



Interaction with brands on social media

Do social media profiles predict purchase intentions?

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Foreword

Finally, the last part for the completion of my Master is done. Writing this thesis turned out to be the biggest obstacle in my studies and now, I am really proud that I can present my research for graduation. I definitely learned a lot throughout the whole process, not only about doing academic research, but also about myself. I will take all those lessons with me for continuing the rest of the journey that is my life.

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Abstract

With the emergence of social networking sites and their growing popularity, it is time that as a research field, these are more exploited. In this study, the interaction with brands on online social networks is investigated. First, it is studied whether there is a fit between the self-concept of individuals and the perceived brand personalities of brands that they associate themselves with on social media. Results show that brands that are displayed on someone's social media profile are a reflection of the self-concept of the profile owner. This is an extension of the congruity theory from consumer behaviour. Second, it is also tested if interaction with brands on social media has influence on the purchase intentions of the users. This is done by operationalizing the activities of commenting and sharing on social media sites into variables for involvement. It was not found that these activities or the congruity with brands on social media have any significant effect on purchase intentions of the social network users.

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Introduction

Within the last decade, the revolution of social media grew out to be one of the hottest topics for various target groups. Not only for the consumer, but also for businesses, a whole new *virtual world* opened up, that is parallel to real life, with synchronizations but also deviations. For businesses, the landscape changed drastically. With all the new communication channels, consumers gained more power, because they had better opportunities to speak up and gather more information, while companies lost control over information that is available. At the same time, it seemed there was a lot to win for the companies. Wide audiences could be reached, in new ways that could change the relationship between company and consumer. Social media offers opportunities for two-way interaction, faster reactive power, actively approaching the consumer and for getting attention from the public with all sorts of actions online. Social media earned its place in business operations, although this should not be generalized too quickly; still many companies leave social media ignored. Decision makers, consultants and marketers are discovering the new possibilities and also have to find ways to handle it right. Social media integration, activity alignment, strategy and image coherency are just a few of the issues to be covered if companies want to succeed in social media. All this is just an outline of the impact of social media, a glimpse of the consequences of its emergence.

Since the phenomenon is relatively new, little is written in the scientific field on the topic. Because of the enormous impact in both everyday lives and business operations, the numerous perspectives for looking at social media and all the options for exploiting the platforms, they make an interesting research context. Engaging in social media automatically produces data in the form of content and also leaves online traces, facilitating the research opportunities even more. The focus of this research is on social networking sites. These resemble a contextual framework with comparable aspects to real life and thus offering an environment that is interesting and suitable for many sorts of research.

The topic of this research was found in both marketing and consumer behaviour theory. In

these fields, one of the most important pursuits is understanding *why people choose to buy certain brands*. An explanation for this is given by the congruity theory that states that people have preferences for brands based on their self-concept. Brands are preferred if perceived to express, present or construct the self-concept of the consumer. Several studies have proven the existence of congruence in the consumer's personality and the brand (Birdwell, 1968; Dolich, 1969; Grubb and Hupp, 1968; Huang et al., 2012; Khare and Handa, 2009; Landon, 1974; Malhotra, 1988; Ross, 1971). Most of these studies were conducted before the emergence of the brand personality construct (Aaker, 1997), which is a useful tool to investigate consumers' perceptions of brands. However, it was not until last year that consumer personalities and brand personalities were made operationally comparable. Based on the construct of the brand personality and the Big Five personality framework, a scale was developed as a measure for comparing both consumer and brand personalities (Huang et al., 2012). This contribution to research offered a new tool that could be used in consumer behaviour and branding theory.

Expressing and presenting the self is also key on social networking sites. For example, on Facebook, the biggest social networking site worldwide, brands can be added to profiles of individual users through a 'like'-mechanism and on YouTube, a content community and a video-sharing website, people can 'subscribe' to the channels of brands. In this way, also in the virtual world, brands are used to express self-concept. This leads to one of the main research questions here: Does this mean that the congruity theory can be applied to the context of social networking sites? If in real life, people prefer brands because these enhance their self-concept, do they also associate themselves with brands that reflect their self-concept on social media? Using the same scale to measure both the personality of an individual and the perceived personality of a brand he associates himself with on social media, it is tested whether the congruity theory can be extended to the online environment.

A consecutive question relates to the opportunities for brands and if there are measurable effects of the presumed congruity theory. Up to date, there is no academic research into the benefits

that brands could obtain by having an appearance on social media. It has been established by other research that people purchase brands that help construct their self (Landon, 1974; Ross, 1971). And if people also associate with brands to construct their self, does it also mean that people buy brands that they associate with on social media? It is explored if this relationship that exists in real life can also be found in the virtual world. For seeking a possible link between purchase intentions and social media profiles, more online behavioural activities are incorporated into the research.

Next to associating with brands, more interaction on social media platforms is possible, indicating some level of involvement with the brand. Each social media site has its own specific activities, though these are theoretically similar. On Facebook, commenting and sharing are such activities. A comment can be placed as a reaction to any sort of post, like status updates, public messages or other forms of content. Content posted by a Facebook user can also be shared by others and is then broadcasted on their personal wall as well. In branding theory, it is generally assumed that involvement leads to increased purchase intentions. This probes the question if behavioural activities as signs of involvement possibly have an effect on purchase intentions. Since social media is relatively new as a research context, the behavioural activities indicating involvement are never used as a measure of any kind. It seems very interesting to explore the possibilities of using this data in research. So, a second part of the current study does a first attempt and investigates whether behaviour on social media influences purchase intentions.

The emergence of social media brings to life a new stream of research that could help to explain consumer phenomena. This study is among the first that explores if interaction with brands on social media has any measurable effect for the brands, in this case being increased purchase intentions. Incorporating behaviour on social media with activities as liking, commenting and sharing on Facebook, into research is a new possibility that offers various opportunities and could result in valuable insights. Therefore, developing these activities into valid measurement instruments seems an interesting task that deserves attention in the academic field. The current research tries to contribute to this.

The research fills a gap in the existing literature, combining the relatively new phenomenon social media with the concepts of self-image and brand personalities. Extending the congruity theory to a new context would increase its meaning in consumer behaviour and theoretical knowledge. Since it is nowadays possible to associate with brands on social media, the question of congruence between self-concept and brand personalities can be applied to the individual level: A social media profile. As explained, in existing research self-concept has been linked to preferred brands and product choices, but not exactly to brand personalities according to the construct developed by Aaker (1997). In the last ten years, it became an important concept in brand advertising strategies but so far, there is only marginal appliance of it in self-concept theory even though it seems to be an appropriate tool for this.

Research on deriving purchase intentions from social networking sites has also not been undertaken until now. Finding out what the added value of the use of these channels could be for companies is a hot topic. However, there is little academic research on the actual benefits of social networking sites for brands and the usefulness of having an online profile on these sites. What benefits offers having such an online appearance to the brand? Testing whether purchase intentions are influenced by having an online appearance is a start into this topic.

The practical implications are mainly relevant to marketing managers, brand managers and others engaged in consumer behaviour. The question why consumers buy specific brands is not a new one and the current research is an extension of this. The knowledge of reasons why consumers buy specific brands could be useful to brand managers and marketing managers. They could use this information in their marketing communication, better enabled to show that they are matching the consumers' needs and demands as closely as possible. If social media profiles could predict the purchase intentions of a particular individual, this would result in interesting data.

After having briefly introduced the topics that play a role in this research, these are more extensively discussed in the next chapter. First, the congruity theory, the framework of brand personalities and self-concept are explained based on a review of the relevant literature. An

elaborate section on social media, funnelling to social networking sites, will provide the context of this research. Then, applying the discussed issues to the new online environment of social media, this leads to the theory underlying this research and hypotheses are stated. The methods undertaken to conduct the study will be described, including a section about Facebook since this is the social media site that will be used to gather the data for the research. The results of the analyses will follow in the next chapter. A discussion of the results will also pay attention to the limitations of this study and give suggestions for further research. Finally, a conclusion includes implications of this research.

Literature Review

The congruity theory

For years, researchers are trying to explain why people buy certain products or brands; a broad topic without one unambiguous answer. One example of a question that could solve a piece of the puzzle is “why have consumers brand preferences, even when product offerings appear to be about the same?” (Birdwell, 1968, p. 76). Self-concept might play a role in answering this question, as Britt says: “A consumer may buy a product because, among other factors, he feels that the product enhances his own self-image.” (1966, p. 186). Belk is even taking it further, stating “we are what we have” (1988, p. 160). The discussion of self-image and product image congruity was initiated by Levy (1959). Levy’s statement was that at least for some products, “people buy things not only for what they can do, but also for what they mean” (Landon, 1974, p. 44). This suggests that the use of such products is considered by consumers to allow for expression of their personality or at least their self-image (Malhotra, 1988, p. 22; Sirgy, 1982, p. 289).

Interpersonal attraction literature in social psychology may be on the theoretical basis of this presumed link between product choice and self-concept. Within this field, research suggests that “people tend to perceive others whom they like as being more similar to themselves than those whom they dislike” (Ross, 1971, p. 38). It also seems to hold up if turned around: “People tend to like others whom they perceive as being more similar to themselves than those who are less similar” (Ross, 1971, p. 38). Following from this, it was predicted that people prefer brands which they perceive as being the brands that would be consumed by a person who is similar to themselves (Ross, 1971, p. 38). Various theorists of consumer behaviour have used self-theory to explain people’s behaviour in the market place. The link between self-concept and product choice has been established by more studies conducted mainly from 1960 on. Tucker and Painter were among the first to show some correlation between personality variables and product usage (1961).

Congruity literature. Several studies of the relationship between brand choice and self-

concept have proven the existence of congruity (Birdwell, 1968; Dolich, 1969; Grubb and Hupp, 1968; Huang et al., 2012; Khare and Handa, 2009; Landon, 1974; Malhotra, 1988; Ross, 1971). In several product categories, researchers were able to establish a link between the self-concept of a consumer and the brand they preferred. It was already in 1965 that, in a limited study, Grubb found congruence between self-concept and consumed brand of beer (Dolich, 1969, p. 80). Birdwell conducted a study to demonstrate that the self-image of a consumer was directly related to his purchasing behaviour (1968). He was the first to measure the extent of this congruity, which he did by measuring perceptions. Specifically, he empirically tested the relationship between an automobile owner's perception of himself and his perception of his car (Birdwell, 1968, p. 78). The results suggested a significantly high degree of congruity in the way respondents perceive their cars and themselves (Birdwell, 1968, p. 87).

Grubb and Hupp also used automobiles in their study to develop a methodology that would better test the relationship between self-concepts and consumer behaviour (1968, p. 58). The positive results from their study indicated "that consumers of a specific brand of automobiles perceive themselves with self-concepts similar to others who consume that brand and significantly different from owners of a competing brand" (Grubb and Hupp, 1968, p. 58).

In the investigation undertaken by Dolich, four products were used to verify psychological theories that individuals tend to relate brands to self-concepts (1969, p. 84). It was shown that the preferred brands of beer, cigarettes, bar soap and toothpaste were perceived to be more similar to self-concepts than least preferred brands (Dolich, 1969, p. 82). Favored brands were even consistent with the self-concept according to the conclusion of this study (Dolich, 1969, p. 84).

Ross wanted to extend this literature, starting from the prediction that "people should prefer brands which they perceive as being the sort of brands that would be consumed by a person who is "similar" to themselves" (Ross, 1971, p. 38). His research supported the hypothesis that an individual will prefer to consume a product or brand which he perceives to be more rather than less similar to his own self-concept (Ross, 1971, p. 40).

Though these studies are performed 40 years ago, in recent years this congruity between self-concept and brand choice still is a relevant topic. In an exploring research, Khare and Handa state that the evaluation and purchase of brands is based upon whether the brand has congruence with the self-construct of the consumers (2009, p. 68). Last year, a new research was published with as fundamental basis that it has long been believed that consumers consume to enhance or reflect their self-identities (Huang et al., 2012, p. 337), completely in line with what Britt stated 50 years ago (1966, p. 168). This shows that the congruity-theory about self-concept and brand choice is still subject to academic research, getting applied to different contexts and being studied to gain more knowledge about the relationship between the two.

A possible explanation of the existence of this congruity between self-concept and preferred brands is that an individual is 'completed' by various brands in supporting his relevant self-concept (Kleine, Kleine and Kernan, 1993). "Consumers like to use brands to express the type of person they think they are" (Huang et al., 2012, p. 345). This could lead to the conclusion that meanings of various brands are used to present who the owners are, which is their self-concept (Escalas and Bettman, 2005; Thompson and Haytko, 1997). The idea of enhancement of self-identity through the choice for specific brands is supported by more researches (Britt, 1966, p. 168; Dolich, 1969, p. 80; Huang et al., 2012; Ross, 1971, p. 39).

Purchase intentions. If consumers have a preference, and therefore seem to buy brands that are congruent with, or construct their self-concept (Khare and Handa, 2009), this prompts a connection between purchase intentions and self-concept. Next to the link between self-concept and brand choice, it may also be a long ago established truth in consumer behaviour that people purchase one product or another only if these are consistent with, or enhance the perception they have of themselves (Ross, 1971, p. 38). This notion of congruity has been established by previous researches (Birdwell, 1968; Escalas and Bettman, 2005; Khare and Handa, 2009; Landon, 1974; Ross, 1971).

As already mentioned, the first researcher who measured the extent to which self-concept is

congruent with purchase was Birdwell (1968). By measuring perceptions that consumers held about themselves and a product that they actually purchased in the past, he directly established this link. To test this congruity hypothesis in a pre-purchase setting, Landon compared self-concept scores with purchase intentions for a list of products (1974). His study had positive results as well.

In another research, it is stated that the degree of congruence of a brand with the consumers' personality and how he perceives himself is the basis for the evaluation and purchase of brands (Khare and Handa, 2009, p. 68). The evaluation of the brand is perceived to be done on how well it improves the self-image of the consumer. According to another study, how often a brand was purchased in the past and will be purchased in the future is strongly predicted by the connections and identifications that consumers have with a brand (Esch et al., 2006, p. 100). The effect of this link between self-concept and purchase intentions can also have a negative outcome: "A consumer may decide not to buy a product or not to shop at a particular store if he feels that these actions are not consistent with his own perceptions of himself", as says Britt (1966, p. 186).

Besides increased purchase intentions, the congruity-theory could have more benefits for brands. It seems logic that the greater the self-congruency, the greater the emotional attachment to the brand (Khare and Handa, 2009, p. 66). This would entail brand loyalty (Khare and Handa, 2009, p. 66) leading to positive word-of-mouth publicity about the brand.

Brand personalities

Now the congruity-theory is discussed, it is time to look closer at one side of the consumer choice process, being the outcome: The choice for a brand. In the past, researchers did not use one generic construct for this according to one general definition, but did use concepts for similar use in the context, like perception of brands (Birdwell, 1968; Grubb and Hupp, 1968) or preferred brands (Dolich, 1969; Malhotra, 1988; Ross, 1971). However, fifteen years ago, a theoretical framework of the "brand personality construct" is developed by Aaker (1997). It has been established that consumers seem to value brands based upon their self-concept (Khare and Handa, 2009, p. 63) and

it is through the brands' personality that consumers are able to perceive how well the image of the brand fits to their self-concept (Aaker, 1997; Khare and Handa, 2009, p. 64). This is based on the fact that consumers often imbue brands with human personality traits, partly due to advertising strategies like anthropomorphization, personification and the creation of user imagery (Aaker, 1997, p. 347). It is probably what makes the symbolic use of brands possible (Aaker, 1997, p. 347) or even strengthens the symbolic representation, because it assists the consumer in associating with the brand (Khare and Handa, 2009, p. 63).

Brand personality has been considered as an instrument that facilitates consumer self-expression and association (Aaker, 1997; Escalas and Bettman, 2005; Freling and Forbes, 2005, p. 404; Huang et al., 2012; Khare and Handa, 2009, p. 64). Because of the foregoing, *brand personality* is used as a popular metaphor to investigate consumers' brand perceptions (Huang et al., 2012, p. 334). Following from this, the concept of brand personalities might be a useful theory to further investigate the link between brand choice and self-concept. This construct will therefore be used in this research, using the following definition: "Brand personality refers to the set of human characteristics associated with a brand" (Aaker, 1997, p. 347).

A considerable amount of attention in consumer behaviour research has been given to the construct *brand personality* (Aaker, 1997, p. 347; Freling et al., 2011; Huang et al., 2012; Kim et al., 2001). By definition, brand personality is obviously linked to human personality as already mentioned. In the existing literature, all of the attempts to measure brand personality found different dimensions of personality called "the Big Five" (Huang et al., 2012, p. 335). The Big Five are generally accepted to be five dimensions that can be recognized within human personalities, labelled 'extraversion', 'agreeableness', 'conscientiousness', 'neuroticism' and 'openness to new experience'. These resulted from a stream of years of research that was initiated by Albert and Odbert (1936) with their study into personality-descriptive traits.

The first researcher to come up with a theoretical framework of brand personality dimensions is Aaker (1997). She developed a reliable, valid and generalizable scale that measures

these dimensions (1997, p. 347). In this framework, brand personality is treated as a unidimensional construct and the distinct dimensions can be isolated; making it possible to distinguish the different types of brand personalities (Aaker, 1997, p. 348). “The brand personality scale measures the extent to which a given brand possesses any of the personality traits from the five dimensions” (Freling and Forbes, 2005, p. 405). The definition of brand personality helps with understanding of how and when it relates to consumer’s personality and thereby influences consumer preference (Aaker, 1997, p. 347; Sirgy, 1982).

It is argued by Aaker (1997) that the notion of personality differed between the contexts of brands, in consumer behaviour theory, and people, in psychology. However, because the concept of impression formation of real people is applied, Aaker extended brand personality to include associations with both inner and outer human characteristics (Huang et al., 2012, p. 337). An important note is that both brand personality and human personality are forms of an individual’s perceptions (Huang et al., 2012, p. 337). Furthermore, perception of consumers regarding the brand is influenced by their own individual personalities (Huang et al., 2012, p. 338; Khare and Handa, 2009, p. 65). It is suggested that brand personality is not a concept or a theory, but “based upon consumers of the brand”, because the personality of a brand enhances or improves the self-concept of the consumer (Khare and Handa, 2009, p. 64).

By now, brand personality literature has matured to the point that its existence is generally accepted by marketers and now they try to determine meaningful facets of the construct and apply it to different scenarios (Freling et al., 2011, p. 404). As such, brand personality is a tool for building brand equity. The concept of brand personality can help the consumer identify the brand and build brand knowledge and as such, it can be a useful tool in creating strong brands. This is one of the most important goals in brand management (Keller, 2008), both in the short and long term, strong brands result in higher revenue streams (Esch et al., 2006, p. 98). It is generally accepted that consumers store brand associations in a memory-based brand network and unconsciously, these associations are accessed in the decision-making process (Freling et al., 2011, p. 393). Having a strong brand

personality supports the creation of these associations and at the same time, brand personality may be developed through marketing efforts like building brand associations (Khare and Handa, 2009, p. 65).

Benefits of brand personalities. Now the background of brand equity is outlined, more specific benefits of having a favourable brand personality are discussed. From existing literature, the most important entail enhanced brand attitudes (Freling et al., 2011, p. 392), increased consumer preference (Aaker, 1997; Freling et al., 2011; Huang et al., 2012; Sirgy, 1982), and higher levels of consumer trust and loyalty (Aaker, 1997, p. 354; Freling et al., 2011, p. 392). Another of the main benefits of having a favourable brand personality is that purchase intentions of the consumer are greater for that brand (Aaker, 1997; Freling et al., 2011, p. 392; Huang et al., 2012, p. 347). Based on the previously discussed literature concerning brand preferences, a brand personality may be perceived as 'favourable' when it is congruent with self-concept (Ross, 1971).

It has also been suggested that brand personality evokes emotions in consumers (Aaker, 1997; Freling and Forbes, 2005b, p. 150; Huang et al., 2012, p. 347), which relates to one of the aspects of customer-based brand equity (Keller, 2008, p. 60). Having a brand personality that is perceived in a similar way by a target group of consumers may even offer a distinct form of sustainable competitive advantage, since it is believed to be difficult to create and relatively enduring (Freling and Forbes, 2005, p. 410). Furthermore, it provides a basis for product differentiation (Aaker, 1997; Freling and Forbes, 2005; Freling et al., 2011; Khare and Handa, 2009). According to Aaker, having a brand personality is a key way to differentiate a brand in a product category (1997, p. 347). It can also be used to market a brand across cultures (Aaker, 1997, p. 347). It is suggested that a brand personality stimulates and influences consumers' perceptual processing of information (Freling et al., 2011, p. 393). Consequently, it can be seen as a nonphysical piece of product knowledge (Freling and Forbes, 2005, p. 405).

Finally, brand personality assists organizations to devise communication strategies, which strengthen the traits of the brand in the minds of the consumers (Khare and Handa, 2009, p. 64).

Positive traits should be sustained in the presentation of the brand. Utilizing the brand personality can assist in targeting and media selection as well as in the creative execution (Freling and Forbes, 2005, p. 413). For companies, brand personality can also fulfil the function of providing an identity and enabling in managing communications effectively (Khare and Handa, 2009, p. 63).

Even though the existence of a construct as brand personality is widely acknowledged in both literature and marketing (Freling et al., 2011, p. 404), there are also some critical notes to make. As previously discussed, it seems that brand personality is related to favourable advantages, however, support for this assumption is primarily anecdotal and these links have not been empirically tested in an extensive way (Freling and Forbes, 2005, p. 404).

Furthermore, as a counterargument to the symbolic use of brands with purposes as self-identification and enhancement, it is suggested that consumers might simply tend to evaluate brands positively along the dimensions that are part of their own personalities (Huang et al., 2012, p. 345). Another suggestion is that brand personality is not a concept or a theory, but “based upon consumers of the brand”, actually *because* the personality of a brand enhances or improves the self-concept of the consumer (Khare and Handa, 2009, p. 64).

The brand personality scale. The brand personality scale developed by Aaker (1997) has proven to be a useful tool to measure brand personality and for operationalizing the concept for research purposes. Human personalities are commonly accepted to consist of five dimensions called the Big Five. As is the case with human personalities, the brand personality scale yields a five-factor structure. However the dimensions are not the same; only three dimension from the brand personality scale overlap with the Big Five. This is problematic if the scale is used to compare brand with consumer personalities. For their research, Huang et al. started from the assumption that a positive relationship exists between consumer and brand personalities for consumers’ preferred brands (2012, p. 338). From existing literature, they recall that “brand personality is a metaphor used to illustrate what personality a brand would have if it were a person” (Huang et al., 2012, p. 337). Then, it is reasoned that, given the overlap of definitions of human personality and brand

personality, any personality inventory that is good, valid and reliable, should be applicable to brands as well as to people (Huang et al., 2012, p. 337). An extensive study was conducted, resulting in a personality scale that measures both consumer and brand personality, thus making these concepts operationally comparable (Huang et al., 2012). Based on this, the personality scale of Huang et al. (2012) is chosen over the original brand personality scale of Aaker (1997) for the purposes of the current study. A further elaboration on this scale and how it was developed will follow in chapter discussing the methods of this research.

Research posits that the self-concept of the consumer influences his assessment of the brands (Kare Handa, 2009, p. 63). Thus, whether a brand personality is 'favourable' to an individual consumer seems to depend on the congruence between the perceived personality of the brand and the self-concept the consumer holds (Birdwell, 1968; Dolich, 1969; Grubb and Hupp, 1968; Landon, 1974; Malhotra, 1988; Ross, 1971). Concluding; a strong relationship between brand personalities and self-concept seem to exist.

Self-concept

As been said, self-concept has been used a lot in consumer behaviour research. It has been shown to be a useful construct to explain consumer choice (Malhotra, 1988, p. 2). As previously discussed, several studies tested the congruity theory of self-concept and brand preferences (Birdwell, 1968; Dolich, 1969; Grubb and Hupp, 1968; Landon, 1974; Malhotra, 1988; Ross, 1971). It is partly because of this congruity theory that self-concept research can contribute to consumer decision-making research (Sirgy, 1982, p. 297). For the application of self-concept in within these streams of research, it is key that the description of self-image implicitly refers to the *perception* one has about himself (Grubb and Grathwohl, 1967; Khare and Handa, 2009, p. 64). A clear definition of self-concept is given by (Rosenberg, 1979, p.7 IN) Sirgy: "The totality of the individual's thoughts and feelings having reference to himself as an object" (1982, p. 287). This "object" is thus classified as the self. The building of the self starts already in infancy, when a person develops perceptions, feelings,

attitudes and evaluations of himself. As this process continues, it accumulates values and the self becomes a principal value around which life revolves (Grubb and Grathwohl, 1967, p. 24; Grubb and Hupp, 1968, p. 59). For example, it provides us with self-esteem (Grubb and Grathwohl, 1967, p. 24; Khare and Handa, 2009, p. 64).

The self is not only unconsciously developed in infancy, but this is an ongoing process, meaning that the self-concept changes over time. Through new experiences, lessons learned and circumstances, the self-concept is subject to modifications, possibly without the awareness of the concerning individual. Within the construction of the self-concept, engaging in consumption behaviour also plays a role (Escalas and Bettman, 2005, p. 378). As mentioned, this can even be traced back to Belk's statement "we are what we have" (1988, p. 160). Additionally to constructing the self, the preference for and purchase of specific brands is also a way of expressing and enhancing the self (Birdwell, 1968; Escalas and Bettman, 2005, p. 379; Grubb and Hupp, 1968, p. 59; Khare and Handa, 2009; Landon, 1974; Malhotra, 1988, p. 22; Ross, 1971; Schau and Gilly, 2003, p. 385; Sirgy, 1982, p. 287).

The self is seen as a multidimensional construct (Khare and Handa, 2009; Landon 1974; Malhotra, 1988; Ross, 1971; Sirgy, 1982) consisting of the ideal, the actual and the social self. The ideal self-concept is defined as the way one would ideally like to be, the social self is the image that one belief others hold about him and the actual self is how a person actually sees himself to be (Malhotra, 1988; Ross, 1971; Sirgy, 1982). All of these, one more than the other, are used as variables in the existing stream of research relating self-concept to either product choice or brand preference. In this research, the construct of actual self was chosen over the others. This decision was based on the results of previous studies. First, Birdwell (1968) and Grubb and Hupp (1968) used the actual self in their researches. Then Ross tested both the actual and ideal self-concept with brand preferences and concluded the actual self to be more similar to the consumption preference (1971). Furthermore, the differences in image congruence between actual and ideal self was not substantially significant in studies of Dolich (1969) and Landon (1974).

Social media

Nowadays, social media plays a major role in everyday life and is also top of the agenda for many business executives (Kaplan and Haenlein, 2012, p. 59). It is almost imperative to have an online presence and incorporate social media channels into, mainly marketing, practice. Not only may it seem inevitable, the use of social media also offers new opportunities for companies, for example in advertising and customer relationship management. Decision makers and consultants try to identify ways in which firms can make profitable use of different social media applications (Kaplan and Haenlein, 2010, p. 59). They have a rather ample choice for various sorts of social media applications, where blogs, social networking sites, virtual social worlds, collaborative projects, and content communities seem to be the most distinguishable classifications.

A clear definition of what social media is, is given by Kaplan and Haenlein: "Social media is a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of User Generated Content" (2010, p. 61). Even though social media is by now a worldwide generally known phenomenon, the definition given above might require some clarification with regard to two related concepts that are interwoven. Web 2.0 is considered to be the platform for the evolution of social media (Kaplan and Haenlein, 2010, p. 61). The term was first used in 2004, to describe the new way in which software developers and end-users started to utilize the World Wide Web (Kaplan and Haenlein, 2010, p. 61), beyond the static pages of earlier websites. Note that it does not refer to any update of technical specifications. What changed is that content and applications were no longer only created and published by individuals, but instead all users could contribute by continuous interaction, collaboration, and modification. As a result, Web 2.0 is the technological basis on which social media could emerge (Kaplan and Haenlein, 2010, p. 61). Next to this, the sum of all ways in which people make use of social media is referred to as "User Generated Content" (Kaplan and Haenlein, 2010, p. 61). "The term is usually applied to describe the various forms of media content that are publicly available and created by end-users" (Kaplan and Haenlein, 2010, p. 61). A combination of technological, economic, and social drivers

caused these three described concepts to emerge, evolve, and finally become evident in everyday life.

The roots of social media might even be traced back to pre-World Wide Web existence. In 1979, Truscott and Ellis from Duke University created Usenet, one of the oldest computer network communications systems. This discussion system allowed users to post public messages and became distributed worldwide (Kaplan and Haenlein, 2010, p. 60); showing the first signs of the concept of social media. Yet, social media as we understand it today, probably started in 1998 when Abelson and Abelson founded Open Diary. Open Diary was an early website that brought together online diary writers in one community (Kaplan and Haenlein, 2010, p. 60). Around the same time, 'weblog' became a used term and a few years later, social networking sites hit the mainstream (Boyd and Ellison, 2008, p. 216). High-speed Internet access grew fast in availability, adding popularity to the concept of social media (Kaplan and Haenlein, 2010, p. 60).

There are two key elements of social media: Media and social processes (Kaplan and Haenlein, 2010, p. 61). From these two research fields, a set of theories is used to create classifications of different types of social media. One of those theories relating to the social dimension of social media is the concept of self-presentation. This states that in any type of social interaction, people have the desire to control the impressions other people form of them (Goffman, 1959). According to Kaplan and Haenlein, this is partly driven by the wish to create an image that is consistent with someone's personal identity (2010, p. 62). This line of reasoning can be extended to someone's online presence. A possible reason for people deciding to create a personal webpage on a social media platform is the wish to present themselves in cyberspace (Schau and Gilly, 2003). Such a presentation is usually done through self-disclosure; that is "the conscious or unconscious revelation of personal information that is consistent with the image one would like to give" (Kaplan and Haenlein, 2010, p. 62). The theories of self-presentation and self-disclosure can be related to self-concept as discussed in the previous section.

Social networking sites

Through combining both dimensions, a classification of social media has been made by Kaplan and Haenlein (2010, p. 62). From the different types of social media, social networking sites score high compared to low regarding self-presentation and self-disclosure (Kaplan and Haenlein, 2010, p. 62) and are therefore most suitable to use for a research with self-concept as one of the main topics. A clear definition of the web-based services (Boyd and Ellison, 2008, p. 211) known as social networking sites is given by Kaplan and Haenlein: “Applications that enable users to connect by creating personal information profiles, inviting friends and colleagues to have access to those profiles, and sending e-mails and instant messages between each other” (2010, p. 63). A ‘profile’ is a unique page where one can “type oneself into being” (Boyd and Ellison, 2008, 211). Users of social networking sites are mostly involved in two kinds of activities: *creating* new content by editing their profiles, by adding pictures, writing notes, uploading music or videos, and *consuming* content that others create, by looking at pictures, reading notes, downloading music or videos (Trusov et al., 2010, p. 643).

The history of social networking sites. The first notable social networking site, Classmates.com, was launched in 1995 and still exists as a directory of high schools and class lists, enabling to find, reconnect and stay up with people who went to the same school (Classmates, 2013; Trusov et al., 2010, p. 643). In the beginning, only surfing the network to affiliate was possible; for years, people could not create profiles or list friends. It was SixDegrees, launched in 1997, that was the first to combine these features (Boyd and Ellison, 2008, p. 214) and is therefore widely regarded as the first popular social networking site. It got its name from “six degrees separation”: The theory that anyone can be connected to any other person in the world through a chain of acquaintances that has a maximum of five intermediaries. SixDegrees attracted millions of users, promoting itself as a tool to help people connect with and send messages to others (Boyd and Ellison, 2008, p. 214). However, the service closed in 2001, failing to become a sustainable business, maybe because “SixDegrees was simply ahead of its time”, as founder Andrew Weinreich said (Boyd and Ellison,

2008, p. 214). In the meantime, “community tools began supporting various combinations of profiles and publicly articulated friends” from 1997 to 2001. Examples of these sites adding new features are AsianAvenue, BlackPlanet, Cyworld, LiveJournal, LunarStorm, and MiGente (Boyd and Ellison, 2008, p. 215).

A new generation of social networking sites emerged in 2001 with the launch of Ryze.com (Boyd and Ellison, 2008, p. 215). Now, the focus was business-oriented since Ryze links business professionals. “Ryze helps people make connections and grow their networks. You can network to grow your business, build your career and life, find a job and make sales” (Ryze, 2013). As a social complement to Ryze and to compete with profitable online dating site Match.com, Friendster was launched in 2002. The aim of Friendster was to help friends-of-friends meet, based on the assumption that this would lead to better romantic partners than would strangers (Boyd and Ellison, 2008, p. 215). Rapidly, Friendster grew to millions of users and many success stories were written about the social networking site. However, as the popularity of Friendster increased, the site encountered various technical and social difficulties, causing users to leave. Together with the emergence of competing sites like Windows Live Spaces, Yahoo! 360 and especially Facebook, Friendster eventually ‘died’ and sometimes is even called “one of the biggest disappointments in Internet history” (Boyd and Ellison, 2008, p. 215; Chafkin, 2007). Nevertheless, in 2011 Friendster repositioned itself into a social gaming site and currently continues existence. The alienated users of Friendster found a new platform in MySpace, the next big social networking site that was able to grow fast because of this. Gradually, music became the emphasis of MySpace with bands creating profiles on the site, attracting their fans who wanted to support them and desired their attention (Boyd and Ellison, 2008, p. 217). Differentiating even further, MySpace regularly added features based on user demand and allowed users to personalize their pages. In 2006, MySpace surpassed Google as the most visited website in the United States and between 2005 and 2008 was the most visited social networking site in the world, until Facebook took over.

Impact of social networking sites. After all these developments, at some point social

networking sites grew to a global phenomenon. In specific regions or countries, different sites were popular, reflecting a digital landscape of virtual local markets. Subsequently, the process of globalization started again with the expansion of Facebook. According to Patterson, the advent of social networking sites changed the general approach to marketing communications from “we talk, you listen” to “you talk, we listen” (2012, p. 527). Because of new channels offered by social media, possibilities for interaction were expanded and consumers gained much more power and control (Kietzmann et al., 2011, p. 242). As clearly elaborated on by Patterson, consumers are “no longer passive recipients but fight back” (Patterson, 2012, p. 528). Another consequence of the new opportunities for interaction, is that consumer involvement with brands could increase. This is described later on.

Also, there is something to win for the companies behind the social networking sites, since they can earn revenues. First, by just showing advertisements to visitors and additionally by being paid for each click or action taken by visitors in response to advertisements they can make money from the advertising companies (Trusov et al., 2010, p. 643). Second, users of the sites can be asked to pay fees for several services, from subscription to access to special features. Furthermore, the advertising companies are hoping to get positive results from their investment. Besides the placement of advertisements, there are more ways in which companies can obtain benefits by making use of social networking sites. For starters, with the use of these sites companies can support the creation of brand communities (Kaplan and Haenlein, 2010, p. 64; Muniz and O’Guinn, 2001). Also as a distribution channel and for providing information to consumers, the sites are valuable (Kaplan and Haenlein, 2010, p. 64). With the use of social networking sites for communications, companies can engage in the direct feedback loop (Patterson, 2012, p. 527) and thereby, engendering a direct relationship with their customers can be a goal of becoming active (Patterson, 2012, p. 527). Finally, it is already mentioned that social networking sites can be an interesting research context, which is also relevant to companies. Marketing research is of crucial importance to companies if they want to gain insight in the consumers’ wants and needs and to help managers

make better decisions (Iacobucci and Churchill, 2010, p. 3).

Self-expression on social media. As said, one of the key reasons for people to create a personal profile on a social networking site is to present themselves online (Kaplan and Haenlein, 2010, p. 62; Schau and Gilly, 2003, p. 394). Social networking sites offer consumers the possibility to construct “digital collages” to represent and express their self-concepts online (Boyd and Ellison, 2008, p. 219; Schau and Gilly, 2003, p. 386). This creates an interesting research context for investigating processes of self-presentation (Boyd and Ellison, 2008, p. 219; Schau and Gilly, 2003, p. 387). According to Schau and Gilly, self-disclosure is easier in digital environments because the pressure of social desirability is less than outside the virtual world and following from this, it may allow for more self-expression (2003, p. 388). Additionally, constructing a digital identity enables “to express latent and nested identities and to more fully disclose aspects of the self that are difficult to represent physically” (Schau and Gilly, 2003, p. 388). Furthermore, applying self-presentation theories to social networking sites, the primacy of possessions is reduced, resulting in a “freer form of self-presentation”, making it possible to “tap into consumers’ deeper attachments to products and brands” (Schau and Gilly, 2003, p. 388).

Where in real life, physical products and brands are used as social stimuli to construct and express the self, on the web this is done through digital association (Schau and Gilly, 2003, p. 396). On different social media sites, it is possible for users to associate brands with themselves. For example, on LinkedIn and Twitter the option to ‘follow’ brands active on the sites is incorporated and Facebook has a ‘like’-button on pages belonging to brands. On most social media sites, the brands that users associate themselves with through these various mechanisms are then displayed on their profile. Therefore, the use of brands on social media adds depth to the digital selves of consumers (Schau and Gilly, 2003, p. 397).

To an assumed audience, impressions of the self are constructed and managed without any financial or physical constraints (Schau and Gilly, 2003, p. 397). It is an interesting notion that even if an individual is not able to afford a brand in real life, on social media sites it takes just one click to

add the brand to your profile. This leads to one fundamental question about social networking sites: Do profiles reflect accurate impressions of profile owners? (Back et al., 2010, p. 372). As discussed in the previous section, self-concept is a multi-dimensional construct, which is also applicable to the digital self. It may seem easier on an online platform to create and communicate an ideal self, because of the absence of financial and physical constraints and the control people have over what is shown on their profile. However, there is also the argument that social networking sites are an extended social context in which one's actual self is expressed through the integration of various sources of personal information (Back et al., 2010, p. 372). With regard to Facebook profiles, Back et al. have researched the *idealized virtual-identity hypothesis* versus the *extended real-life hypothesis* (2010). The first proposes that Facebook users do not reflect their actual personality on their profile, but instead idealized characteristics are displayed (Back et al., 2012, p. 372). The latter predicts a contrasting view, being that social networking sites are used to communicate the real personality of profile owners (Back et al., 2012, p. 372). The results of their research were consistent with the second hypothesis and therefore it is assumed that Facebook profiles reflect actual personality (Back et al., 2012, p. 373). Based on this, actual self-concept is used in the current study as well.

Taking into consideration everything said so far, it would be interesting to see whether the brands that a person adds to his profile on a social networking site are somehow a reflection of his personality. A consecutive question relates to the topic of the opportunities for the brands. It has been established by other researchers that people purchase brands that help construct their self (Landon, 1974; Ross, 1971). And if people associate themselves with brands on social media to construct their self, does it also mean that people buy those brands? Up to date, there is no academic research into the benefits that brands could obtain by having a profile on social media.

Involvement. As mentioned above, the new opportunities for interaction could also lead to increased involvement of the consumers. It is reasoned that with more interaction with brands on social networking sites, someone's involvement with the brands increases. It is generally believed that involvement with a brand leads to increased purchase intentions. Since consumer involvement

seems an interesting topic within the context of social networking sites, the lack of academic research regarding this is surprising. So far, mainly research in consumer involvement in online advertising has been undertaken, leaving a rich area of more research opportunities.

In the early years of computer-mediated environments, user involvement was already an important term and an ingredient of research. Though the environments have revolutionarily changed, the same definition of *user involvement* still seems relevant: "A subjective psychological state reflecting the importance and personal relevance of a system to the user" (Barki and Hartwick, 1989, p. 53). In the definition, a 'system' seems to be applicable to information systems as well as social networking sites and several other computer-mediated environments. In the past, various researches trying to gain insight into user involvement were done, however this appeared to be difficult. Theoretical, methodological and measurement problems caused the understanding of the construct to remain mostly descriptive (Barki and Hartwick, 1989, p. 53).

With the emergence of social networking sites and the offerings of these as a research context, it seems relevant to apply the construct of user involvement again and investigate this in the new context. User involvement with social networking sites could relate to the amount of personal information revealed, time spent on the site, number of pages viewed (Trusov et al., 2010, p. 643) and also to the occurrence of activities such as posting content. For social networking sites, the driving force of its vitality and attractiveness is the digital content, which is almost entirely user generated (Trusov et al., 2010, p. 644). Beyond periodic updates of features and design elements of the site, the firm owning a social networking site cannot do much to attract traffic (Trusov et al., 2010, p. 644). The users of a site do not create content equally, giving rise to the concept of 'influential users' which is researched by Trusov et al. (2010).

In the current study, these influential users are linked to user involvement, since being influential and being involved seem to be closely related. As mentioned above, the activity of posting content on social networking sites can be an indication of user involvement. Since deploying commenting and sharing as variables is of particular interest in this research, in the next chapter is

explained how both commenting and sharing on Facebook can be seen as activities displaying involvement and how this relationship is tried to be shown with an explorative study.

Theory

With the rise of social media, a valuable new research context came into existence (Boyd and Ellison, 2008, p. 219; Schau and Gilly, 2003, p. 387). Research articles have shown how everyday practices are reflected, supported and altered on social networking sites, especially with respect to how people present themselves (Boyd and Ellison, 2008, p. 224). Therefore, for studying processes of self-presentation, social networking sites constitute an appropriate platform (Boyd and Ellison, 2008, p. 219). The fact that participation on these sites leaves online traces (Boyd and Ellison, 2008, p. 224) facilitates the research opportunities even more. The naturalistic behavioural data sources provided by social networking sites (Boyd and Ellison, 2008, p. 220), as for example profiles and comments, add to this offering.

Since social networking sites resemble a contextual framework with comparable aspects to 'real life', it would be interesting to see whether the congruity theory of self-concept and brand preferences also holds in the virtual world of social media. Several studies have proven the existence of congruity between brand choice and self-concept (Birdwell, 1968; Dolich, 1969; Grubb and Hupp, 1968; Huang et al., 2012; Khare and Handa, 2009; Landon, 1974; Malhotra, 1988; Ross, 1971), but this was never applied to social media yet. In the congruity theory, the need for expressing and presenting the self-concept lies on the basis (Ross, 1971) and this is exactly one of the major possibilities offered by social networking sites (Boyd and Ellison, 2008, p. 219; Schau and Gilly, 2003, p. 386). Wanting to present themselves in cyberspace is even one of the most important reasons for people deciding to create a personal webpage (Kaplan and Haenlein, 2010, p. 62; Schau and Gilly, 2003, p. 394).

It is recalled that for expressing the self on social networking sites, brands might play a role. Instead of using physical products and brands, digital association with these is a way to construct the self on the web (Schau and Gilly, 2003, p. 396). How this digital association is done differs per social media site, for example on LinkedIn and Twitter you can follow brands and on Facebook, it is done by clicking the like-button on the specific page of a brand. The brands on the social media profile of an

individual add depth to the digital self of this person (Schau and Gilly, 2003, p. 397). Because this association with brands is easily done on the platforms, consumers might have more freedom to express their identities online (Schau and Gilly, 2003, p. 387), as a result of which consumers' values may be exhibited more clearly on a personal social media profile than in real life.

As explained, self-concept is mainly dividable in two important dimensions: Actual and ideal self-concept. Both of these were used as variables in the existing stream of research relating those self-concepts to product choice or brand preference. For Facebook as a specific research context, Back et al. tested the *idealized virtual-identity hypothesis* versus the *extended real-life hypothesis* (2012). The latter was consistent with the results of their research and this led to the conclusion that Facebook profiles reflect actual self-concept (Back et al., 2012, p. 373). Consequently, for the current research the actual self-concept was measured to test for congruity with the personality of a brand.

Supporting this decision, more research found that "the relationship between actual self and brand choice outperforms the relationship between ideal self and brand choice" (Huang et al., 2012, p. 338). The construct of actual self was also chosen over ideal self in the studies of Birdwell (1968) and Grubb and Hupp (1968) or concluded to be more similar to the consumption preference (Ross, 1971). Furthermore, the differences in image congruence between actual and ideal self, was not substantially significant in studies of Dolich (1969) and Landon (1974).

Taking together the theory as described above, a comparison between the perceived self-concept and the perceived brand personalities of associated brands on someone's social networking site profile would be interesting. Following from the previous, the research question is whether the brands that social media users associate themselves with on their profiles are a true reflection of the self-concept of that person.

Hypothesis 1: Self-concept is congruent with perception of the brand personalities of the brands that consumers associate themselves with on online social media.

For the associations with brands that consumers make, Facebook 'likes' will be used. In a previous research, Facebook likes were already used for an analysis of social media profiles. As mentioned, this mechanism is used to express positive associations with any sort of content that can be posted on Facebook. Facebook likes are easily accessible digital data records of behaviour (Kosinski et al., 2013, p. 1), representing a generic class of digital records (Kosinski et al., 2013, p. 1).

To test if the assumed congruence between brand personalities of brands associated with on social media and self-concept actually has any positive effect for brands, the purchase intentions are incorporated in this research. The congruence between a brand and the consumers' self-concept is the basis for the evaluation and purchase of brands (Khare and Handa, 2009, p. 68). As been stated, a brand personality enables the consumer to perceive how well the brand fits with his self-concept (Aaker, 1997; Khare and Handa, 2009, p. 64). If a brand enhances the self-concept of someone, purchase intentions for that brand are higher (Birdwell, 1968; Escalas and Bettman, 2005; Khare and Handa, 2009; Landon, 1974; Ross, 1971). This is the link between self-concept and purchase intentions established by previous research. It is studied here whether the same causalities apply for the alleged congruence between the self-concept of an individual and the perception of a brand he associates himself with on social media.

It is reasoned that a better fit increases purchase intentions more than a lesser fit. Or in other words: The more congruity between self-concept and the perceived brand personality of a brand that the individual associates with on social media, the higher the purchase intentions for that brand. This relation has not yet been tested in other research, making it an interesting extension of the current study. Resulting from the test for the first hypothesis, is a so-called "distance measure", that indicates the degree of congruity between a consumers' personality and the perceived brand personality. For each individual, the difference between self-concept and the brands' personality is therefore reported as the "personalities distance". Using this data, it is tested if the existing congruity has any influence on purchase intentions, suggesting the following:

Hypothesis 2: A smaller personalities distance between self-concept and perception of the brand that the consumer associates himself with on online social media, has a positive influence on purchase intentions.

This is an addition to testing the congruity theory on social media. If the congruency exists for brands that consumers associate themselves with on social media, it is interesting to see if this results in a measurable effect, being purchase intentions. Since associating with a brand on social media is a way of expressing brand attachment and this in turn, is a key antecedent for future purchases (Esch et al., 2006, p. 103), social media seems like an interesting new context wherein the theory could be tested.

Besides associating with a brand, people can also have interaction with brands on social media sites by replying or commenting on content the brands post. It is suggested that the activity of commenting shows a higher level of involvement than associating with the brand on social media, because it is a more active way of interacting. Compared to only clicking a like-, follow- or subscribe-button, an act that can be executed relatively passive, commenting requires some thinking about what to type. It is argued here, that if someone engages with the brand through commenting on content posted by the brand, involvement of that person with the brand is higher. Put differently, commenting might be seen as an operationalization of involvement on social media. This makes it possible to test whether involvement on social media has any influence on purchase intentions. According to the amount of comments an individual places, his involvement on social media would be higher. Then, to test the relationship between involvement on social media and purchase intentions, it is stated that:

Hypothesis 3: If participants are more involved with a brand on online social media, this has a positive influence on purchase intentions for that brand.

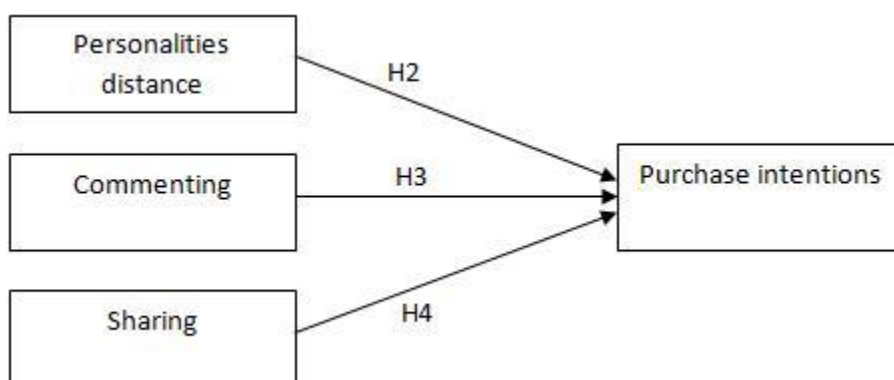
Besides commenting, sharing content is also a way of interacting in social media. Users share posts because they want to converse, build relationships (Kietzmann et al., 2011, p. 245) or just

spread the word of something they find interesting. The latter is again related to expressing the self on social media. The shared post will be broadcasted on someone's profile and is then visible for a public ranging from someone's listed friends to everyone active on the concerning platform, depending on the privacy settings of the owner of the profile. By sharing a status or for example an article about a brand, it shows that somehow a person is interested in, or cares about this brand. The display of shared content on someone's profile is another cause that has digital association as a consequence, just as is the case with liking pages.

Implicit in sharing content is at least some level of involvement. Therefore, additional to commenting, sharing is also seen as a variable to operationalize involvement on social media. Following the same reasoning as with commenting, purchase intentions might be influenced by the activity of sharing. It is proposed that:

Hypothesis 4: Sharing more content from a brand on social media has a positive influence on purchase intentions for that brand.

These last three hypotheses result in the empirical model below.



Figuur 1. The empirical model.

Finally, the third and fourth hypotheses raise the question which of the two social media activities drives purchase intentions more: Commenting or sharing? In the theory above, both are reasoned to be a form of someone's involvement on social media. Because commenting and sharing

are different in nature, one of the activities might be a better indicator of the level of involvement and thus have a greater influence on purchase intentions. This leads to the last hypotheses:

Hypothesis 5a: Commenting has a higher influence on purchase intentions than sharing.

Hypothesis 5b: Sharing has a higher influence on purchase intentions than commenting.

Now that the theory leading to the hypotheses is explained, the next section will describe the methods used to test the hypotheses.

Methods

In this chapter is more precisely described what information was necessary for testing the hypotheses, together with the methods for collecting this data. All the measurement instruments that are used and the resulting variables from this are discussed. The data analyses are also described, but the results of the applied methods will follow in the next chapter.

Data

Procedure. To answer all the research questions, data about both the self-concept of individuals and their perception of the personalities of a brand they associate themselves with on social media, plus the purchase intentions for this brand and information on their interaction on social media with the brand was needed. It was chosen to use Facebook, which is the biggest social networking site worldwide, as the context for gathering the data and testing the hypothesis. Primary data was obtained through questionnaires, in order to have data specific to the research questions. One survey was drafted, gathering all the needed data. The survey was spread via the platform that has a leading role in the research: Facebook. Since most of the data is actually about Facebook, this social media network is assumed to be an appropriate platform for collecting the data. More importantly, spreading surveys on the social network site is for free, easy and a wide audience could be reached.

Facebook

The focus for executing this study is on the number one social networking website in most countries (Patterson, 2012, p. 528), with over 1 billion monthly active users: Facebook. The mission of Facebook is “to make the world more open and connected” (Facebook, 2012). As of July 3, 2013 Facebook.com was globally ranked first relative to other sites, calculated based on a combination of average daily visitors and pageviews (Alexa, 2013).

Founded in 2004 by Mark Zuckerberg, Facebook started as a niche community for students at

Harvard University. To sign up, a Harvard.edu email address was required, keeping the network closed. Over the years, it gradually expanded by adding support for other universities and then for before high school students as well. Eventually, in September 2006, Facebook was opened to “anyone aged 13 and over”. At the moment of this writing, Facebook is globally ranked number 1 as the site with the highest combination of visitors and pageviews (Alexa, 2013).

The reasons for Facebook growing so popular, leaving most other social networking sites behind, are still unclear. However, it has been researched *why* people use Facebook and the answer to this question is mainly because it “facilitates social interaction” (Hart et al., 2008, p. 473). To this social interaction belong to keep in touch with people and to communicate with friends, but also just for the enjoyment people use Facebook (Hart et al., 2008, p. 473). Next to social interaction, there is another important motive to be active on Facebook which is of relevance to this research: It provides a platform for self-expression or identification (Back et al., 2010; Hart et al., 2008, p. 473; Schau and Gilly, 2003, p. 399).

On a Facebook profile, there are various options to create a presentation of the self. For starters, a profile picture that is visible for everyone can be chosen. This does not necessarily need to be an accurate picture of yourself, making room for constructing an image of your own choice. Besides this literal image, there are other things to find on someone’s Facebook profile that help create a reflection of this person. There are different types of activities that, directly or indirectly, are a form of self-expression. Among those activities are announcing status updates, posting publicly broadcasted messages on someone’s wall, commenting on any news item and sharing posts from others. The content of a ‘post’ is not limited to text, but can also be a link, a picture, or other uploaded content.

Self-expression on Facebook. Furthermore, another possibility is to display things that you like on your profile. This is literally done by clicking a “like-button” on the concerning Facebookpage. This option is incorporated in the website since 2010 (Facebook, 2012) and is simply a mechanism to express positive associations (Kosinski, 2013, p. 1). There is an innumerable amount of pages that can

be liked, ranging from pages belonging to companies or artists in several industries, pages about books, places, games, and so on. All the principal themes of pages can be seen as brands, resulting in the premise that a brand on Facebook can be anything (Patterson, 2012, p. 532), just like brands in real life (Keller et al., 2012). The liking of brands on Facebook establishes some kind of 'digital relationship' between the user and the brand (Patterson, 2012, p. 532). Reasons why consumers would like pages entail receiving up-to-date information, being able to enjoy promotions or join in contests (Patterson, 2012, p. 532). Besides this, the purpose of self-expression as mentioned is also a motive for liking pages.

Sample. The participants were notified of the research through Facebook. The researcher posted a link to the survey in her own Facebook status, asking for help with the research without stating the purposes. All the subjects in the study participated on a voluntary basis; no form of any compensation was offered. The respondents completed the survey anonymously and at their own convenience. The link was also shared by others, ultimately resulting in 150 respondents. With the first look at all the data, 13 surveys turned out to be empty and were immediately deleted from the data set. Further inspection revealed that 17 surveys were incomplete and could not be used for testing any of the hypotheses, and were therefore deleted as well. The remaining 120 respondents were considered to represent a sufficient sample for the current research. Of these participants, 67 were female, 50 were male and 3 did not specify their gender. Of the respondents, 82% is between the 18 and 29 years old and most of them are Dutch, but 14 respondents originate from several other countries.

Measurement instruments

Self-concept and brand personalities. For self-concept and the brand personalities, the same adjectival scales were used to measure both concepts. Previous research studies already used such scales to measure both self-concept and brand perceptions (Dolich, 1969; Birdwell, 1968; Grubb and Hupp, 1968; Ross, 1971). These are relatively old studies, and over the years literature, and with that

knowledge, became more extensive. One of the enrichments in the marketing field considered particularly important for this research, is the development of the theoretical framework of the brand personality construct (Aaker, 1997). As described in the literature review, this construct is regarded as a valuable tool for the purposes of measuring brand perceptions and thus for this research. The Brand Personality Scale of Aaker (1997) was the first scale that made the concept of brand personalities measurable. Three brand personality dimensions from her scale relate to the commonly accepted Big Five human personality dimensions (Aaker, 1997, p. 353), but the other two differ from any of these. For this reason, it would not be valid to use the Brand Personality Scale for measuring both human and brand personalities. Fortunately, continued on this theoretical foundation, another research focussing on making the two operationally comparable resulted in the scale that is used in the current study (Huang et al., 2012).

Huang et al. developed a new scale that allows for the measuring of brand personalities and consumer personalities by the same means, thus making these two operationally comparable (2012, p. 342). On the basis of their study was the definition of brand personality as being “a metaphor that is used to illustrate what personality a brand would have if it were a person” (Huang et al., 2012, p. 337). It is implied that both personality of a person and brand personality are forms of an individual’s perceptions (Huang et al., 2012, p. 337). The following reasoning, given the overlap of the definitions of personality and brand personality, was that “any good, valid and reliable personality inventory should be able to be applied to brands as well as to people” (Huang et al., 2012, p. 337). For the measuring of both brand and consumer personality, Huang et al. started with the inventory of the 40 Big Five mini-markers selected by the research of Saucier (1994). This set of mini-markers was demonstrated to be reliable and valid for an abbreviated inventory from the 100 personality items developed by Goldberg (1990) for the Big Five factor structure (Saucier, 1994). Huang et al. executed a pilot test to face validate the measure, with positive results (Huang et al., 2012, p. 341).

Subsequently, exploratory factor analysis and confirmatory factor analysis were performed to examine whether brand and consumer personality could be measured by the same means and if

the same dimensionality was generated (Huang et al., 2012, p. 341). After separate purification of the scales were unsuitable items were deleted, the result was a 19-item scale with “factor loadings, composite reliability, average variance explained, Cronbach’s alphas and various model fit indices all reasonably good” (Huang et al., 2012, 341). In a next stage of their research, it was tested if product category had a moderating effect on the relationship between consumer and brand personalities (Huang et al., 2012, p. 338). When it was proven that no such effect exists, it was stated that the abridged personality scale was stable across product categories (Huang et al., 2012, p. 347). Not only showed the new scale of Huang et al. (2012) that personality and brand personality are operationally comparable, also direct comparison between consumer and brand personalities is facilitated. This is because their brand personality scale is stable across contexts and the same goes for consumer personality measures (Huang et al., 2012, p. 346). Thus, theoretical appropriateness of this comparison is increased (Huang et al., 2012, p. 346). Since Huang et al. (2012) ensured the reliability and validity of the scale, it was extracted without any modifications for the purpose of this research.

With the personalities scale, data is gathered using a modification of the semantic differential method (Iacobucci and Churchill, 2010, p. 241). The semantic differential is a valid tool for measuring an individual’s perceptions of himself and an object (Iacobucci and Churchill, 2010, p. 241). This method involves repeated judgments of a concept or object against pairs of descriptive polar adjectives along a seven-point scale (Iacobucci and Churchill, 2010, p. 242). However, instead of using opposite-meaning adjectives, in the personalities scale only one word was used to describe the characteristics (Huang et al., 2012). The respondent was asked to indicate the degree of applicability of each trait, ranging from 1 (*not at all descriptive*) to 5 (*extremely descriptive*). First, the scale had to be accomplished for the respondent his own personality, measuring the actual self-concept, and subsequently for the perceived personality of one brand that the participant had to choose from his likes on Facebook. This resulted in each of the personalities being described by 19 values for all the different traits.

Personalities Distance. The personalities scale using the semantic differential method

produces quantitative data with which a distance measure can be calculated. Based on the study of Birdwell (1968), who tested image congruence, the generalized distance technique of solid geometry was used. This computes a Euclidean distance measure to test the congruity between the individual's self-concept and brand personalities. The Euclidean distance is the distance in multidimensional space (StatSoft, 2013). This distance measure is given by:

$$D_{ie} = \sqrt{\sum_i d_{ie}^2}$$

Where D_{ie} is the linear distance between the points in the semantic space representing concepts i , self-concept, and e , perceived brand personality, and d_{ie} is the algebraic difference between the coordinates of i and e on the same item of the scale. Summation is over the k items on the scale. A D-value of zero indicates complete congruity or complete perceptual agreement. The larger the D-value becomes, the more divergence there is from congruity (Birdwell, 1968, p. 80), this means that it is an indication of the distance between consumer and brand personality and therefore the results are reported as the 'personalities distance'. The possible outcomes of the D-value are dependent on the range of the scales that are used and the number of items included. In this study, the minimum value is determined to be zero and it was calculated that the maximum value is 21.794. The mean of the personalities distance turned out to be 5.26 ($SD = 1.68$) for the gathered data set.

Purchase intentions. Furthermore, data about the purchase intentions for the same brand as used to test the first hypothesis needed to be collected. In several items, the subjects were asked questions related to their purchase intentions for the brand they chose. For example, on a five-point Likert scale they had to indicate the likelihood that they would buy the brand in the next year, but also closed questions were included. Both the questions and answer categories are consistent with those reported in the literature concerning previous studies into purchase intentions (Esch et al., 2006, p. 101; Freling and Forbes, 2005, p. 407; Khare and Handa, 2009, p. 66; Landon, 1974, p. 46).

For the analysis the six different items had to result in one value indicating the purchase intentions of each individual. For four items the answers were scaled from 1 to 5 and two were

closed “yes” or “no” questions. Enabling the calculation of one value based on these six items, some variables were reversely coded, resulting in 1 being the lowest possible indication for purchase intentions and 5 the highest. For the closed questions, after recoding “yes” was assigned a score of 5 and “no” was scored as 1.

Then, it was tested if the six different questions actually measure the same construct, being purchase intentions. A principal component analysis resulted in two components extracted from the data, meaning that the questions do not have one underlying dimension, but two. The first component explained 40% of the variance and the second another 21%. When considering the questions again, it was determined that the two questions belonging to the second component, were actually more about preference of the brand over other brands and frequency of usage of the brand instead of purchase intentions. The remaining four questions belonging to the first component seemed more coherent with each other than the initial six questions. Therefore, it was decided to leave the two questions from the second component out of the measure for purchase intentions.

For the four remaining items, a reliability analysis was undertaken. With $N = 118$ valid cases, Cronbach’s $\alpha = .563$, indicating poor reliability. To see if this could be improved, the values in the column labelled *Cronbach’s alpha if item deleted* were examined, see table 1. These values reflect the change in Cronbach’s α if a particular item is deleted and when the deletion of an item increases Cronbach’s α , then reliability is improved. As can be seen in the table, the value for Cronbach’s α is substantially greater if item 4 would be deleted. With looking at the questions again, the fourth item was about whether the brand was purchased in the past, while the first three were specifically about future purchase intentions. It was decided to delete the fourth item, to increase the reliability of the measure for purchase intentions and because it seemed that the first three questions had the best fit with the construct.

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Purchase intentions 1	13,64	3,909	,593	,422
Purchase intentions 2	13,69	3,735	,596	,395
Purchase intentions 3	13,81	4,090	,276	,545
Purchase intentions 4	13,98	1,829	,345	,718

Table 1. Reliability analysis.

Then the sum of the three values was taken, measuring the purchase intentions of each individual on a scale where 3 is the minimum and 15 is the maximum score. For the data set, the mean of the purchase intentions is 13.92 ($SD = 1.43$).

Facebook behaviours. Additionally, the data set must be complemented with information on someone's behaviour on Facebook, specifically regarding commenting and sharing, in order to test the rest of the hypotheses. In the existing literature, no other research using these activities as variables was found. It seems plausible that nothing is published yet and studies using commenting and sharing are still in progress, since Facebook is open for the world for only five years. As an experienced, frequent Facebook user with good knowledge about the social networking site, the researcher constructed items that would give insight into the behaviour on Facebook, the interaction with brands on the platform and at last the frequency of commenting and sharing related to the brand that was chosen at the beginning of the survey. To face-validate this section (Babbie, 2010, p. 154), other experienced, frequent Facebook users who can be seen as experts on this topic, were used as a control group in a pilot test. They were asked for their opinion and suggestions, which were incorporated and resulted in an improved questionnaire on Facebook behaviour.

Respondents were asked how frequently they commented on a post respectively shared a post of the brand they had chosen at the beginning of the survey. For the same brand as for which purchase intentions were measured, involvement on Facebook was measured resulting in two

independent variables named commenting and *sharing*, ranging from 1 (*no involvement*) to 5 (*high involvement*).

Data analysis

The sample size of 120 Facebook users is considered to have sufficient power to detect significant results. This number of respondents should be enough to perform the statistical methodology of the generalized distance technique and for a regression analysis with three independent variables. The complete set of data has missing values, excluding those cases for certain analysis. There are 11 missing values for the total amount of personality traits, leaving 109 personalities distances to be calculated. For both the variables sharing and commenting were 3 missing values and in the data regarding purchase intentions 2 participants had a missing value, resulting in 118 values for the purchase intention variable. Because there are only a few missing values on all included variables, it is assumed that their absence did not influence the analyses in a great extent.

Personality congruency. Using the software program Excel, the formula for the distance measure was applied to the data, producing the personalities distances, which are an indication of the congruence between the self-concept of the individual and the perceived brand personality of the chosen brand. Unfortunately, no other research using the D-measure had the same range of possible outcomes and these studies used it in a slightly different way. It has not been established yet how the resulting D-values should be interpreted, since this is different for each specific research. Because of these difficulties surrounding the interpretation of the personalities distance, this seemed not to be a reliable measure for testing the first hypothesis and therefore a correlation between self-concept and brand personality was computed. Just as for all the other following analyses, this was done using software package "IBM SPSS Statistics".

A factor analysis was executed to see if this would result in the five dimensions of the Big Five, because it seemed logic to use those as a basis for the correlation. Since the factor analysis did not give a satisfactorily outcome for these dimensions, a correlation per item was seen as the most

appropriate option for testing the congruity hypothesis for self-concept and perceived brand personality of a brand liked on Facebook. Before executing the correlation test, it was determined whether a parametric or a non-parametric would be appropriate for the data. Some of the items were clearly normally distributed, but this was not as clear for other items. It was decided to do both Pearson's correlation test and Spearman's correlation test and compare the results.

Influence on purchase intentions. All other hypotheses are tested using a multiple regression analyses with purchase intentions as the dependent variable. Using the forced entry method, the personality distance, commenting and sharing were simultaneously entered to the model as the predictors. The same model is used to control for the effect of the others, thus taken into account the possible relation between commenting and sharing. Another advantage of putting the three independent variables into one regression model is that error inflation will be absent. Age and gender were used as control variables, meaning that in the first model, these were added as covariates and in the second model the three predictors were added. Now, in the second model is controlled for the effects of age and gender. The unstandardized regression coefficients with their 95% confidence intervals are provided, a significance level of .05 is used. If the commenting and sharing variables appear to be significant indicators of purchase intentions, standardized regression coefficients will be used to indicate the relative importance of both predictors. The equation of the used regression model is given by:

$$\text{Purchase intentions} = \beta_0 + \beta_{\text{PersDistance}}x_{\text{PersDistance}} + \beta_{\text{Commenting}}x_{\text{Commenting}} + \beta_{\text{Sharing}}x_{\text{Sharing}} + \epsilon$$

Results

Preceded by general information on the behaviour on Facebook of the participants, the results of the analyses for testing the hypotheses are reported. A discussion of the results will follow in the next chapter.

Facebook usage

Of the 117 participants, 18.8% indicated that they visited Facebook every hour, 66.7% checked Facebook several times a day and another 10.3% also goes to the site every day. This results in 95.8% of the respondents visiting Facebook on a daily basis. With regard to posting something on Facebook, 29.1% indicated to do this at least once a day and the biggest group, representing 32.5% of the sample, posts something several times a week. For the frequencies of the other two Facebook activities, the mean was 2.84 ($SD = 1.03$) for commenting and 2.70 ($SD = 1.21$) for sharing on a range from 1 (*never*) to 5 (*very often*).

Personality congruency

For 109 of the respondents a personalities distance was calculated, for the other 13 respondents data on one or more of the personality traits was missing. Concerning the distribution of the personalities distance, the mean is 5.26 ($SD = 1.68$), with a range of 7.36; the minimum value that occurred is 1.41 and the maximum value is 8.77.

The factor analysis conducted to check whether the dimensionality of both the consumer and brand personality scales was in compliance with the Big Five factor structure did not give satisfying results. When performing confirmatory factor analyses with 5 factors, the factorloadings did not indicate the big five structure as proposed by Huang et al. (2012) for either of the consumer and brand personality scales, but seemed very random and with high factorloadings on several factors. This questions the validity of the scales, because it was developed and used to measure personality according to the five-dimensional structure, but these results show that the Big Five is not measured.

Even though Huang et al. found a very clear five-factor solution, the data in this study did not support this finding. Because of the absence of the five dimensions, it would not be valid to base the congruence between self-concept and brand personalities on those dimensions. The correlation per item was measured.

Another reason supporting this decision is the outcome of the reliability analysis that was done, where $N = 114$ valid cases for both of the completed scales. For the brand personality traits Cronbach's $\alpha = .556$ for the 19 items and for the measured self-concept of the participants Cronbach's $\alpha = .053$ for the 19 items. These results indicate a poor or even unacceptable internal consistency of the scale. With looking at the correlation between self-concept and brand personalities at the individual level of each trait, the problematic reliability is overcome.

When checking whether a parametric or non-parametric test would be appropriate, for some of the items on the scale it was doubtful if the normal distribution assumption was met. Therefore, both Pearson's correlation test and Spearman's correlation test were done and results were compared. For all the items in the data set, both Pearson's and Spearman's correlation test between self-concept and brand personality produced similar results. Therefore, it was decided to only report Pearson's correlation coefficient, see table 2.

There was a significant relationship between self-concept and brand personality for the personality trait 'extraverted', $r = .261, p = .005$. Also for the characteristic 'sympathetic' self-concept and brand personality were significantly correlated, $r = .255, p = .005$, as was for 'warm', $r = .267, p = .004$, and 'kind', $r = .294, p = .001$. Furthermore, there was a positive relationship between the item 'cooperative' for both self-concept and brand personality, $r = .336, p < .001$. The perceived inefficiency of someone's personality was significantly related to that of the brand, 'inefficient', $r = .303, p = .001$, which seems notable since there is no significant relationship between the two personalities for the trait 'efficient', $r = .085, p = .364$. There was also a significant relationship between self-concept and brand personality for the traits 'temperamental', $r = .279, p = .002$, 'envious' $r = .426, p < .001$, 'creative', $r = .206, p = .027$, 'imaginative', $r = .260, p = .005$, 'uncreative', r

= .366, $p < .001$ and 'unintellectual', $r = .305$, $p = .001$. For 12 out of the 19 personality traits, there was at least a medium correlation effect detected with Pearson's test.

Self-concept and perceived brand personality

Trait	N	Pearson's	
		coefficient	Sig. (2-tailed)
Extraverted	116	,261	,005
Quiet	116	,148	,113
Shy	116	,096	,303
Withdrawn	113	,141	,137
Sympathetic	117	,255	,005
Warm	119	,267	,004
Kind	116	,294	,001
Cooperative	116	,336	,000
Organized	116	,019	,838
Efficient	117	,085	,364
Systematic	116	,102	,274
Inefficient	115	,303	,001
Jealous	115	,054	,570
Temperamental	116	,279	,002
Envious	116	,426	,000
Creative	116	,206	,027
Imaginative	115	,260	,005
Uncreative	116	,366	,000
Unintellectual	116	,305	,001

Table 2. Correlation.

Multiple regression analysis

Multiple regression analysis was used to test if the personalities distance, commenting and sharing significantly influenced purchase intentions. The results of the analysis are displayed in table 3. In the first model, it is seen that age was not a significant covariate for predicting purchase intentions, $B = .025$, $t(106) = 0.281$, $p = .779$. Results indicated a non-significant effect of gender on purchase intentions, $B = .516$, $t(106) = 1.850$, $p = .067$.

Moving on to the second model, for all three independent variables results indicated a non-significant effect on purchase intentions. For the personalities distance, $B = .074$, $t(103) = 0.881$, $p = .380$, meaning that the personalities distance between self-concept and perception of brand personality has no significant influence on purchase intentions. Thus, the second hypothesis is not supported by this research. Regarding the frequency of commenting on posts of a brand on their Facebookpage, no influence on purchase intentions was found, $B = -.066$, $t(103) = -0.353$, $p = .725$. These results of the regression analysis reject the third hypothesis. Finally, the outcome of the test did not indicate a positive influence on purchase intentions of the frequency of sharing posts of a brand on Facebook, $B = -.018$, $t(103) = -0.108$, $p = .914$. The fourth hypothesis assuming this relationship is therefore not supported in the current study. The results of the regression indicated the three predictors explained 4.4% of the variance.

Coefficients^a

Model 1	Unstandardized			Model 2	Unstandardized		
	B	Beta	Sig.		B	Beta	Sig.
(Constant)	22,147		,000	(Constant)	21,219		,000
Age	,088	,052	,595	Age	,082	,049	,653
Gender	,876	,515	,092	Gender	,934	,177	,079
				PersDistance	,107	,070	,489
				Commenting	-,091	-,034	,794
				Sharing	,247	,099	,429

a. Dependent Variable: Purchase intentions.

Table 3. Multiple regression analysis.

Since the outcome of the regression analysis indicated that none of the activities commenting and sharing has a significant influence on purchase intentions, the fifth hypothesis seems not relevant anymore. Although the standardized coefficients are given in the table, comparing them for these variables is meaningless. All the results are discussed in the next chapter.

Because of the absence of significant results testing the influence of the personalities distance, commenting and sharing on purchase intentions, a post-hoc analysis was undertaken. Another multiple regression analysis was used to test if commenting and sharing moderate the relationship between the personalities distance and purchase intentions. The results of the analysis are displayed in table 4. The results indicated that the main effects are still non-significant, as was expected from the first multiple regression analysis.

For the model testing the interaction effects, the $R^2 = .013$. For the new variable testing the interaction effect between commenting and the personalities distance, $B = .036$, $t(103) = 0.337$, $p = .710$. For the interaction effect between sharing and the personalities distance, $B = -.025$, $t(103) = -0.275$, $p = .784$. These results do not indicate the existence of a moderating effect. There is no main effect of the personalities distance on purchase intentions, as seen in the first analyses, and this effect does not change depending on sharing or commenting. This means that participants' levels of involvement do not depend on their level of congruency between their self-concept and perceived brand personalities and vice versa.

Coefficients^a

Model 1	Unstandardized	
	B	Sig.
(Constant)	13,754	,000
PersDistance	,056	,737
Commenting	-,209	,718
Sharing	,070	,892
Interact_Comment*PersDistance	,036	,710
Interact_Share*PersDistance	-,025	,784

Table 4. Multiple regression analysis testing for moderating effect.

Discussion

This research aimed to test if there was congruity between the self-concept of social media users and the perceived brand personalities of brands they associate themselves with on their social media profiles. Previous research has proven the existence of congruity between self-concept and brand choice (Birdwell, 1968; Dolich, 1969; Grubb and Hupp, 1968; Huang et al., 2012; Khare and Handa, 2009; Landon, 1974; Malhotra, 1988; Ross, 1971) and the reasoning was that this theory could possibly be extended to the context of social media.

Besides the testing for congruence, it was also explored if interaction with brands on social media would have any influence outside the virtual world of the social networking site. Since this is a relatively new topic, for now it was chosen to measure if involvement with brands on Facebook influenced the purchase intentions. The activities of commenting on posts and sharing of posts from brands were operationalized as measures for the involvement. Purchase intentions seemed most appropriate as a measurement instrument for the effect of both the presumed congruity between self-concept and perceived brand personalities and involvement with brands on social media. The results as reported in the previous chapter are now more elaborately discussed. A reflection upon the outcomes of the data analyses is given, together with possible reasons for why they appeared as they did. This will immediately highlight suggestions for further research and notify the limitations of the current research, which will also be addressed here.

Starting with the first hypothesis, stating that self-concept is congruent with perception of brand personalities of brands consumers associate themselves with on social media, it has been shown that this was partly supported by the research. This result was expected based on the literature and previous studies testing for congruence between self-concept and brand personalities or research questions closely related to this (Birdwell, 1968; Dolich, 1969; Grubb and Hupp, 1968; Ross, 1971). However, in this study the congruity exists for 12 out of the 19 personality traits and thus the hypothesis was not completely supported. A possible explanation for this is that the interpretation of the meaning of the personality traits by the participants might have caused

difficulties. For some of the items, the exact meaning or what it entails might have been unclear, influencing the accuracy of the given answers. For some of the respondents, it might have been too vague to imagine that the brand they chose had a personality, since they did not have any specific background in marketing, branding or advertising and thus might lack the knowledge of the brand personality construct. There is also some subjectivity involved in rating the characteristics.

A factor analysis showed that the personality scale that was used, did not comply with the Big Five factor structure although the dimensions of the Big Five were to be the foundation of the scale. In the research developing the scale, undertaken by Huang et al. (2012), a factor analysis was also done and this validated the scale based on the five dimensions. There might be several explanations for this difference in result for the same tests on the same scale. First the sample size of the current study might have been too small; Huang et al. were able to recruit more participants for their study. Additionally, they used a homogeneous sample, where a more heterogeneous sample was used here. Besides the validity, the reliability of the scale was also questionable, with poor alpha-values for both the consumer personality scale and the brand personality scale. It seems that more research is needed to validate the scale and improve the reliability for the only one year-old scale developed for measuring both consumer and brand personalities. After the research presenting the scale, this is, to the extent known by the researcher, the first study that uses the scale.

Furthermore, there is a difference in how the brands used for the brand personality scale were chosen. Huang et al. asked participants for their favorite brand and use this for completing the scale, so as to ensure that they possessed intimate knowledge about the brand (2012, p. 341) . In the current research, participants were asked to “choose a brand you ‘like’ on Facebook”. The reasoning behind this was that if specifically asked for their favorite brand, some response bias might already arise. What a person wants and likes influences what he sees (Birdwell, 1968, p. 88). Then, the fact that an individual has expressed attachment by liking a brand on Facebook may distort his perception. The brand might be more positively rated on the traits only because it is a preferred ‘favorite’ brand and the consumer has positive associations with it. However, with asking to choose

just any brand, disadvantages might have been that participants chose the first brand they saw on their likes or one recently liked came first to mind, and these brand might be liked for several other reasons than that the Facebook user truly liked the brand. For example, they could have participated in promotional activities where liking was required or it could even be the case that they used to like the brand, but do not anymore.

When the participants were asked to choose a brand from their Facebook profile, the only explanation given was “the brand can be anything, as long as it is possible to buy any products and services provided by the brand” (see appendix A). The broad definition of a brand by Keller was on the basis of this, but with the questions regarding purchase intentions in mind, it was a bit more specified. If the participants choose for example a musician, they might have found it vague to apply questions concerning whether they would choose to buy this ‘brand’ over other ‘brands’. Furthermore, there are many brands that customers can feel attached to, even though their purchase intentions are low. Imagine luxury goods, expensive brands, a brand providing products or services that consumers normally buy every few years; according to the used scale, this results in low purchase intentions. Since this study was explorative, the decision to ask the participants to choose any brand was consciously made, however further research could handle this differently. Suggestions are using a sample where all the participants like the same brand or using specified product categories.

Another explanation of the results regards the independent variables commenting and sharing. For respectively commenting on and the sharing of posts of a brand, only one question was actually measuring the frequencies of these, even though related questions about commenting and sharing preceded those to have the participant think about the subject. This limited method can be partly be accounted to a lack of knowledge and previous studies to rely on. No other research was found that used the Facebook activities commenting and sharing as operationalized measurement instruments for the involvement with brands on Facebook, or used those as variables at all. This new form of data that emerged with the launch of Facebook seems really promising, although it is still

unclear how it can be used and for what purposes. The current research explored the possibilities, seeking a link with purchase intentions, but many more options for using the data in research are to be thought of. Commenting and sharing should be refined as measurement instruments and different methods of applying them should be tested.

A last possibility for the obtained results mentioned here, is that the survey was spread on Facebook and the participants could fill in the survey at their own convenience. Despite what was explicitly stated in the introduction of the survey, it is possible that the respondents were not accurately thinking about the questions and their answers.

Limitations and further research

With discussing the results of the study, some of the limitations and suggestions for further research were already noted, but this paragraph expands on this for the purpose of completeness.

First, the sample size may seem relatively small, compared to both the research of Huang et al. that developed the personalities scale (2012) and the total population of Facebook users. This seems unavoidable in an exploratory study as this, where both time and money were restricted. However, the sample size is assumed to be sufficient for performing the executed tests.

A limitation relating to the measurement of purchase intentions is that income of the participants was not included in this research. Income is an enabling factor to the consumer's ability to make purchases compatible with self-image, whilst on the contrary on social media sites users can associate themselves with brands and establish associations with those without any financial or physical constraints (Schau and Gilly, 2003, p. 397). This important difference affects the resulting data from the items to measure purchase intentions. Further research could explore the relationship between social media profiles and purchase intentions more extensively, focussing on the notion of the lack of financial and physical limits in the virtual world.

This leads again to the different dimensions of self-concept, as discussed in the literature review. Based on the research of Back et al., that stated that Facebook profiles reflect actual instead

of idealized self-concept (2010), this study focussed on the actual self. It is not excluded that further research into the different dimensions within the context of social networking sites would also bring interesting findings to light. The argument that people present themselves in a different way online than they do in real life seems still plausible. Especially with the notion that different platforms might be used for different purposes (Kietzmann et al., 2011, p. 244), for example Facebook is a more 'social' network for friends, where LinkedIn is business-related. People might display different presentations of the self, dependent on the context. This perspective is an interesting source for further research. One of the possible questions relating to this is if the various sites reflect different dimensions of the self.

Another unsolved question regarding self-concept in consumer behaviour theory is whether consumers use brands for *reflecting* or *constructing* their self-concept (Huang et al., 2012, p. 347). This question can also be applied to the use of brands on personal profiles on social networking sites.

Further research could use more brands from someone's social media profile to explore the congruence between the self-concept of the profile owner and the perception of the liked brands. This would give more thorough insight into what is reflected on social media profiles. From the fields of impression management and self-presentation, interesting research questions can be drawn and applied to personal web profiles.

In this research, the personalities scale seemed not to consist of the Big Five personality dimensions. Even though this is one of the most important frameworks in measuring personality, other inventories for measuring both consumer and brand personalities might be examined too. Since the comparing of the two personalities by the same means is still in its beginnings, more research is needed to explore the possible measurement instruments and methods. The congruity between consumer and brand personalities was shown in this study, but there is definitely room for refinement and improvement.

Finally, it is emphasized that social media activities imply rich data that can be used for all sorts of research. The development of decent methods for using these is of both academic and

practical relevance. Commenting and sharing can be used for more purposes than they served in the current study and the possibilities for this should be explored.

Conclusion

This research incorporated several topics and tried to find relationships between those. Self-concept, brand personalities, social media, involvement, and purchase intentions were all variables that had a part in the theory that forms the basis of this study. Most importantly, the interaction with brands on social media was investigated. It is concluded now with the main points of the research and the implications of the theory and the findings.

First, it was shown that the congruity theory could be applied to Facebook profiles, meaning that there is congruence between the self-concept of a profile owner and perceived brand personalities of brands that he likes on Facebook. On the basis of the congruity theory is the need for expressing and presenting the self, for which brands can be used (Birdwell, 1968; Grubb and Hupp, 1968, p. 59; Khare and Handa, 2009; Landon, 1974; Malhotra, 1988, p. 22; Ross, 1971). Presenting the self is one of the most important reasons for people to join social networking sites (Back et al., 2010; Hart et al., 2008; Kaplan and Haenlein, 2010, p. 62; Schau and Gilly, 2003, p. 394). Following the previous, the interest arose to see whether the congruity theory could also be applied to social media profiles, where owners have the option to associate themselves with brands by adding these to their profile. This digital association and involvement with the brand helps to present who the owners of the profiles are. Although it is still not completely clear yet how exactly having a profile on social media sites can benefit brands, the current research adds to the theoretical knowledge and understanding.

As noted by Huang et al., the formation of a brand personality is not solely done by marketers of the brands, but also consumers contribute to this process (2012, p. 345). Marketers need to coordinate the information that consumers receive and here, especially social networking sites can not be neglected. The platforms offer the possibility of interaction between the brand and the consumers and are also an environment where consumers experience the brand (Huang et al., 2012, p. 345). When making use of the brand personality construct as a tool, marketers need to make sure that this is aligned with their social media strategies.

An implication of the congruity theory is that promotional efforts of companies must attempt to associate their brands with the self-concept of the target customers. Consumers use brands for presenting and expressing the self and thus choose brands that fit for this purpose (Grubb and Hupp, 1968, p. 63). This suggests the perceived self-concept of consumers can be used in building the brand image, in order to help the target group identifying with the brand (Khare and Handa, 2009, p. 65). As such, the congruity theory can help marketers in devising communication and advertising strategies.

For long-term brand success, issues as brand trust, brand satisfaction and brand attachment play an important role (Esch et al., 2006, p. 103). These all relate to brand relationships and social networking sites as a platform that can help building such a relationship. This is one of the purposes for which companies can have an online profile on social media.

Using new forms of data provided by social media, can have many implications for companies. From data regarding Facebook activities as commenting and posts, information of the Facebook user can be derived. What a person feels, thinks, and likes might all be reflected on their Facebook profile. This adds in a great extend to consumer knowledge. Since a main part of marketing is about activities concerning creating and communicating offerings that have value for the customers, knowing what would have value to the consumers is key. Besides the gaining of consumer knowledge, Facebook is also a platform that can be used for communication with the potential customers. Social networking sites offer new opportunities for promotions, actions and creative marketing campaigns.

Furthermore, commenting and sharing are a rich source of data, however ways for exploitation need to be found. When valid methods and measurements instruments concerning the Facebook activities are developed, much more research can be done. If the variables can be operationalized as an indication of involvement, interesting information can be revealed. Trusov et al. state that determining influential users permits more tailored advertisement targeting and retention efforts aimed at sustaining and increasing the activity (2010, p. 644), that in turn, will

generate more content. It is stated that improved advertisement targeting has significant financial implications, because based on audience attractiveness, pricing of advertisement display varies widely (Trusov et al., 2010, p. 644).

Finally, targeting can be based on insight in the behaviour of consumers on social media. More understanding of the social networking sites and how the companies could use these can arise from research on the interaction with brands on social media.

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Appendix A - Survey

Hi,

Thank you in advance for taking the time to complete this survey. It is for the research I am conducting to finish my Master in Economics & Business Studies, so filling out the survey will help me a lot! The topic of my thesis is related to how people interact with brands. It should take approximately x minutes of your time.

None of the information you provide can be traced back to you, all your responses will be completely anonymous. Please answer the questions with the first thought that comes to mind, there are no right or wrong answers.

For the first set of questions, you need to choose a brand that you 'like' on Facebook and is therefore visible on your personal Facebook profile. The brand can be anything, as long as it is possible to buy any products or services provided by the brand.

The brand you choose from your Facebook profile is

Would you ever buy a product of brand X? 1 = very probably, 5 = not at all probably

Do you intend to buy a product of brand X in the next 12 months? 1 = very certain, 5 = not at all certain

How likely are you to purchase a product of brand X? 1 = very likely, 5 = not at all likely

Have you ever bought a product of brand X in the past? Yes/No/Not sure

If you are planning to buy a product that is provided by brand X, would you choose brand X over other brands?

How often do you consume/use the brand? 1 = not at all, 5 = very frequently

The next part of this survey is about personalities. First, your own personality is measured. Please indicate on the scale to what extent each of the characteristics fits you. Please remember that your answers are completely anonymous. 1 = not at all descriptive, 5 = extremely descriptive

Extraverted

Quiet

Shy

Withdrawn

Sympathetic

Warm

Kind

Cooperative

Organized

Efficient

Systematic

Inefficient

Jealous

Temperamental

Envious

Creative

Imaginative

Uncreative

Unintellectual

Imagine the brand you choose before would have a personality. Please indicate on the scale to what extent each of the characteristics fits this brand. 1 = not at all descriptive, 5 = extremely descriptive.

Extraverted

Quiet

Shy

Withdrawn

Sympathetic

Warm

Kind

Cooperative

Organized

Efficient

Systematic

Inefficient

Jealous

Temperamental

Envious

Creative

Imaginative

Uncreative

Unintellectual

The last topic of this survey is your behaviour on Facebook.

Since when do you have a Facebook profile? {year}

How often do you check Facebook? Every hour, several times a day, every day, several times a week, once a week, several times per month, less.

How often do you post something on Facebook? This can be an update of your status, a message on someone's wall or a reaction to a post by someone else. {Every hour, several times a day, every day, several times a week, once a week, several times per month, never.}

The next questions are about two types of interaction on Facebook: commenting and sharing. Please indicate how often you undertake each of the activities on the scale where 1 = never and 5 = very often.

Do you comment on any sort of posts on Facebook?

Do you comment on posts of your friends on Facebook?

Do you comment on posts on pages that you 'like' on Facebook?

Do you comment on posts of the brand you chose before?

Do you share posts on Facebook?

Do you share posts of your friends on Facebook?

Do you share posts on pages that you 'like' on Facebook?

Do you share posts of the brand you chose before?

Finally, some questions about your demographics.

What is your age? <18, 18-23, 24-29, 30-35, 36-41, 42-47, 48-53, 54-59, 60>

What is your gender?

What is your nationality?

Thank you for your time and cooperation!

Appendix B - SPSS Output

Factor Analysis Purchase Intentions

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,405	40,076	40,076	2,405	40,076	40,076
2	1,299	21,645	61,721	1,299	21,645	61,721
3	,889	14,821	76,542			
4	,607	10,118	86,660			
5	,512	8,525	95,186			
6	,289	4,814	100,000			

Extraction Method: Principal Component Analysis.

Component Matrix^a

	Component	
	1	2
PI1R	,835	,225
PI2R	,813	,294
PI3R	,634	-,206
PI4R	,537	,466
PI5R	,378	-,772
PI 6	-,461	,554

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

Reliability Analysis Purchase Intentions

Reliability Statistics

Cronbach's Alpha	N of Items
,563	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
PI1R	13,64	3,909	,593	,422
PI2R	13,69	3,735	,596	,395
PI3R	13,81	4,090	,276	,545
PI4R	13,98	1,829	,345	,718

Factor Analysis Consumer Personality Scale

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,760	19,790	19,790	3,760	19,790	19,790
2	2,519	13,260	33,049	2,519	13,260	33,049
3	2,303	12,123	45,172	2,303	12,123	45,172
4	1,834	9,653	54,825	1,834	9,653	54,825
5	1,254	6,598	61,423	1,254	6,598	61,423
6	1,120	5,893	67,316			
7	,952	5,011	72,328			
8	,778	4,097	76,425			
9	,746	3,926	80,351			
10	,614	3,229	83,580			
11	,578	3,044	86,624			
12	,491	2,582	89,206			
13	,422	2,219	91,425			
14	,406	2,136	93,561			
15	,352	1,855	95,416			
16	,308	1,621	97,037			
17	,278	1,461	98,498			
18	,177	,933	99,431			
19	,108	,569	100,000			

Extraction Method: Principal Component Analysis.

Component Matrix^a

	Component				
	1	2	3	4	5
CPT 1	,392	-,282	-,285	-,161	,351
CPT 2	-,452	,309	,580	,265	,007
CPT 3	-,578	,241	,441	,232	,182
CPT 4	-,455	,349	,376	,428	-,154
CPT 5	,298	,043	,460	-,160	,391
CPT 6	,564	,016	,463	-,081	,352
CPT 7	,363	,110	,618	-,266	,358
CPT 8	,583	,220	,063	-,281	-,131
CPT 9	,424	,431	-,362	,373	,182
CPT 10	,532	,509	-,215	,338	-,054
CPT 11	,549	,363	-,352	,363	,087
CPT 12	-,314	-,487	,028	-,289	-,048
CPT 13	-,351	-,227	-,388	,267	,437

CPT 14	-,161	-,487	-,201	,141	,339
CPT 15	-,527	-,216	-,101	,454	,362
CPT 16	,426	-,569	,228	,473	-,294
CPT 17	,417	-,646	,178	,196	-,078
CPT 18	-,459	,461	-,357	-,472	,197
CPT 19	-,355	-,009	-,155	-,260	-,194

Extraction Method: Principal Component Analysis.

a. 5 components extracted.

Factor Analysis Brand Personality Scale

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4,233	22,276	22,276	4,233	22,276	22,276
2	2,795	14,713	36,989	2,795	14,713	36,989
3	2,407	12,666	49,655	2,407	12,666	49,655
4	2,074	10,915	60,570	2,074	10,915	60,570
5	1,196	6,296	66,866	1,196	6,296	66,866
6	1,077	5,668	72,534			
7	,845	4,445	76,978			
8	,762	4,009	80,987			
9	,641	3,373	84,360			
10	,550	2,895	87,255			
11	,485	2,555	89,810			
12	,395	2,078	91,888			
13	,317	1,671	93,559			
14	,282	1,487	95,046			
15	,263	1,382	96,428			
16	,236	1,241	97,669			
17	,195	1,027	98,696			
18	,164	,862	99,558			
19	,084	,442	100,000			

Extraction Method: Principal Component Analysis.

Component Matrix^a

	Component				
	1	2	3	4	5
BPT 1	-,279	,227	,018	,176	,793
BPT 2	,523	-,295	,564	-,084	-,069
BPT 3	,613	-,313	,507	-,067	-,049
BPT 4	,567	-,181	,489	,063	-,041
BPT 5	,010	,075	,514	-,252	,111

BPT 6	-,072	,268	,760	-,018	,213
BPT 7	-,286	,187	,672	-,218	,083
BPT 8	-,432	-,190	,279	,271	-,291
BPT 9	-,480	-,522	,221	,491	,048
BPT 10	-,565	-,551	,085	,445	,060
BPT 11	-,501	-,522	,072	,482	-,066
BPT 12	,626	,330	-,026	,231	-,360
BPT 13	,566	,181	,061	,540	,155
BPT 14	,178	,611	-,089	,411	,160
BPT 15	,368	,344	,077	,509	,135
BPT 16	-,509	,624	,228	,242	-,301
BPT 17	-,460	,611	,246	,299	-,331
BPT 18	,672	-,363	-,057	,341	-,003
BPT 19	,556	-,042	-,159	,367	,004

Extraction Method: Principal Component Analysis.

a. 5 components extracted.

Reliability Analysis Consumer and Brand Personality Scales

Cronbach's Alpha	N of Items
,053	19

Cronbach's Alpha	N of Items
,556	19

Correlations

	CPT 1	BPT 1
Pearson Correlation	1	,261**
CPT 1 Sig. (2-tailed)		,005
N	120	116
Pearson Correlation	,261**	1
PT 1 Sig. (2-tailed)	,005	
N	116	116

	CPT 2	BPT 2
Pearson Correlation	1	,148
CPT 2 Sig. (2-tailed)		,113
N	120	116
Pearson Correlation	,148	1
BPT 2 Sig. (2-tailed)	,113	
N	116	116

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

Correlations

	CPT 3	BPT 3
Pearson Correlation	1	,096
CPT 3 Sig. (2-tailed)		,303
N	120	116
Pearson Correlation	,096	1
BPT 3 Sig. (2-tailed)	,303	
N	116	116

Correlations

	CPT 4	BPT 4
Pearson Correlation	1	,141
CPT 4 Sig. (2-tailed)		,137
N	118	113
Pearson Correlation	,141	1
BPT 4 Sig. (2-tailed)	,137	
N	113	115

Correlations

	CPT 5	BPT 5
Pearson Correlation	1	,255**
CPT 5 Sig. (2-tailed)		,005
N	120	117
Pearson Correlation	,255**	1
BPT 5 Sig. (2-tailed)	,005	
N	117	117

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

Correlations

	CPT 6	BPT 6
Pearson Correlation	1	,267**
CPT 6 Sig. (2-tailed)		,004
N	119	116
Pearson Correlation	,267**	1
BPT 6 Sig. (2-tailed)	,004	
N	116	117

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

Correlations

	CPT 7	BPT 7
Pearson Correlation	1	,294**
CPT 7 Sig. (2-tailed)		,001
N	120	116
Pearson Correlation	,294**	1
BPT 7 Sig. (2-tailed)	,001	
N	116	116

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

Correlations

	CPT 8	BPT 8
Pearson Correlation	1	,336**
CPT 8 Sig. (2-tailed)		,000
N	120	116
Pearson Correlation	,336**	1
BPT 8 Sig. (2-tailed)	,000	
N	116	116

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

Correlations

		CPT 9	BPT 9
CPT 9	Pearson Correlation	1	,019
	Sig. (2-tailed)		,838
	N	120	116
BPT 9	Pearson Correlation	,019	1
	Sig. (2-tailed)	,838	
	N	116	116

Correlations

		CPT 10	BPT 10
CPT 10	Pearson Correlation	1	,085
	Sig. (2-tailed)		,364
	N	120	117
BPT 10	Pearson Correlation	,085	1
	Sig. (2-tailed)	,364	
	N	117	117

Correlations

		CPT 11	BPT 11
CPT 11	Pearson Correlation	1	,102
	Sig. (2-tailed)		,274
	N	120	116
BPT 11	Pearson Correlation	,102	1
	Sig. (2-tailed)	,274	
	N	116	116

Correlations

		CPT 12	BPT 12
CPT 12	Pearson Correlation	1	,303**
	Sig. (2-tailed)		,001
	N	119	115
BPT 12	Pearson Correlation	,303**	1
	Sig. (2-tailed)	,001	
	N	115	116

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

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

Correlations

		CPT 13	BPT 13
CPT 13	Pearson Correlation	1	,054
	Sig. (2-tailed)		,570
	N	120	115
BPT 13	Pearson Correlation	,054	1
	Sig. (2-tailed)	,570	
	N	115	115

Correlations

		CPT 14	BPT 14
CPT 14	Pearson Correlation	1	,279**
	Sig. (2-tailed)		,002
	N	120	116
BPT 14	Pearson Correlation	,279**	1
	Sig. (2-tailed)	,002	
	N	116	116

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

Correlations

		CPT 15	BPT 15
CPT 15	Pearson Correlation	1	,426**
	Sig. (2-tailed)		,000
	N	119	116
BPT 15	Pearson Correlation	,426**	1
	Sig. (2-tailed)	,000	
	N	116	116

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

Correlations

		CPT 16	BPT 16
CPT 16	Pearson Correlation	1	,206*
	Sig. (2-tailed)		,027
	N	120	116
BPT 16	Pearson Correlation	,206*	1
	Sig. (2-tailed)	,027	
	N	116	116

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

Correlations

		CPT 17	BPT 17
CPT 17	Pearson Correlation	1	,260**
	Sig. (2-tailed)		,005
	N	119	115
BPT 17	Pearson Correlation	,260**	1
	Sig. (2-tailed)	,005	
	N	115	116

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

Correlations

		CPT 18	BPT 18
CPT 18	Pearson Correlation	1	,366**
	Sig. (2-tailed)		,000
	N	120	116
BPT 18	Pearson Correlation	,366**	1
	Sig. (2-tailed)	,000	
	N	116	116

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

Correlations

		CPT 19	BPT 19
CPT 19	Pearson Correlation	1	,305**
	Sig. (2-tailed)		,001
	N	120	116
BPT 19	Pearson Correlation	,305**	1
	Sig. (2-tailed)	,001	
	N	116	116

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

Multiple Regression Analysis

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,180 ^a	,032	,014	1,40812	,032	1,722	2	103	,184
2	,210 ^b	,044	-,004	1,42049	,012	,405	3	100	,750

a. Predictors: (Constant), Gender, Age

b. Predictors: (Constant), Gender, Age, PersDistance, Sharing, Commenting

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6,827	2	3,414	1,722	,184 ^b
	Residual	204,229	103	1,983		
	Total	211,057	105			
2	Regression	9,278	5	1,856	,920	,472 ^c
	Residual	201,779	100	2,018		
	Total	211,057	105			

a. Dependent Variable: SUM_PurchaseIntentions

b. Predictors: (Constant), Gender, Age

c. Predictors: (Constant), Gender, Age, PersDistance, Sharing, Commenting

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
		1	(Constant)	13,101			,517	
	Age	,025	,090	,027	,281	,779	-,153	,203
	Gender	,516	,279	,180	1,850	,067	-,037	1,070
2	(Constant)	12,787	,758		16,875	,000	11,283	14,290
	Age	,049	,099	,053	,497	,620	-,147	,245
	Gender	,514	,286	,179	1,799	,075	-,053	1,081
	PersDistance	,074	,083	,088	,881	,380	-,092	,239
	Commenting	-,066	,188	-,047	-,353	,725	-,439	,306
	Sharing	-,018	,166	-,014	-,108	,914	-,347	,312

a. Dependent Variable: SUM_PurchaseIntentions

Post-hoc Analysis for Moderating Effects

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,094 ^a	,009	-,001	1,41828
2	,109 ^b	,012	-,017	1,42990

a. Predictors: (Constant), PersDistance

b. Predictors: (Constant), PersDistance, Comment4, Share4

ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1,859	1	1,859	,924	,339 ^b
	Residual	209,197	104	2,012		
	Total	211,057	105			
2	Regression	2,506	3	,835	,409	,747 ^c
	Residual	208,550	102	2,045		
	Total	211,057	105			

a. Dependent Variable: SUM_PurchaseIntentions

b. Predictors: (Constant), PersDistance

c. Predictors: (Constant), PersDistance, Commenting, Sharing

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13,489	,455		29,664	,000
	PersDistance	,079	,082	,094	,961	,339
2	(Constant)	13,672	,573		23,868	,000
	PersDistance	,070	,084	,084	,837	,405
	Commenting	-,004	,176	-,003	-,023	,982
	Sharing	-,071	,165	-,054	-,433	,666

a. Dependent Variable: SUM_PurchaseIntentions

Post-hoc Analysis for Interaction Effects

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,115 ^a	,013	-,036	1,44312

a. Predictors: (Constant), Interact_Sharing_PersDist, PersDistance, Commenting, Sharing, Interact_Comment_PersDist

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	2,798	5	,560	,269	,929 ^b
Residual	208,259	100	2,083		
Total	211,057	105			

a. Dependent Variable: SUM_PurchaseIntentions

b. Predictors: (Constant), Interact_Sharing_PersDist, PersDistance, Commenting, Sharing, Interact_Comment_PersDist

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	13,754	,942		14,608	,000
PersDistance	,056	,166	,067	,337	,737
Commenting	-,209	,577	-,148	-,362	,718
Sharing	,070	,512	,053	,136	,892
Interact_Comment_PersDist	,036	,096	,157	,373	,710
Interact_Sharing_PersDist	-,025	,089	-,109	-,275	,784

a. Dependent Variable: SUM_PurchaseIntentions