The effect of the language an online review is written in

A quantitative study on the influence of language on the relationship between review valence and purchase intention

Radboud Universiteit Nijmegen

Abstract

This thesis uses a quantitative approach to examine the relationship between review valence and purchase intention and how this relationship is affected by the language an online review is written in. Three main findings can be derived from the results of an online 2x2 experiment. First of all, a positive relationship is found between review valence and purchase intention. Secondly, the negativity effect shows that the negative impact of negative reviews is bigger than the positive effect of positive reviews. Lastly, results do not confirm the expected bigger impact of reviews written in the reader's first language rather than their second language.

Keywords

Review valence; eWOM; purchase intention; negativity effect; first language; second language; online purchasing behavior

Master's thesis International Business

Author	Maud Broen
Student number	4576543
E-mail	m.broen@student.ru.nl
Date	February 1st, 2021
Supervisor	Dr. René ten Bos
Second examiner	Dr. Erik Poutsma

Executive summary

Online purchasing has become more prevalent over the last few years. Potential customers tend to rely on online customer reviews as they are not able to physically assess a product's quality. Customers are able to buy their products from worldwide global websites and are therefore exposed to reviews in different languages.

The purpose of this research is to find out how the relationship between review valence and purchase intention is influenced by reading an online review in one's first or a second language. The study focuses on the research question "*What is the effect of an online review's language on the relationship between review valence and purchase intention?".*

An online 2x2 experiment was conducted among 260 respondents with Dutch as their first language. Respondents were randomly assigned to one of four conditions in which they saw either Dutch or English reviews which were either positive or negative. The experiment tested the change in purchase intention before and after reading the reviews.

Analyses were conducted to see how the change in purchase intention differs across the experimental conditions. The results of the experiment showed a positive relationship between review valence and purchase intention. The negative influence of negatively valenced reviews is bigger than the positive effect of positive reviews, referred to as the negativity effect. No significant effect of whether the reviews were written in the respondents' first or second language was found in this research.

Based on these results it is suggested to further explore the influence of language on purchase intention in traditional marketing and traditional word-of-mouth. It is also suggested to investigate the influence of language on the relationship between review valence and purchase intention for populations with a lower exposure to a second language. In conducting these suggestions, the role of review valence should be carefully taken into account.

Content

Introduction

Over the last few years, online purchasing behavior has been on the rise (Roy et al., 2019). People enjoy buying products from the comfort of their own home. During the COVID-19 pandemic, the value of purchases done online has increased even more (Hall et al., 2020; Watanabe & Omori, 2020). When purchasing online, customers have no opportunity to physically assess a product's quality themselves (Kim & Krishnan, 2015). Therefore, it is becoming more and more common to rely on online customer reviews to consider other buyers' opinions of a product's quality (Ketelaar et al., 2015). Online customer reviews are an important aspect within electronic word-of-mouth (eWOM). Similar to traditional word-of-mouth, eWOM relies on information exchanged between consumers about a product or service (Chu & Kim, 2011). However, unlike traditional word-of-mouth, eWOM does not occur face to face but rather happens via online platforms. Online reviews have a certain review valence, meaning the amount of positivity or negativity carried out by the review (Cheung et al., 2009). A large body of literature exists proving the relationship between review valence and purchase intention (Purnawirawan et al., 2015). Purchase intention is defined as a customer's willingness to buy a product or service (Ling et al., 2010). Positive reviews result in higher purchase intention, whereas negative reviews lower the purchase intention. Other than that past research has confirmed the relationship between review valence and purchase intention is influenced by the negativity effect (Bae & Lee, 2011). This effect states that the negative influence of negative reviews is greater than the positive effect of positive reviews.

Not only do consumers buy their products on websites from their own country, but they are also able to buy globally. This naturally means that reviews about products online are not only available in potential customers' first spoken language but are available in other languages as well. According to Salehan and Kim (2016), research should focus on the effect first language can have on purchase intention. It has been proven that the valence of words takes on more extreme measures in a first language than in a second language (Garrido & Prada, 2018). Messages written in a first language have a higher chance of being understood and decoded the way they were meant to be (Moran & Muzellec, 2017). Next to that, customers seem to place more value on reviews written by people that have similar characteristics to themselves, in which language can be considered one of the characteristics (Punj, 2011). Whereas existing literature on eWOM has studied a large number of factors that influence the relationship between review valence and purchase intention, language in terms of one's first – also called native – and later learned second languages has been mainly ignored. Certain aspects of

language have been discussed in their influence on purchase intention, such as language abstraction (Schellekens et al., 2010), language errors (Hilbrink, 2017), and disclosure language (Evans et al., 2017), however, the influence of one's first language remains largely unresearched. This research will not focus on the influence of different languages, but rather on the influence of whether the review is written in one's first language or a later learned second language. Other than the focus on certain aspects of language, research in the past has not consistently made use of one type of language in examining the relationship between review valence and purchase intention. Some conducted experiments have utilized English for the questionnaires while this is not the respondents' first language (e.g. Ketelaar et al., 2015; Kusumasondjaja et al., 2012; Sutanto & Aprianingsih, 2016). Other experiments were conducted in the respondents' first language (e.g. Hilbrink, 2017; Sparks & Browning, 2011), whereas others did not mention language at all (e.g. Langan et al., 2017; Mauri & Minazzi, 2013; Park & Lee, 2009). Understanding the influence of language on the relationship between review valence and purchase intention would increase the reliability of comparing researches' outcomes on this topic in the future. According to Roy et al. (2019), the effect of review valence on purchase intention is reinforcing as positive reviews lead to more purchases which leads to more positive reviews. For websites it would be important to enable this reinforcing effect to the best of their ability. This research will therefore examine to what extent language influences this effect.

The aim of this research is to find out how the relationship between review valence and purchase intention is influenced by whether consumers read reviews in their first language or second language. Based on this, the research question this thesis will address is *"What is the effect of an online review's language on the relationship between review valence and purchase intention?".* The remainder of this thesis is structured as follows. First, an extensive overview of theoretical background on purchase intention, eWOM, review valence, the negativity effect, and language will be given. Hypotheses and a conceptual model will be elaborated on based on this knowledge. After that, the methodology will be discussed, and the collected data will be analyzed. Lastly, conclusions, implications, and limitations will be provided.

Theoretical framework

Purchase intention

A purchase as defined by Monroe and Chapman (1987) is "a mixed outcome in that the buyer gains a product but loses the money paid for the product" (p. 195). The product referred to in this definition can be either a product or a service. The customer's process of arriving at the decision to purchase a certain product or service is known as customer purchase behavior (Jalilvand & Samiei, 2012). Purchase intention relates positively to the customer's inclination to carry out this behavior (Tata et al., 2020). Thus, before the decision to purchase can be made, a purchase intention has to be created. Therefore, purchase intention can be seen as a necessary condition for customers to engage in purchase behavior. Differences between purchase behavior and purchase intention may arise when there are restrictions that prevent customers from buying products or services based on their genuine preferences (Ling et al., 2010).

The consumer purchase decision process is characterized by several steps resulting in the final act of purchasing a product or service (Munthiu, 2009). The process that defines purchase behavior consists of the following steps; problem recognition, information search, evaluation of alternatives, purchase decision, and lastly, post-purchase evaluation (Comegys et al., 2006). Purchase intention is created in and influenced by the stages of problem recognition, information search, and evaluation of alternatives (Sutanto & Aprianingsih, 2016). According to Lin and Lu (2010), purchase intention defines a customer's likelihood of considering to buy the product, the possibility of recommending the product to others, and the probability of truly buying the product. This matches the definition of Ansar (2013) that purchase intention is the likelihood of a consumer buying a certain product as a result of their needs. When referring to purchase intention throughout the rest of this thesis, the definition by Mirabi et al. (2015) will be used; a psychological state of mind "where consumer tends to buy a certain product in certain condition" (p. 268).

Electronic word-of-mouth

The internet is increasingly becoming the place where consumers are able to share their opinion about products (Moran & Muzellec, 2017). For potential buyers, this results in a higher number of opinions to assess when considering buying a product. The exchange of product information and experiences online is known as electronic word-of-mouth (eWOM). Boo and Kim (2013) say that the main characteristics of eWOM are that it can be either positive or negative statements, the statement concerns a product or service, and the opinion is shared online. In this

research, eWOM will be defined as "any positive or negative statement made by potential, actual, or former customers about a product or company, which is made available to a multitude of people and institutions via the Internet" (Hennig-Thurau et al., 2004, p. 39). As opposed to traditional marketing, eWOM depends on consumers sharing their product experiences with other potential buyers rather than companies selling their products (Lin & Xu, 2017). Mauri and Minazzi (2013) say it is a tool to transfer the marketing power from businesses to consumers. A benefit of eWOM is, therefore, that customers do not have to rely solely on information given by the company selling the product, but they are able to consider more independent experiences and opinions (Pentina et al., 2018). Kudeshia and Kumar (2017) categorize all communication exchanged among consumers about products or brands online as social electronic word-of-mouth. One of the most important elements of eWOM is online reviews (Wang et al., 2015). These are reviews written on the internet by prior consumers with the aim to inform potential buyers about experiences with and opinions about the purchased product. This research will therefore focus on online reviews as the most important part of eWOM. Traditional word-of-mouth (WOM) happens when consumers share experiences face to face, whereas eWOM happens online (Mauri & Minazzi, 2013). Traditional WOM communications take place between people with close connections, however, with the availability of the internet people are able to assess the opinions of people outside of their close network (Moran & Muzellec, 2017). Not only do potential buyers have greater access to online reviews, consumers that write a review are able to reach a greater audience with their opinion compared to traditional WOM (Chu & Kim, 2011). Knowing one's experiences are to help more potential customers, because the internet guarantees a larger audience, increases the likelihood of one engaging in eWOM rather than WOM.

Online reviews can also be posted anonymously (Lee & Youn, 2009). This anonymity encourages consumers to honestly write about their opinions and experiences with products without having to give away their identity. While this broader online access to consumers' opinions allows for assessing more information, it also increases the difficulty of determining review credibility (Park & Lee, 2009). However, as the reviews are independent from the selling company, their perceived objectivity is generally higher (Pentina et al., 2018). Lots of research on eWOM in the past has focused on review credibility, trustworthiness, and helpfulness (e.g. Lin & Xu, 2017; Moran & Muzellec, 2017). Moran and Muzellec (2017) mention community, competence, content, and consensus as the four sources of eWOM credibility. Lin and Xu (2017) propose social distance, social distance, ethnicity, and review valence as influencers of review trustworthiness.

Customers that engage in purchase behavior after being exposed to eWOM are more likely to add value to a company than customers that have been exposed to traditional marketing techniques (Mauri & Minazzi, 2013). eWOM has become a vital part of the consumer purchase decision process (Moran et al., 2014). In the consumer buying decision process, eWOM has an influence on the stages of information search and evaluation of alternatives (Sutanto & Aprianingsih, 2016). Online reviews increase the possibility of consumers' awareness and evaluation of the product or service in offering (Chan et al., 2017). As the reviews are placed independently they tend to be more persuasive than traditional marketing, leading to a higher purchase intention (Lee et al., 2009).

Review valence

The effect eWOM has on purchase intention is, amongst other factors, dependent on review valence (Sutanto & Aprianingsih, 2016). Review valence is defined as "the positive or negative orientation of information about an object or a situation" (Chan et al., 2017, p. 55). Positively valenced reviews are characterized by the exchange of pleasant experiences with a product or service and the use of positively perceived words. Negatively valenced reviews, on the other hand, are characterized by the description of unpleasant experiences with a product or service and the use of negatively perceived words. Positive reviews describe the strengths of a product, in contrary to negative reviews that emphasize its weaknesses (Ketelaar et al., 2015). Review valence can be shown through written content as well as through numerical ratings. Building on this, review valence can be shown in individual reviews or as an aggregated rating (Qiu et al., 2012). Aggregated ratings are calculated as an average of individual numerical ratings. Since individual ratings can consist of both textual content and numerical ratings, they will be the focus within this research. Next to review valence, a review is also characterized by message sidedness (Pentina et al., 2018). One-sided reviews are solely fixated on positivity or negativity, whereas two-sided reviews contain both positive as well as negative information. This research will focus on the review valence of one-sided reviews, as the valence of this type of reviews is easier to determine for potential customers.

The act of writing a review takes place in the final stage of the consumer buying decision process; post-purchase evaluation (Munthiu, 2009). The valence of a review will be dependent on how the consumer values their experience with the product or service after the purchase. Review valence is determined by the perceived quality of a product and the value a consumer attaches to a product or service (Willemsen et al., 2011). Online reviews play a big role in

influencing the purchase decision of potential buyers (Tata et al., 2020). Reviews have an effect on consumers' attitude towards a product, which influences purchase intention (Bi et al., 2019). Roy et al. (2019) found that the effect of review valence on purchase intention is reinforcing, as positive reviews lead to more purchases which lead to more reviews. Whereas positive reviews increase potential buyers' trust in a product resulting in higher purchase intention, negative reviews reduce trust in a product and decrease purchase intention (Chan et al., 2017).

The effect of review valence on purchase intention might be influenced by for example receiver expertise (Ketelaar et al., 2015), consumer experiences (Mauri & Minazzi, 2013), and product type (Pentina et al., 2018). Nonetheless, there is a positive relationship between review valence and purchase intention found in these researches. Kusumasondjaja et al. (2012) agree that even though some researches might contradict one another in terms of what factors moderate the relationship, they all find that positive review valence has a positive effect on purchase intention, while negative review valence has a negative effect on purchase intention.

In summation, positively valenced reviews are supposed to have a positive effect on purchase intention, whereas negatively valenced reviews are found to have a negative effect on purchase intention. This statement will be put to the test in the first hypothesis.

H1. There is a positive relationship between review valence and purchase intention, implying purchase intention will be higher for positive reviews than for negative reviews.

Negativity effect

The relationship between review valence and purchase intention is characterized by the negativity effect (Park & Lee, 2009). This effect relates to the fact that people tend to weigh negative information heavier than positive information. The extremity fact states that people are more affected by extreme information than by moderate information (Lee et al., 2009). Negative information has a greater influence on one's judgment than positive information, as the negative tends to grab more information (Park & Lee, 2009). Consumers with a neutral point of view find negative reviews more noticeable than positive ones (Kusumasondjaja et al., 2012). On that same note, potential buyers tend to look for negative reviews rather than positive reviews, because they find it important to know what problems may arise with a purchase. A negativity bias within people makes that they are more inclined to believe and remember negative over positive information (Lee et al., 2009). In relation to purchase intention, this means that the effect of negative reviews is bigger than the effect of positive reviews (Sparks & Browning, 2011; Tsao et al., 2019). The negativity effect is defined as "the degree to which

a negative review influences a consumer more than a positive review" (Bae & Lee, 2011, p. 205).

In conclusion, literature shows that negative reviews carry more weight for people than positive reviews do. This makes the effect of negative reviews on the relationship between review valence and purchase intention greater than the effect of positive reviews. This statement is tested with the second hypothesis.

H2. Negative review valence has a stronger effect on purchase intention than positive review valence.

Language

Research in the past has been able to explain the influence of certain review characteristics on purchase intention, such as content, volume, and platform (Roy et al., 2019). Other than that, moderators of the relationship between review valence and purchase intention have been extensively researched such as receiver expertise (Ketelaar et al., 2015), consumer experiences (Mauri & Minazzi, 2013), product type (Pentina et al., 2018), and review consistency (Quaschning et al., 2015). Language characteristics have also been researched in terms of language abstraction (Schellekens et al., 2010), language errors (Hilbrink, 2017), and disclosure language (Evans et al., 2017). Even though lots of language aspects have been researched in their influence on the relationship between review valence and purchase intention in the past, the influence of whether one reads a review in their first language has not been examined yet. Next to the influence of language characteristics, there has not been consistent use of one language in the conducting of experiments. Some conducted experiments used English as language in their experiments, while the respondents had another first language (e.g. Ketelaar et al., 2015; Kusumasondjaja et al., 2012; Sutanto & Aprianingsih, 2016). Some were conducted in the respondents' first language (e.g. Hilbrink, 2017; Sparks & Browning, 2011), whereas other researches had no mention of language at all (e.g. Langan et al., 2017; Mauri & Minazzi, 2013; Park & Lee, 2009).

The first language is the language one learns to speak and understand when they are born (Cook, 2003). Most important when defining the first language is that one learns the language by being exposed to it as a child, rather than having to learn it at a later age. A second language, even though one might reach a near-native level of proficiency, will usually not reach the same proficiency level as one's first language. Language contains certain aspects that are difficult to learn at a later age, as they are most effectively transferred in the earliest years of one's life.

Salehan and Kim (2016) found that language is a way of expressing oneself that is different between cultures. Language is thus a cultural artifact that may not be comprehended the same by one that has a different first language. For online reviews, this means that the message may be misinterpreted and understood in a different way than the reviewer meant to. Besides, translating words from one's second to first language may result in tiny mistakes that change the meaning of words (Garrido & Prada, 2018). The process of reading in a second language requires more attention and time than reading in a first language, because of which the meaning of words may be less adequately understood. Since one's proficiency level is usually higher in a first than in a second language, reviews in one's first language are considered more persuasive (Boo & Kim, 2013). Potential buyers are more prone to believe and take into account reviews from consumers with whom they perceive share similar characteristics (Chan et al., 2017; Pentina et al., 2018). Sharing a language is considered to increase perceived similarity between people, which in turn increases persuasive power (Aune & Kikuchi, 1993). People are more emotionally detached from information gathered in their second language than they are from information in their first language (Hautasaari et al., 2019; Jończyk et al., 2016; Wu & Thierry, 2012). Through this emotional detachment, one would be persuaded more quickly by reviews written in their first language. This would lead to positive reviews having a more positive impact for reviews in a first language, whereas negative reviews would have a bigger negative impact for reviews in a first language.

To summarize, one is quicker to make translation mistakes in a second language, first language reviews are more persuasive because of perceived similarity and less emotional detachment, and perceived similarity is increased through sharing a common first language. Based on this, it can be argued that the relationship between review valence and purchase intention is stronger in first language than in second language. The third hypothesis will test this reasoning.

H3. Review valence has a stronger effect on purchase intention for reviews written in one's first language.

The valence of words is less emotionally loaded in a second language (Garrido & Prada, 2018). As the negativity effect is based on the fact that negative reviews provoke more profound emotions than positive information, one could argue this effect is less extreme for reviews in a second language (Park & Lee, 2009). Jończyk et al. (2016) found that people tend to close themselves to negative emotions in a second language. Negative reviews would therefore have

a stronger influence in one's first language, as these negative emotions are less suppressed.

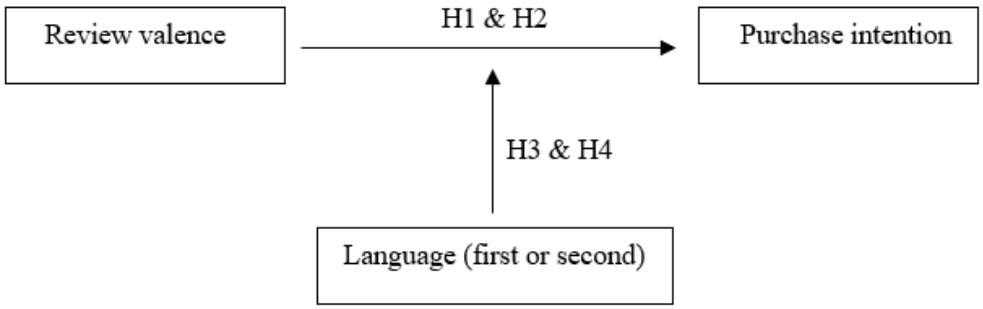
This leads to the fourth hypothesis that will be tested during this research.

H4. Negative review valence for reviews written in one's first language has the strongest effect on purchase intention.

Conceptual model

Based on the aforementioned hypotheses, the following conceptual model is formed.

Figure 1: conceptual model



The conceptual model will be the basis for the upcoming chapters. The methodology design is created based on the relationships that are expected to be present between the variables. The conceptual model will also be the basis for analyzing, answering, and discussing the research question.

Methodology

Research strategy

The first aim of this research is to test the positive relationship between review valence and purchase intention that has been proven in previous literature. Secondly, the negativity effect that is hypothesized to influence the power of the relationship between review valence and purchase intention will be tested. Lastly, this research will attempt to determine how the relationship between review valence and purchase intention is influenced by whether an online review is written in one's first language or their second language. An answer to the central question of this thesis will be sought through the analysis of quantitative data. The variables derived from this question are *review valence*, *purchase intention*, and *language*. *Review valence*, as well as *language*, are independent variables within this research, whereas *purchase intention* is a dependent variable.

Quantitative data will be gathered in the form of a 2x2 experimental design, which will be conducted as a survey. The rationale for the use of this quantitative approach is based on the fact that this approach allows for gathering information about a large group of individuals in a short amount of time and in a cost-efficient manner (Johnson & Turner, 2003). Since the 2x2 experimental design contains two independent variables and one dependent variable, it allows for systematic alteration of the independent variables to examine their individual effects on the dependent variable (Cooper et al., 2006). This results in an experiment with four conditions: 1) positive first language review, 2) negative first language review, 3) positive second language review, and 4) negative second language review. The experimental design has been used in many prior research in the field of review valence and purchase intention (e.g. Kusumasondjaja et al., 2012; Langan et al., 2017; Park & Lee, 2009; Sparks & Browning, 2011). In order to analyze the influence of each condition on consumers' purchase intention, the conditions will be tested in a survey. All respondents will be asked questions about their intention to purchase an electric toothbrush, based on the reviews they are shown. Customers tend to rely relatively heavily on online reviews when purchasing electronics, which is why an electric toothbrush is chosen as manipulation material for this research (Bae & Lee, 2011). The survey will be distributed via social media channels in order to reach a large audience and receive response sets from people with different demographics (Lefever et al., 2007). Next to that, online distribution is chosen as it allows for assigning the conditions to respondents at random.

Experimental design

Table 1: experimental groups

Experimental groups		Review valence	
		Positive	Negative
Language	First language	Group 1 Positive Dutch review	Group 2 Positive Dutch review
	Second language	Group 3 Positive English review	Group 4 Negative English review

As mentioned before, the relationship between review valence and purchase intention, and the effect of language on this relationship, will be tested in a 2x2 experiment. The manipulation will be based on the independent variables *review valence* and *language*. This results in an experiment with four conditions: 1) positive first language review, 2) negative first language review, 3) positive second language review, and 4) negative second language review (Table 1). Other than changing the independent variables, the circumstances are kept equal in order to ensure maximum comparability between the different experimental conditions. All participants will be randomly assigned to either one of the four conditions.

This experiment is based on a between-subjects design, which relates to the fact that all respondents are exposed to only one level of the independent variables (e.g. reviews written in either Dutch or English) (Loftus & Masson, 1994). The respondents experience only one of the experimental conditions, rather than having them complete the survey for both conditions. A between-subjects design is often used in situations where people are asked whether or not they are willing to make a decision, as opposed to within-subjects designs in which all decisions are open to make (Charness et al., 2012).

According to Mauri and Minazzi (2013), unfamiliar brands are more affected by online reviews than familiar brands, as a familiar and established brand is usually more resilient. Since the goal is to find how purchase intention is influenced by review valence and language, an unfamiliar and undefined brand is chosen. Price plays an important role in customers' willingness to buy a product (Kim & Krishnan, 2015). The price of the product used in this experiment will therefore be neither expensive nor cheap, in order to avoid having respondents base their purchase decisions on price rather than reviews. The price is an average determined based on the prices of electric toothbrushes with similar qualities on Coolblue.nl. Customers tend to rely on online reviews to a relatively large extent when considering to purchase

electronics (Bae & Lee, 2011). On this same note, Chang and Wildt (1994) found that consumers tend to rely more on others' opinions of a product when the purchase of the product is infrequent. The reliance on online reviews is higher for search goods than for experience goods (Willemsen et al., 2011). Electronics are products that are characterized by the fact that their performance can be relatively accurately assessed before purchasing the product, which is the definition of a search product. Therefore, the product under consideration in this experiment will be an electronic device, namely an electric toothbrush. A qualitative pre-test conducted through interviews among 10 students shows this product requires pre-purchase investigation including the evaluation of online reviews, however, the investment is not that big they would not be willing to consider buying the product.

The shorter an online review is, the less helpful it is found, as shortness often results in shallowness (Salehan & Kim, 2016). In order to increase the helpfulness, the reviews used in this experiment will be rather long such that it aids the respondents in making their purchase decision. Other than that, the written reviews will consist of both numerical and textual content in order to ensure the review valence is transferred to the respondents without the risk of misinterpretation (Ketelaar et al., 2015). This misinterpretation is also avoided because the reviews are extreme in their either positive or negative valence (Mudambi & Schuff, 2010). The reviews that differ in review valence are written to be one another's antonyms (e.g., good service vs. bad service). Writing the reviews this way avoids the valence of one of the reviews being higher or clearer, as the reviews will be each other's almost exact opposites. The reviews that differ in language are each other's literal translations, to ensure the meaning of the review stays equal across the conditions. Even though the independent variables vary in each of the experiment's conditions, all other circumstances are kept equal. The manipulation material can be found in Appendix A.

Susceptibility to interpersonal influence is described to have an influence on a person's sensitivity to eWOM (Moran et al., 2014). This concept is defined as "the need to identify with or enhance one's image in the opinion of significant others through the acquisition and use of products and brands, the willingness to conform to the expectations of others regarding purchase decisions, and/or the tendency to learn about products and services by observing others or seeking information from others" (Bearden et al., 1989, p. 474). The higher one's susceptibility to interpersonal influence, the more they will be influenced by eWOM expressions (Park et al., 2011). Therefore, the variable *susceptibility* to interpersonal influence will be used as a control variable next to some general demographics within this experiment.

The reviews about the unbranded electric toothbrush will be shown according to the Coolblue.nl format. The participants in the pre-test find this website reliable and trustworthy, and when deciding to purchase a product on this website they indicate to consider online reviews in their decision.

Research material

The 2x2 experimental design will be conducted as a survey. The survey will be created in Qualtrics, an online survey tool that helps in creating a survey, distributing this survey, and preliminary analyzing the results. Qualtrics offers the option to randomly assign respondents to one of the four conditions. The distribution of the survey will mainly happen via social media (e.g., WhatsApp, Facebook, LinkedIn, etc.). When enough data has been collected the data will be transferred to IBM SPSS statistics 25. This statistical program allows for an elaborate quantitative analysis of the gathered data.

The stimulus used in the survey is chosen based on a pre-test conducted during a short qualitative interview with 10 independent students. During these interviews they are asked about their perception of Coolblue.nl's reliability and trustworthiness, their evaluation of online reviews before purchasing an electric toothbrush and if they would be willing to consider purchasing an electric toothbrush at a price of 43.99 euros. Based on the answers of this pre-test the product under consideration will be an electronic toothbrush sold on Coolblue.nl at a price of 43.99 euros.

Sampling

The first way of the survey's distribution is through non-random convenience sampling. People within the close network are asked to complete the survey via online media channels, such as WhatsApp and LinkedIn. Secondly, snowball sampling is used, as participants were asked to share the survey within their network. The main advantage of snowball sampling is that people outside of the researcher's direct network are approached to participate in the experiment as well, which increases the diversity of the sample (Goodman, 1961). Next to a more diverse audience, the distribution through snowball sampling increases the number of people that are approached to participate in the experiment. The advantage of using the online survey tool Qualtrics is that respondents can be randomly assigned to one of the four experimental conditions.

To ensure the effect of language can be measured accurately, only people with Dutch as first language are included in the sample. The survey will be conducted in Dutch regardless of the reviews' language respondents are shown, in order to guarantee all respondents fully understand the questions that are asked in the survey. People between the ages of 15 and 65 are allowed to participate in the experiment. Including people over 15 is chosen based on the inclusion of this age group in similar studies (e.g. Hernández et al., 2011; Kau et al., 2003). From this age onwards people generally have access to the internet and are able to make certain small financial decisions themselves. People above the age of 65 have a lower online presence and therefore are less likely to engage in online purchasing, hence this age group is excluded from this experiment (Vroman et al., 2015).

According to Bentley and Thacker (2004), a quantitative research requires a minimum number of 30 respondents per experimental group, whereas a number of 50 is recommended according to Field (2013) in order to obtain generalizable results. However, the bigger the sample size, the more generalizable results will become, and how more effects can be detected (Oehlert, 2000). This experiment is conducted on 270 respondents with a final number of 260 valid responses.

Procedure

The participants will be invited to partake in the experiment via online media channels. An online link to the survey in Qualtrics will be sent alongside this invitation. Before starting the survey, respondents are ensured their data will be used confidentially and their answers will not be traced back to them personally. Besides ensuring anonymity and confidentiality, the purpose of the survey and research is explained shortly. After respondents agree to continue the survey, they will be randomly assigned to one of the four conditions: 1) positive first language review, 2) negative first language review, 3) positive second language review, and 4) negative second language review. The respondent will first see the electric toothbrush and some product information as per the format used for products on Coolblue.nl. After this initial introduction to the product, they are asked about their *initial purchase intention* for this particular product. This question will be used to be able to measure the effect of the reviews on the respondents' purchase intention. Next, the respondents are shown two online reviews, differing in review valence and language, depending on which condition they have been assigned to. Then they are asked questions about the *valence* of the reviews they were shown to ensure the review valence has been identified correctly. After the questions regarding review valence, the respondents will

be asked again about their *purchase intention* of the product under consideration. Their level of *proficiency* in the language of the reviews will be tested to ensure the respondents are able to understand the review. Level of *susceptibility* will be measured to function as a control variable in the analysis. The last questions will be about some of the respondent's demographics, *gender*, *age*, *nationality*, *first language*, level of *education*, and *frequency* of online purchasing. The survey will be ended with a message for the participants to express gratefulness for their cooperation.

Measurement instruments

To clarify how the variables in this research are measured, each of their operationalization will be discussed, including their definition, dimensions, and items. The items derived from this operationalization will then be used as questions for the survey. These items will then be tested in a pre-test among five random people that did not participate in the first pre-test in order to ensure they are clear and understandable.

The hypothesized moderating and first independent variable *language* will be tested as follows. Respondents are asked to evaluate their proficiency level of the language the review is written in on a scale from 1 to 10. This ensures they are able to understand the review and its valence. The questions and scale for assessing one's language proficiency used in this research are derived from the elaborate research of Marian et al. (2007). One's first language is the language they learn to speak and understand when they are born (Cook, 2003). Language proficiency is defined as "the language learner's ability to use language for real-life purposes without regard to the manner in which that competence was acquired." (Clark, 1972, as cited in Farhady, 1982, p. 44).

The second independent variable *review valence* is measured with two questions. The questions are those used by Kim and Gupta (2012). Whereas they used a nine-point Likert scale in their research, respondents will be asked to answer on a seven-point Likert scale in this research. This is done to increase consistency between questions as later will be explained purchase intention is also measured on a seven-point Likert scale. Next to that, review valence is a categorical variable since a review is positive or negative. The definition of review valence within this research is "the positive or negative orientation of information about an object or a situation" (Chan et al., 2017, p. 55).

Purchase intention will be measured by a combination of the items and scale of Jiang and Benbasat (2007) and Spears and Singh (2004). A combination was chosen as the pre-test shows

the measurement of both researches contained some unclear questions, whereas combining them lead to the highest understanding among respondents. The measurement within this research consists of four questions about the respondent's purchase intention, measured on a seven-point Likert scale. The definition of purchase intention used in this research is a psychological state of mind "where consumer tends to buy a certain product in certain condition" (Mirabi et al., 2015, p. 268).

Lastly, *susceptibility* to interpersonal influence will be measured on a seven-point Likert scale to function as a control variable in the analysis. The variable will be measured by four items created by Bearden et al. (1989). Susceptibility to interpersonal influence is defined as "the need to identify with or enhance one's image in the opinion of significant others through the acquisition and use of products and brands, the willingness to conform to the expectations of others regarding purchase decisions, and/or the tendency to learn about products and services by observing others or seeking information from others (Bearden et al., 1989, p. 474)".

All scale items are measured on the 7-point Likert scale ranging from 1) strongly disagree to 7) strongly agree, with answer possibilities 1) helemaal mee oneens, 2) mee oneens, 3) een beetje mee oneens, 4) niet mee oneens/niet mee eens, 5) een beetje mee eens, 6) mee eens, and 7) helemaal mee eens. The 7-point Likert scale is the preferred measure for quantitative data because answers closely resemble respondents' actual attitude, however, the answer possibilities are not overwhelming in the sense that they confuse respondents as to what answer resembles their attitude (Babbie, 2014).

A complete overview of the operationalization of the variables and their items can be found in Appendix B. An overview of the operationalization of the demographics can be found in Appendix C.

Validity and reliability

Conducting the pre-test has a positive influence on both the validity and reliability of this research. The first pre-test was conducted among 10 students through face-to-face interviews and asked about the stimulus chosen for the experiments. First of all, participants of this pre-test indicate they find Coolblue.nl a trustworthy website, and they would consult online reviews before purchasing on this website. Secondly, they confirm that they would consider buying an electric toothbrush at the price of 43,99 euros and before purchasing this product they would evaluate online reviews. The confirmation of the chosen stimulus in the experiments positively affects validity and reliability. A second pre-test conducted on another random sample after

creating the initial survey based on the operationalization, results in some changes in the items of the variable purchase intention. Instead of using only the measurement items created by Jiang and Benbasat (2007), it is chosen to combine this with the items created by Spears and Singh (2004). Increasing the understandability and clarity of the items positively affects the research's validity and reliability.

The research's validity is increased by using measurement scales and items from existing literature. Since the scales have been tested and used extensively in previous research, it can be assumed these measurement scales are able to correctly estimate the respondents' opinions. Ensuring the anonymity of answers reduces the chance of people completing the survey in a way that does not necessarily reflect their own views but in a way they deem socially desirable (Dodou & De Winter, 2014). This increases the research's reliability as the respondents' answers will most closely resemble their actual attitudes.

The reliability and validity of the measurement scales within this research will be tested in the results section.

Data analysis

A manipulation, randomization, and reliability check will be conducted before starting to test the hypotheses. The manipulation check will test if the manipulation can be considered successful (Hoewe, 2017). The randomization check will test if the sample distribution is equal across all conditions (Mutz & Pemantle, 2015). The reliability analysis is used to test the internal consistency of the scale variables *initial purchase intention, purchase intention* after reviews, *review valence* and *susceptibility* to interpersonal influence (Santos, 1999).

The hypotheses will then be tested with a two-way mixed ANOVA and a two-way mixed ANCOVA. The ANOVA looks at the differences in purchase intention between the different valence and language groups. The ANCOVA does the same, while including the covariates *age*, *gender*, *education*, *frequency* of online purchasing, and *susceptibility* to interpersonal influence. The covariates are included in the model to see if effects found in the ANOVA still exist when including control variables.

Research ethics

In the conducting of this research the principles for ethical research as to Vanclay et al. (2013) are adhered to. It will be shortly explained how the relevant principles are implemented in this research.

First of all, respect for participants is ensured by approaching potential respondents in a polite and respectful manner. Next to that, they are addressed in the same polite way throughout the survey. An email address is provided at the end of the survey in case respondents have any questions or remarks about the research. The message that will be sent out asking people to participate in the experiment shortly informs the potential respondents about the purpose of the research, without decreasing the validity of the manipulation material. The principles of informed consent and voluntary participation are followed through notifying respondents about the voluntary grounds of their participation. Respondents are in no way coerced or forced to take part in the experiment. Building on this, participants are able to withdraw from the survey at any given moment. Data from participants that choose to withdraw and thus not complete the survey are automatically deleted after seven days. The next principle focuses on the avoidance of undue intrusion. This is safeguarded as participants are only asked questions relevant to this research. It is made clear that participation is anonymous, and the respondent's answers will thus not be traced back to them personally. The answers are completely anonymous and therefore not able to harm participants in their personal or professional life. Next to that, participants are guaranteed the gathered data will be handled confidentially and will not be shared with any third parties outside of this research. The data will be stored safely when the research is finished in order to guarantee there will be no unauthorized access. The next principle of enabling participation is adhered to by making sure all relevant individuals are able to participate in the research. That is, all individuals with Dutch as their mother tongue and English as a second language between the ages of 15 and 64. The research is reliable and valid, which fulfills the criteria for an appropriate research. Lastly, the methods used within this research will be fully reported in order to enable reproduction and replication.

Results

Sample description

The survey was completed by 270 respondents of which 260 will be used for analysis. Two cases that did not have Dutch as a first language were deleted. Six cases with a self-rated proficiency lower than six in the language of the review were deleted as well. Lastly, one case with an age over 65, and one case with an age under 15 were deleted from the sample. Cases with a nationality other than Dutch (i.e., Belgian) were used in the analysis since this research focuses on language rather than nationality.

Among the 260 respondents, 57.7% were female and 42.3% were male. With a percentage of 61.2, the largest group of respondents has an age between 15 and 24. The second-largest age group was the group between 25 and 34 with 13.8%. The other age groups range between 6.9% and 10%. From the sample population, 2.7% indicated high school was their current or highest achieved education and 10.4% indicated theirs was post-secondary vocational education (MBO). A larger group of the population, 26.2%, has a current or highest achieved educational level of university of applied sciences (HBO), and the largest group with 60.8% was found for university (WO). The influence of the distorted presence of younger age groups and higher educated people will be deliberated on in the discussion chapter. Lastly, only 1.5% expressed they never purchase online, and 3.8% purchases online more than ten times a month. A group of 14.6% does online purchases between 6 and 10 times a month. With a percentage of 80, the largest group of the population indicated to purchase online between 1 and 5 times a month. A full overview of the frequency tables can be found in Appendix D.

Randomization check

Among the 260 valid respondents, 67 (25.8%) were shown positive English reviews and 61 (23.5%) were shown negative English reviews. Both positive and negative Dutch reviews were shown to 66 respondents (25.4%).

A randomization check was conducted to see if the respondents were equally distributed over the conditions in terms of their demographics *gender*, *age*, *education*, and *frequency* of online purchasing (Table 2). Randomization of characteristics across conditions helps to ensure that found effects are a result of the research manipulation (Urbach, 1985). For all statistical tests a significance level of .05 is used (Field, 2013).

For the categorized variables *gender*, *education* and *frequency* of online purchasing, the randomization check was done with a Chi-square test. Since none of the cells had an expected

count of less than five for the variable *gender*, Pearson's Chi-square was interpreted. The distribution within the variable passes the randomization check, X2(3, N = 260) = 4.32, $p > .05$ ($p = .229$). The Fisher's exact test was interpreted for the variable *education* and *frequency* of online purchasing, as more than 20% of the cells (25% for education, 50% for frequency of online purchasing) had an expected count of less than five. With $p > .05$ ($p = .662$), the distribution of the variable *age* can be considered equal across all conditions. *Frequency* of online purchasing also passes the randomization check with $p > .05$ ($p = .600$).

Even though the answers are categorized, *age* is treated as a continuous variable, because the categories are of interval level (Stevens, 1946). The randomization check for the continuous variable *age* was done with an ANOVA. This test showed no significant differences in the mean ages between the different experimental conditions, F(1, 256) = 0.366, $p > .05$, ηp2 = .004 ($p = .799$).

Table 2: randomization demographics per condition (for a full overview see Appendix E)

		Total	**Positive Dutch**	**Negative Dutch**	**Positive English**	**Negative English**
Size	*N*	260	66	66	67	61
Gender	*Male*	42.3%	47.0%	50.0%	35.8%	36.1%
	Female	57.7%	53.0%	50.0%	64.2%	63.9%
Age	*15 - 24*	61.2%	66.7%	56.1%	58.2%	63.9%
	25 - 34	13.8%	10.6%	18.2%	14.9%	11.5%
	35 - 44	6.9%	7.6%	4.5%	7.5%	8.2%
	45 - 54	10.0%	7.6%	12.1%	11.9%	8.2%
	55 - 64	8.1%	7.6%	9.1%	8.2%	8.1%
Education	*High school*	2.7%	3.0%	1.5%	1.5%	4.9%
	MBO	10.4%	6.1%	13.6%	9.0%	13.1%
	HBO	26.2%	27.3%	19.7%	28.4%	29.5%
	WO	60.8%	63.6%	65.2%	61.2%	52.5%
Frequency of online purchasing per month	*Never*	1.5%	4.5%	1.5%	0.0%	0.0%
	1 - 5 times	80.0%	78.8%	84.8%	77.6%	78.7%
	6 - 10 times	14.6%	12.1%	10.6%	19.4%	16.4%
	> 10 times	3.8%	4.5%	3.0%	3.0%	4.9%

Manipulation check

A manipulation check was conducted in order to ensure manipulated reviews were correctly considered positive or negative by the respondents as to verify successful manipulation of the reviews (Hoewe, 2017). The manipulation check was conducted through an independent samples T-test. The mean score for the group with positive review valence was 6.11 (SD = 1.02) on a Likert scale from 1 to 7, whereas the mean score for the group with negative review valence was 1.48 (SD = 0.98). This is a significant difference between the two groups with

$t(258) = 37.30$, $p < .001$.Based on these results, the manipulation can be considered successful. The results of the manipulation check can also be found in Appendix F.

Reliability analysis

The internal consistency of the scale items for *purchase intention*, *valence*, and *susceptibility* to interpersonal influence was tested with a reliability analysis. Since these variables are latent constructs it is important to ensure their scale items measure the same construct. A scale can be considered internally consistent if Cronbach's alpha is higher than 0,70 (Field, 2013), with high proven reliability for a Cronbach's alpha over .80 (Ursachi et al., 2015). As Table 3 shows, all scales used in this research are highly reliable since all Cronbach's alphas are higher than 0,80. Scale scores were created based on these reliability analyses and were used throughout the further analysis.

Table 3: reliability statistics of latent constructs (for a full overview see Appendix G)

Variable	**Cronbach's alpha**
Initial purchase intention	.886
Perceived review valence	.963
Purchase intention after review	.962
Susceptibility to interpersonal influence	.824

ANCOVA

The entire conceptual model that shows the hypothesized relations is tested with both an ANOVA and ANCOVA. Both models look at how purchase intention changed before and after seeing the review. The ANOVA looks at the effects between the variables and the ANCOVA shows if these effects are influenced by control variables. The results of these tests can be found in Table 4 and Appendix H. First, a two-way mixed ANOVA was conducted with one within-subject factor (*change* in purchase intention before and after seeing the reviews) and two between-subject factors (*valence* and *language*). Secondly, a two-way mixed ANCOVA was performed with the same within and between-subject factors. Covariates are included in the model to more accurately test the effect of the experimental manipulation (Field, 2013).

Table 4: results ANOVA and ANCOVA (for a full overview see Appendix H)

		Before reviews		After reviews	
Valence	Language	M	SE	M	SE
Positive	Dutch	4.27	1.47	4.83	1.65
	English	4.49	1.32	4.88	1.32
Negative	Dutch	4.72	1.1	2.1	1.01
	English	4.53	1.41	2.14	0.99

	Mixed ANOVA			Mixed ANCOVA		
Variable	F(1, 256)	p	η^2_p	F(1, 256)	p	η^2_p
PI change	178.05	.000	.410	7,53	.007	.029
PI change * review valence	369.05	.000	.590	393,31	.000	.611
PI change * language	0.17	.679	.001	0,38	.540	.002
PI change * valence * Language	1.19	.276	.005	1,98	.161	.008
Susceptibility * PI change				5,04	.026	.020
Age * PI change				4,03	.046	.016
Education * PI change				2,11	.148	.008
Gender * PI change				2,59	.109	.010
Frequency * PI change				7,48	.007	.029

Assumptions

In order to conduct an ANCOVA, a few assumptions have to be met (Field, 2013). Statistical results for all of the assumptions can be found in Appendix I.

The first assumptions concern the measurement levels of the variables used in the model. First of all the dependent variables purchase intention before and after reviews are of metric measurement level. Secondly, the independent variables language and review valence are of categorical measurement level (Dutch or English and positive or negative, respectively). Thirdly, the covariates included in the model are *susceptibility* to interpersonal influence, *age*, *education*, *gender*, and *frequency* of online purchasing are of metric measurement level. In order to be able to include *gender* in the ANCOVA, a dummy variable was created. Since *education* and *age* are both ordinal measures, they were both treated as continuous variables as to be allowed to include them as covariates in the model.

Next, the population sample within all of the experimental groups should be normally distributed. A population has a normal distribution if skewness and kurtosis have a Z-score between -1.96 and 1.96. These Z-scores were calculated for each of the experimental groups on initial purchase intention and purchase intention after manipulation. Five cases of skewness and one of kurtosis were found with Z-scores lower than -1.96 or higher than 1.96. Q-Q plots were visually analyzed since there were signs of non-normal distribution. Because the Q-Q plots do look normally distributed, normality is assumed for all conditions, and the data is approximately

normally distributed. There is one extreme outlier in the negative Dutch review group for purchase intention after the reviews. However, after reviewing the answers of this respondent, the respondent did seem to have genuinely answered all questions. For this reason the outlier was not deleted from the dataset.

Then, the assumption of equality of variances for *initial purchase intention* and *purchase intention* after reviews was tested. With $F(3, 255) = 4.16$, $p < .05$ ($p = .007$) and $F(3, 255) = 6{,}86$, $p < .001$, equality of variances cannot be assumed. However, since the sample size is relatively large and distribution across conditions is more or less equal, it was chosen to overlook this issue. Implications of this inequality will be discussed in the discussion section.

Lastly, there should be no significant correlation between the conditions and the covariates, and the factors and covariates should be independent of one another. All Pearson's correlation scores show insignificant values, which means there is no correlation between the conditions and covariates. Since the randomization check showed no significant differences in the distribution of the control variables across the conditions, it can be assumed the groups and covariates are independent of the factors.

Hypothesis testing

H1. There is a positive relationship between review valence and purchase intention, so that purchase intention will be higher for positive reviews than for negative reviews.

The first hypothesis suggests that there exists a positive relationship between review valence and purchase intention. Thus, reviews with a positive valence will result in higher purchase intention than reviews with a negative valence. This relationship has been proven in past literature and was sought to confirm within this research.

To test this hypothesis an independent sample T-test was conducted. That way purchase intention was compared between the groups that read the positive reviews and the groups that read the negative reviews. The mean purchase intention for positive review valence was 4.86 (SD = 1.48) on a Likert scale from 1 to 7, whereas the mean purchase intention for negative review valence was 2.12 (SD = 1.04). This is a significant difference between the two valence groups with $t(258) = 17.19$, $p < .001$. Secondly, this hypothesis was tested in a two-way mixed ANCOVA (Table 4). This test showed that even when including covariates review valence influences purchase intention, $F(1, 256) = 393.31$, $p < .001$, $\eta p2 = .611$. With a partial eta squared of .611, this influence has a large effect size (Sawilowsky, 2009).

The full statistical results can be found in Appendix J. Based on these results, **H1 is accepted.**

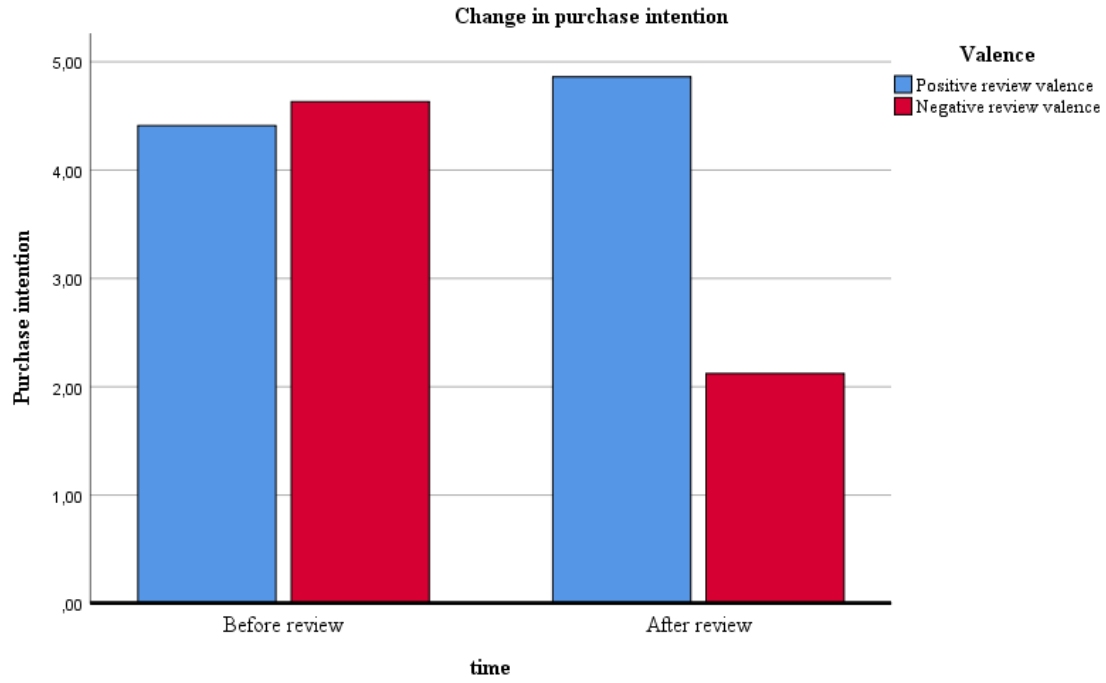
H2. Negative review valence has a stronger effect on purchase intention than positive review valence.

The second hypothesis concerns the negativity effect. This effect states that the negative impact of negative reviews is bigger than the positive impact of positive reviews. This effect has been proven in the past and is tested in this research.

To find whether this hypothesis can be accepted first an independent sample T-test was conducted. This test looks at whether the respondents' purchase intention has changed after reading the reviews. This test, therefore, looks at the change in purchase intention before and after reading the reviews between the two valence groups. The mean of purchase intention for respondents who read the positive reviews increased by 0.45 (SD = 0.98). The mean purchase intention for the group of respondents that was shown the negative reviews on the other hand decreased by 2.51 (SD = 1.46). With $t(258) = 19.27$, $p < .001$ this a significant difference in means. Figure 2 shows the negativity effect in the change of purchase intention between the two valence groups.

Hypothesis 2 is accepted based on the statistical results. A full overview of the statistical results can be found in Appendix K.

Figure 2: purchase intention change between valence groups.



H3. Review valence has a stronger effect on purchase intention for reviews written in one's first language.

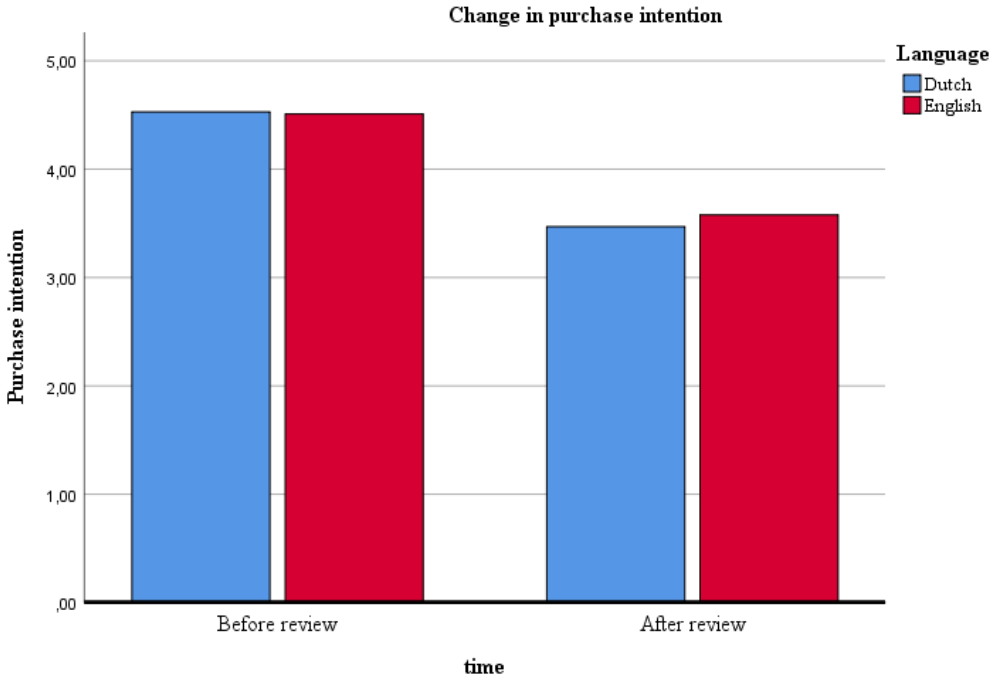
H4. Negative review valence for reviews written in one's first language has the strongest effect on purchase intention.

Hypothesis 3 tests the new theory that the relationship between purchase intention and review valence is moderated by whether or not a review is written in one's first language. The third hypothesis states that this relationship is moderated as such that reviews written in one's first language have a greater effect on purchase intention than reviews written in a second language. The fourth hypothesis builds on the third as it suggests that the negativity effect is strongest for reviews written in one's first language.

The hypotheses are first tested with an independent sample T-test. This test looks at whether the change in purchase intention is different between the two language groups. mean decrease in purchase intention for respondents who read the Dutch reviews is 1.06 (SD = 2.01). The mean purchase intention for the group of respondents that was shown the English reviews decreased by 0.93 (SD = 1.85). With $t(258) = -0.538$, $p > .05$ ($p = .591$) there is no significant difference in means. Figure 3 shows the mean difference in purchase intention between before and after the reviews for the Dutch and English groups. Secondly, these hypotheses were tested in a two-way mixed ANCOVA (Table 4). This test showed that even when including covariates language does not influence purchase intention, $F(1, 256) = 0.38$, $p > .05$, $\eta p2 = .002$ ($p = .540$). Other than that, the ANCOVA shows no three-way interaction between language, review valence and purchase intention, $F(1, 256) = 1.98$, $p > .05$, $\eta p2 = .008$ ($p = .161$). Since no interaction is found, language cannot be considered a moderator in the relationship between review valence and purchase intention.

Based on the statistical results **hypotheses 3 and 4 are rejected**. A full overview can be found in Appendix L.

Figure 3: purchase intention change between language groups



Control variables

Including covariates in the ANCOVA was done to test for possible effects of control variables on the respondents' change in purchase intention (Table 4 and Appendix H). *Education* and *gender* were both insignificant with F(1, 256) = 2.11, $p > .05$, ηp2 = .008 ($p = .148$) for *gender*, and F (1, 256) = 2.59, $p > .05$, ηp2 = .010 ($p = .109$) for *education*. However, parameter estimates showed a marginally significant effect of gender on initial purchase intention, $t(256) = -1.800$, $.05 < p < .10$ ($p = .073$). With a B of -0.308 this means that initial purchase intention was slightly lower for men than for women. *Susceptibility* to interpersonal influence showed a small effect, F(1, 256) = 5.04, $p < .05$, ηp2 = .020 ($p = .026$). Parameter estimates showed that susceptibility significantly influences initial purchase intention, $t(256) = 1.967$, $p = .05$. With a B of .169 respondents with higher susceptibility to interpersonal influence have a higher initial purchase intention. The variable *age* showed a small significant effect with F(1, 256) = 4.03, $p < .05$, ηp2 = .016 ($p = .046$). A marginally significant effect on initial purchase intention was shown by parameter estimates, $t(256) = 1.869$, $.05 < p < .10$ ($p = .063$). The older respondents were, the lower their initial purchase was, B = -0.120. Lastly, *frequency* of online purchasing has a small effect with F(1, 256) = 7,48, $p < .05$, ηp2 = .029, ($p = .007$). The parameter estimates showed a marginally significant effect of online purchasing frequency on initial purchase

intention, $t(256) = -1.910$, $.05 < p < .10$ ($p = .057$). With a B of -.304 this means that the more often respondents purchase online, the lower their initial purchase intention is.

None of the covariates showed significant parameter estimates for purchase intention after reading the reviews. The direction and effects of the control variables will be discussed in the discussion section.

Summary of research findings

This research has a twofold objective. First of all, it aims to verify the relationship and direction of the relationship between review valence and purchase intention. Secondly, it introduces language as a new factor that is expected to influence the relationship between review valence and purchase intention.

As described in the theoretical framework, purchase intention is one of the main determinants of a customers' actual purchase behavior. Academic literature has shown that review valence positively influences purchase intention. The first hypothesis tests whether this relationship can be confirmed by this research. Based on the statistical analysis of quantitative data it can be confirmed that the more positive a review's valence is, the higher one's purchase intention will be. The second hypothesis concerns the fact that this relationship is affected by the negativity effect. This effect states that the negative influence of negative reviews is greater than the positive effect of positive reviews. Statistical results indeed show that the negative impact is bigger than the positive impact of reviews. Thus, the change in purchase intention before and after reading reviews is bigger for negative than for positive reviews.

The third and fourth hypotheses suggest that language is a moderator in the relationship between review valence and purchase intention. Based on literature it is hypothesized that the influence of review valence on purchase intention is bigger when one reads a review written in their first language. Language supposably functioning as a moderator is based on two main premises. First of all, the chances of a message being transferred incorrectly are bigger in a second language than in a first language. One is quicker to make tiny mistakes in translating messages in a second language, changing its meaning. Secondly, first language reviews are presumably less subject to emotional detachment and more persuasive because of perceived similarity from sharing a common language. There are no significant results in this research to confirm the third hypothesis that language is a moderator in the relationship between review valence and purchase intention. Since the third hypothesis is not supported, the fourth cannot be supported either. The negativity effect is in this research thus not more prevalent for first language reviews than for second language reviews.

Discussion

Discussion regarding theory

As expected, based on literature, review valence has a positive relationship with purchase intention, in which the influence of negative reviews is bigger than the influence of positive reviews. On the other hand, the expected moderating effect of language was not confirmed in this research. Nonetheless, these results should be interpreted cautiously, and a number of factors should be borne in mind.

There is no literature stating second language actually does function as a moderating factor. However, some previous researches have discussed it as a possible element influencing the relationship between review valence and purchase intention (e.g. Salehan & Kim, 2016). This possible influence was then examined based on other literature. Even though other language aspects such as language style (Aerts et al., 2017), language errors (Hilbrink, 2017), and language abstraction (Schellekens et al., 2010) have been tested, the influence of reviews written in either first or second language remained an unresearched field. Since there is no research yet proving the effect of language, there was always the possibility no effect would be found. It was assumed that people would find a review written in their first language more persuasive because the perceived similarity would increase its credibility and trustworthiness (Aune & Kikuchi, 1993; Lin & Xu, 2017; Moran & Muzellec, 2017). However, this research tested only the effect of language on purchase intention after reading the reviews. Since the effect on credibility and trustworthiness was not tested, the insignificant results for language might have been the result of an insignificant effect on credibility and trustworthiness.

The lack of the effect of language could also possibly be explained by some biases in the research sample. It was expected that reviews in a first language are more persuasive because proficiency in one's first language is higher than in their second language (Boo & Kim, 2013; Garrido & Prada, 2018). However, the higher one's education, the more likely they are to have a higher proficiency in a second language (Hulstijn, 2011). Higher proficiency leads to fewer mistakes in translation and a more accurate understanding of the message (Brantmeier, 2005). The sample of this research is relatively highly educated with 60.8% currently being enrolled in or having obtained a university degree. Next to that, reading in a second language requires more thorough reading in order to comprehend the text (Singhal, 1998). It could thus be that these factors cancel out one another in this research. More mistakes might have been made in translating the message read in a second language. Meanwhile the respondents that saw the

second language reviews might have paid more attention to the message since it requires more effort to read those than in one's first language.

Lastly, it was expected that the effect of first language reviews is higher because people tend to be more emotionally detached from messages in a second language (Hautasaari et al., 2019; Jończyk et al., 2016; Wu & Thierry, 2012). However, the experiment did not test the emotional attachment respondent felt towards the manipulation material. The results for language may therefore have been insignificant because the manipulation did not impact the respondents' emotional attachment.

Discussion regarding control variables

Education had no effect on the respondents' change in purchase intention, neither on their initial purchase intention or purchase intention after reading the reviews. The fact that no effect of education was found may have been the result of an education bias in the sample. Finding a significant effect of education was less likely due to the largest part of the sample belonging to the same educational category.

The control variable gender did not influence the change in respondents' purchase intention but did have a small, marginally significant effect on their initial purchase intention. Male customers tend to approach their buying process more practically, whereas female customers tend to rely more on their emotions (Fan & Miao, 2012). Next to that, men are generally more risk-taking than women. Lastly, visual presentation of a product has a higher influence on men than on women (Shaouf et al., 2016). Based on this, it might make sense that women are a bit more reluctant to buy a product before having a deeper knowledge about the product, whereas men are slightly more willing to take the risk of purchasing a product.

Age had a small effect on the change in purchase intention because of its marginally significant effect on initial purchase intention. The older respondents turned out to be less likely to initially purchase the product. This could be explained by older generations being less comfortable using the internet and purchasing online (Akhter, 2003). People with a higher age also tend to seek more certainty before making a purchase decision, reading the reviews would then increase their certainty.

Frequency of online purchasing had a small effect on respondents' change in purchase intention as it marginally impacted their initial purchase intention. People that purchased online more frequently had a lower initial purchase intention. Finding a strong effect was unlikely due to a large group of respondents (80%) purchasing online between 1 and 5 times a month. The

effect that was found can be explained by frequent online shoppers being more experienced and used to reading reviews prior to making their purchase decision (Ling et al., 2010).

Susceptibility to interpersonal has a small effect on the change in purchase intention before and after reading the reviews, which is explained by a significant effect of susceptibility on initial purchase intention. Respondents with higher levels of susceptibility had a higher initial purchase intention. According to theory, susceptibility usually influences the purchase decision made after reading reviews in order to comply with the opinion of others (Bearden et al., 1989). There is no existing literature that confirms the positive effect of susceptibility on initial purchase intention as found in this research.

Limitations

Other than the aforementioned factors possibly influencing the results stemming from literature, there are also some limitations regarding the methodology and analysis that could have had an impact on the results.

The hypotheses were tested in an experiment that was designed to resemble reality most closely. Even though resemblance of reality was strived for, experimental conditions will always differ from reality (Levitt & List, 2007). While answering the survey, the respondents were exposed to two reviews, whereas in real life they have access to a bigger range of reviews (Pentina et al., 2018). The number of reviews increases their influence on readers' purchase intention (Park & Lee, 2008). Respondents were also solely exposed to reviews with either positive or negative valence. In a real-life online environment there usually are reviews available differing in their valence (Doh & Hwang, 2009).

The data in this research was gathered through convenience and snowball sampling. A disadvantage of this data collection method is that a selection bias may arise through over and under-representation of certain population characteristics (Baltar & Brunet, 2012). In this research, there was an over-representation of highly educated respondents. 87% of the respondents were highly educated (university or university of applied sciences), whereas only 33% of the actual Dutch population has this level of education (Ministerie van Onderwijs, Cultuur en Wetenschap, 2020). There is also an age bias towards younger respondents in this research. Whereas 61% of the survey sample had an age between 15 and 25, only 12% of the actual Dutch population falls within this age group (CBS, 2020). The education and age bias influence the generalizability of the results.

One of the assumptions for interpreting the results of an ANCOVA is that there should be equality of variances. The data in this research violated this assumption of homogeneity. Even though it was dismissed as the sample sizes for each of the conditions are more or less equal, it still could have had an impact on the results (Rogan & Keselman, 1977). Large variances combined with large group sizes may lead to an overestimation of the test's significance level. When interpreting the results, it should be borne in mind that the explanatory power of the model could be slightly smaller due to the inequality of variances.

Suggestions for future research

Even though no effect of language on the relationship between review valence and purchase intention was found in this research, it should not necessarily mean language can be dismissed as a factor in future research.

Due to the development and execution of this research during the Covid-19 pandemic, it was impossible to verify the results with another language. Future research could repeat the experiment for people with another first language. The relative amount of exposure to a second language differs across countries and cultures (Deanda et al., 2016; Ranta & Meckelborg, 2013). This amount of exposure has an influence on comfort in and comprehension of the second language (Ro, 2013). Looking at a country and culture with lower exposure to English might thus lead to different results on the impact of language.

This research showed a positive relationship between review valence and purchase intention, regardless of the language a review was written in. However, this is simply one relationship that could be influenced by language, whereas purchase intention is influenced by other aspects as well. Online reviews are a part of eWOM, communications between previous and potential customers rather than official brand communications. However, advertising from a company also has an impact on purchase intention (Sallam & Algammash, 2016; Schivinski, 2013; Zafar & Rafique, 2012). It would be interesting to see if there would be an effect of language when looking at the influence of company advertising statements on purchase intention. This way one would be able to compare the differences between language effects in eWOM and traditional marketing.

Another road for future research could be to look at the role of language in traditional word-of-mouth. Similar to the relationship between review valence and purchase intention for online reviews, positive traditional WOM has a positive effect on purchase intention (Khan et al., 2015). According to Lund (1991), different second language components require different

skill sets. Language comprehension in a second language is bigger for reading than for listening. Between the second language modalities reading and listening, reading is the most stable and easiest to maintain (Singhal, 1998). Traditional WOM is about oral communications between customers and therefore involves the language modality of listening (Bi et al., 2019; Park et al., 2011). Since the listening skills in a second language are assumed to be less developed than the reading skills, it would be interesting to see if there are differences between the influence of language in traditional WOM and eWOM.

Theoretical implications

This research confirms the positive relationship between review valence and purchase intention that has been described in literature. For future research regarding purchase intention, it is important to be aware of the influence of review valence. The effect of review valence should also be carefully taken into account when considering to conduct the aforementioned suggestions for future research.

Measuring the purchase intention before and after reading the reviews controls for part of the effects that are not measured by the covariates. Rather than using the purchase intention after reviews alone, the initial purchase intention is used as a baseline measure. The change in the respondents' purchase intention can then be used as a measure in the analyses. By doing so, for example the personal preferences of the respondents regarding the manipulation material are less important because they are controlled for by the baseline measure. This leads to higher chances of the results being effects of the reviews than when only using the purchase intention after reviews in analyses.

Managerial implications

The positive relationship between review valence and purchase intention found in this research should be carefully taken into account by every retailer for whom online reviews can be written and assessed by potential customers. Next to that, they should be aware of the negativity effect. Thus, negative reviews have a bigger impact on potential buyers than positive reviews do. The online reviews a product has received can be considered in deciding where to allocate company resources. Online sellers should figure out a way to deal with the negative impact of negative reviews. It could also be examined if there are ways to place more emphasis on positive reviews than on the negative ones. Based on this research, it does not matter if reviews are read in the reader's first or second language.

Conclusion

In conclusion, this thesis has examined how the relationship between review valence and purchase intention is affected by the language an online review is written in. Three main findings were derived from the results of the online 2x2 experiment. First of all, a positive relationship was found between review valence and purchase intention. Positive reviews thus increase potential customers' purchase intention, whereas it is decreased by negative reviews. Secondly, this relationship is affected by the negativity effect, meaning that the negative impact of negative reviews is bigger than the positive effect of positive reviews. Lastly, it was expected that the influence of review valence on purchase intention is bigger for reviews read in one's first language. Based on the experimental results this hypothesis could not be confirmed. For future research it is recommended to examine the effect of language in traditional marketing and traditional word-of-mouth. It is also suggested to research whether an effect of language can be found for populations with another first language than Dutch.

Bibliography

Aerts, G., Smits, T., & Verlegh, P. W. J. (2017). The platform shapes the message: How website design affects abstraction and valence of online consumer reviews. *Decision Support Systems*, *104*, 104–112. https://doi.org/10.1016/j.dss.2017.10.006

Akhter, S. H. (2003). Digital divide and purchase intention: Why demographic psychology matters. *Journal of Economic Psychology*, *24*(3), 321–327. https://doi.org/10.1016/S0167-4870(02)00171-X

Ansar, N. (2013). Impact of green marketing on consumer purchase intention. *Mediterranean Journal of Social Sciences*, *4*(11), 650–655. https://doi.org/10.5901/mjss.2013.v4n11p650

Aune, R. K., & Kikuchi, T. (1993). Effects fo language intensity similarity on perceptions of credibility, relational attributions and persuasion. *Journal of Language and Social Psychology*, *12*(3), 224–237. https://doi.org/10.1177/0261927X93123004

Babbie, E. (2014). *Practice of social research* (14th ed.). CENGAGE Learning Custom Publishing.

Bae, S., & Lee, T. (2011). Gender differences in consumers' perception of online consumer reviews. *Electronic Commerce Research*, *11*(2), 201–214. https://doi.org/10.1007/s10660-010-9072-y

Baltar, F., & Brunet, I. (2012). Social research 2.0: Virtual snowball sampling method using Facebook. *Internet Research*, *22*(1), 57–74. https://doi.org/10.1108/10662241211199960

Bearden, W. O., Netemeyer, R. G., & Teel, J. E. (1989). Measurement of consumer susceptibility to interpersonal influence. *Journal of Consumer Research*, *15*(4), 473–481. https://doi.org/https://doi.org/10.1086/209186

Bentley, J. P., & Thacker, P. G. (2004). The influence of risk and monetary payment on the research participation decision making process. *Journal of Medical Ethics*, *30*(3), 293–298. https://doi.org/10.1136/jme.2002.001594

Bi, N. C., Zhang, R., & Ha, L. (2019). Does valence of product review matter?: The mediating role of self-effect and third-person effect in sharing YouTube word-of-mouth (vWOM). *Journal of Research in Interactive Marketing*, *13*(1), 79–95. https://doi.org/10.1108/JRIM-04-2018-0049

Boo, S., & Kim, J. (2013). Comparison of negative eWOM intention: An exploratory study. *Journal of Quality Assurance in Hospitality and Tourism*, *14*(1), 24–48. https://doi.org/10.1080/1528008X.2013.749381

Brantmeier, C. (2005). Anxiety about L2 reading or L2 reading tasks? A study with advanced language learners. *The Reading Matrix*, *5*(2), 67–85. http://www.readingmatrix.com/articles/shomoossi/article.pdf

CBS. (2020, September 7). Bevolking; geslacht, leeftijd en burgerlijke staat, 1 januari. CBS Statline. Retrieved from https://opendata.cbs.nl/statline/?dl=1EFBB#/CBS/nl/dataset/7461bev/table

Chan, I. C. C., Lam, L. W., Chow, C. W. C., Fong, L. H. N., & Law, R. (2017). The effect of online reviews on hotel booking intention: The role of reader-reviewer similarity. *International Journal of Hospitality Management*, *66*, 54–65. https://doi.org/10.1016/j.ijhm.2017.06.007

Chang, T. Z., & Wildt, A. R. (1994). Price, product information, and purchase intention: An empirical study. *Journal of the Academy of Marketing Science: Official Publication of the Academy of Marketing Science*, *22*(1), 16–27. https://doi.org/10.1177/0092070394221002

Charness, G., Gneezy, U., & Kuhn, M. A. (2012). Experimental methods: Between-subject and within-subject design. *Journal of Economic Behavior and Organization*, *81*(1), 1–8. https://doi.org/10.1016/j.jebo.2011.08.009

Cheung, M., Luo, C., Sia, C., & Chen, H. (2009). Credibility of electronic word-of-mouth: Informational

and normative determinants of on-line consumer recommendations. *International Journal of Electronic Commerce*, *13*(4), 9–38. https://doi.org/10.2753/JEC1086-4415130402

Chu, S. C., & Kim, Y. (2011). Determinants of consumer engagement in electronic word-of-mouth in social networking sites. *International Journal of Advertising*, *30*(1), 47–75. https://doi.org/https://doi.org/10.2501/ija-30-1-047-075

Comegys, C., Hannula, M., & Va, J. (2006). Longitudinal comparison of Finnish and US online shopping behaviour among university students: The five-stage buying decision process. *Journal of Targeting, Measurement and Analysis for Marketing*, *14*(4), 336–356. https://doi.org/10.1057/palgrave.jt.5740193

Cook, V. (2003). *Effects of the second language on the first.* Multilingual Matters. https://doi.org/10.21832/9781853596346

Cooper, D. R., Schindler, P. S., & Sun, J. (2006). *Business research methods.* McGraw-Hill Irwin.

Deanda, S., Bosch, L., Poulin-Dubois, D., Zesiger, P., & Friend, M. (2016). The language exposure assessment tool: quantifying language exposure in infants and children. *Journal of Speech, Language and Hearing Research*, *59*, 1346–1356. https://doi.org/10.1044/2016

Dodou, D., & De Winter, J. C. F. (2014). Social desirability is the same in offline, online, and paper surveys: A meta-analysis. *Computers in Human Behavior*, *36*, 487–495. https://doi.org/10.1016/j.chb.2014.04.005

Doh, S. J., & Hwang, J. S. (2009). How consumers evaluate eWOM (electronic word-of-mouth) messages. *Cyberpsychology and Behavior*, *12*(2), 193–197. https://doi.org/10.1089/cpb.2008.0109

Evans, N. J., Phua, J., Lim, J., & Jun, H. (2017). Disclosing Instagram influencer advertising: The effects of disclosure language on advertising recognition, attitudes, and behavioral intent. *Journal of Interactive Advertising*, *17*(2), 138–149. https://doi.org/10.1080/15252019.2017.1366885

Fan, Y.-W., & Miao, Y.-F. (2012). Effect of electronic word-of-mouth on consumer purchase intention: The perspective of gender differences. *International Journal of Electronic Business Management*, *10*(3), 175–181.

Farhady, H. (1982). Measures of language proficiency from the learner's perspective. *TESOL Quarterly*, *16*(1), 43–59. https://doi.org/https://doi.org/10.2307/3586562

Field, A. (2013). *Discovering statistics using IBM SPSS statistics*. Sage.

Garrido, M. V., & Prada, M. (2018). Comparing the valence, emotionality and subjective familiarity of words in a first and a second language. *International Journal of Bilingual Education and Bilingualism*, 1–17. https://doi.org/10.1080/13670050.2018.1456514

Goodman, L. A. (1961). Snowball sampling. *The Annals of Mathematical Statistics*, *32*(1), 148–170. https://doi.org/https://doi.org/10.1214/aoms/1177705148

Hall, M. C., Prayag, G., Fieger, P., & Dyason, D. (2020). Beyond panic buying: consumption displacement and COVID-19. *Journal of Service Management*. https://doi.org/10.1108/JOSM-05-2020-0151

Hautasaari, A., Yamashita, N., & Gao, G. (2019). How non-native English speakers perceive the emotional valence of messages in text-based computer-mediated communication. *Discourse Processes*, *56*(1), 24–40. https://doi.org/10.1080/0163853X.2017.1323184

Hennig-Thurau, T., Gwinner, K. P., Walsh, G., & Gremler, D. D. (2004). Electronic word-of-mouth via consumer-opinion platforms: What motivates consumers to articulate themselves on the Internet? *Journal of Interactive Marketing*, *18*(1), 38–52. https://doi.org/10.1002/dir.10073

Hernández, B., Jiménez, J., & Martín, M. J. (2011). Age, gender and income: Do they really moderate online shopping behaviour? *Online Information Review*, 113–133. https://doi.org/10.1108/14684521111113614

Hilbrink, E. (2017). *The effects of valence and language errors on the attitude towards the hotel, review credibility, booking intention and eWOM intention of consumers.* Master's thesis, University of Twente.

Hoewe, J. (2017). *Manipulation Check.* The International Encyclopedia of Communication Research Methods (p. 1–5). https://doi.org/10.1002/9781118901731.iecrm0135

Hulstijn, J. H. (2011). Language proficiency in native and nonnative speakers: An agenda for research and suggestions for second-language assessment. *Language Assessment Quarterly*, *8*(3), 229–249. https://doi.org/10.1080/15434303.2011.565844

Jalilvand, M. R., & Samiei, N. (2012). The effect of electronic word of mouth on brand image and purchase intention: An empirical study in the automobile industry in Iran. *Marketing Intelligence and Planning*, *30*(4), 460–476. https://doi.org/10.1108/02634501211231946

Jiang, Z., & Benbasat, I. (2007). Investigating the influence of the functional mechanisms of online product presentations. *Information Systems Research*, *18*(4), 454–470. https://doi.org/10.1287/isre.1070.0124

Johnson, B., & Turner, L. A. (2003). *Data Collection Strategies in Mixed Methods Research*. Handbook of Mixed Methods in Social & Behavioral Research.

Jończyk, R., Boutonnet, B., Musiał, K., Hoemann, K., & Thierry, G. (2016). The bilingual brain turns a blind eye to negative statements in the second language. *Cognitive, Affective and Behavioral Neuroscience*, *16*(3), 527–540. https://doi.org/10.3758/s13415-016-0411-x

Kau, A. K., Tang, Y. E., & Ghose, S. (2003). Typology of online shoppers. *Journal of Consumer Marketing*, *20*(2), 139–156. https://doi.org/10.1108/07363760310464604

Ketelaar, P. E., Willemsen, L. M., Sleven, L., & Kerkhof, P. (2015). The good, the bad, and the expert: How consumer expertise affects review valence effects on purchase intentiosn in online product reviews. *Journal of Computer-Mediated Communication*, *20*(6), 649–666. https://doi.org/10.1111/jcc4.12139

Khan, S. A., Ramzan, N., Shoaib, M., & Mohyuddin, A. (2015). Investigating impact of electronic word of mouth on consumer purchase intention. *Science International*, *27*(1), 479–482. https://doi.org/10.4018/978-1-4666-9449-1.ch012

Kim, J., & Gupta, P. (2012). Emotional expressions in online user reviews: How they influence consumers' product evaluations. *Journal of Business Research*, *65*(7), 985–992. https://doi.org/10.1016/j.jbusres.2011.04.013

Kim, Y., & Krishnan, R. (2015). On product-level uncertainty and online purchase behavior: An empirical analysis. *Management Science*, *61*(10), 2449–2467. https://doi.org/10.1287/mnsc.2014.2063

Kudeshia, C., & Kumar, A. (2017). Social eWOM: does it affect the brand attitude and purchase intention of brands? *Management Research Review*, *40*(3), 310–330. https://doi.org/10.1108/MRR-07-2015-0161

Kusumasondjaja, S., Shanka, T., & Marchegiani, C. (2012). Credibility of online reviews and initial trust: The roles of reviewer's identity and review valence. *Journal of Vacation Marketing*, *18*(3), 185–195. https://doi.org/10.1177/1356766712449365

Langan, R., Besharat, A., & Varki, S. (2017). The effect of review valence and variance on product evaluations: An examination of intrinsic and extrinsic cues. *International Journal of Research in*

Marketing, *34*(2), 414–429. https://doi.org/10.1016/j.ijresmar.2016.10.004

Lee, M., Rodgers, S., & Kim, M. (2009). Effects of valence and extremity of eWOM on attitude toward the brand and website. *Journal of Current Issues and Research in Advertising*, *31*(2), 1–11. https://doi.org/10.1080/10641734.2009.10505262

Lee, M., & Youn, S. (2009). Electronic word of mouth (eWOM): How eWOM platforms influence consumer product judgement. *International Journal of Advertising*, *28*(3), 473–499. https://doi.org/10.2501/S0265048709200709

Lefever, S., Dal, M., & Matthíasdóttir, Á. (2007). Online data collection in academic research: Advantages and limitations. *British Journal of Educational Technology*, *38*(4), 574–582. https://doi.org/10.1111/j.1467-8535.2006.00638.x

Levitt, S. D., & List, J. A. (2007). Viewpoint: On the generalizability of lab behaviour to the field. *Canadian Journal of Economics*, *40*(2), 347–370. https://doi.org/10.1111/j.1365-2966.2007.00412.x

Lin, C. A., & Xu, X. (2017). Effectiveness of online consumer reviews: The influence of valence, reviewer ethnicity, social distance and source trustworthiness. *Internet Research*, *27*(2), 362–380. https://doi.org/10.1108/IntR-01-2016-0017

Lin, L.-Y., & Lu, C.-Y. (2010). The influence of corporate image, relationship marketing, and trust on purchase intention: the moderating effects of word-of-mouth. *Tourism Review*, *65*(3), 16–34. https://doi.org/10.1108/16605371011083503

Ling, K. C., Chai, L. T., & Piew, T. H. (2010). The effect of shopping orientations, online trust and prior online purchase experience toward customers' online purchase intention. *International Business Research*, *3*(3), 63. https://doi.org/10.5539/ibr.v3n3p63

Loftus, G. R., & Masson, M. E. J. (1994). Using confidence intervals in within-subject designs. *Psychonomic Bulletin & Review*, *1*(4), 476–490. https://link.springer.com/content/pdf/10.3758%2FBF03210951.pdf%0Ahttps://stti.confex.com/stti/bc42/webprogram/Paper58166.html

Lund, R. J. (1991). A comparison of second language listening and reading comprehension. *The Modern Language Journal*, *75*(2), 196–204. https://doi.org/10.1111/j.1540-4781.1991.tb05350.x

Marian, V., Blumenfeld, H. K., & Kaushanskaya, M. (2007). The language experience and proficiency questionnaire (LEAP-Q): Assessing language profiles in bilinguals and multilinguals. *Journal of Speech Language and Hearing Research*, *50*(4), 940. http://jslhr.pubs.asha.org/article.aspx?doi=10.1044/1092-4388(2007/067)

Mauri, A. G., & Minazzi, R. (2013). Web reviews influence on expectations and purchasing intentions of hotel potential customers. *International Journal of Hospitality Management*, *34*(1), 99–107. https://doi.org/10.1016/j.ijhm.2013.02.012

Ministerie van Onderwijs, Cultuur en Wetenschap. (2020, May 29). *Opleidingsniveau van de bevolking*. Kerngetallen | Onderwijs in Cijfers. Retrieved from https://www.onderwijsincijfers.nl/kengetallen/internationaal/opleidingsniveau-bevolking

Mirabi, V., Akbariyeh, H., & Tahmasebifard, H. (2015). A study of factors affecting on customers purchase intention. *Journal of Multidisciplinary Engineering Science and Technology (JMEST)*, *2*(1), 267–273.

Monroe, V., & Chapman, J. D. (1987). Framing effects on buyers' subjective product evaluations. *Advances in Consumer Research*, *14*, 193–197.

Moran, G., & Muzellec, L. (2017). eWOM credibility on social networking sites: A framework. *Journal of Marketing Communications*, *23*(2), 149–161. https://doi.org/10.1080/13527266.2014.969756

Moran, G., Muzellec, L., & Nolan, E. (2014). Consumer moments of truth in the digital context: How "search" and "e-word of mouth" can fuel consumer decision-making. *Journal of Advertising Research*, *54*(2), 200–2014. https://doi.org/10.2501/jar-54-2-200-204

Mudambi, S. M., & Schuff, D. (2010). What makes a helpful online review? A study of customer reviews on Amazon.com. *MIS Quarterly: Management Information Systems*, *34*(1), 185–200. https://doi.org/https://doi.org/10.2307/20721420

Munthiu, M.-C. (2009). The buying decision process and types of buying decision behaviour. *Sibiu Alma Mater University Journals*, *2*(4), 27–33.

Mutz, D. C., & Pemantle, R. (2015). Standards for experimental research: Encouraging a better understanding of experimental methods. *Journal of Experimental Political Science*, *2*(2), 192–215. https://doi.org/10.1017/XPS.2015.4

Oehlert, G. W. (2000). *A First Course in Design and Analysis of Experiments*. W.H.Freeman & Co Ltd.

Park, C., & Lee, T. M. (2009). Information direction, website reputation and eWOM effect: A moderating role of product type. *Journal of Business Research*, *62*(1), 61–67. https://doi.org/10.1016/j.jbusres.2007.11.017

Park, C., Wang, Y., Yao, Y., & Kang, Y. R. (2011). Factors Influencing eWOM Effects: Using Experience, Credibility, and Susceptibility. *International Journal of Social Science and Humanity*, *1*(1), 74–79. https://doi.org/10.7763/ijssh.2011.v1.13

Park, D. H., & Lee, J. (2008). eWOM overload and its effect on consumer behavioral intention depending on consumer involvement. *Electronic Commerce Research and Applications*, *7*(4), 386–398. https://doi.org/10.1016/j.elerap.2007.11.004

Pentina, I., Bailey, A. A., & Zhang, L. (2018). Exploring effects of source similarity, message valence, and receiver regulatory focus on yelp review persuasiveness and purchase intentions. *Journal of Marketing Communications*, *24*(2), 125–145. https://doi.org/10.1080/13527266.2015.1005115

Punj, G. (2011). Effect of consumer beliefs on online purchase behavior: The influence of demographic characteristics and consumption values. *Journal of Interactive Marketing*, *25*(3), 134–144. https://doi.org/10.1016/j.intmar.2011.04.004

Purnawirawan, N., Eisend, M., De Pelsmacker, P., & Dens, N. (2015). A meta-analytic investigation of the role of valence in online reviews. *Journal of Interactive Marketing*, *31*, 17–27. https://doi.org/10.1016/j.intmar.2015.05.001

Qiu, L., Pang, J., & Lim, K. H. (2012). Effects of conflicting aggregated rating on eWOM review credibility and diagnosticity: The moderating role of review valence. *Decision Support Systems*, *54*(1), 631–643. https://doi.org/10.1016/j.dss.2012.08.020

Quaschning, S., Pandelaere, M., & Vermeir, I. (2015). When consistency matters: The effect of valence consistency on review helpfulness. *Journal of Computer-Mediated Communication*, *20*(2), 136–152. https://doi.org/10.1111/jcc4.12106

Ranta, L., & Meckelborg, A. (2013). How much exposure to english do international graduate students really get? measuring language use in a naturalistic setting. *Canadian Modern Language Review*, *69*(1), 1–33. https://doi.org/10.3138/cmlr.987

Ro, E. (2013). A case study of extensive reading with an unmotivated L2 reader. *Reading in a Foreign Language*, *25*(2), 213–233.

Rogan, J. C., & Keselman, H. J. (1977). Is the ANOVA F-test robust to variance heterogeneity when sample sizes are equal?: An investigation via a coefficient of variation. *American Educational Research Journal*, *14*(4), 493–498. https://doi.org/10.3102/00028312014004493

Roy, G., Datta, B., & Mukherjee, S. (2019). Role of electronic word-of-mouth content and valence in

influencing online purchase behavior. *Journal of Marketing Communications*, *25*(6), 661–684. https://doi.org/10.1080/13527266.2018.1497681

Salehan, M., & Kim, D. J. (2016). Predicting the performance of online consumer reviews: A sentiment mining approach to big data analytics. *Decision Support Systems*, *81*, 30–40. https://doi.org/10.1016/j.dss.2015.10.006

Sallam, M. A., & Algammash, F. A. (2016). The effect of Attitude toward Advertisement on Attitude toward Brand and Purchase Intention. *International Journal of Economics, Commerce and Management United Kingdom*, *4*(2), 21–29. http://ijecm.co.uk/

Santos, J. R. A. (1999). Cronbach's alpha: A tool for assessing the reliability of scales. *Journal of Extension*, *37*(2), 1–5.

Sawilowsky, S. S. (2009). Very large and huge effect sizes. *Journal of Modern Applied Statistical Methods*, *8*(2), 597–599. https://doi.org/10.22237/jmasm/1257035100

Schellekens, G. A. C., Verlegh, P. W. J., & Smidts, A. (2010). Language abstraction in word of mouth. *Journal of Consumer Research*, *37*(2), 207–223. https://doi.org/10.1086/651240

Schivinski, B. (2013). Effects of social media communication on brand equity and brand purchase intention. *PhD Interdisciplinary Journal*, *2*, 157–162. https://doi.org/10.1080/13527266.2013.871323

Shaouf, A., Lü, K., & Li, X. (2016). The effect of web advertising visual design on online purchase intention: An examination across gender. *Computers in Human Behavior*, *60*, 622–634. https://doi.org/10.1016/j.chb.2016.02.090

Singhal, M. (1998). A comparison of L1 and L2 reading: Cultural differences and schema. *The Internet TESL Journal*, *4*(10), 4–10. https://doi.org/10.5539/elt.v3n4p175

Sparks, B. A., & Browning, V. (2011). The impact of online reviews on hotel booking intentions and perception of trust. *Tourism Management*, *32*(6), 1310–1323. https://doi.org/10.1016/j.tourman.2010.12.011

Spears, N., & Singh, S. N. (2004). Measuring attitude toward the brand and purchase intentions. *Journal of Current Issues and Research in Advertising*, *26*(2), 53–66. https://doi.org/10.1080/10641734.2004.10505164

Stevens, S. S. (1946). On the theory of scales of measurement. *Science*, *103*(2684), 677–680. https://doi.org/0.1126/science.103.2684.677

Sutanto, M. A., & Aprianingsih, A. (2016). The effect of online consumer review toward purchase intention: A study in premium cosmetic in Indonesia. *International Conference on Ethics of Business, Economics, and Social Science*, 218–230. https://doi.org/10.1007/s10067-008-0838-8

Tata, S. V., Prashar, S., & Gupta, S. (2020). An examination of the role of review valence and review source in varying consumption contexts on purchase decision. *Journal of Retailing and Consumer Services*, *52*, 1–10. https://doi.org/10.1016/j.jretconser.2019.01.003

Tsao, H. Y., Chen, M. Y., Lin, H. C. K., & Ma, Y. C. (2019). The asymmetric effect of review valence on numerical rating: A viewpoint from a sentiment analysis of users of TripAdvisor. *Online Information Review*, *43*(2), 283–300. https://doi.org/10.1108/OIR-11-2017-0307

Urbach, P. (1985). Randomization and the design of experiments. *Philosophy of Science*, *52*(2), 256–273. https://doi.org/10.1086/289243

Ursachi, G., Horodnic, I. A., & Zait, A. (2015). How reliable are measurement scales? External factors with indirect influence on reliability estimators. *Procedia Economics and Finance*, *20*(15), 679–686. https://doi.org/10.1016/s2212-5671(15)00123-9

Vanclay, F., Baines, J. T., & Taylor, C. N. (2013). Principles for ethical research involving humans: Ethical professional practice in impact assessment Part I. *Impact Assessment and Project Appraisal, 31*(4), 243–253. https://doi.org/10.1080/14615517.2013.850307

Vroman, K. G., Arthanat, S., & Lysack, C. (2015). "Who over 65 is online?" Older adults' dispositions toward information communication technology. *Computers in Human Behavior, 43*, 156–166. https://doi.org/10.1016/j.chb.2014.10.018

Wang, S., Cunningham, N. R., & Eastin, M. S. (2015). The impact of eWOM message characteristics on the perceived effectiveness of online consumer reviews. *Journal of Interactive Advertising, 15*(2), 151–159. https://doi.org/10.1080/15252019.2015.1091755

Watanabe, T., & Omori, Y. (2020). Online consumption during the COVID-19 crisis: Evidence from Japan. *Covid Economics, 23*, 218–252.

Willemsen, L. M., Neijens, P. C., Bronner, F., & de Ridder, J. A. (2011). "Highly recommended!" The content characteristics and perceived usefulness of online consumer reviews. *Journal of Computer-Mediated Communication, 17*(1), 19–38. https://doi.org/10.1111/j.1083-6101.2011.01551.x

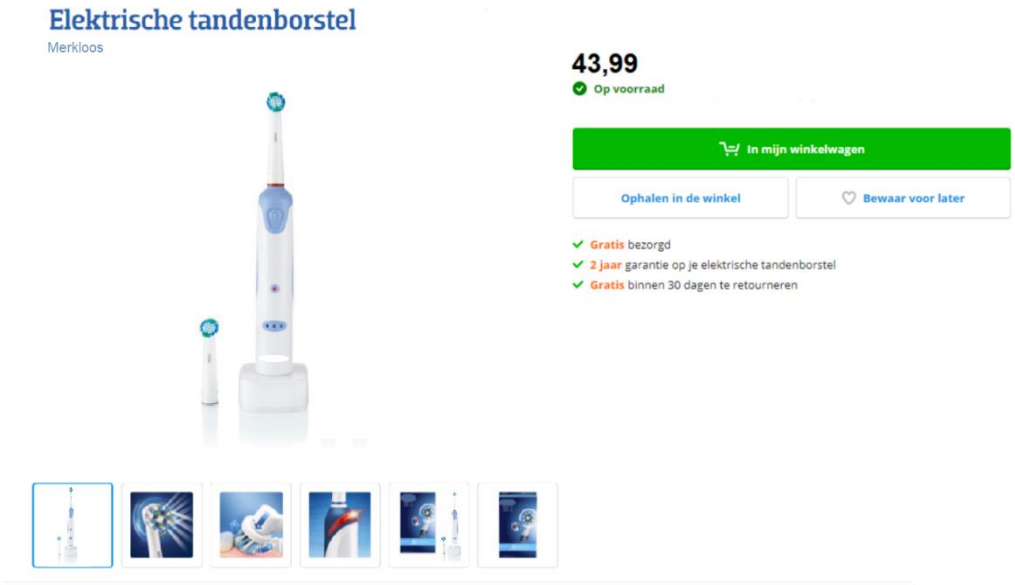
Wu, Y. J., & Thierry, G. (2012). How reading in a second language protects your heart. *Journal of Neuroscience, 32*(19), 6485–6489. https://doi.org/10.1523/JNEUROSCI.6119-11.2012

Zafar, Q., & Rafique, M. (2012). Impact of celebrity advertisement on customers' brand perception and purchase intention. *Asian Journal of Business and Management Sciences, 1*(11), 53–67. http://www.ajbms.org/articlepdf/ajbms201211i11104.pdf

Appendices

Appendix A – manipulation material

Product



Condition 1: positive Dutch

Prima tandenborstel

Goede prijs-kwaliteitverhouding. Prettige gebruikservaring, makkelijk in gebruik. De batterij gaat tot wel 30 minuten mee. Maakt bijna geen geluid. Tevredenstellend product.

Robin | 25 oktober 2020

Absoluut een aanrader

Wat een fantastisch product! Zeer tevreden na 3 maanden gebruik maken van deze tandenborstel. Na enkele weken zag ik al direct resultaat. Het product voldoet aan zijn verwachtingen. Ik had geen geld om een super dure tandenborstel te kopen, dus deze was het geld meer dan waard.
Ik zou deze tandenborstel zeker aanraden!

Sem | 6 november 2020

Condition 2: negative Dutch

Onprettige tandenborstel

Slechte prijs-kwaliteitverhouding. Onprettige gebruikservaring, moeilijk in gebruik. De batterij gaat maar 30 minuten mee. Maakt redelijk veel geluid. Teleurstellend product.

Robin | 25 oktober 2020

Absoluut geen aanrader

Wat een ellendig product! Zeer ontevreden na 3 maanden gebruik maken van deze tandenborstel. Ondanks langdurig gebruik nog steeds geen resultaat. Het product voldoet niet aan zijn verwachtingen. Ik had geen geld om een super dure tandenborstel te kopen, maar dit was echt een miskoop.
Ik zou deze tandenborstel zeker niet aanraden!

Sem | 6 november 2020

Condition 3: positive English

Fine toothbrush

Good value for money. Pleasant user experience, easy to use. The battery even lasts up to 30 minutes. Makes almost no sound. Satisfactory product.

Robin | 25 oktober 2020

Would definitely recommend

What an amazing product! Very satisfied after using this toothbrush for 3 months. After a few weeks I already saw some results. The product lives up to its expectations. I didn't have money to buy a super expensive toothbrush, so this one was definitely worth the money.
I would definitely recommend this toothbrush!

Sem | 6 november 2020

Condition 4: negative English

Unpleasant toothbrush

Poor value for money. Unpleasant user experience, difficult to use. The battery only lasts up to 30 minutes. Makes some pretty loud noise. Disappointing product.

Robin | 25 oktober 2020

Would definitely not recommend

What a terrible product! Very unsatisfied after using this toothbrush for 3 months. Despite long-term use, still no results. The product doesn't live up to its expectations. I didn't have money to buy a super expensive toothbrush, but this one was definitely a bad buy.
I would definitely not recommend this toothbrush!

Sem | 6 november 2020

Appendix B – operationalization variables

Variable	Items	Measure	Source
Language proficiency **"The language learner's ability to use language for real-life purposes without regard to the manner in which that competence was acquired." (Clark, 1972, as cited in Farhady, 1982, p. 44).**	Op een schaal van 1 tot 10, hoe goed beheerst u de taal van deze recensies	1 – 10 scale	(Marian et al., 2007)
Review valence **"the positive or negative orientation of information about an object or a situation" (Chan et al., 2017, p. 55)**	De toon van deze recensie is positief	1 – 7 Likert scale	(Kim & Gupta, 2012)
	De toon van deze recensie is optimistisch	1 – 7 Likert scale	
Purchase intention **a psychological state of mind "where consumer tends to buy a certain product in certain condition" (Mirabi et al., 2015, p. 268)**	Er is een kans dat ik dit product zou kopen	1 – 7 Likert scale	(Jiang & Benbasat, 2007; Spears & Singh, 2004)
	De volgende keer dat ik een elektrische tandenborstel nodig heb, zou ik dit product kopen	1 – 7 Likert scale	
	Ik zou overwegen dit product te kopen	1 – 7 Likert scale	
	Ik zou dit product zeker proberen	1 – 7 Likert scale	

Susceptibility to interpersonal influence **"The need to identify with or enhance one's image in the opinion of significant others through the acquisition and use of products and brands, the willingness to conform to the expectations of others regarding purchase decisions, and/or the tendency to learn about products and services by observing others or seeking information from others (Bearden et al., 1989, p. 474).**	Om zeker te weten dat ik het juiste product koop kijk ik vaak naar wat andere mensen kopen en gebruiken	1 – 7 Likert scale	(Bearden et al., 1989)
	Als ik weinig ervaring heb met een product, vraag ik vaak naar de mening van vrienden	1 – 7 Likert scale	
	Ik raadpleeg vaak andere mensen als ik moet kiezen welk product het beste is	1 – 7 Likert scale	
	Ik verzamel vaak informatie van vrienden of familie over een product voordat ik het koop	1 – 7 Likert scale	

Appendix C – operationalization demographics

Variable	Item	Measure
Gender	Wat is uw geslacht?	Man Vrouw Anders
Age	Wat is uw leeftijd?	Jonger dan 15 15 – 24 25 – 34 35 – 44 45 – 54 55 – 64 65 – 74 Ouder dan 74
Nationality	Wat is uw nationaliteit?	Nederlands Anders
First language	Wat is uw moedertaal?	Nederlands Anders
Level of education	Wat is uw hoogst behaalde of huidige opleidingsniveau?	Basisschool Middelbare school MBO HBO WO
Frequency of online shopping	Hoe vaak doet u online aankopen?	Nooit 1 – 5 keer per maand 6 – 10 keer per maand Vaker dan 10 keer per maand

Appendix D – frequency tables

Gender

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Vrouw	150	57,7	57,7	57,7
	Man	110	42,3	42,3	100,0
	Total	260	100,0	100,0	

Age

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	15 - 24	159	61,2	61,2	61,2
	25 - 34	36	13,8	13,8	75,0
	35 - 44	18	6,9	6,9	81,9
	45 - 54	26	10,0	10,0	91,9
	55 - 64	21	8,1	8,1	100,0
	Total	260	100,0	100,0	

Current or highest achieved education

Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Middelbare school	7	2,7	2,7	2,7
	MBO	27	10,4	10,4	13,1
	HBO	68	26,2	26,2	39,2
	WO	158	60,8	60,8	100,0
	Total	260	100,0	100,0	

Frequency of online purchasing

Freq_online

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Nooit	4	1,5	1,5	1,5
	1 - 5 keer per maand	208	80,0	80,0	81,5
	6 - 10 keer per maand	38	14,6	14,6	96,2
	Vaker dan 10 keer per maand	10	3,8	3,8	100,0
	Total	260	100,0	100,0	

Appendix E – randomization check

Frequency of conditions

Group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Positive Dutch	66	25,4	25,4	25,4
	Negative Dutch	66	25,4	25,4	50,8
	Positive English	67	25,8	25,8	76,5
	Negative English	61	23,5	23,5	100,0
	Total	260	100,0	100,0	

Randomization gender

Crosstab

			Group				
			Positive Dutch	Negative Dutch	Positive English	Negative English	Total
Gender	Vrouw	Count	35	33	43	39	150
		% within Group	53,0%	50,0%	64,2%	63,9%	57,7%
	Man	Count	31	33	24	22	110
		% within Group	47,0%	50,0%	35,8%	36,1%	42,3%
Total		Count	66	66	67	61	260
		% within Group	100,0%	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	4,317[a]	3	,229	,232		
Likelihood Ratio	4,328	3	,228	,234		
Fisher's Exact Test	4,286			,235		
Linear-by-Linear Association	2,895[b]	1	,089	,090	,050	,011
N of Valid Cases	260					

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 25,81.

b. The standardized statistic is -1,701.

Randomization education

Crosstab

			Group				
			Positive Dutch	Negative Dutch	Positive English	Negative English	Total
Education	Middelbare school	Count	2	1	1	3	7
		% within Group	3,0%	1,5%	1,5%	4,9%	2,7%
	MBO	Count	4	9	6	8	27
		% within Group	6,1%	13,6%	9,0%	13,1%	10,4%
	HBO	Count	18	13	19	18	68
		% within Group	27,3%	19,7%	28,4%	29,5%	26,2%
	WO	Count	42	43	41	32	158
		% within Group	63,6%	65,2%	61,2%	52,5%	60,8%
Total		Count	66	66	67	61	260
		% within Group	100,0%	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	6,742[a]	9	,664	.[b]	
Likelihood Ratio	6,888	9	,649	,717	
Fisher's Exact Test	6,783			,662	
Linear-by-Linear Association	2,098	1	,147	.[b]	.[b]
N of Valid Cases	260				

a. 4 cells (25,0%) have expected count less than 5. The minimum expected count is 1,64.

b. Cannot be computed because there is insufficient memory.

Randomization frequency of online purchasing

Crosstab

			Group				
			Positive Dutch	Negative Dutch	Positive English	Negative English	Total
Freq_online	Nooit	Count	3	1	0	0	4
		% within Group	4,5%	1,5%	0,0%	0,0%	1,5%
	1 - 5 keer per maand	Count	52	56	52	48	208
		% within Group	78,8%	84,8%	77,6%	78,7%	80,0%
	6 - 10 keer per maand	Count	8	7	13	10	38
		% within Group	12,1%	10,6%	19,4%	16,4%	14,6%
	Vaker dan 10 keer per maand	Count	3	2	2	3	10
		% within Group	4,5%	3,0%	3,0%	4,9%	3,8%
Total		Count	66	66	67	61	260
		% within Group	100,0%	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	8,814[a]	9	,455	,466		
Likelihood Ratio	9,423	9	,399	,530		
Fisher's Exact Test	7,165			,600		
Linear-by-Linear Association	1,780[b]	1	,182	,199	,101	,018
N of Valid Cases	260					

a. 8 cells (50,0%) have expected count less than 5. The minimum expected count is ,94.

b. The standardized statistic is 1,334.

Randomization age

*Age * Group Crosstabulation*

			Group				
			Positive Dutch	Negative Dutch	Positive English	Negative English	Total
Age	15 - 24	Count	44	37	39	39	159
		% within Group	66,7%	56,1%	58,2%	63,9%	61,2%
	25 - 34	Count	7	12	10	7	36
		% within Group	10,6%	18,2%	14,9%	11,5%	13,8%
	35 - 44	Count	5	3	5	5	18
		% within Group	7,6%	4,5%	7,5%	8,2%	6,9%
	45 - 54	Count	5	8	8	5	26
		% within Group	7,6%	12,1%	11,9%	8,2%	10,0%
	55 - 64	Count	5	6	5	5	21
		% within Group	7,6%	9,1%	7,5%	8,2%	8,1%
Total		Count	66	66	67	61	260
		% within Group	100,0%	100,0%	100,0%	100,0%	100,0%

Tests of Between-Subjects Effects

Dependent Variable: Age

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1,832[a]	3	,611	,336	,799	,004
Intercept	2181,971	1	2181,971	1199,791	,000	,824
Group	1,832	3	,611	,336	,799	,004
Error	465,568	256	1,819			
Total	2654,000	260				
Corrected Total	467,400	259				

a. R Squared = ,004 (Adjusted R Squared = -,008)

Appendix F – manipulation check

Group Statistics

	Valence	N	Mean	Std. Deviation	Std. Error Mean
Valence_perceived	Positive review valence	133	6,1128	1,02176	,08860
	Negative review valence	127	1,4803	,97875	,08685

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Valence_perceived	Equal variances assumed	,273	,602	37,301	258	,000	4,6325	,12419	4,3879	4,8770
	Equal variances not assumed			37,339	258,00	,000	4,6325	,12407	4,3882	4,8768

Appendix G – reliability analyses

Initial purchase intention

Reliability Statistics

Cronbach's Alpha	N of Items
,886	4

Perceived valence

Reliability Statistics

Cronbach's Alpha	N of Items
,963	2

Purchase intention after review

Reliability Statistics

Cronbach's Alpha	N of Items
,962	4

Susceptibility to interpersonal influence

Reliability Statistics

Cronbach's Alpha	N of Items
,824	4

Appendix H – ANOVA and ANCOVA

ANOVA

Tests of Within-Subjects Effects

Measure: Pl_change

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
time	Sphericity Assumed	136,897	1	136,897	178,048	,000	,410
	Greenhouse-Geisser	136,897	1,000	136,897	178,048	,000	,410
	Huynh-Feldt	136,897	1,000	136,897	178,048	,000	,410
	Lower-bound	136,897	1,000	136,897	178,048	,000	,410
time * Valence	Sphericity Assumed	283,752	1	283,752	369,047	,000	,590
	Greenhouse-Geisser	283,752	1,000	283,752	369,047	,000	,590
	Huynh-Feldt	283,752	1,000	283,752	369,047	,000	,590
	Lower-bound	283,752	1,000	283,752	369,047	,000	,590
time * Language	Sphericity Assumed	,132	1	,132	,171	,679	,001
	Greenhouse-Geisser	,132	1,000	,132	,171	,679	,001
	Huynh-Feldt	,132	1,000	,132	,171	,679	,001
	Lower-bound	,132	1,000	,132	,171	,679	,001
time * Valence * Language	Sphericity Assumed	,918	1	,918	1,194	,276	,005
	Greenhouse-Geisser	,918	1,000	,918	1,194	,276	,005
	Huynh-Feldt	,918	1,000	,918	1,194	,276	,005
	Lower-bound	,918	1,000	,918	1,194	,276	,005
Error(time)	Sphericity Assumed	196,832	256	,769			
	Greenhouse-Geisser	196,832	256,000	,769			
	Huynh-Feldt	196,832	256,000	,769			
	Lower-bound	196,832	256,000	,769			

ANCOVA

Descriptive Statistics

	Valence	Language	Mean	Std. Deviation	N
Initial_PI	Positive review valence	Dutch	4,3692	1,46716	65
		English	4,4851	1,31777	67
		Total	4,4280	1,38921	132
	Negative review valence	Dutch	4,7235	1,10430	66
		English	4,5328	1,41088	61
		Total	4,6319	1,25942	127
	Total	Dutch	4,5477	1,30425	131
		English	4,5078	1,35773	128
		Total	4,5280	1,32852	259
PI_after	Positive review valence	Dutch	4,8308	1,64537	65
		English	4,8843	1,32383	67
		Total	4,8580	1,48536	132
	Negative review valence	Dutch	2,1023	1,08750	66
		English	2,1434	,99421	61
		Total	2,1220	1,03982	127
	Total	Dutch	3,4561	1,94923	131
		English	3,5781	1,80734	128
		Total	3,5164	1,87780	259

Tests of Within-Subjects Effects

Measure: PI_change

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
time	Sphericity Assumed	5,285	1	5,285	7,529	,007	,029
	Greenhouse-Geisser	5,285	1,000	5,285	7,529	,007	,029
	Huynh-Feldt	5,285	1,000	5,285	7,529	,007	,029
	Lower-bound	5,285	1,000	5,285	7,529	,007	,029
time * Gender	Sphericity Assumed	1,817	1	1,817	2,589	,109	,010
	Greenhouse-Geisser	1,817	1,000	1,817	2,589	,109	,010
	Huynh-Feldt	1,817	1,000	1,817	2,589	,109	,010
	Lower-bound	1,817	1,000	1,817	2,589	,109	,010
time * Age	Sphericity Assumed	2,829	1	2,829	4,031	,046	,016
	Greenhouse-Geisser	2,829	1,000	2,829	4,031	,046	,016
	Huynh-Feldt	2,829	1,000	2,829	4,031	,046	,016
	Lower-bound	2,829	1,000	2,829	4,031	,046	,016
time * Education	Sphericity Assumed	1,482	1	1,482	2,111	,148	,008
	Greenhouse-Geisser	1,482	1,000	1,482	2,111	,148	,008
	Huynh-Feldt	1,482	1,000	1,482	2,111	,148	,008
	Lower-bound	1,482	1,000	1,482	2,111	,148	,008
time * Freq_online	Sphericity Assumed	5,250	1	5,250	7,480	,007	,029
	Greenhouse-Geisser	5,250	1,000	5,250	7,480	,007	,029
	Huynh-Feldt	5,250	1,000	5,250	7,480	,007	,029
	Lower-bound	5,250	1,000	5,250	7,480	,007	,029
time * Susceptibility	Sphericity Assumed	3,536	1	3,536	5,037	,026	,020
	Greenhouse-Geisser	3,536	1,000	3,536	5,037	,026	,020
	Huynh-Feldt	3,536	1,000	3,536	5,037	,026	,020
	Lower-bound	3,536	1,000	3,536	5,037	,026	,020
time * Valence	Sphericity Assumed	276,075	1	276,075	393,314	,000	,611
	Greenhouse-Geisser	276,075	1,000	276,075	393,314	,000	,611
	Huynh-Feldt	276,075	1,000	276,075	393,314	,000	,611
	Lower-bound	276,075	1,000	276,075	393,314	,000	,611
time * Language	Sphericity Assumed	,264	1	,264	,376	,540	,002
	Greenhouse-Geisser	,264	1,000	,264	,376	,540	,002
	Huynh-Feldt	,264	1,000	,264	,376	,540	,002
	Lower-bound	,264	1,000	,264	,376	,540	,002
time * Valence * Language	Sphericity Assumed	1,388	1	1,388	1,978	,161	,008
	Greenhouse-Geisser	1,388	1,000	1,388	1,978	,161	,008
	Huynh-Feldt	1,388	1,000	1,388	1,978	,161	,008
	Lower-bound	1,388	1,000	1,388	1,978	,161	,008
Error(time)	Sphericity Assumed	175,480	250	,702			
	Greenhouse-Geisser	175,480	250,000	,702			
	Huynh-Feldt	175,480	250,000	,702			
	Lower-bound	175,480	250,000	,702			

Levene's test

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
Initial_PI	4,161	3	255	,007
PI_after	6,864	3	255	,000

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Gender + Age + Education + Freq_online + Susceptibility + Valence + Language + Valence * Language
Within Subjects Design: time

Estimated marginal means

1. Valence

Measure: PI_change

			95% Confidence Interval	
Valence	Mean	Std. Error	Lower Bound	Upper Bound
Positive review valence	4,641[a]	,101	4,443	4,839
Negative review valence	3,376[a]	,103	3,173	3,578

a. Covariates appearing in the model are evaluated at the following values: Gender = ,42, Age = 2,90, Education = 4,45, Freq_online = 2,21, Susceptibility = 5,2362.

2. Language

Measure: PI_change

			95% Confidence Interval	
Language	Mean	Std. Error	Lower Bound	Upper Bound
Dutch	4,014[a]	,102	3,814	4,215
English	4,002[a]	,103	3,800	4,205

a. Covariates appearing in the model are evaluated at the following values: Gender = ,42, Age = 2,90, Education = 4,45, Freq_online = 2,21, Susceptibility = 5,2362.

3. time

Measure: PI_change

time	Mean	Std. Error	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
1	4,527[a]	,080	4,368	4,685
2	3,490[a]	,081	3,331	3,650

a. Covariates appearing in the model are evaluated at the following values: Gender = ,42, Age = 2,90, Education = 4,45, Freq_online = 2,21, Susceptibility = 5,2362.

*4. Valence * Language*

Measure: PI_change

Valence	Language	Mean	Std. Error	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Positive review valence	Dutch	4,592[a]	,144	4,308	4,876
	English	4,690[a]	,142	4,410	4,970
Negative review valence	Dutch	3,437[a]	,143	3,155	3,719
	English	3,315[a]	,149	3,021	3,608

a. Covariates appearing in the model are evaluated at the following values: Gender = ,42, Age = 2,90, Education = 4,45, Freq_online = 2,21, Susceptibility = 5,2362.

*5. Valence * time*

Measure: PI_change

Valence	time	Mean	Std. Error	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Positive review valence	1	4,427[a]	,113	4,204	4,649
	2	4,855[a]	,114	4,632	5,079
Negative review valence	1	4,627[a]	,115	4,400	4,854
	2	2,125[a]	,116	1,897	2,353

a. Covariates appearing in the model are evaluated at the following values: Gender = ,42, Age = 2,90, Education = 4,45, Freq_online = 2,21, Susceptibility = 5,2362.

*6. Language * time*

Measure: PI_change

Language	time	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Dutch	1	4,556[a]	,114	4,331	4,780
	2	3,473[a]	,115	3,248	3,699
English	1	4,498[a]	,115	4,271	4,725
	2	3,507[a]	,116	3,278	3,736

a. Covariates appearing in the model are evaluated at the following values: Gender = ,42, Age = 2,90, Education = 4,45, Freq_online = 2,21, Susceptibility = 5,2362.

*7. Valence * Language * time*

Measure: PI_change

Valence	Language	time	Mean	Std. Error	95% Confidence Interval	
					Lower Bound	Upper Bound
Positive review valence	Dutch	1	4,348[a]	,161	4,030	4,666
		2	4,836[a]	,162	4,516	5,156
	English	1	4,505[a]	,159	4,192	4,819
		2	4,875[a]	,160	4,560	5,191
Negative review valence	Dutch	1	4,763[a]	,160	4,447	5,079
		2	2,111[a]	,161	1,793	2,429
	English	1	4,490[a]	,167	4,161	4,820
		2	2,139[a]	,168	1,808	2,470

a. Covariates appearing in the model are evaluated at the following values: Gender = ,42, Age = 2,90, Education = 4,45, Freq_online = 2,21, Susceptibility = 5,2362.

Parameter estimates

Parameter Estimates

Dependent Variable	Parameter	B	Std. Error	t	Sig.	95% Confidence Interval		Partial Eta Squared
						Lower Bound	Upper Bound	
Initial_PI	Intercept	5,310	,841	6,314	,000	3,654	6,967	,138
	Gender	-,308	,171	-1,800	,073	-,645	,029	,013
	Age	-,120	,064	-1,869	,063	-,247	,006	,014
	Education	-,124	,110	-1,126	,261	-,340	,093	,005
	Freq_online	-,304	,159	-1,910	,057	-,617	,009	,014
	Susceptibility	,169	,086	1,967	,050	,000	,338	,015
	[Valence=1,00]	,015	,231	,063	,950	-,440	,469	,000
	[Valence=2,00]	0[a]	.	.	.	.	.	.
	[Language=1,00]	,273	,233	1,171	,243	-,186	,731	,005
	[Language=2,00]	0[a]	.	.	.	.	.	.
	[Valence=1,00] * [Language=1,00]	-,430	,325	-1,321	,188	-1,070	,211	,007
	[Valence=1,00] * [Language=2,00]	0[a]	.	.	.	.	.	.
	[Valence=2,00] * [Language=1,00]	0[a]	.	.	.	.	.	.
	[Valence=2,00] * [Language=2,00]	0[a]	.	.	.	.	.	.
PI_after	Intercept	1,899	,846	2,244	,026	,232	3,566	,020
	Gender	-,056	,172	-,325	,745	-,395	,283	,000
	Age	-,002	,065	-,031	,975	-,130	,126	,000
	Education	,022	,111	,202	,840	-,195	,240	,000
	Freq_online	,094	,160	,589	,556	-,221	,410	,001
	Susceptibility	-,007	,086	-,086	,932	-,177	,163	,000
	[Valence=1,00]	2,736	,232	11,776	,000	2,278	3,194	,357
	[Valence=2,00]	0[a]	.	.	.	.	.	.
	[Language=1,00]	-,028	,234	-,120	,904	-,490	,433	,000
	[Language=2,00]	0[a]	.	.	.	.	.	.
	[Valence=1,00] * [Language=1,00]	-,011	,327	-,034	,973	-,656	,633	,000
	[Valence=1,00] * [Language=2,00]	0[a]	.	.	.	.	.	.
	[Valence=2,00] * [Language=1,00]	0[a]	.	.	.	.	.	.
	[Valence=2,00] * [Language=2,00]	0[a]	.	.	.	.	.	.

a. This parameter is set to zero because it is redundant.

Appendix I – assumptions

Skewness and kurtosis initial purchase intention

Descriptives

	Group			Statistic	Std. Error
Initial_PI	Positive Dutch	Mean		4,3333	,18276
		95% Confidence Interval for Mean	Lower Bound	3,9683	
			Upper Bound	4,6983	
		5% Trimmed Mean		4,3775	
		Median		4,7500	
		Variance		2,204	
		Std. Deviation		1,48475	
		Minimum		1,00	
		Maximum		7,00	
		Range		6,00	
		Interquartile Range		2,50	
		Skewness		-,454	,295
		Kurtosis		-,535	,582
	Negative Dutch	Mean		4,7235	,13593
		95% Confidence Interval for Mean	Lower Bound	4,4520	
			Upper Bound	4,9950	
		5% Trimmed Mean		4,7597	
		Median		5,0000	
		Variance		1,219	
		Std. Deviation		1,10430	
		Minimum		2,00	
		Maximum		7,00	
		Range		5,00	
		Interquartile Range		1,56	
		Skewness		-,402	,295
		Kurtosis		-,226	,582
	Positive English	Mean		4,4851	,16099
		95% Confidence Interval for Mean	Lower Bound	4,1636	
			Upper Bound	4,8065	
		5% Trimmed Mean		4,5348	
		Median		4,7500	
		Variance		1,737	
		Std. Deviation		1,31777	
		Minimum		1,75	
		Maximum		6,50	
		Range		4,75	
		Interquartile Range		2,25	
		Skewness		-,586	,293
		Kurtosis		-,780	,578
	Negative English	Mean		4,5328	,18064
		95% Confidence Interval for Mean	Lower Bound	4,1714	
			Upper Bound	4,8941	
		5% Trimmed Mean		4,5460	
		Median		4,7500	
		Variance		1,991	
		Std. Deviation		1,41088	
		Minimum		1,75	
		Maximum		7,00	
		Range		5,25	
		Interquartile Range		2,13	
		Skewness		-,414	,306
		Kurtosis		-,694	,604

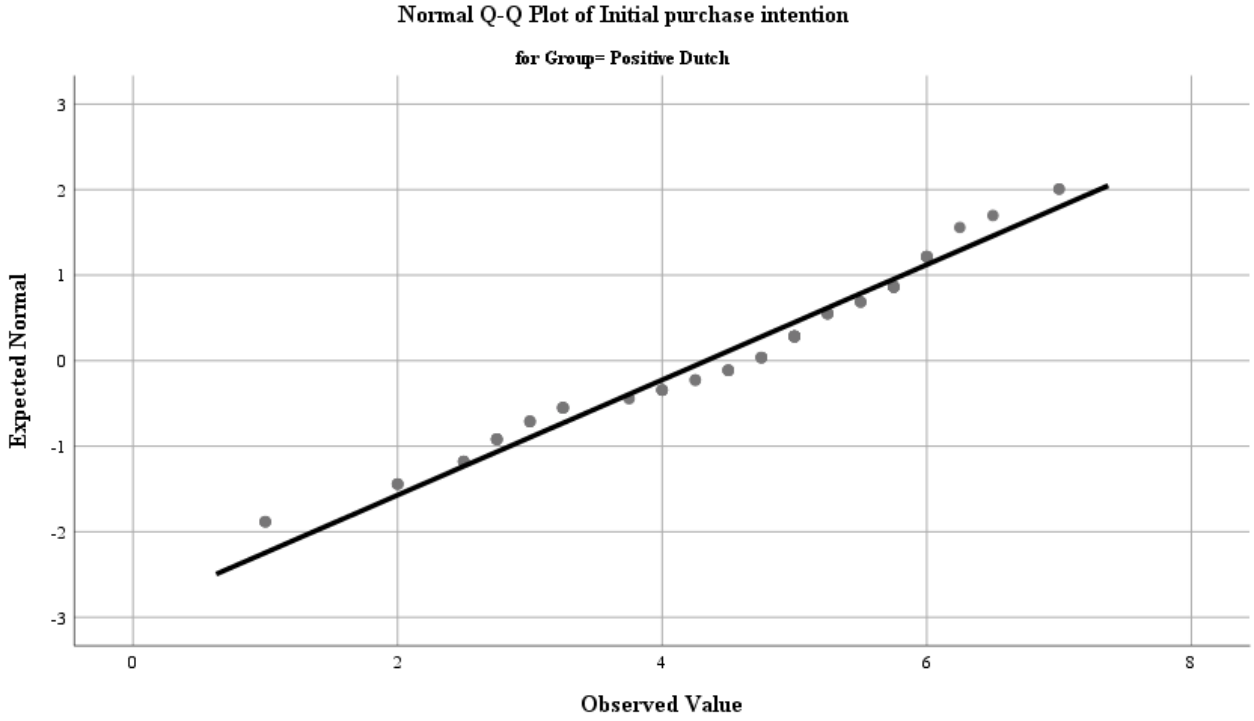
Skewness and kurtosis purchase intention after reviews

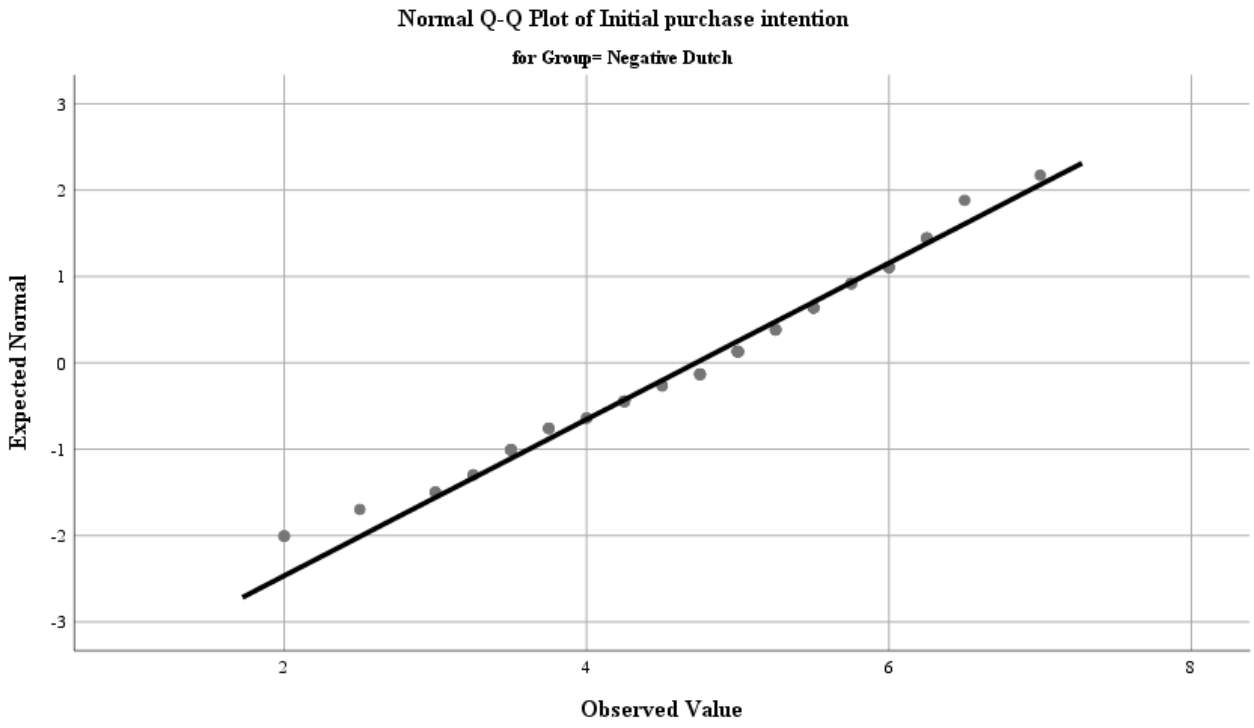
Descriptives

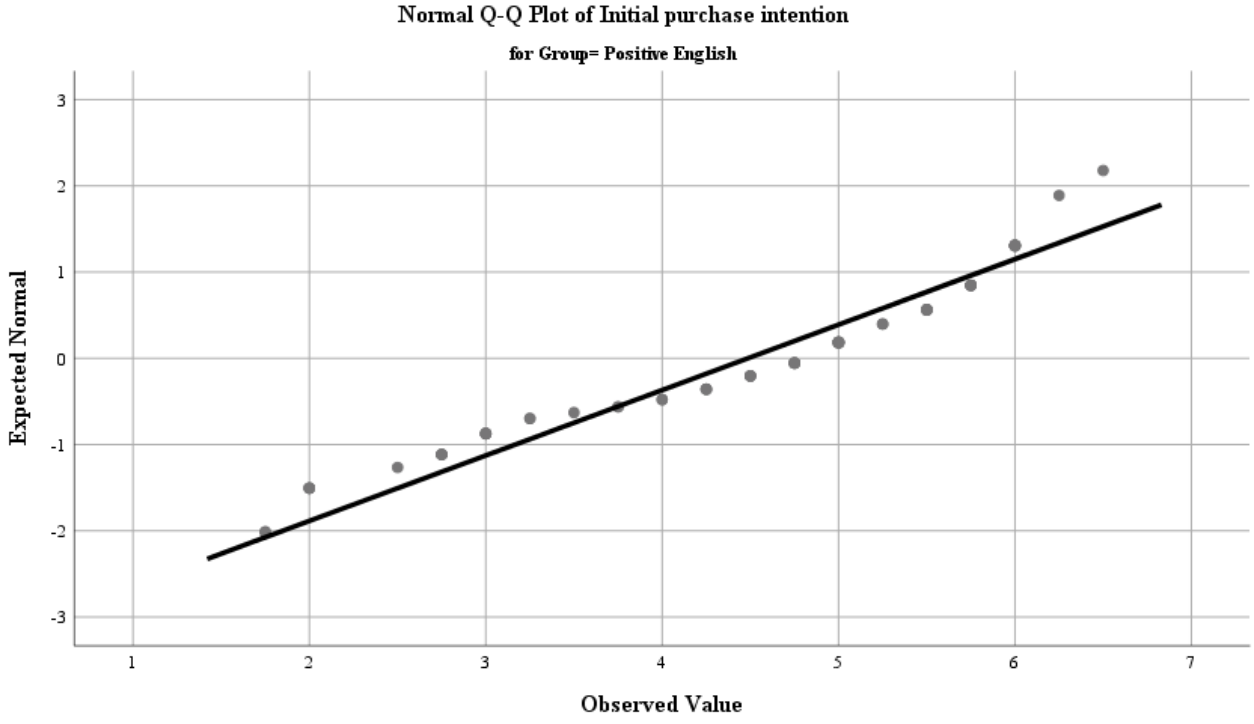
	Group			Statistic	Std. Error
PI_after	Positive Dutch	Mean		4,8371	,20107
		95% Confidence Interval for Mean	Lower Bound	4,4356	
			Upper Bound	5,2387	
		5% Trimmed Mean		4,9314	
		Median		5,0000	
		Variance		2,668	
		Std. Deviation		1,63348	
		Minimum		1,00	
		Maximum		7,00	
		Range		6,00	
		Interquartile Range		2,00	
		Skewness		-,911	,295
		Kurtosis		,027	,582
	Negative Dutch	Mean		2,1023	,13386
		95% Confidence Interval for Mean	Lower Bound	1,8349	
			Upper Bound	2,3696	
		5% Trimmed Mean		1,9865	
		Median		2,0000	
		Variance		1,183	
		Std. Deviation		1,08750	
		Minimum		1,00	
		Maximum		7,00	
		Range		6,00	
		Interquartile Range		1,31	
		Skewness		1,889	,295
		Kurtosis		5,622	,582
	Positive English	Mean		4,8843	,16173
		95% Confidence Interval for Mean	Lower Bound	4,5614	
			Upper Bound	5,2072	
		5% Trimmed Mean		4,9507	
		Median		5,0000	
		Variance		1,753	
		Std. Deviation		1,32383	
		Minimum		1,00	
		Maximum		7,00	
		Range		6,00	
		Interquartile Range		1,75	
		Skewness		-,861	,293
		Kurtosis		,428	,578
	Negative English	Mean		2,1434	,12730
		95% Confidence Interval for Mean	Lower Bound	1,8888	
			Upper Bound	2,3981	
		5% Trimmed Mean		2,0719	
		Median		2,0000	
		Variance		,988	
		Std. Deviation		,99421	
		Minimum		1,00	
		Maximum		5,00	
		Range		4,00	
		Interquartile Range		1,13	
		Skewness		,987	,306
		Kurtosis		,432	,604

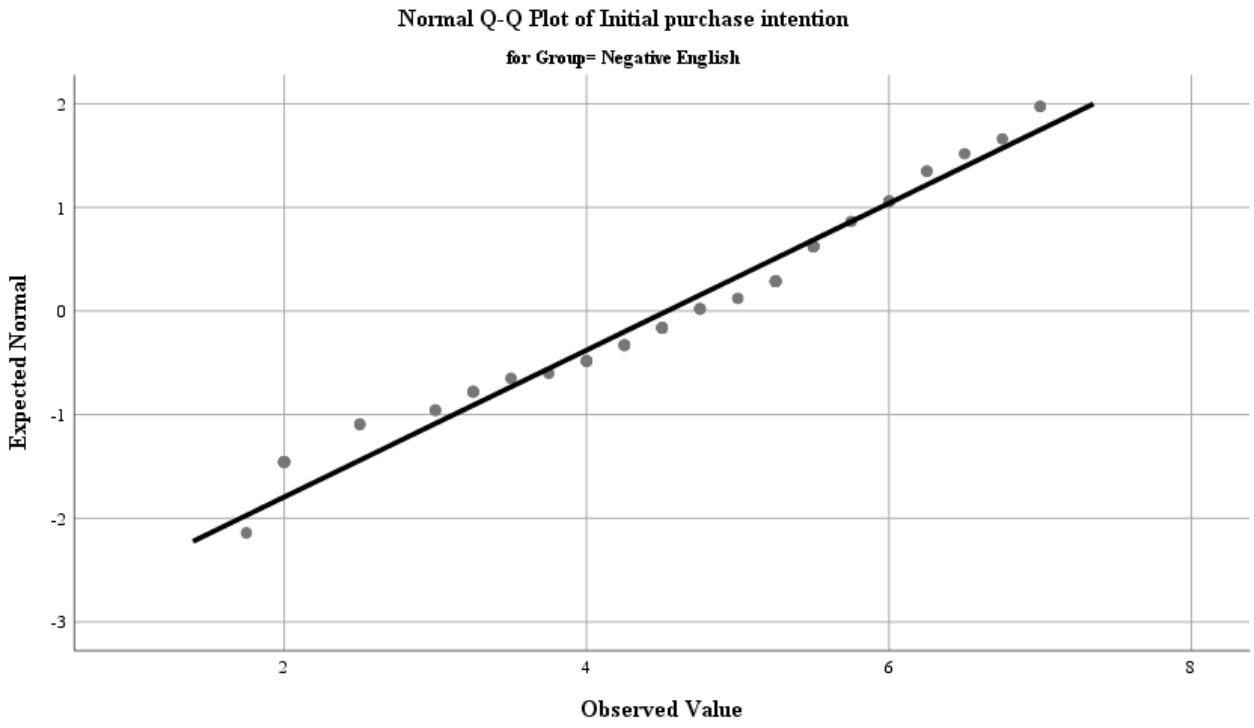
			Skewness	Kurtosis
Initial PI	L1	positive	1.54	-0.92
		negative	-1.36	-0.39
	L2	positive	-2	-1,35
		negative	1.36	-1.15
PI after reviews	L1	positive	-3.09	0.05
		negative	6.4	9.66
	L2	positive	-2.94	0.74
		negative	3.23	0.72

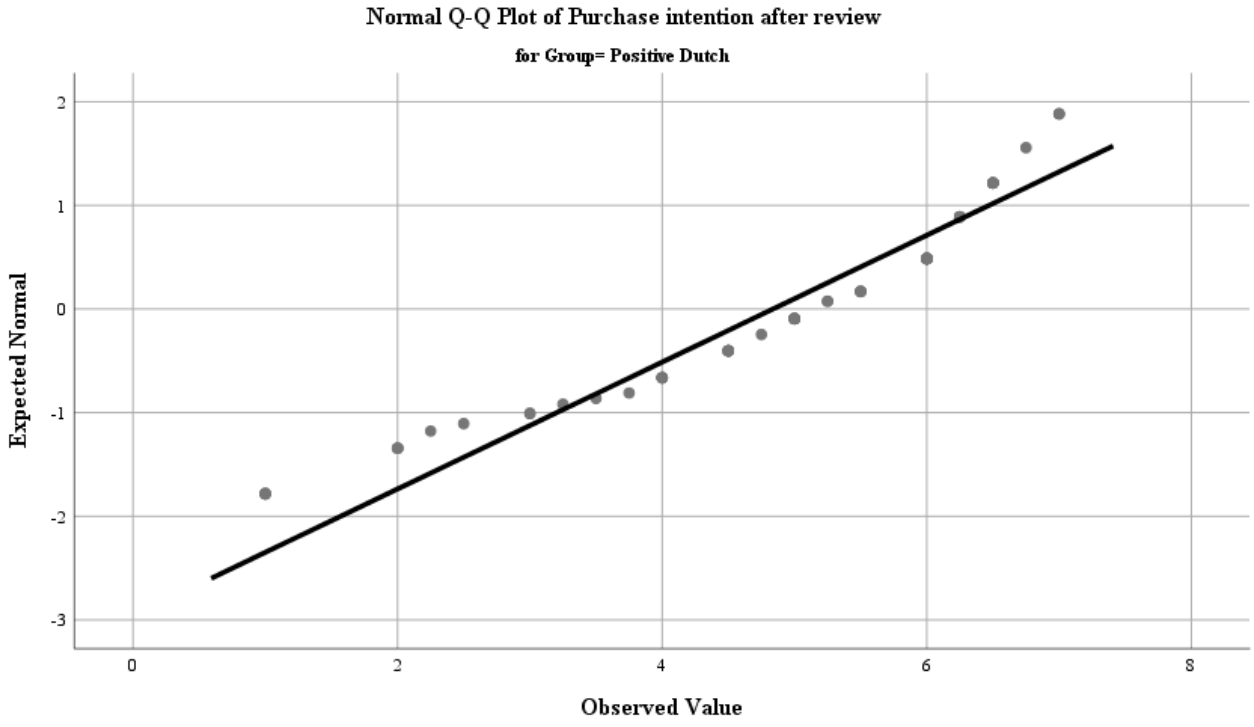
Normality Q-Q plots

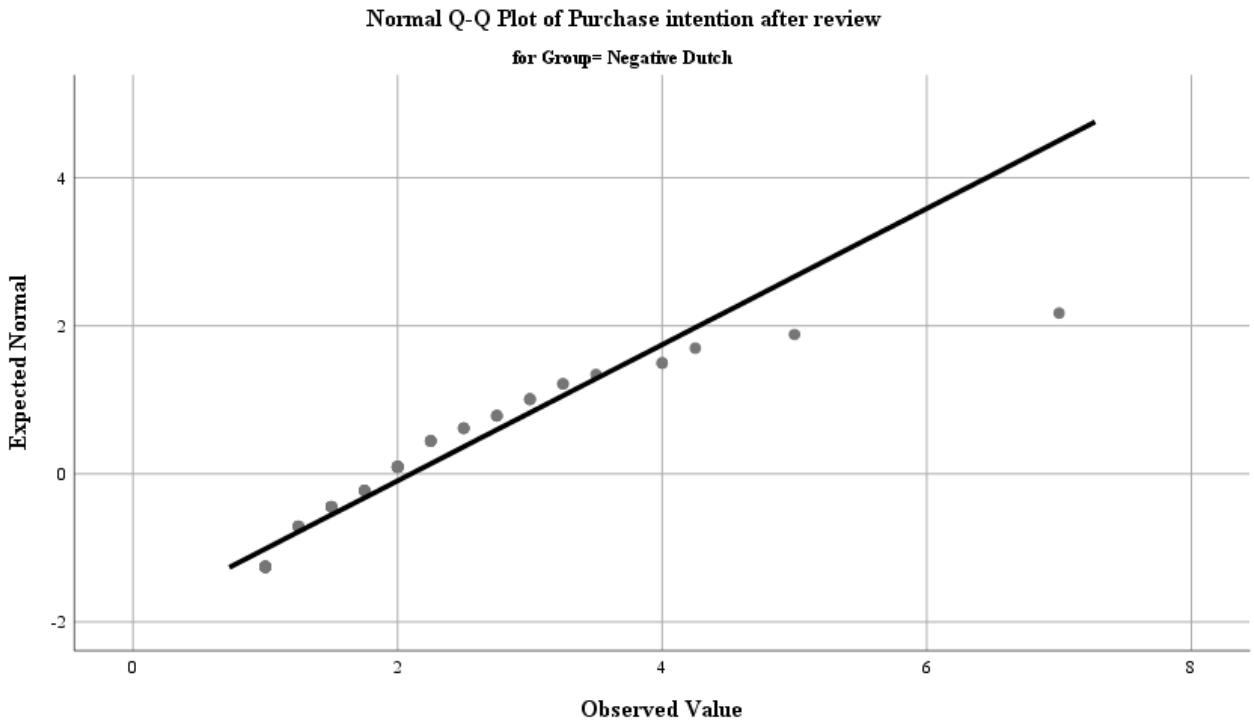


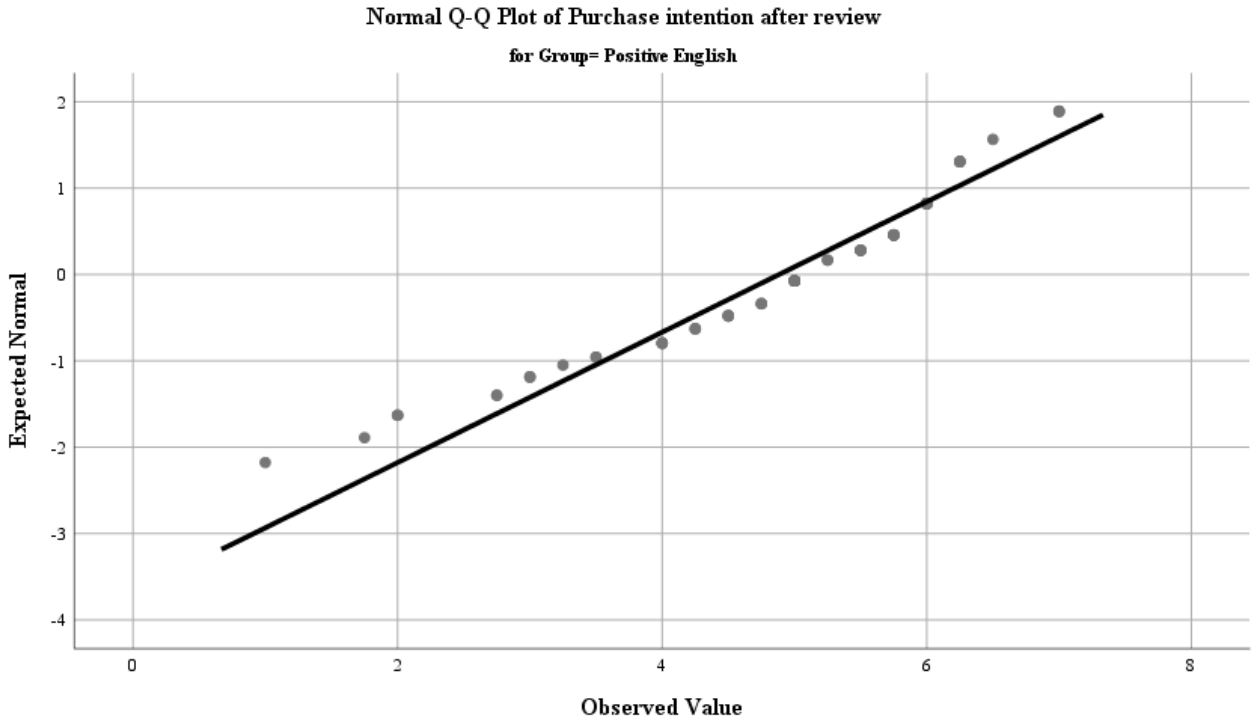

Normal Q-Q Plot of Initial purchase intention
for Group= Negative Dutch
Expected Normal
Observed Value
3
2
1
0
-1
-2
-3
2
4
6
8

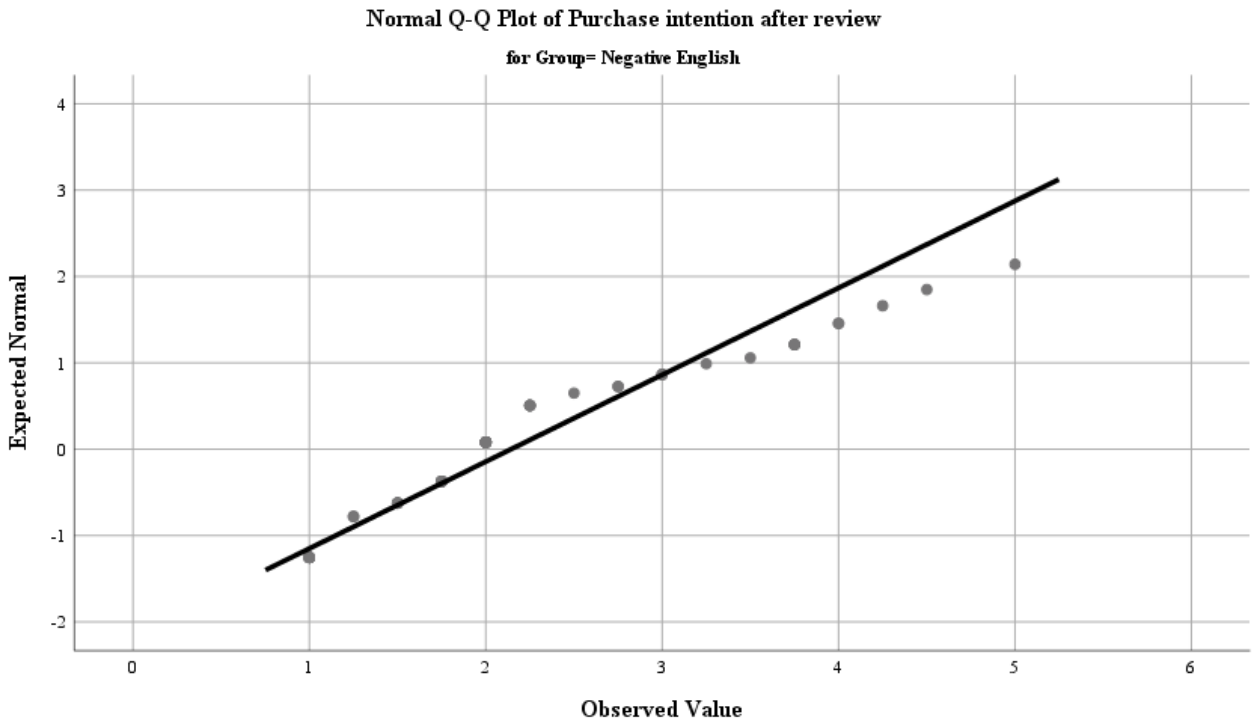

Normal Q-Q Plot of Initial purchase intention
for Group= Positive English
Expected Normal
Observed Value
3
2
1
0
-1
-2
-3
1
2
3
4
5
6
7


Normal Q-Q Plot of Initial purchase intention
for Group= Negative English
Expected Normal
Observed Value
2
1
0
-1
-2
-3
2
4
6
8

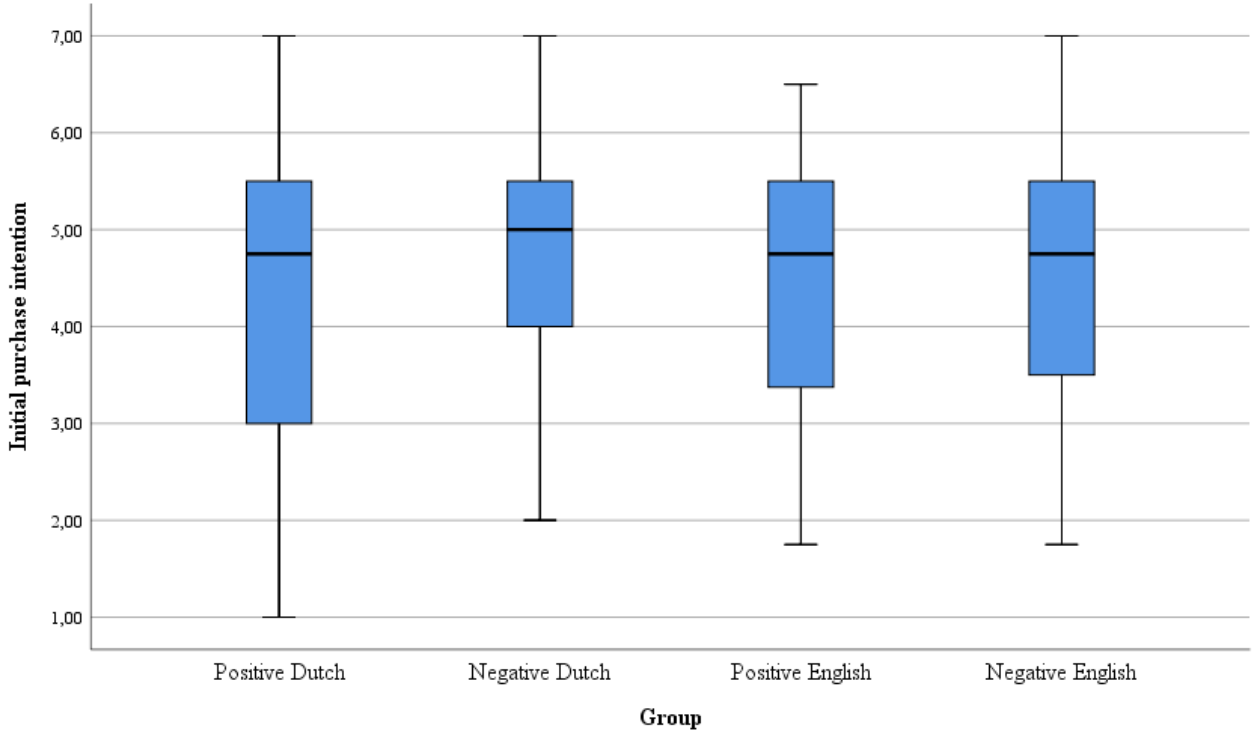

Normal Q-Q Plot of Purchase intention after review
for Group= Positive Dutch
Expected Normal
Observed Value
2
1
0
-1
-2
-3
0
2
4
6
8

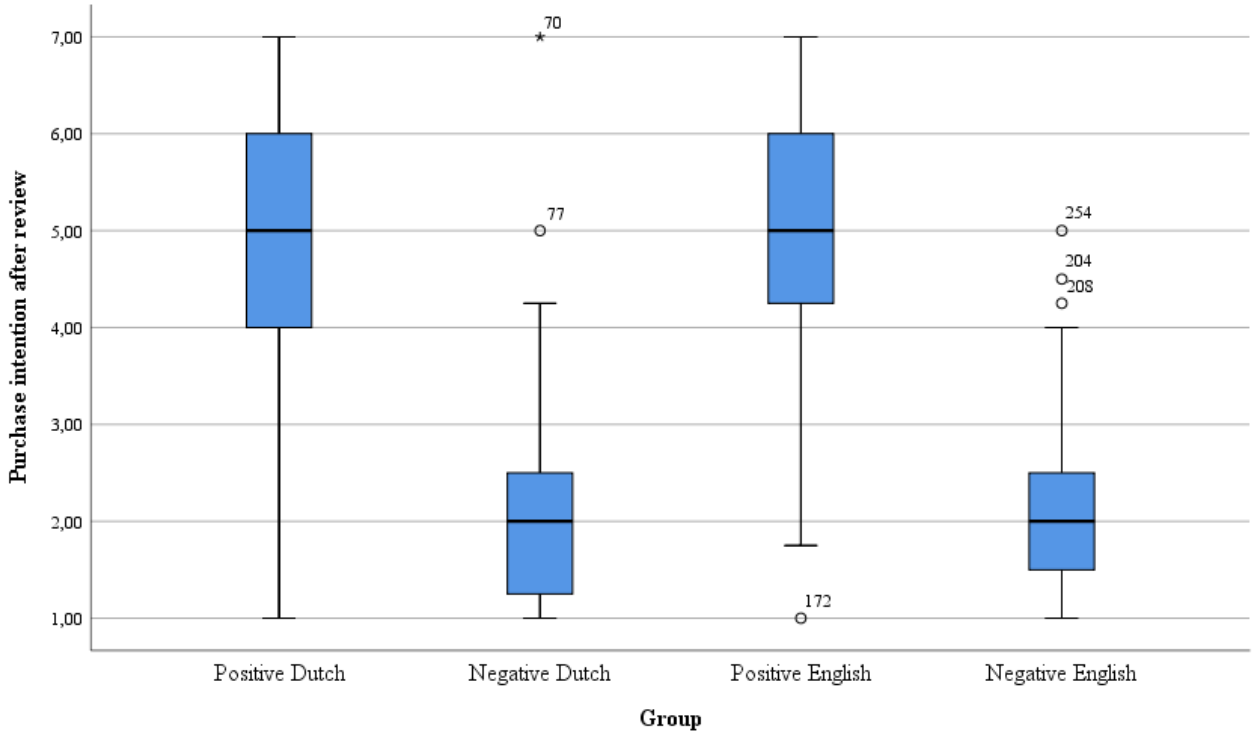

Normal Q-Q Plot of Purchase intention after review
for Group= Negative Dutch
Expected Normal
Observed Value
4
2
0
-2
0
2
4
6
8


Normal Q-Q Plot of Purchase intention after review
for Group= Positive English
Expected Normal
Observed Value
2
1
0
-1
-2
-3
-4
0
2
4
6
8


Normal Q-Q Plot of Purchase intention after review
for Group= Negative English
Expected Normal
Observed Value
4
3
2
1
0
-1
-2
0
1
2
3
4
5
6

Boxplot outliers





Equality of variances

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
Initial_PI	4,161	3	255	,007
PI_after	6,864	3	255	,000

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Gender + Age + Education + Freq_online + Susceptibility + Valence + Language + Valence * Language
Within Subjects Design: time

Correlation matrix

Correlations

		Group	Gender	Age	Education	Freq_online	Susceptibility
Group	Pearson Correlation	1	-,106	,014	-,090	,083	-,022
	Sig. (2-tailed)		,089	,826	,148	,183	,721
	N	260	260	260	260	260	259
Gender	Pearson Correlation	-,106	1	-,012	,134*	-,087	-,217**
	Sig. (2-tailed)	,089		,852	,031	,161	,000
	N	260	260	260	260	260	259
Age	Pearson Correlation	,014	-,012	1	-,297**	,140*	-,221**
	Sig. (2-tailed)	,826	,852		,000	,024	,000
	N	260	260	260	260	260	259
Education	Pearson Correlation	-,090	,134*	-,297**	1	-,162**	,105
	Sig. (2-tailed)	,148	,031	,000		,009	,092
	N	260	260	260	260	260	259
Freq_online	Pearson Correlation	,083	-,087	,140*	-,162**	1	-,034
	Sig. (2-tailed)	,183	,161	,024	,009		,590
	N	260	260	260	260	260	259
Susceptibility	Pearson Correlation	-,022	-,217**	-,221**	,105	-,034	1
	Sig. (2-tailed)	,721	,000	,000	,092	,590	
	N	259	259	259	259	259	259

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

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

Appendix J – hypothesis 1

Independent samples T-test

Group Statistics

	Valence	N	Mean	Std. Deviation	Std. Error Mean
PI_after	Positive review valence	133	4,8609	1,48011	,12834
	Negative review valence	127	2,1220	1,03982	,09227

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
PI_after	Equal variances assumed	16,041	,000	17,192	258	,000	2,7389	,15931	2,4251	3,0526
	Equal variances not assumed			17,327	237,30	,000	2,7389	,15807	2,4275	3,0502

Appendix K – hypothesis 2

Independent samples T-test

Group Statistics

	Valence	N	Mean	Std. Deviation	Std. Error Mean
change_PI	Positive review valence	133	,4511	,97772	,08478
	Negative review valence	127	-2,5098	1,46263	,12979

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
change_PI	Equal variances assumed	20,984	,000	19,270	258	,000	2,9610	,15366	2,6584	3,2636
	Equal variances not assumed			19,100	218,49	,000	2,9610	,15502	2,6554	3,2665

Estimated marginal means change in purchase intention

Descriptive Statistics

	Valence	Mean	Std. Deviation	N
Initial_PI	Positive review valence	4,4098	1,39986	133
	Negative review valence	4,6319	1,25942	127
	Total	4,5183	1,33519	260
PI_after	Positive review valence	4,8609	1,48011	133
	Negative review valence	2,1220	1,03982	127
	Total	3,5231	1,87725	260

Appendix L – hypothesis 3 & 4

Independent samples T-test

Group Statistics

	Language	N	Mean	Std. Deviation	Std. Error Mean
change_PI	Dutch	132	-1,0587	2,01328	,17523
	English	128	-,9297	1,84699	,16325

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
change_PI	Equal variances assumed	3,289	,071	-,538	258	,591	-,1290	,23981	-,6013	,34322
	Equal variances not assumed			-,539	257,22	,591	-,1290	,23950	-,6006	,34260

Estimated marginal means of change in purchase intention

Descriptive Statistics

	Language	Mean	Std. Deviation	N
Initial_PI	Dutch	4,5284	1,31805	132
	English	4,5078	1,35773	128
	Total	4,5183	1,33519	260
PI_after	Dutch	3,4697	1,94804	132
	English	3,5781	1,80734	128
	Total	3,5231	1,87725	260

Appendix M – survey

Start of Block: Start survey

Intro
Beste deelnemer,

Dit onderzoek wordt uitgevoerd voor het afronden van mijn master International Business. Het invullen van de vragenlijst duurt ongeveer 5 minuten.
Alle antwoorden zijn anoniem, zullen niet met derden worden gedeeld en worden uitsluitend gebruikt voor dit onderzoek.
Alvast hartelijk dank voor uw deelname.

Maud Broen

End of Block: Start survey

Start of Block: Coolblue

Scenario
Deze enquête gaat over de aankoop van een product via Coolblue.nl.
Het is de bedoeling dat u zich bij het invullen van de vragen voorstelt dat u via Coolblue.nl op zoek bent naar een nieuwe elektrische tandenborstel.

Familiarity coolbue
Bent u bekend met Coolblue.nl?

- ○ Ja (1)
- ○ Nee (2)

End of Block: Coolblue

Start of Block: Product and initial PI

Product image

Product info

Omschrijving

Deze merkloze elektrische tandenborstel beschikt over een dubbele timer. Die laat je weten wanneer je een ander gebied in je mond moet poetsen én wanneer je lang genoeg hebt gepoetst. Naast een poetsstand voor een intense reiniging, is het ook mogelijk om te kiezen voor een zachtere poetsstand. Je neemt de tandenborstel veilig mee op vakantie in het bijgeleverde reisetui. De tandenborstel wordt geleverd met 1 extra opzetstuk.

Initial PI

In hoeverre bent u het eens met de volgende stellingen?

	Helemaal mee oneens (1)	Mee oneens (2)	Een beetje mee oneens (3)	Niet mee oneens / niet mee eens (4)	Een beetje mee eens (5)	Mee eens (6)	Helemaal mee eens (7)
Er is een kans dat ik dit product zou kopen (1)	○	○	○	○	○	○	○
De volgende keer dat ik een elektrische tandenborstel nodig heb, zou ik dit product kopen (2)	○	○	○	○	○	○	○
Ik zou overwegen dit product te kopen (3)	○	○	○	○	○	○	○
Ik zou dit product zeker proberen (4)	○	○	○	○	○	○	○

End of Block: Product and initial PI

Start of Block: Positive Dutch

Review +L1
De volgende twee recensies zijn geschreven over de eerder getoonde elektrische tandenborstel en zijn geplaatst op Coolblue.nl.
Lees deze alstublieft door voordat u verder gaat met de vragen.

Review +L1

Prima tandenborstel

Goede prijs-kwaliteitverhouding. Prettige gebruikservaring, makkelijk in gebruik. De batterij gaat tot wel 30 minuten mee. Maakt bijna geen geluid. Tevredenstellend product.

Robin | 25 oktober 2020

Absoluut een aanrader

Wat een fantastisch product! Zeer tevreden na 3 maanden gebruik maken van deze tandenborstel. Na enkele weken zag ik al direct resultaat. Het product voldoet aan zijn verwachtingen. Ik had geen geld om een super dure tandenborstel te kopen, dus deze was het geld meer dan waard.
Ik zou deze tandenborstel zeker aanraden!

Sem | 6 november 2020

---

valence +L1
In hoeverre bent u het eens met de volgende stellingen?

	Helemaal mee oneens (1)	Mee oneens (2)	Een beetje mee oneens (3)	Niet mee oneens / niet mee eens (4)	Een beetje mee eens (5)	Mee eens (6)	Helemaal mee eens (7)
De toon van deze recensies is positief (1)	○	○	○	○	○	○	○
De toon van deze recensies is optimistisch (2)	○	○	○	○	○	○	○

PI +L1

Na het lezen van de recensies, in hoeverre bent u het eens met de volgende stellingen?

	Helemaal mee oneens (1)	Mee oneens (2)	Een beetje mee oneens (3)	Niet mee oneens / niet mee eens (4)	Een beetje mee eens (5)	Mee eens (6)	Helemaal mee eens (7)
Er is een kans dat ik dit product zou kopen (1)	○	○	○	○	○	○	○
De volgende keer dat ik een elektrische tandenborstel nodig heb, zou ik dit product kopen (2)	○	○	○	○	○	○	○
Ik zou overwegen dit product te kopen (3)	○	○	○	○	○	○	○
Ik zou dit product zeker proberen (4)	○	○	○	○	○	○	○

Page Break

Review2
Hieronder ziet u nogmaals dezelfde recensies.

Review +L1

Prima tandenborstel

Goede prijs-kwaliteitverhouding. Prettige gebruikservaring, makkelijk in gebruik. De batterij gaat tot wel 30 minuten mee. Maakt bijna geen geluid. Tevredenstellend product.

Robin | 25 oktober 2020

Absoluut een aanrader

Wat een fantastisch product! Zeer tevreden na 3 maanden gebruik maken van deze tandenborstel. Na enkele weken zag ik al direct resultaat. Het product voldoet aan zijn verwachtingen. Ik had geen geld om een super dure tandenborstel te kopen, dus deze was het geld meer dan waard.
Ik zou deze tandenborstel zeker aanraden!

Sem | 6 november 2020

Prof +L1
Op een schaal van 1 tot 10, hoe goed beheerst u de taal waarin deze recensies zijn geschreven?

	1	2	3	4	5	6	7	8	9	10	
	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	8 (8)	9 (9)	10 (10)	
Slecht	○	○	○	○	○	○	○	○	○	○	Goed

End of Block: Positive Dutch

Start of Block: Negative Dutch

Review -L1

De volgende twee recensies zijn geschreven over de eerder getoonde elektrische tandenborstel en zijn geplaatst op Coolblue.nl.
Lees deze alstublieft door voordat u verder gaat met de vragen.

Review -L1

Onprettige tandenborstel

Slechte prijs-kwaliteitverhouding. Onprettige gebruikservaring, moeilijk in gebruik. De batterij gaat maar 30 minuten mee. Maakt redelijk veel geluid. Teleurstellend product.

Robin | 25 oktober 2020

Absoluut geen aanrader

Wat een ellendig product! Zeer ontevreden na 3 maanden gebruik maken van deze tandenborstel. Ondanks langdurig gebruik nog steeds geen resultaat. Het product voldoet niet aan zijn verwachtingen. Ik had geen geld om een super dure tandenborstel te kopen, maar dit was echt een miskoop.
Ik zou deze tandenborstel zeker niet aanraden!

Sem | 6 november 2020

valence -L1 In hoeverre bent u het eens met de volgende stellingen?

	Helemaal mee oneens (1)	Mee oneens (2)	Een beetje mee oneens (3)	Niet mee oneens / niet mee eens (4)	Een beetje mee eens (5)	Mee eens (6)	Helemaal mee eens (7)
De toon van deze recensies is positief (1)	○	○	○	○	○	○	○
De toon van deze recensies is optimistisch (2)	○	○	○	○	○	○	○

PI -L1

Na het lezen van de recensies, in hoeverre bent u het eens met de volgende stellingen?

	Helemaal mee oneens (1)	Mee oneens (2)	Een beetje mee oneens (3)	Niet mee oneens / niet mee eens (4)	Een beetje mee eens (5)	Mee eens (6)	Helemaal mee eens (7)
Er is een kans dat ik dit product zou kopen (1)	○	○	○	○	○	○	○
De volgende keer dat ik een elektrische tandenborstel nodig heb, zou ik dit product kopen (2)	○	○	○	○	○	○	○
Ik zou overwegen dit product te kopen (3)	○	○	○	○	○	○	○
Ik zou dit product zeker proberen (4)	○	○	○	○	○	○	○

Page Break

Review2
Hieronder ziet u nogmaals dezelfde recensies.

Review -L1

Onprettige tandenborstel

Slechte prijs-kwaliteitverhouding. Onprettige gebruikservaring, moeilijk in gebruik. De batterij gaat maar 30 minuten mee. Maakt redelijk veel geluid. Teleurstellend product.

Robin | 25 oktober 2020

Absoluut geen aanrader

Wat een ellendig product! Zeer ontevreden na 3 maanden gebruik maken van deze tandenborstel. Ondanks langdurig gebruik nog steeds geen resultaat. Het product voldoet niet aan zijn verwachtingen. Ik had geen geld om een super dure tandenborstel te kopen, maar dit was echt een miskoop.
Ik zou deze tandenborstel zeker niet aanraden!

Sem | 6 november 2020

Prof -L1
Op een schaal van 1 tot 10, hoe goed beheerst u de taal waarin deze recensies zijn geschreven?

	1	2	3	4	5	6	7	8	9	10	
	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	8 (8)	9 (9)	10 (10)	
Slecht	○	○	○	○	○	○	○	○	○	○	Goed

End of Block: Negative Dutch

Start of Block: Positive English

Review +L2

De volgende twee recensies zijn geschreven over de eerder getoonde elektrische tandenborstel en zijn geplaatst op Coolblue.nl.
Lees deze alstublieft door voordat u verder gaat met de vragen.

Review +L2

Fine toothbrush

Good value for money. Pleasant user experience, easy to use. The battery even lasts up to 30 minutes. Makes almost no sound. Satisfactory product.

Robin | 25 oktober 2020

Would definitely recommend

What an amazing product! Very satisfied after using this toothbrush for 3 months. After a few weeks I already saw some results. The product lives up to its expectations. I didn't have money to buy a super expensive toothbrush, so this one was definitely worth the money.
I would definitely recommend this toothbrush!

Sem | 6 november 2020

Valence +L2

In hoeverre bent u het eens met de volgende stellingen?

	Helemaal mee oneens (1)	Mee oneens (2)	Een beetje mee oneens (3)	Niet mee oneens / niet mee eens (4)	Een beetje mee eens (5)	Mee eens (6)	Helemaal mee eens (7)
De toon van deze recensies is positief (1)	○	○	○	○	○	○	○
De toon van deze recensies is optimistisch (2)	○	○	○	○	○	○	○

PI +L2

Na het lezen van de recensies, in hoeverre bent u het eens met de volgende stellingen?

	Helemaal mee oneens (1)	Mee oneens (2)	Een beetje mee oneens (3)	Niet mee oneens / niet mee eens (4)	Een beetje mee eens (5)	Mee eens (6)	Helemaal mee eens (7)
Er is een kans dat ik dit product zou kopen (1)	○	○	○	○	○	○	○
De volgende keer dat ik een elektrische tandenborstel nodig heb, zou ik dit product kopen (2)	○	○	○	○	○	○	○
Ik zou overwegen dit product te kopen (3)	○	○	○	○	○	○	○
Ik zou dit product zeker proberen (4)	○	○	○	○	○	○	○

Page Break

Review2
Hieronder ziet u nogmaals dezelfde recensies.

Review +L2

Fine toothbrush

Good value for money. Pleasant user experience, easy to use. The battery even lasts up to 30 minutes. Makes almost no sound. Satisfactory product.

Robin | 25 oktober 2020

Would definitely recommend

What an amazing product! Very satisfied after using this toothbrush for 3 months. After a few weeks I already saw some results. The product lives up to its expectations. I didn't have money to buy a super expensive toothbrush, so this one was definitely worth the money.
I would definitely recommend this toothbrush!

Sem | 6 november 2020

Prof +L2
Op een schaal van 1 tot 10, hoe goed beheerst u de taal waarin deze recensies zijn geschreven?

	1	2	3	4	5	6	7	8	9	10	
	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	8 (8)	9 (9)	10 (10)	
Slecht	○	○	○	○	○	○	○	○	○	○	Goed

End of Block: Positive English

Start of Block: Negative English

Review -L2

De volgende twee recensies zijn geschreven over de eerder getoonde elektrische tandenborstel en zijn geplaatst op Coolblue.nl.
Lees deze alstublieft door voordat u verder gaat met de vragen.

Review -L2

Unpleasant toothbrush

Poor value for money. Unpleasant user experience, difficult to use. The battery only lasts up to 30 minutes. Makes some pretty loud noise. Disappointing product.

Robin | 25 oktober 2020

Would definitely not recommend

What a terrible product! Very unsatisfied after using this toothbrush for 3 months. Despite long-term use, still no results. The product doesn't live up to its expectations. I didn't have money to buy a super expensive toothbrush, but this one was definitely a bad buy.
I would definitely not recommend this toothbrush!

Sem | 6 november 2020

valence -L2

In hoeverre bent u het eens met de volgende stellingen?

	Helemaal mee oneens (1)	Mee oneens (2)	Een beetje mee oneens (3)	Niet mee oneens / niet mee eens (4)	Een beetje mee eens (5)	Mee eens (6)	Helemaal mee eens (7)
De toon van deze recensies is positief (1)	○	○	○	○	○	○	○
De toon van deze recensies is optimistisch (2)	○	○	○	○	○	○	○

PI -L2

Na het lezen van de recensies, in hoeverre bent u het eens met de volgende stellingen?

	Helemaal mee oneens (1)	Mee oneens (2)	Een beetje mee oneens (3)	Niet mee oneens / niet mee eens (4)	Een beetje mee eens (5)	Mee eens (6)	Helemaal mee eens (7)
Er is een kans dat ik dit product zou kopen (1)	○	○	○	○	○	○	○
De volgende keer dat ik een elektrische tandenborstel nodig heb, zou ik dit product kopen (2)	○	○	○	○	○	○	○
Ik zou overwegen dit product te kopen (3)	○	○	○	○	○	○	○
Ik zou dit product zeker proberen (4)	○	○	○	○	○	○	○

Page Break

Review2
Hieronder ziet u nogmaals dezelfde recensies.

Review -L2

Unpleasant toothbrush

Poor value for money. Unpleasant user experience, difficult to use. The battery only lasts up to 30 minutes. Makes some pretty loud noise. Disappointing product.

Robin | 25 oktober 2020

Would definitely not recommend

What a terrible product! Very unsatisfied after using this toothbrush for 3 months. Despite long-term use, still no results. The product doesn't live up to its expectations. I didn't have money to buy a super expensive toothbrush, but this one was definitely a bad buy.
I would definitely not recommend this toothbrush!

Sem | 6 november 2020

---

prof -L2
Op een schaal van 1 tot 10, hoe goed beheerst u de taal waarin deze recensies zijn geschreven?

	1	2	3	4	5	6	7	8	9	10	
	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	8 (8)	9 (9)	10 (10)	
Slecht	○	○	○	○	○	○	○	○	○	○	Goed

End of Block: Negative English

Start of Block: Susceptibility to interpersonal influence

Susc. In hoeverre bent u het eens met de volgende stellingen?

	Helemaal mee oneens (1)	Mee oneens (2)	Beetje mee oneens (3)	Nietmee oneens / niet mee eens (4)	Beetje mee eens (5)	Mee eens (6)	Helemaal mee eens (7)
Om zeker te weten dat ik het juiste product koop kijk ik vaak naar wat andere mensen kopen en gebruiken (1)	○	○	○	○	○	○	○
Als ik weinig ervaring heb met een product, vraag ik vaak naar de mening van vrienden (2)	○	○	○	○	○	○	○
Ik raadpleeg vaak andere mensen als ik moet kiezen welk product het beste is (3)	○	○	○	○	○	○	○
Ik verzamel vaak informatie via vrienden of familie over een product voordat ik het koop (4)	○	○	○	○	○	○	○

End of Block: Susceptibility to interpersonal influence

Start of Block: Demographics

Gender
Wat is uw geslacht?

- ○ Man (1)
- ○ Vrouw (2)
- ○ Anders (3)

Age
Wat is uw leeftijd?

- ○ Jonger dan 15 (1)
- ○ 15 - 24 (2)
- ○ 25 - 34 (3)
- ○ 35 - 44 (4)
- ○ 45 - 54 (5)
- ○ 55 - 64 (6)
- ○ 65 - 74 (8)
- ○ Ouder dan 74 (7)

Nationality
Wat is uw nationaliteit?

- ○ Nederlands (1)
- ○ Anders (2) _____

Mother tongue
Wat is uw moedertaal?

- Nederlands (1)
- Anders (2) _____

Education
Wat is uw hoogst behaalde of huidige opleidingsniveau?

- Basisschool (1)
- Middelbare school (2)
- MBO (3)
- HBO (4)
- WO (5)

Freq. online
Hoe vaak doet u online aankopen?

- Nooit (1)
- 1 - 5 keer per maand (2)
- 6 - 10 keer per maand (3)
- Vaker dan 10 keer per maand (4)

End of Block: Demographics