defend his or her prior attitude by searching for information that confirms this attitude (Pham & Muthukrishnan, 2002, according to Dawar & Lei, 2009). A consumers' experience with the brand will allow them to retrieve pro-attitudinal which would reduce the influence of the crisis. Another study has shown that familiar brands are less harmed by negative word of mouth as well (Sundaram & Webster, 1999, according to Dawar & Lei, 2009). In the study by Dawar & Lei (2009) they found that familiar consumers will get affected by a brand crisis that concerns the brands' core values. If the crisis affects the core associations of the brand, an experienced consumer will lower his brand evaluation. Usually a consumer who loves a brand has a much stronger connection to the brand than a consumer who is just familiar with a brand. We therefore hypothesize that a consumer who loves the brand will be less affected by a crisis in that brand, than a regular consumer. This is not just because the consumer who loves the brand is better able to assess the seriousness of the crisis, but because it will be difficult to block out the pro-attitudinal information, the feelings and the emotions that is connected to the brand, in the face of a crisis. Thereby, the consumer who loves a brand will have a higher intention to purchase when the brand is going through a "core crisis", compared to a regular consumer. Theory does not suggest that there will be any difference when it comes to a specific product from a brand. We therefore expect the same effect for both brand and product.

Consumers who buy a product may try to minimize cognitive dissonance in a crisis by selectively processing information that is consistent with earlier purchases of the same brand (Kiesler et al., 1969, according to Dawar & Pillutla, 2000). The study by Dawar & Pillutla (2000) also showed that brands with repeat customers are remarkably resilient to a crisis situation. In a situation where a consumer loves a brand this effect

will probably be even stronger. This is because brand love, as mentioned before, spans wider and stronger than brand familiarity or being experienced with a brand. We therefore hypothesize that brand love will dampen the effect a "no core crisis" has on purchase intention for the brand. Theory does not suggest that there will be any difference when it comes to a specific product from a brand. We therefore expect the same effect that is mentioned above.

b) **Brand love will moderate the negative effect of both "core crisis" and "no core crisis" on purchase intention for the brand and purchase intention for a specific product from the brand. It will dampen the negative effect of the crisis.**

For performance risk we expect a similar effect as mentioned above with purchase intention. Because brand love is "high" it is likely that it can cause "performance risk" to be perceived as less serious than it would be if brand love was "low". However a "core crisis" is not necessarily related to "performance risk". When it comes to a "no core crisis" we expect the same effect as mentioned above. However, a "no core crisis" is directly connected to "performance risk", therefore it might be less likely that brand love can dampen the effect of the "no core crisis" on performance risk. A core crisis (especially in our scenario) can have an effect on social risk. Notably if brand love is sufficiently "high" we expect that it can moderate the relationship between a "core crisis" and social risk for the brand. For a "no core crisis" we expect the same effect as with a "core crisis", but to a lesser degree, because a "no core crisis" does not have a direct connection to social risk.

c) **Brand love will moderate the negative effect of both "core crisis" and "no core crisis" on social risk for the brand and performance risk for a specific product from the brand. It will dampen the negative effect of the crisis.**

4 Method

In this section we go through the methodological approach we have used to answer our research questions. We will discuss our research design, our pretest, how we gathered data, how we analyzed our data, and the credibility of our research.

4.1 Research design

This paper will answer the research questions by doing an experiment, the purpose of which is to study the change in an independent variable causing a change in a dependent variable (Saunders, et al., 2012). We are interested in the effect the independent variable has on the dependent variable. It is the dependent variable we have measured. We have manipulated the independent variables which are hypothesized to be the casual factor. This can make it easier for us to be sure that our findings are due to what we hypothesize. One of the advantages of doing an experiment is that we have more control of variables and confounding variables, than if we found a scenario that actually happened in real life. We have used a quantitative approach. This differs from the qualitative approach in that it uses numeric data (numbers) instead of non-numeric data, such as words (Saunders, et al., 2012). It also differs in that the quantitative approach simplifies how things may be in reality to tease out answers. Our quantitative approach have used data based on people's opinions (referred to as "qualitative" numbers), rather than attributes of people or organizations. We have used a deductive approach, where the focus is on using data to test theory. It is important that we collect data that are essential for our research questions; therefore we have used well established measures from other studies as questions.

We have used a hypothetical brand, a hypothetical product, a hypothetical "no core crisis" and a hypothetical "core crisis" for our research questions. We have used a 2x3 between subject design. This means that have manipulated both love and crisis.

	Core crisis	No core crisis	No crisis
High love			
Low love			

Figure 5: 2x3 matrix, between subject design

We constructed six different stories where the respondent was asked to imagine the scenario that was being described. One scenario was "high love" and "core crisis", another scenario "high love", "no core crisis" and so on. Which situation the respondent got was randomly drawn. The experiment started with an introduction to what the respondents were participating in. This was followed by a video with images and a voice-over that was explaining the situation that the respondent was in. The first part of the video established *brand love*. This was a fictional story about how much the respondent loved or did not love a particular brand. This was followed by information about a new product that the brand was launching. The second part of the video was to establish "core crisis" *or* "no core crisis". Again, this was a fictional story about the brand having a "core crisis" or a "no core crisis". The control group (no crisis) did not get any information about crisis. The script for the videos can be found in appendix 2. The video was followed by a questionnaire where we did measures to answer our hypotheses. The experiment had the following flow:
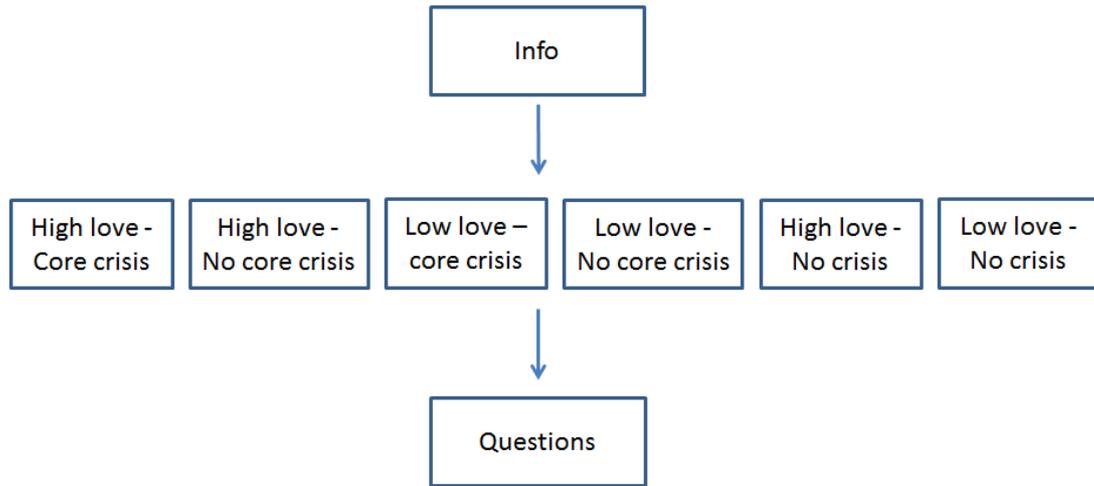
Figure 6: Experiment flow

The respondent first got info about the experiment and then the respondent randomly got one of six videos which were followed by questions about the video.

4.2 Measures

In our study we measured: *attitude, purchase intention, brand love, "core crisis", "no core crisis", performance risk, social risk, intention to use* and *willingness to pay*. We have used measures that are already well established. "Intention to use" and "willingness to pay" was included for exploratory reasons.

4.2.1 Purchase intention

To measure *purchase intention* we used a seven-item, seven-point scale. The measures are adapted from Becerra & Korgaonkar (2011) and (Pavlou, 2003). They measure both intention to purchase the brand and intention to purchase the specific product in our study.

Items:
In the near future I would probably buy the brand "Phone-Smart"
In the near future I intend to buy myPhone, made by "Phone-Smart"
In the near future I would likely buy the product "myPhone"
In the near future I would likely buy the brand "Phone-Smart"
In the near future I would possibly buy the brand "Phone-Smart"
If I am buying a new phone now it would probably be from the brand "Phone-Smart"
If I am buying a new phone now it would probably be the product "myPhone"

Table 2: Measures for purchase intention

4.2.2 Brand love

Albert & Valette-Florence (2010) developed a scale to measure brand love. They built their research on another scale for measuring brand love, developed by Carroll & Ahuvia (2006). However, they felt that the scale developed by Carroll & Ahuvia (2006) were lacking. It did not measure enough dimensions of brand love, and it also seemed to measure well-being with statements like: "this brand makes me feel good". They constructed a new scale by first generating items from four different interpersonal love scales. Two marketing experts then evaulated the items from the four scales. From the 65 items found, 57 were included for further analysis. Further, they made a questionaire where the respondent was to describe to which extent the 57 different items described their relationship to a brand they loved, on a 10 point Likert scale. They also did a second data collection procedure to make sure that the results from the first questionaire was valid. Further, they did an exploratory analysis of the 57 items remaining and retained those that: loaded strongly on the factor that they were designed to represent, showed high correlations with others items on the same factor, and that they exhibited weak correlations with other factors. Finally they did a confirmatory factor analysis that ended in twelve items in two different dimensions (Albert & Valette-Florence, 2010). The scale consists of a *passion* dimension and a *affection* dimensions. As discussed earlier, *passion* and *affection* are major characteristics of brand love.

Factor	Items
Affection	I experience great happiness with the brand "Phone-Smart"
	I feel emotionally close to the brand "Phone-Smart"
	There is something almost "magical" about my relationship with the brand "Phone Smart"
	I feel tender toward the brand "Phone-Smart"
	When I am with the brand, we are almost always in the same mood
	I think that this brand and I are quite similar to each other.
Passion	If I could never be with the brand "Phone-Smart", I would feel miserable
	I find myself thinking about the brand "Phone-Smart" frequently during the day
	If I were separated from the brand "Phone-Smart" for a long time, I would feel intensely lonely

	Sometimes I feel I can't control my thoughts; they are obsessively on the brand
	If I were separated from this brand for a long time, I would feel intensely lonely
	There is nothing more important to me than my relationship with the brand
	I would feel deep despair if this brand left me

4.2.3 Crisis

To measure whether a crisis is related to the brands' core values is a harder task. Literature on this subject is scarce. Dutta & Pullig (2011, p. 1283) uses a two-item measure to "assess the extent to which the crisis story is related to product-performance or values espoused by the brand". They did not specify what the measures were. However, we contacted them and were able to get the measures. The measures were: *"To what extent was the negative event related to a specific "defect" in a XXXX product or brand?",* and *"To what extent was the negative event related to the XXXX organization and <u>not</u> a specific product defect?"* We used these measures together with the six other measures below. These measures were adapted from the above mentioned study. In total we have 8-item scale to measure the crisis.

Items
I think that the negative information is related to brand Phone-Smart's core values
I think that the negative information I have heard is related to the values promoted by the brand Phone-Smart
The brand, Phone-Smart, is living up to its core values
The brand, Phone-Smart, has stayed true to its core values
To what extent was the negative event related to a specific "defect" in the product "myPhone"
To what extent was the negative event related to a specific "defect" in the brand "Phone-Smart"
To what extent was the negative event related to the "Phone-Smart" organization and not a specific product defect?

4.2.4 Performance risk

To measure performance risk we used the following measures, which are adapted from Grønhaug & Stone (1993):

Items:
I am uncertain if the product "myPhone" will work like it should
There is a high probability that the product "myPhone" won't work as it should
I am uncertain if "myPhone's" technological solution is working like intended

Table 5: Measures for performance risk

4.2.5 Social risk

Social risk was measured with the following measures, which are adapted from

Grønhaug & Stone (1993):

Items:
People close to me may think that it is wrong to use the brand "Phone-Smart"
Acquaintances may think that it is unwise to use the brand "Phone-Smart"
It would give a negative impression on my friends and family if I used this brand

Table 6: Measures for social risk

4.2.6 Attitude

Attitude was measured by the following measures (Nysveen, et al., 2005)

I think that use of the brand "Phone-Smart" is:
- Bad – Good   - Unreasonable – Reasonable   - Disadvantageous – Advantageous   - Negative - Positive
I think that use of the product "myPhone" is:
- Bad – Good   - Unreasonable – Reasonable   - Disadvantageous – Advantageous   - Negative - Positive

Table 7: Measures for attitude

4.2.7 Intention to use

Intention to use was not included in our model, it was used in our analysis for

exploratory reasons, and this is further discussed in chapter 4.5.1 about factor analysis.

The measures we used were:

I will use this product in the future
I will use this brand in the future

Table 8: Measures for "intention to use"

4.2.8 Willingness to pay

Willingness to pay was not included in our model, it was used in the analysis for exploratory reasons, and this is further discussed in chapter 4.5.1 about factor analysis. The measures we used were:

I would be willing to pay a premium for this product
I would be willing to pay a premium for this brand

Table 9: Measures for "willingness to pay"

4.3 Manipulation tests

Before our experiment we needed to make sure that our manipulations worked. This means that brand love should be "high" when we manipulate for "high love" and the same with crisis. For this pretest we did a 2x2 within subject design.
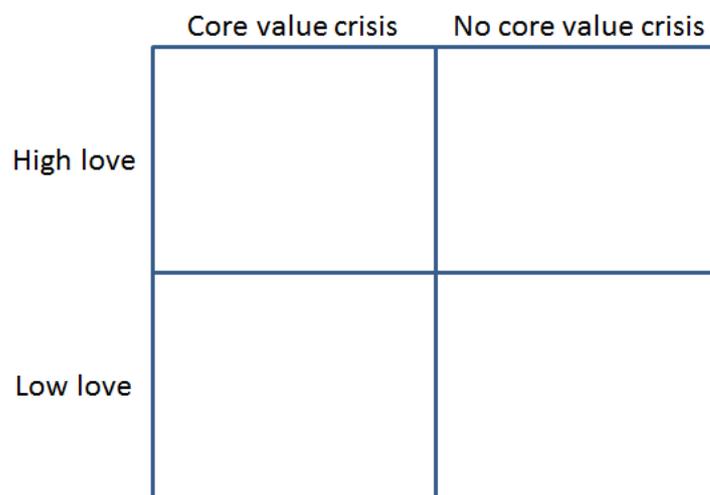
Figure 7 - 2x2 matrix

4.3.1 Brand love

Five people were exposed to all four scenarios, and were asked questions about their experience afterwards, both quantitatively and qualitatively. We first measured if brand love is "high" when the stimuli is "high" and if brand love is "low" when the stimulus is "low". They first saw a video clip that described the situation. The script for the videos and URLs can be found in appendix 1. They were then asked to answer a questionnaire with the measures of brand love and "core crisis" like described above. All respondents watched and did the questionnaire for all four videos. After they had completed all four videos we asked them questions about the whole pretest. Overall, the manipulation for brand love worked to satisfaction. In the responses we got "high brand love" when we manipulated for "high brand love" and "low brand love" when we manipulated for that. But we still had to do some changes. One respondent had

49

trouble understanding the question *"when I am with the brand, we are almost always in the same mood"* (measure for brand love). We chose not to use this question in our main experiment because it can be confusing to understand the meaning of the question. Further, we chose not to use the question *"I think that this brand and I are quite similar to each other",* because it does not add anything that the other questions don't. We also chose not to use the questions:

"Sometimes I feel I can't control my thoughts; they are obsessively on the brand", "if I were separated from this brand for a long time, I would feel intensely lonely", "there is nothing more important to me than my relationship with the brand", "I would feel deep despair if this brand left me". None of the respondents agreed with these statements when the manipulation was "high love". This could mean that they do not measure *brand love* in a good way. But it could also mean that for our scenario, it is hard to relate to the brand and product in that way. In the end we had seven items to measure brand love. This is the revised table of the measures we used for brand love.

Factor	Items
Affection	I experience great happiness with the brand "Phone-Smart"
	I feel emotionally close to the brand "Phone-Smart"
	There is something almost "magical" about my relationship with the brand "Phone Smart"
	I feel tender toward the brand "Phone-Smart"
Passion	If I could never be with the brand "Phone-Smart", I would feel miserable
	I find myself thinking about the brand "Phone-Smart" frequently during the day
	If I were separated from the brand "Phone-Smart" for a long time, I would feel intensely lonely

Table 10: Revised measures for "brand love"

4.3.1 Crisis

We had more trouble with the "crisis" part of the pretest. For the quantitative questions they tended to go in the direction we wanted them to, but not as clear as with "brand love". After the questionnaire a respondent commented that the "core value crisis" was not severe enough. The respondent felt that 15-hour shifts can be found many places and that it is hard to blame the brand for a fault that a sub-contractor did. For the final experiment we solved this by stating that this happened in the brand not a sub-contractor. We also changed it to 18-hour shifts to make the crisis

more severe. For the part with "no core value crisis" a respondent pointed out that the values "cutting edge technology" and "innovation" crash with the fact that the battery life is worse than expected. This can imply that our case with "no core value crisis" is in fact a "core value crisis". For the final experiment we fixed this by removing "cutting edge technology" and "innovation" as core values of the brand. We will instead focus more on the corporate social responsibility effort of the brand. The respondents also commented that you could easily miss information in the video. We solved this by giving thorough instructions before the experiment saying that the respondent need to focus when watching the video and that it is possible to view the video several times. The new version of the script and URLs for the videos can be seen in appendix 2.

4.4 Gathering data

The data we gathered was used to examine relationships between variables, this is called explanatory research. The emphasis here is on studying a situation or a problem to explain the relationship between variables (Saunders, et al., 2012). Questions need to be expressed clearly to make sure that the respondent is clear on what is asked. To ensure this we used established measures from other studies.

4.4.1 Sample

The population for this study will be anyone who has some sort of relationship with a brand, either weak or strong. This population consists of several million people. Because of homogeneity we have chosen our sample to be students at Norges Handelshøyskole. The advantage of homogeneity is that we have more control over variables like age, income and education. Therefore, if we get different results they probably cannot be attributed to variables like age, income and education. NHH consists of 3882 students in total, 544 of them are international students. Approximately 40% of the students are female (Norges Handelshøyskole, 2012). The age of the students ranged mainly from 18 years to 30 years. We got respondents for the experiment in two different ways: 1) we got e-mail addresses to 1000 random students, they all got an e-mail with info about the experiment. In total we got 66 responses from e-mails that were sent out. 2) We randomly asked students in the student cafeteria to participate in the experiment. They were given an iPad to do the experiment. In total we got 126 responses from this, for a total of 192 responses.

4.4.2 The experiment

The questionnaire was made with Qualtrics software and respondents were randomly assigned to one of the six scenarios. If one scenario got many responses the software would automatically assign respondents to the scenario with the fewest respondents. All respondents were informed that they could participate in a draw for either two cinema tickets or a chess board by participating in the experiment. Regarding ethics the respondents was made fully aware that their answers were used for research. Also, they were informed about privacy, that it is voluntary to participate, that we ensure confidentiality and that we will maintain their anonymity. Assurance of anonymity is important because it is more likely that the respondent will answer questions truthfully (Saunders, et al., 2012).

When we started the experiment it became clear that our manipulations were not working to satisfaction, despite our efforts with the pretest. More specifically "brand love" was not "high" when we manipulated for "high brand love". We solved this be changing the order of the questions in the experiment. Originally the respondents were first asked about the crisis. This might have caused them to put too much emphasis on the crisis instead of their relationship to the brand before the crisis. This could be due to the recency effect (Ebbinghaus, 1913). We therefore first asked the respondents questions about "brand love" and after that we asked about the crisis. This fixed our issue with our manipulations. We had a total of 63 responses when we changed the order of the questions and started over. These 63 responses were not included in our final analysis, and are not a part of the 192 final responses.

4.5 Data analysis

We used the statistical program SPSS to examine our results. We tested if results were statistically different by doing one-way analysis of variance. "ANOVA analyses the variance, that is, the spread of data values, within and between groups of data by comparing means (Saunders, et al., 2012)". The following assumptions have to be true in order to use one-way ANOVA:

- Each data value is independent and does not relate to any other data values
- The data for each group is normally distributed
- The data for each group have the same variance

4.5.1 Factor analysis

Factor analysis can be used to examine the underlying patterns or relationship for a large number of variables to determine whether the information can be condensed or summarized in a smaller set of factors (Hair Jr, et al., 2010). In our dataset we did this for our manipulations *crisis* and *love* and for our dependent variables *purchase intention, attitude* and *risk. Intention to use* and *willingness to pay* were included for exploratory reasons.

4.5.1.1 Manipulation crisis

We started by doing a factor analysis on the measures we used for *crisis.* It consists of seven different measures. We started with a KMO & Barlett test to see if we got a significant alpha. Our alpha was 0,000 which signifies that we can use factor analysis. We first used "principal components" for extraction and "Varimax" for rotation. This gave us pretty similar results as using "maximum likelihood" for extraction and "direct oblimin" for rotation. We therefore chose to use "maximum likelihood" and "direct oblimin" for the rest of our experiment. We also chose to extract factor that have a greater Eigenvalue than 1. Preferably we should only get one factor for *crisis.* We got two factors, but one factor loaded heavily on the items "I think that the negative information is related to the brand Phone-Smart's core values" and "I think that the negative information I have heard is related to the values promoted by the brand". For the other items there are also some problems with cross loading, as can be seen in appendix 3.1. We therefore chose to use the two items mentioned above for crisis. We then calculated the mean values for these and stored it in a new variable. We also did a reliability test to make sure that there was consistency between the multiple measurements of our variables (Hair Jr, et al., 2010). To test this we used Cronbach's alpha which ranges from 0 to 1. The generally agreed lower limit is 0,7 (Hair Jr, et al., 2010). We got a Cronbach alpha of 0,802.

4.5.1.2 Manipulation love

For love we had seven different measures. We did the same factor analysis here and got one factor where all items loaded heavily. The KMO and Bartlett test also gave us a significant alpha of 0,000. We also did an ANOVA-test which showed that all items were significant. Results can be seen in appendix 3.2. We calculated the average of these seven factors and stored them in a new variable. We also did a test of Cronbach alpha and got a result of 0,910.

We have six dependent variables: purchase intention, performance risk, social risk, attitude, intention to use and willingness to pay. We did a factor analysis for all of these. Again, KMO & Bartlett's test gave us a significant alpha of 0,000. However, we had some difficulties with the factor analysis. Ideally we should get seven different factors as a result. We first set a condition that Eigenvalue needs to be greater than 1 for it to be a factor. This gave us trouble with cross loading and it only gave us four different factors. We then tried to set the numbers of variables to seven (fixed). This did not help as we still had trouble with cross loading. We had separate measures for both the product "myPhone" and the brand "Phone-Smart" but in the factor analysis they loaded on the same factor. We solved this by splitting the factor analysis in two with one analysis for measures that were related to the product "myPhone", and one analysis for measures that were related to the brand "Phone-Smart". Another problem was that "intention to use" and "willingness to pay" all loaded heavily (all >0,78) on the same factor as "purchase intention". This is an indication that they measure the same things. We therefore chose to exclude "intention to use" and "willingness to pay" from our analysis. We also chose to exclude the item "I think that using the brand/product myPhone is disadvantageous", because it loaded poorly compared to the other factors in the dependent variable "attitude".

When we split the analysis we ended up with three factors in each analysis, for a total of six factors. In both analyses we had to set it to fixed numbers of factors (3) to get optimal results. This gave us the six factors: intention to purchase brand, intention to purchase product, performance risk, social risk, attitude towards brand, attitude towards product. See appendix 3.3 for details. We then calculated the mean of all six factors and stored them in new variables. We also calculated Cronbach alpha for the different dependent variables.

Purchase intention for product	0,957
Purchase intention for brand	0,939
Attitude toward product	0,907
Attitude toward brand	0,919
Performance risk	0,925
Social risk	0,861

All the variables indicate that there is consistency between the variables in the measures.

4.5.2 Description of data and test of assumptions for ANOVA

To be able to do statistical tests our data set must be normally distributed. Normality is referring to the shape of the data distribution for an individual metric variable. If the variation from the normal distribution is sufficiently large, all resulting statistical tests are invalid (Hair Jr, et al., 2010). We can test this by the measures *kurtosis* and *skewness. Kurtosis* refers to the «peakedness» or «flatness» of the distribution compared with the normal distribution. Distributions that are taller than the normal distribution are called *leptokurtic,* and a distribution that is flatter is called *platykurtic. Skewness* is whether the distribution is unbalanced or shifted to one side. A positive skew means that the distribution is shifted to the left and a negative skewness means that there is a shift to the right. For our data set we got the following numbers.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
purchase_int_prod	192	1,00	7,00	3,9670	1,80187	-,095	,175	-1,118	,349
perf_risk_prod	192	1,00	7,00	3,4392	1,58520	,099	,175	-,923	,349
attitude_prod	192	1,00	7,00	4,4358	1,38446	-,207	,175	-,359	,349
purchase_int_brand	192	1,00	7,00	4,1111	1,78883	-,117	,175	-1,057	,349
social_risk	192	1,00	7,00	3,2622	1,50474	,292	,175	-,745	,349
attitude_brand	192	1,00	7,00	4,6372	1,43210	-,364	,175	-,410	,349
Valid N (listwise)	192								

Table 12: Descriptive statistics of data set

Our minimum is one because that is the lowest the respondent can choose in the survey. Maximum is seven because that is the highest number in the survey. We can see that the mean is centered on 3 and 4. Our standard deviation varies from 1,43 to 1,8. At first glance the numbers seem to indicate that there is not any problem with skewness and kurtosis. We can test this by dividing skewness or kurtosis by the standard error. If the result falls within the range of -1,96 and 1,96 (z-value) there is no problem with skewness or kurtosis (significance level 0,05) (Hair Jr, et al., 2010). Skewness varies from -2,06 to 1,66 which mean that there should not be any problems with skewness. For kurtosis we got a range from -3,2 to -1,03. This could indicate that we have a flatter (platykurtic) distribution. We need to be aware of this when

analyzing our results, but it should not be a big issue. To further check our data set we also check for correlation among our dependent variables.

Correlations

		purchase_int_prod	perf_risk_prod	attitude_prod	purchase_int_brand	social_risk	attitude_brand
purchase_int_prod	Pearson Correlation	1	-,176[*]	,632[**]	,895[**]	-,221[**]	,640[**]
	Sig. (2-tailed)		,015	,000	,000	,002	,000
	N	192	192	192	192	192	192
perf_risk_prod	Pearson Correlation	-,176[*]	1	-,173[*]	-,157[*]	-,031	,054
	Sig. (2-tailed)	,015		,017	,030	,670	,456
	N	192	192	192	192	192	192
attitude_prod	Pearson Correlation	,632[**]	-,173[*]	1	,578[**]	-,331[**]	,720[**]
	Sig. (2-tailed)	,000	,017		,000	,000	,000
	N	192	192	192	192	192	192
purchase_int_brand	Pearson Correlation	,895[**]	-,157[*]	,578[**]	1	-,197[**]	,691[**]
	Sig. (2-tailed)	,000	,030	,000		,006	,000
	N	192	192	192	192	192	192
social_risk	Pearson Correlation	-,221[**]	-,031	-,331[**]	-,197[**]	1	-,398[**]
	Sig. (2-tailed)	,002	,670	,000	,006		,000
	N	192	192	192	192	192	192
attitude_brand	Pearson Correlation	,640[**]	,054	,720[**]	,691[**]	-,398[**]	1
	Sig. (2-tailed)	,000	,456	,000	,000	,000	
	N	192	192	192	192	192	192

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table 13: Correlation for dependent variables

We can see that purchase intention for product correlates with purchase intention for brand. We could also see this when we did our factor analysis, that brand and product loaded on the same factor. Attitude correlates with most of the dependent variables. This is not a surprise since, as discussed in the theory chapter, attitude formation predicts purchase intention. Performance risk is not correlated with social risk.

We also tested our data set for homoscedasticity, which refers to "the assumption that dependent variables exhibit equal levels of variance across the range of predictor variables" (Hair Jr, et al., 2010, p. 74).We can test this by doing a Levene's test.

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
purchase_int_prod	2,918	2	189	,056
perf_risk_prod	5,967	2	189	,003
attitude_prod	,065	2	189	,938
purchase_int_brand	3,518	2	189	,032
social_risk	,771	2	189	,464
attitude_brand	1,017	2	189	,364

Table 14: Homogeneity of variance with crisis as factor

We first did this by using *crisis* as a factor and in the dependent list we put our dependent variables. Our result showed that the dependent variables "performance risk for product" and "purchase intention for brand" are both significant (p = 0,05).

This means that those two dependent variables do not have equal levels of variance across the range of the predictor variable (type of crisis). We therefore need to proceed with caution when we interpret our results in later analysis. We also did the same analysis with *love* as a factor.

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
purchase_int_prod	,000	1	190	,983
perf_risk_prod	,352	1	190	,553
attitude_prod	4,173	1	190	,042
purchase_int_brand	,089	1	190	,766
social_risk	,038	1	190	,846
attitude_brand	,142	1	190	,706

Table 15: Homogeneity of variance with love as factor

Here we can see that "attitude about product" is significant. This means that it does not have equal levels of variance across the range of the predictor variable (high love or low love). We also need to proceed with caution here when interpreting our results in later analysis.

4.6 Credibility of research

Reliability refers to whether our results would be consistent if they were repeated on another occasion or if they were replicated by another researcher (Saunders, et al., 2012). Threats to the reliability can be "participant error", which is any factor that will adversely alter the way the respondent performs. "Participant bias" is any factor which induces a false response. This could happen if the respondent gets questions that obviously would portray them in a negative way. For our study this probably won't be a big issue because we don't ask questions that are very sensitive. "Researcher error" is any factor which changes the researcher's interpretation. Since our study deals with quantitative data this should be a minor problem. Finally we have "researcher bias" which is bias in the researchers' recording of responses (Saunders, et al., 2012). This issue will be most important when constructing the survey. It is important that the questions are not affected by our subjective meanings.

4.6.1 Internal validity

Construct validity can be a challenge for our study. This is whether we measure what we intend to measure. Our study is complex and this makes it hard to ensure that we actually measure what we intend to measure. Internal validity is established when there is a causal relationship between two variables (Saunders, et al., 2012). However

we need to make sure that this is not because of a flaw in our research design. Some threats to internal validity are: *past or recent events*, this could be any event that will cause the respondent to answer differently. Our internal validity is strengthened by the fact that we only conduct the experiment on students at Norges Handelshøyskole. Students here are reasonably similar; this makes it easier to find casual relationships. As an example: results in the study cannot be due difference in education, because all participants go to the same school. Internal validity is also strengthened by the fact that we manipulate both brand love and crisis. However, a strengthening internal validity comes at the cost of external validity being weaker. Internal validity can be tested by a retest, which tests for correlating data with the same questionnaire collected under near equivalent conditions (Saunders, et al., 2012). It is also possible to use "internal consistency" which measures consistency of responses across either a subgroup of questions or all the questions in the questionnaire. The last approach is "alternative form" which tests reliability by comparing responses to alternative forms of the same questions. These are also called "check questions". To avoid that positive adjective always comes first; we will vary the position from left to right.

4.6.2 External validity

External validity is whether the research findings can be generalized to other relevant settings or groups (Saunders, et al., 2012). This will be a challenge for our study because the respondent is informed about a hypothetical situation with a made-up brand and made-up crisis. It is a challenge to make the participant actually feel love for a made up-brand, and relate to made-up crisis scenarios. We have chosen to use video to inform the respondent about the different situations. We hypothesize that this will make it easier to relate to the situation. Whether the respondent would make the same choices in a real setting is difficult to determine. It is likely that the *purchase intention* we measure in our experiment is different from what it would be in a real life setting. Only having students from a specific school is also a weakness. We cannot be sure that our results will be valid for people in general. However it also gives us more control over the experiment. Further, this study used smartphones as a brand and product category. We cannot be sure that our results will be valid for other categories.

Another challenge is *testing*, which is informing respondents that it is a research project might cause them to alter their answers if they believe it will have future consequences for them. This can be avoided to some degree by giving clear instructions before the respondent start the survey.

4.6.3 Sample size

The size of the sample is important. This helps us determine the confidence we can have in our data, the margin of error we can tolerate, and the analysis we can perform. Stutely (2003, according to Saunders et al, 2012) recommends having at least thirty responses. Since we used a 2x3 between subject design, we needed thirty responses in each case, giving us a minimum of 180 respondents in total. Considering our sample we can determine the probability that our result is obtained by chance. A margin of error of 5% is often used in research (Saunders, et al., 2012). The experiment was pilot tested to ensure that respondents would not have any problem answering the questions, and to make sure that our manipulations were working correctly. It also important to do pilot testing to assess the questions validity and the reliability of the data that will be collected (Fink, 2009, according to Saunders et al, 2012). When testing for statistical significance we need to be aware of type I and type II errors. Type I error is when we wrongly reject a null hypothesis. A type II error occurs when you accept a null hypothesis that should have been rejected.

5 Results

5.1 Manipulation test of data set

We mainly used ANOVA to do analysis on our data set. We used one-way ANOVA test to see if our groups "core crisis" and "no core crisis" were significantly different. Our mean for "core crisis" were 4,2 and 2,96 for "no core crisis" with F = 20,1 and alpha = 0,000 (see appendix 4.1). This means that our manipulation for crisis is working to satisfaction. We also tested if our groups of "high love" and "low love" were significantly different. The ANOVA test gave us a mean of 4,42 for "high love" and 2,796 for "low love" with an F-value of 90.86 and alpha-value of 0,000 (see appendix 4.2). This shows that our manipulation of *love* is also working to satisfaction.

5.2 Hypothesis testing

5.2.1 Hypothesis 1

Hypothesis 1 is whether brand love, the independent variable, influences any of the dependent variables (attitude, purchase intention, social risk and performance risk). We used one-way ANOVA to test this. Significance level was set to 0,05.

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	Upper Bound	Minimum	Maximum
purchase_int_brand	1,00	96	4,9931	1,58131	,16139	4,6727	5,3135	1,00	7,00
	2,00	96	3,2292	1,53654	,15682	2,9178	3,5405	1,00	6,67
	Total	192	4,1111	1,78883	,12910	3,8565	4,3658	1,00	7,00
purchase_int_prod	1,00	96	4,7292	1,65102	,16851	4,3946	5,0637	1,00	7,00
	2,00	96	3,2049	1,62104	,16545	2,8764	3,5333	1,00	7,00
	Total	192	3,9670	1,80187	,13004	3,7105	4,2235	1,00	7,00
perf_risk_prod	1,00	96	3,1458	1,51238	,15436	2,8394	3,4523	1,00	7,00
	2,00	96	3,7326	1,60963	,16428	3,4065	4,0588	1,00	7,00
	Total	192	3,4392	1,58520	,11440	3,2136	3,6649	1,00	7,00
social_risk	1,00	96	3,4306	1,49222	,15230	3,1282	3,7329	1,00	6,67
	2,00	96	3,0937	1,50609	,15371	2,7886	3,3989	1,00	7,00
	Total	192	3,2622	1,50474	,10860	3,0480	3,4764	1,00	7,00
attitude_brand	1,00	96	5,0694	1,39247	,14212	4,7873	5,3516	1,67	7,00
	2,00	96	4,2049	1,34414	,13719	3,9325	4,4772	1,00	7,00
	Total	192	4,6372	1,43210	,10335	4,4333	4,8410	1,00	7,00
attitude_prod	1,00	96	4,8021	1,42294	,14523	4,5138	5,0904	1,00	7,00
	2,00	96	4,0694	1,24808	,12738	3,8166	4,3223	1,00	7,00
	Total	192	4,4358	1,38446	,09991	4,2387	4,6328	1,00	7,00

Table 16: Descriptive statistics for dependent variables with love as factor, 1 = high love 2 = low love

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
purchase_int_brand	Between Groups	149,343	1	149,343	61,439	,000
	Within Groups	461,843	190	2,431		
	Total	611,185	191			
purchase_int_prod	Between Groups	111,528	1	111,528	41,664	,000
	Within Groups	508,596	190	2,677		
	Total	620,124	191			
perf_risk_prod	Between Groups	16,528	1	16,528	6,776	,010
	Within Groups	463,429	190	2,439		
	Total	479,958	191			
social_risk	Between Groups	5,445	1	5,445	2,423	,121
	Within Groups	427,027	190	2,248		
	Total	432,472	191			
attitude_brand	Between Groups	35,880	1	35,880	19,158	,000
	Within Groups	355,841	190	1,873		
	Total	391,722	191			
attitude_prod	Between Groups	25,764	1	25,764	14,384	,000
	Within Groups	340,332	190	1,791		
	Total	366,097	191			

Table 17: ANOVA for dependent variables with love as factor

We can see that H1a is supported. Attitude towards the brand is significantly higher when love is high (p = 0,000 F = 19,2). Purchase intention for the brand is also higher when love is high (p = 0,000 F = 61,4). H1b is supported. Attitude towards a specific product is significantly higher when love is high (p = 0,000 F = 14,4). Purchase intention for a specific product is also higher when love is high (p = 0,000 F = 41,7). Further, H1c is supported. Performance risk is significantly lower when brand love is high (p = 0,010 F = 6,8). H1d is not supported. Social risk is higher when brand love is high, which is the opposite of our hypothesis. However, the two groups are not significantly different (p = 0,121 F = 2,4).

.

Hypothesis	Supported
1a	Yes
1b	Yes
1c	Yes
1d	No

Table 18: Overview hypothesis 1

5.2.2 Hypothesis 2

Hypothesis 2 is whether crisis (independent variable) influences any of the dependent variables. We also used one-way ANOVA here.

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
purchase_int_brand	1,00	64	3,4740	1,86758	,23345	3,0075	3,9405	1,00	7,00
	2,00	64	4,4167	1,55895	,19487	4,0273	4,8061	1,00	7,00
	3,00	64	4,4427	1,77882	,22235	3,9984	4,8870	1,00	7,00
	Total	192	4,1111	1,78883	,12910	3,8565	4,3658	1,00	7,00
purchase_int_prod	1,00	64	3,4010	1,95738	,24467	2,9121	3,8900	1,00	7,00
	2,00	64	4,0729	1,63674	,20459	3,6641	4,4818	1,00	7,00
	3,00	64	4,4271	1,66769	,20846	4,0105	4,8437	1,00	7,00
	Total	192	3,9670	1,80187	,13004	3,7105	4,2235	1,00	7,00
perf_risk_prod	1,00	64	2,4844	1,30921	,16365	2,1573	2,8114	1,00	5,67
	2,00	64	4,4896	1,13773	,14222	4,2054	4,7738	2,33	7,00
	3,00	64	3,3438	1,59802	,19975	2,9446	3,7429	1,00	7,00
	Total	192	3,4392	1,58520	,11440	3,2136	3,6649	1,00	7,00
social_risk	1,00	64	4,0365	1,53515	,19189	3,6530	4,4199	1,00	7,00
	2,00	64	3,0313	1,32233	,16529	2,7009	3,3616	1,00	7,00
	3,00	64	2,7188	1,34022	,16753	2,3840	3,0535	1,00	5,67
	Total	192	3,2622	1,50474	,10860	3,0480	3,4764	1,00	7,00
attitude_brand	1,00	64	3,6146	1,32566	,16571	3,2834	3,9457	1,00	6,67
	2,00	64	5,1667	1,18783	,14848	4,8700	5,4634	1,67	7,00
	3,00	64	5,1302	1,20642	,15080	4,8289	5,4316	1,67	7,00
	Total	192	4,6372	1,43210	,10335	4,4333	4,8410	1,00	7,00
attitude_prod	1,00	64	3,9844	1,38451	,17306	3,6385	4,3302	1,00	7,00
	2,00	64	4,5000	1,28208	,16026	4,1797	4,8203	1,00	7,00
	3,00	64	4,8229	1,37369	,17171	4,4798	5,1661	1,00	7,00
	Total	192	4,4358	1,38446	,09991	4,2387	4,6328	1,00	7,00

Table 19: Descriptive statistics with crisis as factor, 1 = Core crisis, 2 = No core crisis, 3 = No crisis

Scheffe

Dependent Variable	(I) 1 = Core crisis, 2 = no core crisis, 3 = No crisis	(J) 1 = Core crisis, 2 = no core crisis, 3 = No crisis	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
purchase_int_brand	1,00	2,00	-,94271*	,30758	,010	-1,7016	-,1838
		3,00	-,96875*	,30758	,008	-1,7276	-,2099
	2,00	1,00	,94271*	,30758	,010	,1838	1,7016
		3,00	-,02604	,30758	,996	-,7849	,7329
	3,00	1,00	,96875*	,30758	,008	,2099	1,7276
		2,00	,02604	,30758	,996	-,7329	,7849
purchase_int_prod	1,00	2,00	-,67188	,31110	,100	-1,4395	,0957
		3,00	-1,02604*	,31110	,005	-1,7936	-,2585
	2,00	1,00	,67188	,31110	,100	-,0957	1,4395
		3,00	-,35417	,31110	,524	-1,1217	,4134
	3,00	1,00	1,02604*	,31110	,005	,2585	1,7936
		2,00	,35417	,31110	,524	-,4134	1,1217
perf_risk_prod	1,00	2,00	-2,00521*	,24071	,000	-2,5991	-1,4113
		3,00	-,85938*	,24071	,002	-1,4533	-,2655
	2,00	1,00	2,00521*	,24071	,000	1,4113	2,5991
		3,00	1,14583*	,24071	,000	,5519	1,7397
	3,00	1,00	,85938*	,24071	,002	,2655	1,4533
		2,00	-1,14583*	,24071	,000	-1,7397	-,5519
social_risk	1,00	2,00	1,00521*	,24794	,000	,3935	1,6169
		3,00	1,31771*	,24794	,000	,7060	1,9294
	2,00	1,00	-1,00521*	,24794	,000	-1,6169	-,3935
		3,00	,31250	,24794	,453	-,2992	,9242
	3,00	1,00	-1,31771*	,24794	,000	-1,9294	-,7060
		2,00	-,31250	,24794	,453	-,9242	,2992
attitude_brand	1,00	2,00	-1,55208*	,21946	,000	-2,0936	-1,0106
		3,00	-1,51563*	,21946	,000	-2,0571	-,9741
	2,00	1,00	1,55208*	,21946	,000	1,0106	2,0936
		3,00	,03646	,21946	,986	-,5050	,5779
	3,00	1,00	1,51563*	,21946	,000	,9741	2,0571
		2,00	-,03646	,21946	,986	-,5779	,5050
attitude_prod	1,00	2,00	-,51562	,23821	,099	-1,1034	,0721
		3,00	-,83854*	,23821	,002	-1,4263	-,2508
	2,00	1,00	,51562	,23821	,099	-,0721	1,1034
		3,00	-,32292	,23821	,401	-,9107	,2648
	3,00	1,00	,83854*	,23821	,002	,2508	1,4263
		2,00	,32292	,23821	,401	-,2648	,9107

*. The mean difference is significant at the 0.05 level.

Table 20: ANOVA with Scheffe

H2a is partly supported. Attitude towards the brand is significantly lower when there is a "core crisis" compared to "no crisis" with a mean difference of 1,51(p = 0,000). There is not a significant difference in attitude towards the brand when we compare "no core crisis" and "no crisis" (p = 0,453). Purchase intention for the brand "Phone-Smart" is significantly lower when there is a "core crisis" (group 1) compared to "no crisis" (group 3). p = 0,008. Purchase intention for the brand is barely different when there is a "no core crisis" (group 2) compared to "no crisis", and the difference is not significant (p = 0,996).

H2b is partly supported. Attitude towards the product is significantly lower when there is a "core crisis" compared to "no crisis" (p = 0,002). Purchase intention for the product "myPhone" is significantly lower when there is a "core crisis" compared to "no crisis" (p = 0,05). Attitude towards the product is not significantly different when comparing "no core crisis" to "no crisis" (p = 0,401). Purchase intention for the

product "myPhone" is not significantly different when there is a "no core crisis" compared to "no crisis" (p = 0,524). H2c is not supported. Purchase intention (for the brand) is significantly lower when there is a "core crisis" compared to a "no core crisis". This is the opposite effect of what we hypothesized. The mean difference is 0,94 where p = 0,010. Purchase intention (for the product) is lower for a "core crisis" compared to a "no core crisis". However, the difference is not significant with p = 0,10.

H2d is supported. Performance risk (for the product) is greater when there is "core crisis" compared to "no crisis" (p = 0,02). Performance risk is also higher when there is a "no core crisis" compared to "no crisis" (p = 0,000). H2e is partly supported. Social risk (for the brand) is greater when there is a "core crisis" compared to "no crisis" (p = 0,000). There is not a significant difference in social risk when there is a "no core crisis" compared to "no crisis" (p = 0,453).

Hypothesis	Supported
2a	Partly
2b	Partly
2c	No
2d	Yes
2e	Partly

Table 21: Overview hypothesis 2

5.2.3 Hypothesis 3

Hypothesis 3 is whether "brand love" is moderating the relationship between "crisis" and the different dependent variables (attitude, purchase intention, performance risk and social risk).

Dependent Variable	(I) 1 = high love - core crisis, 2 = high love - no core crisis, 3 = low love - core crisis, 4 = low love - no core crisis, 5 = High love - No crisis, 6 = Low love - No crisis	(J) 1 = high love - core crisis, 2 = high love - no core crisis, 3 = low love - core crisis, 4 = low love - no core crisis, 5 = High love - No crisis, 6 = Low love - No crisis	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
attitude_prod	1,00	2,00	-,33333	,32156	,956	-1,4149	,7482
		3,00	,61458	,32156	,601	-,4670	1,6961
		4,00	-,08333	,32156	1,000	-1,1649	,9982
		5,00	-1,19792	,32156	,019	-2,2795	-,1164
		6,00	,13542	,32156	,999	-,9461	1,2170
	2,00	1,00	,33333	,32156	,956	-,7482	1,4149
		3,00	,94792	,32156	,128	-,1336	2,0295
		4,00	,25000	,32156	,988	-,8316	1,3316
		5,00	-,86458	,32156	,210	-1,9461	,2170
		6,00	,46875	,32156	,831	-,6128	1,5503
	3,00	1,00	-,61458	,32156	,601	-1,6961	,4670
		2,00	-,94792	,32156	,128	-2,0295	,1336
		4,00	-,69792	,32156	,455	-1,7795	,3836
		5,00	-1,81250	,32156	,000	-2,8941	-,7309
		6,00	-,47917	,32156	,817	-1,5607	,6024
	4,00	1,00	,08333	,32156	1,000	-,9982	1,1649
		2,00	-,25000	,32156	,988	-1,3316	,8316
		3,00	,69792	,32156	,455	-,3836	1,7795
		5,00	-1,11458	,32156	,039	-2,1961	-,0330
		6,00	,21875	,32156	,993	-,8628	1,3003
attitude_brand	1,00	2,00	-1,31250	,29073	,002	-2,2904	-,3346
		3,00	,95833	,29073	,059	-,0195	1,9362
		4,00	-,83333	,29073	,151	-1,8112	,1445
		5,00	-1,61458	,29073	,000	-2,5925	-,6367
		6,00	-,45833	,29073	,778	-1,4362	,5195
	2,00	1,00	1,31250	,29073	,002	,3346	2,2904
		3,00	2,27083	,29073	,000	1,2930	3,2487
		4,00	,47917	,29073	,743	-,4987	1,4570
		5,00	-,30208	,29073	,955	-1,2800	,6758
		6,00	,85417	,29073	,130	-,1237	1,8320
	3,00	1,00	-,95833	,29073	,059	-1,9362	,0195
		2,00	-2,27083	,29073	,000	-3,2487	-1,2930
		4,00	-1,79167	,29073	,000	-2,7695	-,8138
		5,00	-2,57292	,29073	,000	-3,5508	-1,5950
		6,00	-1,41667	,29073	,000	-2,3945	-,4388
	4,00	1,00	,83333	,29073	,151	-,1445	1,8112
		2,00	-,47917	,29073	,743	-1,4570	,4987
		3,00	1,79167	,29073	,000	,8138	2,7695
		5,00	-,78125	,29073	,210	-1,7591	,1966
		6,00	,37500	,29073	,893	-,6029	1,3529

Table 22: ANOVA with Scheffe. Attitude with "Love" and "crisis" as factors.

H3a is not supported. There is not a significant difference in attitude (for the product) for a "core crisis" when brand love is "high" compared to when brand love is "low" (p = 0,601). There is no significant difference in attitude (for the product) for a "no core crisis" when brand love is "high" compared to when brand love is "low" (p = 0,988). There is no significant difference in attitude (for the brand) for a "core crisis" when brand love is "high" compared to when brand love is "low" (p = 0,059). There is no significant difference in attitude (for the brand) for a "no core crisis" when brand love is "high" compared to when brand love is "low" (p = 0,743).

Dependent Variable	(I) 1 = high love - core crisis, 2 = high love - no core crisis, 3 = low love - core crisis, 4 = low love - no core crisis, 5 = High love - No crisis, 6 = Low love - No crisis	(J) 1 = high love - core crisis, 2 = high love - no core crisis, 3 = low love - core crisis, 4 = low love - no core crisis, 5 = High love - No crisis, 6 = Low love - No crisis	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
purchase_int_brand	1,00	2,00	-,78125	,37629	,508	-2,0469	,4844
		3,00	1,84375	,37629	,000	,5781	3,1094
		4,00	,73958	,37629	,571	-,5261	2,0052
		5,00	-1,01042	,37629	,211	-2,2761	,2552
		6,00	,91667	,37629	,317	-,3490	2,1823
	2,00	1,00	,78125	,37629	,508	-,4844	2,0469
		3,00	2,62500	,37629	,000	1,3593	3,8907
		4,00	1,52083	,37629	,007	,2552	2,7865
		5,00	-,22917	,37629	,996	-1,4948	1,0365
		6,00	1,69792	,37629	,002	,4323	2,9636
	3,00	1,00	-1,84375	,37629	,000	-3,1094	-,5781
		2,00	-2,62500	,37629	,000	-3,8907	-1,3593
		4,00	-1,10417	,37629	,131	-2,3698	,1615
		5,00	-2,85417	,37629	,000	-4,1198	-1,5885
		6,00	-,92708	,37629	,304	-2,1927	,3386
	4,00	1,00	-,73958	,37629	,571	-2,0052	,5261
		2,00	-1,52083	,37629	,007	-2,7865	-,2552
		3,00	1,10417	,37629	,131	-,1615	2,3698
		5,00	-1,75000	,37629	,001	-3,0157	-,4843
		6,00	,17708	,37629	,999	-1,0886	1,4427
purchase_int_prod	1,00	2,00	-,43750	,39783	,943	-1,7756	,9006
		3,00	1,86458	,39783	,001	,5265	3,2027
		4,00	,95833	,39783	,330	-,3798	2,2964
		5,00	-,75000	,39783	,616	-2,0881	,5881
		6,00	,56250	,39783	,849	-,7756	1,9006
	2,00	1,00	,43750	,39783	,943	-,9006	1,7756
		3,00	2,30208	,39783	,000	,9640	3,6402
		4,00	1,39583	,39783	,035	,0577	2,7339
		5,00	-,31250	,39783	,987	-1,6506	1,0256
		6,00	1,00000	,39783	,281	-,3381	2,3381
	3,00	1,00	-1,86458	,39783	,001	-3,2027	-,5265
		2,00	-2,30208	,39783	,000	-3,6402	-,9640
		4,00	-,90625	,39783	,397	-2,2443	,4318
		5,00	-2,61458	,39783	,000	-3,9527	-1,2765
		6,00	-1,30208	,39783	,062	-2,6402	,0360
	4,00	1,00	-,95833	,39783	,330	-2,2964	,3798
		2,00	-1,39583	,39783	,035	-2,7339	-,0577
		3,00	,90625	,39783	,397	-,4318	2,2443
		5,00	-1,70833	,39783	,003	-3,0464	-,3702
		6,00	-,39583	,39783	,963	-1,7339	,9423

Table 23: ANOVA with Scheffe. Purchase intention with "Love" and "crisis" as factors.

H3b is supported. Purchase intention when there is a "core crisis" for the brand "Phone-Smart" is significantly higher when the only difference between group 1 and 3 is "high love" and "low love" (mean difference of 1,84 and p = 0,000). Purchase intention when there is a "core crisis" for the product "myPhone" is significantly higher when the only difference between the groups is "high love" and "low love" (p = 0,001). Purchase intention when there is a "no core crisis" is significantly higher for the brand "Phone Smart" when the only difference between group 2 and 4 is "high love" and "low love" (p = 0,007). Purchase intention for "myPhone" when there is a "no core crisis" is significantly higher when the only difference between the groups is "high love" and "low love" (0,035).

Dependent Variable	(I) 1 = high love - core crisis, 2 = high love - no core crisis, 3 = low love - core crisis, 4 = low love - no core crisis, 5 = High love - No crisis, 6 = Low love - No crisis	(J) 1 = high love - core crisis, 2 = high love - no core crisis, 3 = low love - core crisis, 4 = low love - no core crisis, 5 = High love - No crisis, 6 = Low love - No crisis	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
perf_risk_prod	1,00	2,00	-2,20833	,33105	,000	-3,3218	-1,0949
		3,00	-,53125	,33105	,765	-1,6447	,5822
		4,00	-2,33333	,33105	,000	-3,4468	-1,2199
		5,00	-,57292	,33105	,701	-1,6864	,5406
		6,00	-1,67708	,33105	,000	-2,7906	-,5636
	2,00	1,00	2,20833	,33105	,000	1,0949	3,3218
		3,00	1,67708	,33105	,000	,5636	2,7906
		4,00	-,12500	,33105	1,000	-1,2385	,9885
		5,00	1,63542	,33105	,000	,5219	2,7489
		6,00	,53125	,33105	,765	-,5822	1,6447
	3,00	1,00	,53125	,33105	,765	-,5822	1,6447
		2,00	-1,67708	,33105	,000	-2,7906	-,5636
		4,00	-1,80208	,33105	,000	-2,9156	-,6886
		5,00	-,04167	,33105	1,000	-1,1551	1,0718
		6,00	-1,14583	,33105	,039	-2,2593	-,0324
	4,00	1,00	2,33333	,33105	,000	1,2199	3,4468
		2,00	,12500	,33105	1,000	-,9885	1,2385
		3,00	1,80208	,33105	,000	,6886	2,9156
		5,00	1,76042	,33105	,000	,6469	2,8739
		6,00	,65625	,33105	,561	-,4572	1,7697
social_risk	1,00	2,00	1,21875	,34982	,037	,0421	2,3954
		3,00	,63542	,34982	,654	-,5412	1,8121
		4,00	1,42708	,34982	,007	,2504	2,6037
		5,00	1,55208	,34982	,002	,3754	2,7287
		6,00	1,71875	,34982	,000	,5421	2,8954
	2,00	1,00	-1,21875	,34982	,037	-2,3954	-,0421
		3,00	-,58333	,34982	,734	-1,7600	,5933
		4,00	,20833	,34982	,996	-,9683	1,3850
		5,00	,33333	,34982	,969	-,8433	1,5100
		6,00	,50000	,34982	,842	-,6766	1,6766
	3,00	1,00	-,63542	,34982	,654	-1,8121	,5412
		2,00	,58333	,34982	,734	-,5933	1,7600
		4,00	,79167	,34982	,405	-,3850	1,9683
		5,00	,91667	,34982	,236	-,2600	2,0933
		6,00	1,08333	,34982	,093	-,0933	2,2600
	4,00	1,00	-1,42708	,34982	,007	-2,6037	-,2504
		2,00	-,20833	,34982	,996	-1,3850	,9683
		3,00	-,79167	,34982	,405	-1,9683	,3850
		5,00	,12500	,34982	1,000	-1,0516	1,3016
		6,00	,29167	,34982	,983	-,8850	1,4683

Table 24: ANOVA with Scheffe. Performance risk and social risk with "Love" and "crisis" as factors.

H3c is not supported. There is not a significant difference in "performance risk" for a "core crisis" when brand love is "high" compared to when brand love is "low" (p = 0,765). There is not a significant difference in "performance risk for a "no core crisis" when brand love is "high" compared to when brand love is "low" (p = 1,000). There is no significant difference in "social risk" for a "core crisis" when brand love is "high" compared to when brand love is "low" (p = 0,654). There is no significant difference for a "no core crisis (p = 0,996).

Hypothesis	Supported
3a	No
3b	Yes
3c	No

Table 25: Overview hypothesis 3

6 Discussion

6.1 Main conclusions

For research question 1 we have found that a "core crisis" affects both attitude towards the brand "Phone-Smart" and purchase intention towards the brand "Phone-Smart". This means that when we have a crisis that affects the core values of the brand, the attitude of the respondent will be lower, and the purchase intention of the consumer will be lower. We found the same effect for attitude and purchase intention towards the product "myPhone" in a "core crisis". However, this is not true when we have a "no core crisis". This type of crisis does not affect attitude and purchase intention towards the brand. This means that a crisis that affects the performance of the product "myPhone" does not affect the brand when it comes to attitude and purchase intention. We got the same result for attitude and purchase intention towards the product "myPhone" in a "no core crisis", meaning that a crisis that affects the performance of the product does not affect attitude and purchase intention. Further, we found that a "core crisis" has a larger effect on purchase intention for a brand, than a "no core crisis". This means that the respondent will view a "core crisis" as a more serious crisis than a "no core crisis", in terms of purchase intention. This is the opposite of what we hypothesized. We had expected that the consumer would have reacted more to a crisis where he is directly affected (no core crisis) compared to a crisis where you are indirectly affected (core crisis). We did not see the same effect when it comes to purchase intention towards the product. The groups "core crisis" and "no core crisis" were not significantly different here.

We also found that performance risk is affected by both a "core crisis" and a "no core crisis". This means that the consumer perceives performance risk to be higher when there is a "core crisis" or a "no core crisis". It is somewhat surprising that performance risk is affected by a "core crisis" since they are not directly connected, performance risk is related to the product and "core crisis" is related to the brand. Social risk was found to be affected by a "core crisis" but not by a "no core crisis". This was also expected as social risk is closely related to a "core crisis" while there is no direct connection between social risk and "no core crisis".

For research question 2 we found that brand love has a positive influence on attitude and purchase intention both for the brand and the product. This means that when a respondent loves a brand he will have a higher attitude and a higher purchase intention. We also found that performance risk was affected by brand love, performance risk was lower when brand love was high. For social risk we did not find any difference when comparing "high love" with "low love". This could indicate that social risk is important to the respondents, that brand love will not influence how they perceive social risk.

For research question 3 we found that brand love moderates the relationship between crisis and purchase intention. It dampens the effect a "core crisis" and a "no core crisis" has on purchase intention for both the brand "Phone-Smart" and the product "myPhone". This means that the respondent will think that a crisis is less severe if he or she loves the brand "Phone-Smart" or the product "myPhone". Further, we found that brand love does not moderate the relationship between crisis and attitude in any circumstances. This was somewhat surprising as attitude is a part of purchase intention. Also, crisis does not moderate the relationship between crisis and performance risk or crisis and social risk. This indicates that the respondent does not change his perceived risk despite loving the brand "Phone-Smart" or loving the product "myPhone".

6.2 Implications

6.2.1 Theoretical implications:

One of our findings was that a crisis has a negative effect on purchase intention for both the brand "Phone-Smart" and the product "myPhone". Intuitively, this makes sense, as you would expect that a consumer will have a reaction when presented with negative information. We also found support for this in our literature review, information about a crisis can negatively affect your judgment, which affects attitude, which in turn can affect purchase intention (Kisielius & Sternthal, 1986). In our test for homogeneity we found that "purchase intention for brand" with crisis as a factor did not have equal level of variance. We therefore need to be cautious when making conclusions about our results. However, our conclusion both makes sense intuitively and theoretically. Therefore, homogeneity should not be a big issue. Theoretically this

does not have big implications, as mentioned above, our results is already confirmed by theory.

We also found that there is a significant difference between purchase intentions for a brand when there is a "core crisis" compared to a "no core crisis". This is opposite of what we hypothesized. Theory suggests that a "no core crisis" will do more harm to consumer satisfaction and choice likelihood, than a "core crisis" (Dutta & Pullig, 2011). This is because in a "no core crisis" the consumer is directly affected because the product is faulty, while in a "core crisis" the consumer is not directly affected. Our results suggest that a consumer will punish a brand severely when they do not live by their core values. Support for this can be found in Skowronski & Carlston (1987) who suggested that negative information is perceived to be higher in "morality" (like company values) compared to "ability" (like product attributes). Again, our results could be due to the specific type of crisis we made, but our analysis points in the direction that a "core crisis" will be more severe than a "no core crisis" for purchase intention. This implies that a "core crisis" can do more harm than what Dutta & Pullig (2011) suggested.

Purchase intention when there was a "no core crisis" was the same for both the brand and the product. This means that the respondent did not change his intention to purchase the brand or the product despite getting information that the product had a performance issue. It is surprising since you would expect that a consumer reacts negatively to negative information about a specific product he is about to buy. You could argue that "purchase intention for brand" would not necessarily get affected by a fault in a specific product, since you could attribute the fault to just a single mistake from the brand. However, you would still expect that a consumer changes his intention to purchase when he is considering buying the very product that is faulty. This is also supported by theory; Klein & Dawar (2004) found that in a "no core crisis" consumers will construct attributions of blame which will affect brand evaluation, which in turn will affect purchase intention. It could be that the type of crisis we made is not severe enough for the respondent to change his purchase intention, or it could be that the result would have been different with a larger sample. However our results indicate that a "no core crisis" will not do much harm to purchase intention.

Performance risk was also found to be affected by a "core crisis" and a "no core crisis". Literature on this topic is scarce, but our study shows that perceived performance risk will be higher if there is a crisis. Intuitively, we would expect that performance risk is affected by a "no core crisis" as it is related to product performance. Performance risk was also affected by a "core crisis", which is not necessarily related to product performance. This shows that the effect of a "core crisis" spills over to performance risk. Social risk was found to be affected by a "core crisis" but not a "no core crisis".

Another finding was that brand love influences attitude, purchase intention and performance risk. This means that attitude towards both the product and the brand will increase when brand love is "high". We found the same effect for purchase intention and this is also supported by theory. Laroche et al., (1996) found that brand familiarity will cause you to have higher purchase intention, while Becerra & Badrinarayanan (2013) found that brand trust increases purchase intention. These two concepts are not exactly the same as brand love, but they are related. Literature on the effect of brand love on purchase intention is scarce, but here we have found that brand love does increase purchase intention. Brand love was also found to influence performance risk, but not social risk. This means that a consumer will have less perceived performance risk if he loves the brand, but there will be no difference in social risk. The fact that brand love does not influence social risk could suggest that a consumer views social risk as a big threat, and that it does not matter if the consumer loves the brand. Theory on the effects of brand love on social risk is also scarce, but our results indicate that brand love does not influence social risk.

Another key finding was that brand love moderates the relationship between crisis and purchase intention. Brand love dampened the effect a crisis had on purchase intention. This effect was for both types of crisis and for both the product and the brand. We found support for this in our literature review as well. Pham & Muthukrishnan, 2002, according to Dawar & Lei (2009) found that brand familiarity can act as a shield against the effect of negative information about a brand. Further, Ahluwalia, et al (2000) found that *brand commitment* was a strong moderator of consumer response to negative information about the product. The respondents would counter argue negative information about the product if they had "high" commitment.

Brand love is a "stronger" concept than both brand commitment and brand familiarity so it is not a surprise that we find the same effect with brand love.

6.2.2 Managerial implications

The fact that our findings showed that a crisis can have a negative effect on purchase intention should not come as a surprise for a brand manager. However, it is important for a brand manager to know that a crisis, both "core" and "no core", will affect purchase intention for the brand and the product. Our finding that a "core crisis" has a larger effect on purchase intention than a "no core crisis" is also vital to know for a brand manager. It can help the brand manager making sure that they are sticking to their core values, and are not vulnerable to such a crisis. It can also be helpful for the brand manager to know that a "no core crisis" will not have a large effect on purchase intention. Knowing this can help the brand manager avoiding panic, if such a crisis should strike.

It is also important for the brand manager to know that a "core crisis" and a "no core crisis" can influence performance risk. If the consumer perceives that the product has "high" performance risk he will use more sources for information (Lutz & Reilly, 1974). This could make it less likely that the consumer buys the product. A brand manager can reduce risk by focusing on risk aspects in the marketing mix. A brand manager also needs to know that social risk is affected by a "core crisis". When there is social risk a consumer tends to seek information through word-of-mouth (Perry & Hamm, 1969; Roselius, 1971, according to Lutz & Reilly, 1974). This is important, as it would not work if the brand manager tried to reduce social risk in the through a traditional ad campaign.

Brand love influences attitude, purchase intention and performance risk. These findings are important for brand managers. It implies that brand managers should work to make their customers love their brand. This is a significant undertaking as they have to, among else, make their customers: have a passion for the brand, be attracted to the brand, find the brand unique and trust the brand (Albert, et al.,2007). These elements need to be included in the marketing mix. If the brand manager can do this he will be able to: sell more through higher purchase intention and reduce the perceived performance risk.

Brand love can dampen the effect of a crisis on purchase intention. This shows how powerful effect brand love can have, and how valuable it can be for a brand to have customers who love their brand. Knowing this is relevant for a brand manager. A crisis can happen without any warning and it could potentially have devastating effects for the brand. In a situation like that it will be valuable for the brand to have a shield against the crisis. However, this will only shield them from the crisis affecting purchase intention. We found that brand love does not moderate the relationship between crisis and the other dependent variables: attitude, social risk and performance risk. We had expected that brand love would moderate the relationship between crisis and attitude, because attitude is a part of purchase intention. This shows that a crisis still has a significant effect on a brand, despite having customers that loves the brand.

6.2.3 Methodological implications

Our manipulations for brand love, and the two types of crisis worked very well. This could in part be due to the stimuli given through video instead of written text. A video produces a more rich experience and can make it easier for the respondent to imagine the situation described. However, we did not have the opportunity to compare written text and video for our experiment.

6.3 Future research

Future research should focus on improving the weaknesses of our study. First, the experiment should be conducted on a wider range of people. Our experiment was only conducted on students from one school. By including people from a wider range of the population the external validity will be better. It would also be interesting to see if the study will give the same results on another product category. We did our experiment with cell phone as product category, but the results could be different for another category. Further, the experiment should also be tried with different kinds of "core crisis" and different kinds of "no core crisis". Our study used a "core crisis" which had elements of ethical issues, other "core crisis" could contain other issues, and that might trigger other results. For "no core crisis" we used "short battery life" as a defect. We might get other results by using other defects.

The experiment should also be tested on a larger sample. We had 32 respondents in each of our groups, for a total of 192 respondents. Thirty samples in each group is the minimum of what we could accept. By having a smaller number of samples we are

vulnerable to high standard deviation. With high standard deviation our results will be less accurate.

Finally, our study is an experiment. Our scenarios are made-up and it is difficult for the respondent to answer the same way that they would act in a real situation. It also a challenge to communicate to the respondent that they love a brand that is made up. This makes it difficult for us to draw solid conclusions about how relevant our study is for a real life setting. Because of this it would be interesting to study the same effects after a real brand has gone through a "core crisis" or a "no core crisis".

Appendix:

Appendix 1 – Script and URL for pretest

High love, core crisis (http://bit.ly/questionaire-01)

You are a big fan of smartphones and for the last six years you have only bought phones from a brand called Phone-Smart. The brand is known for cutting edge technology and innovation. The brand believes that they have an obligation to behave ethically. Because of this the brand has a corporate social responsibility program where they give away phones to developing countries. You don't really consider any other options when buying a new phone and you have a passionate relationship with the brand, where you often think and dream about the brand. You also feel that that the products Phone-Smart makes are both unique and beautiful.

Recently the brand launched a new smartphone called "myPhone". You are considering buying the new phone, replacing the old one. Two days ago you started hearing stories in the news that the brand has used a subcontractor whose workers have suffered under very poor working conditions. Apparently, employees of the subcontractor have been working fifteen hour shifts, and there has also been reports of underage kids working there.

High love, no core crisis (http://bit.ly/questionaire-02)

You are a big fan of smartphones and for the last six years you have only bought phones from a brand called Phone-Smart. The brand is known for cutting edge technology and innovation. The brand believes that they have an obligation to behave ethically. Because of this the brand has a corporate social responsibility program where they give away phones to developing countries. You don't really consider any other options when buying a new phone and you have a passionate relationship with the brand, where you often think and dream about the brand. You also feel that that the products Phone-Smart makes are both unique and beautiful.

Recently the brand launched a new smartphone called "myPhone". You are considering buying the new phone, replacing the old one. Two days ago you started hearing stories in the news that some phones have shorter battery life than advertised,

and that the brand might need to do a partial product recall. It is still unclear how many of the cell phones are affected.

Low love, core crisis ()

You are a big fan of smartphones and for the last six years you bought smartphones from several different brands. One brand is called "Phone-Smart". The brand is known for cutting edge technology and innovation. The brand believes that they have an obligation to behave ethically. Because of this the brand has a corporate social responsibility program where they give away phones to developing countries. You don't have much experience with the brand. You have only heard that some of your friends like it.

Recently the brand launched a new smartphone called "myPhone". You are considering buying the new phone, replacing the old one. Two days ago you started hearing stories in the news that the brand has used a subcontractor whose workers have suffered under very poor working conditions. Apparently, employees of the subcontractor have been working fifteen hour shifts, and there has also been reports of underage kids working there.

Low love, no core crisis ()

You are a big fan of smartphones and for the last six years you bought smartphones from several different brands. One brand is called "Phone-Smart". The brand is known for cutting edge technology and innovation. The brand believes that they have an obligation to behave ethically. Because of this the brand has a corporate social responsibility program where they give away phones to developing countries. You don't have much experience with the brand. You have only heard that some of your friends like it.

Recently the brand launched a new smartphone called "myPhone". You are considering buying the new phone, replacing the old one. Two days ago you started hearing stories in the news that some phones have shorter battery life than advertised, and that the brand might need to do a partial product recall. It is still unclear how many of the cell phones are affected.

High love, core crisis (http://youtu.be/1KRypXst6_A)
You are a big fan of smartphones and for the last six years you have only bought phones from a brand called Phone-Smart. The brand believes that it is important for them behave ethically and fairly. Because of this the brand has a corporate social responsibility program where they give away phones to developing countries. You don't really consider any other options when buying a new phone and you have a passionate relationship with the brand, where you often think and dream about the brand. You also feel that that the products Phone-Smart makes are both unique and beautiful.

Recently the brand launched a new smartphone called "myPhone". You are considering buying the new phone, replacing the old one. Two days ago you started hearing stories in the news that the brands' workers have suffered under very poor working conditions. Apparently, employees have been working eighteen hour shifts, and there has also been reports of underage kids working there.

High love, no core crisis (http://youtu.be/KdH6fCqAlDU)
You are a big fan of smartphones and for the last six years you have only bought phones from a brand called Phone-Smart. The brand believes that it is important for them behave ethically and fairly. Because of this the brand has a corporate social responsibility program where they give away phones to developing countries. You don't really consider any other options when buying a new phone and you have a passionate relationship with the brand, where you often think and dream about the brand. You also feel that that the products Phone-Smart makes are both unique and beautiful.

Recently the brand launched a new smartphone called "myPhone". You are considering buying the new phone, replacing the old one. Two days ago you started hearing stories in the news that some phones have shorter battery life than advertised, and that the brand might need to do a partial product recall. It is still unclear how many of the cell phones are affected.

Low love, core crisis (http://youtu.be/ImLTH7NA1tw)

You are a big fan of smartphones and for the last six years you bought smartphones from several different brands. One brand is called "Phone-Smart". The brand believes that it is important for them behave ethically and fairly. Because of this the brand has a corporate social responsibility program where they give away phones to developing countries. You don't have much experience with the brand. You have only heard that some of your friends like it.

Recently the brand launched a new smartphone called "myPhone". You are considering buying the new phone, replacing the old one. Two days ago you started hearing stories in the news that the brands' workers have suffered under very poor working conditions. Apparently, employees have been working eighteen hour shifts, and there has also been reports of underage kids working there.

Low love, no core crisis (http://youtu.be/yhyGhwlxNyQ)
You are a big fan of smartphones and for the last six years you bought smartphones from several different brands. One brand is called "Phone-Smart". The brand believes that it is important for them behave ethically and fairly. Because of this the brand has a corporate social responsibility program where they give away phones to developing countries. You don't have much experience with the brand. You have only heard that some of your friends like it.

Recently the brand launched a new smartphone called "myPhone". You are considering buying the new phone, replacing the old one. Two days ago you started hearing stories in the news that some phones have shorter battery life than advertised, and that the brand might need to do a partial product recall. It is still unclear how many of the cell phones are affected.

High love, no crisis (http://youtu.be/x1mHrRSzoNg)
You are a big fan of smartphones and for the last six years you have only bought phones from a brand called Phone-Smart. The brand believes that it is important for them behave ethically and fairly. Because of this the brand has a corporate social responsibility program where they give away phones to developing countries. You don't really consider any other options when buying a new phone and you have a passionate relationship with the brand, where you often think and dream about the

brand. You also feel that that the products Phone-Smart makes are both unique and beautiful. Recently the brand launched a new smartphone called "myPhone". You are considering buying the new phone, replacing the old one.

Low love, no crisis (http://youtu.be/5T1z3mBU8es)
You are a big fan of smartphones and for the last six years you bought smartphones from several different brands. One brand is called "Phone-Smart". The brand believes that it is important for them behave ethically and fairly. Because of this the brand has a corporate social responsibility program where they give away phones to developing countries. You don't have much experience with the brand. You have only heard that some of your friends like it.

Recently the brand launched a new smartphone called "myPhone". You are considering buying the new phone, replacing the old one.

Appendix 3

3.1 Factor analysis for *crisis*

Pattern Matrix[a]

	Factor	
	1	2
I think that the negative information is related to the brand Phone-Smart's core values-Strongly disagree:Strongly agree		,886
I think that the negative information I have heard is related to the values promoted by the bran...-Strongly disagree: Strongly agree		,813
The brand, Phone-Smart, is living up to its core values-Strongly disagree: Strongly agree	,907	
The brand,Phone-Smart, has stayed true to its core values-Strongly disagree: Strongly agree	,951	
To what extent was the negative event related to a specific "defect" in the product "myPhone"?...-To little or no extent:To a great extent	,438	
To what extent was the negative event related to a specific "defect" in the brand "Phone-Smart"?...-To little or no extent:To a great extent		,399
To what extent was the negative event related to the "Phone-Smart" organization and not a specif...-To little or no extent:To a great extent	-,321	,391

Extraction Method: Maximum Likelihood.
Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 4 iterations.

Table 26: Factor analysis for crisis

81

Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	3,436	49,082	49,082	2,896	41,372	41,372	2,654
2	1,227	17,528	66,610	1,064	15,202	56,574	2,430
3	,832	11,882	78,492				
4	,624	8,918	87,410				
5	,485	6,933	94,343				
6	,297	4,237	98,580				
7	,099	1,420	100,000				

Extraction Method: Maximum Likelihood.

a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

Table 27: Variance explained for crisis

3.2 Factor analysis *love*

Factor Matrix[a]

	Factor
	1
I experience great happiness with the brand "Phone-Smart"-Strongly disagree:Strongly agree	,791
I feel emotionally close to the brand "Phone-Smart"-Strongly disagree: Strongly agree	,880
I feel tender toward the brand "Phone-Smart"-Strongly disagree: Strongly agree	,896
There is something almost "magical" about my relationship with the brand "Phone-Smart"-Strongly disagree: Strongly agree	,757
If I could never be with the brand "Phone-Smart", I would feel miserable-Strongly disagree: Strongly agree	,601
I find myself thinking about the brand "Phone-Smart" frequently during the day-Strongly disagree:Strongly agree	,726
If I were separated from the brand "Phone-Smart" for a long time, I would feel intensely lonely-Strongly disagree: Strongly agree	,696

Extraction Method: Maximum Likelihood.

a. 1 factors extracted. 4 iterations required.

Table 28: Factor analysis for love

82

Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4,552	65,032	65,032	4,147	59,250	59,250
2	,976	13,947	78,979			
3	,387	5,522	84,501			
4	,331	4,726	89,227			
5	,319	4,558	93,786			
6	,248	3,548	97,333			
7	,187	2,667	100,000			

Extraction Method: Maximum Likelihood.

Table 29: Variance explained for love

3.3 Dependent variables

Factor analysis for: purchase intention brand, social risk and attitude towards brand.

Pattern Matrix[a]

	Factor		
	1	2	3
In the near future I would probably buy the brand "Phone-Smart"-Strongly disagree:Strongly agree	,955		
In the near future I would likely buy the brand "Phone-Smart"-Strongly disagree:Strongly agree	,932		
If I am buying a new phone now it would probably be from the brand "Phone-Smart"-Strongly disagree: Strongly agree	,836		
People close to me may think that it is wrong to use the brand "Phone-Smart"-Strongly disagree: Strongly agree		,931	
Acquaintances may think that it is unwise to use the brand "Phone-Smart" -Strongly disagree: Strongly agree		,803	
It would give a negative impression on my friends and family if I used the brand "Phone-Smart"-Strongly disagree: Strongly agree		,722	
I think that using the brand "Phone-Smart" is:-Bad:Good			,876
I think that using the brand "Phone-Smart" is:-Unreasonable: Reasonable			,947
I think that using the brand "Phone-Smart" is:-Negative:Positive			,768

Extraction Method: Maximum Likelihood.
Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 6 iterations.

Table 30: Factor analysis purch_int_brand, soc_risk_brand, att_brand

83

Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	4,904	54,488	54,488	4,663	51,807	51,807	3,925
2	2,032	22,580	77,068	1,806	20,064	71,871	2,604
3	,743	8,258	85,326	,570	6,337	78,208	4,111
4	,392	4,361	89,687				
5	,264	2,939	92,626				
6	,209	2,324	94,949				
7	,177	1,965	96,914				
8	,149	1,660	98,575				
9	,128	1,425	100,000				

Extraction Method: Maximum Likelihood.

a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

Table 31: Variance explained in factor analysis

Factor analysis for: purchase intention product, performance risk and attitude towards product.

Pattern Matrix[a]

	Factor		
	1	2	3
In the near future I intend to buy "myPhone", made by "Phone-Smart"-Strongly disagree: Strongly agree	,895		
In the near future I would likely buy the product "myPhone"-Strongly disagree:Strongly agree	,986		
If I am buying a new phone now it would probably be the product "myPhone"-Strongly disagree:Strongly agree	,923		
I am uncertain if the product "myPhone" will work like it should-Strongly disagree: Strongly agree		,919	
There is a high probability that the product "myPhone" won't work as it should-Strongly disagree:Strongly agree		,858	
I am uncertain if myPhone's technological solution is working like intended-Strongly disagree:Strongly agree		,916	
I think that using the product "myPhone" is:-Bad:Good			,935
I think that using the product "myPhone" is:-Unreasonable: Reasonable			,820
I think that using the product "myPhone" is:-Negative:Positive			,854

Extraction Method: Maximum Likelihood.
Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 4 iterations.

Table 32: Factor analysis for purch_int_prod, perf_risk_prod_att_prod

Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	4,546	50,513	50,513	4,247	47,183	47,183	3,784
2	2,400	26,667	77,180	2,238	24,867	72,050	2,595
3	,980	10,889	88,069	,910	10,116	82,166	3,590
4	,279	3,103	91,172				
5	,236	2,627	93,799				
6	,192	2,133	95,933				
7	,161	1,788	97,721				
8	,124	1,375	99,096				
9	,081	,904	100,000				

Extraction Method: Maximum Likelihood.

a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

Table 33: Variance explained factor analysis

Appendix 4

4.1 ANOVA manipulation crisis

Descriptives

manipulation_crisis

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1,00	64	4,2031	1,84244	,23031	3,7429	4,6634	1,00	7,00
2,00	64	2,9609	1,23541	,15443	2,6523	3,2695	1,00	6,00
Total	128	3,5820	1,68221	,14869	3,2878	3,8763	1,00	7,00

Table 34: Manipulation crisis, 1 = Core crisis, 2 = No core crisis

ANOVA

manipulation_crisis

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	49,377	1	49,377	20,069	,000
Within Groups	310,012	126	2,460		
Total	359,389	127			

Table 35: Significance of manipulation crisis

4.2 ANOVA manipulation Love:

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
I experience great happiness with the brand "Phone-Smart"-Strongly disagree:Strongly agree	Between Groups	174,422	1	174,422	89,682	,000
	Within Groups	369,531	190	1,945		
	Total	543,953	191			
I feel emotionally close to the brand "Phone-Smart"-Strongly disagree: Strongly agree	Between Groups	143,521	1	143,521	51,091	,000
	Within Groups	533,729	190	2,809		
	Total	677,250	191			
I feel tender toward the brand "Phone-Smart"-Strongly disagree: Strongly agree	Between Groups	208,333	1	208,333	86,885	,000
	Within Groups	455,583	190	2,398		
	Total	663,917	191			
There is something almost "magical" about my relationship with the brand "Phone-Smart"-Strongly disagree: Strongly agree	Between Groups	61,880	1	61,880	26,975	,000
	Within Groups	435,865	190	2,294		
	Total	497,745	191			
If I could never be with the brand "Phone-Smart", I would feel miserable-Strongly disagree: Strongly agree	Between Groups	81,380	1	81,380	32,650	,000
	Within Groups	473,573	190	2,492		
	Total	554,953	191			
I find myself thinking about the brand "Phone-Smart" frequently during the day-Strongly disagree:Strongly agree	Between Groups	133,333	1	133,333	43,534	,000
	Within Groups	581,917	190	3,063		
	Total	715,250	191			
If I were separated from the brand "Phone-Smart" for a long time, I would feel intensely lonely-Strongly disagree: Strongly agree	Between Groups	114,083	1	114,083	47,650	,000
	Within Groups	454,896	190	2,394		
	Total	568,979	191			

Table 36: Significance of brand love measures

Descriptives

manipulation_love

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1,00	96	4,4196	1,27587	,13022	4,1611	4,6782	1,14	6,71
2,00	96	2,7961	1,07560	,10978	2,5782	3,0141	1,00	6,00
Total	192	3,6079	1,43091	,10327	3,4042	3,8116	1,00	6,71

Table 37: Manipulation love, 1 = high love, 2 = low love

86

ANOVA

manipulation_love

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	126,518	1	126,518	90,864	,000
Within Groups	264,553	190	1,392		
Total	391,071	191			

Table 38: Significance of brand love manipulation

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