CAN LESS ALSO BE MORE FOR THOSE WHO CRAVE UNIQUENESS?

Master Thesis Marketing

A study on the moderating role of CNFU on the relationship between processing fluency and evaluative judgments

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Management summary

This study was initiated to demonstrate that a higher degree of processing fluency is not always superior over a lower degree of such fluency. Previous research has claimed that a higher degree of processing fluency is always more beneficial for product evaluations, as this higher degree elicits perceptions of familiarity and prototypicality that improve consumers' evaluative judgments. However, not every type of consumer is looking for products that evoke those perceptions. Consumers with a high need for uniqueness value products that are perceived as uncommon and unfamiliar and devalue products that are perceived as common and popular among the general population. Therefore, it was expected that those consumers evaluate a product in a high fluency situation less favorable than a product in a low fluency situation. An experiment that tested the role of consumers' need for uniqueness in the evaluation of products – when the degree of processing fluency was manipulated – could not find support for this hypothesis. Participants across both manipulation groups were exposed to an advertisement promoting cheese cubes and asked to evaluate both the product and the ad itself. Although the degree of processing fluency was found to be irrelevant for consumers with a high need for uniqueness, a low degree of processing fluency decreased the evaluations for consumers with a lower need for uniqueness. Therefore, marketers are recommended to keep the degree of processing fluency as high as possible, in order to elicit the most favorable evaluations from both consumers with a high and low need for uniqueness. However, this study was able to indicate that a lower degree of processing fluency is less detrimental for product evaluations than was previously believed and a higher degree of processing fluency is not always superior over a lower degree; for consumers with a high need for uniqueness, product evaluations are equally favorable in both low and high fluency situations.

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Chapter 1: Introduction

Metacognitive experiences have significant influences on evaluative judgments. One such metacognitive experience that has been extensively addressed in previous literature is the *processing fluency*, which refers to the ease or difficulty with which new, externally presented stimuli can be processed (Schwarz, 2004). This fluency has been an established concept that appears in many research areas. For example, processing fluency has been found to increase consumers' likelihood to endorse a statement as true (Reber & Schwarz, 1999; Unkelbach, 2007). Also in the research area of linguistics, a higher degree of processing fluency resulted in more favorable language attitudes toward foreign-accented speech (Dragojevic & Giles, 2016). Other research found that the willingness to engage in a certain behavior increased when the instructions for executing the behavior were easier to process (Song & Schwarz, 2008).

Also within the research area of marketing, processing fluency is an important concept that marketers should take into account when designing marketing communications, as it is– often unwittingly or unintentionally – influenced by many different variables. For example, Lee & Aaker (2004) have indicated that consumers perceive a higher processing fluency when the product information is presented in a frame (i.e. loss vs. gain frame) that fits with the regulatory goals of the consumer (i.e. prevention vs. promotion focused). Also, repeated exposure to a marketing communication (Janiszewski & Meyvis, 2001), using a more easier-to-read font (e.g. Novemsky, Dhar, Schwarz & Simonson, 2007; Pocheptsova, Labroo & Dhar, 2010) and using a higher figure-ground contrast in marketing communications (Reber, Winkielman & Schwarz, 1998) are examples that were found to increase perceived processing fluency.

Theories about this processing fluency propose that consumers internally monitor the effort they devote to processing a certain stimulus (Herrmann, Zidansek, Sprott & Spangenberg, 2013). Marketers should therefore acknowledge the importance of processing fluency when designing marketing communications, as a substantial body of literature indicates that these metacognitive experiences partly determine consumers' product evaluations (e.g. Reber et al., 1998; Schwarz, 2004). Hence, processing fluency is a highly relevant concept in marketing, as it is influenced by many different variables. In turn, it influences consumers' product evaluations, which serve, among others, as a proxy for actual brand choice.

Although there are a lot of variables that influence processing fluency, research findings on the *effects* or *influences* of processing fluency itself are rather contradictory on some aspects. Decreasing the degree of processing fluency is usually seen as a bad practice, as consumers attribute this lower fluency to unfamiliarity with the product, which is likely to reduce its liking

(Winkielman, Schwarz, Fazendeiro & Reber, 2003). However, research findings have found that processing *dis*fluency can enhance product evaluations as well, indicating that this attribution to unfamiliarity does not always occur or may not always be detrimental for those evaluations. For example, research indicated that consumers infer a higher product innovativeness from lower processing fluency, which can result in a higher preference for that product (Cho & Schwarz, 2006). Also in the domain of special-occasion products, the opposite is true. In this consumption domain, a lower degree of processing fluency increased the attractiveness of a product, by making it appear unique or uncommon (Pocheptsova et al., 2010). Hence, several studies challenge and contradict the notion that marketers should make their marketing communications easier to process in order to improve consumers' product evaluations; there are situations in which a lower degree of processing fluency is more beneficial for those evaluations. As products that are perceived as unique, or are evaluated as superior over other products, can command a price premium (Aaker, 1996; Netemeyer et al., 2004), this once again makes processing fluency a contemporary and relevant concept. Especially when there are avenues that might provide academics and marketers with new insights, as the aforementioned studies did as well.

As becomes clear, processing fluency has a recognized and significant influence on product evaluations and the premise behind the studies that contradicted the current practice of increasing processing fluency, seems to be that consumers have a certain preference for products that are perceived as uncommon, unique or unknown. These preferences are reflected by consumers' need for uniqueness (CNFU), which Tian, Bearden & Hunter (2010) define as "the trait of pursuing differentness relative to others through the acquisition, utilization, and disposition of consumer goods for the purpose of developing and enhancing one's self-image and social image" (p. 52). Previous research depict this need as a personality characteristic or trait, such that consumers differ in their tendency to seek differentness relative to others (e.g. Snyder & Fromkin, 1977). Following the dimensions that make up this CNFU construct, consumers with a high need for uniqueness value products that are less popular among the general public and are perceived as unfamiliar, while consumers with a lower need for uniqueness stick with the products that are more common and accepted among the general public (Tian et al., 2010). This might suggest that CNFU can have a moderating effect on the relationship between processing fluency and product evaluations, as processing fluency leads to perceptions of familiarity, which is something that appears to be appreciated by consumers with a low need for uniqueness, but is devalued by consumers with a higher need for uniqueness. Hence, the conceptual model is depicted in Figure 1 and looks as follows:

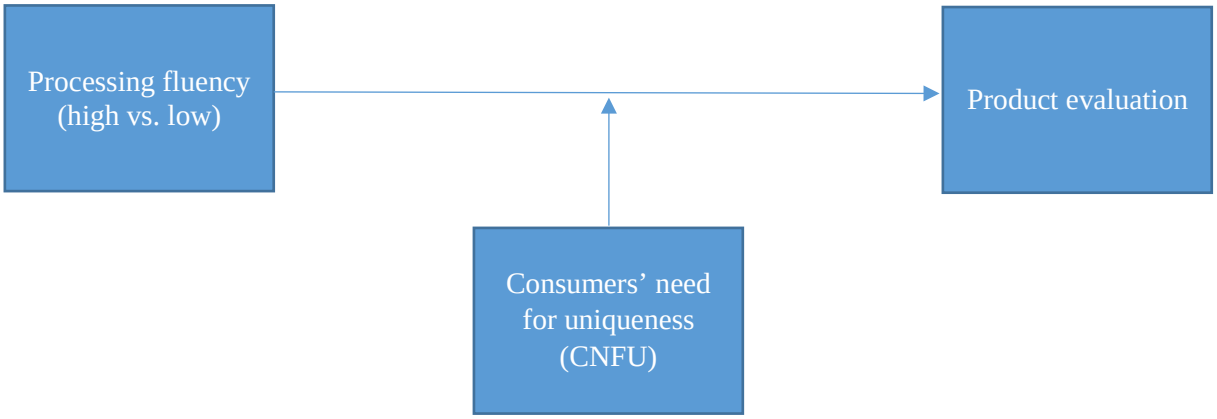


Figure 1. Conceptual model

In sum, this study will address the following problem statement: What are the effects of processing fluency on product evaluations and what are the moderating influences of CNFU on those relationships? By doing so, this study will provide academics and marketers with new insights in a field where previous research recommended a clear direction (i.e. increase processing fluency in order to enhance product evaluations) by introducing CNFU as a possible moderator. The results of this exploratory study, along with future research, may as well provide marketers with new insights on how to design marketing communications with respect to processing fluency, which enables them to elicit the most favorable product evaluations among different type of consumers in terms of their need for uniqueness.

Chapter 2 will start with a conceptualization of processing fluency and will elaborate on the relationships between processing fluency and product evaluations. Why exactly does a higher degree of processing fluency in marketing communications (usually) lead to more favorable product evaluations? What are the underlying reasons or mechanisms that explain this? Besides, Chapter 2 will also elaborate on the concept of CNFU and cover why it might have a moderating influence on the relationships between processing fluency and product evaluations. Chapter 3 will then set up an experiment that will be used to test the hypotheses as developed in Chapter 2 and Chapter 4 will analyze the results of this experiment. A discussion of the study, along with an interpretation of the results, the limitations of the study and future research suggestions, will follow in Chapter 5.

Chapter 2: Literature Review

This chapter will start with an introduction to create a comprehensive overview and place the concept of processing fluency in a broader context. A conceptualization of the different variables along with a discussion of the relationships between them will then follow. Hence, this chapter will also outline consumers' need for uniqueness (CNFU) and discuss how it can possibly moderate the relationships between processing fluency and product evaluations. The chapter will end with a summary of the reviewed literature, followed by the development of the hypotheses that will be tested in Chapter 3 and 4.

2.1 Heuristics and processing fluency

When consumers choose among alternatives, they may use heuristics or mental short-cuts that simplify their choices and enable them to make relatively quick and effortless decisions (Olshavsky & Granbois, 1979; Hoyer, 1984). Consumers are more likely to employ such a heuristic processing strategy when a decision requires low cognitive effort or when personal involvement is low (Chaiken, 1980). Following this strategy, consumers make inferences based on certain cues and those inferences, in turn, determine their product beliefs. For example, research found that a higher price enhanced quality perceptions (Dodds, Monroe & Grewal, 1991), indicating that consumers use the stated price as a cue and infer a higher product quality from a higher price. Likewise, consumers use the number of arguments as a cue to infer their degree of agreement with those arguments, as research indicated that a higher number of arguments produced more agreement with a certain communication (Petty & Cacioppo, 1984). Also, when products differ in their stated country of origin, consumers evaluate those products as being of different quality, indicating that consumers use the country of origin as a cue to infer product quality (Elliott & Camero, 1994).

In line with those examples, consumers also use the perceived processing fluency (i.e. the ease or difficulty with which new, externally presented stimuli can be processed) as cues when making inferences in a heuristic fashion (Schwarz, 2004). As mentioned in Chapter 1, consumers internally monitor the effort they devote to processing a certain stimulus (Herrmann et al., 2013). The fluency experiences that result from this internal audit are informative in their own right and serve as a basis for evaluative judgments. Consumers use these experiences as cues to make inferences that, in turn, influence their product evaluations (Novemsky et al., 2007). What those inferences exactly are will be covered in section 2.2; a conceptualization of processing fluency will first follow.

As Lee (2002) indicates, processing fluency can either be perceptual or conceptual. Whereas *conceptual* fluency pertains to the processing of meaning and a stimulus' relation to semantic knowledge structures, *perceptual* fluency involves the processing of physical features and the identification of a stimulus' physical identity (Winkielman et al., 2003; Lee & Labroo, 2004). The premise behind both types of fluency is that any stimulus may be processed with different degrees of speed, accuracy and effort, which is internally monitored by the consumer (Novemsky et al., 2007). Those degrees can be manipulated by a large number of variables, influencing processing fluency as a result (Schwarz, 2004). Relevant variables that influence conceptual fluency include repeated exposure – which relies on the activation of information stored in memory (Zajonc, 1968; Reber et al. 1998) – and the consistency between the stimulus and its context (Whittlesea, 1993), whereas visual priming, presentation time and figure-ground contrast are examples of variables that influence the perceptual fluency (Reber et al., 1998).

Although it is important to acknowledge this dichotomy – as to get an impression of the scope of this construct – Winkielman et al. (2003) demonstrated that conceptual fluency (e.g. categorization) and perceptual fluency (e.g. recognition, identification) have similar effects on evaluative judgments and result in a similar signal of fluency. Both concepts will therefore be subsumed under the general term *processing fluency*, which is in line with previous research (e.g. Schwarz, 2004; Winkielman et al. 2003).

2.2 The effects of processing fluency

The use of heuristics is often affective in nature. According to Winkielman et al. (2003), processing fluency and the resulting fluency experiences are such cues that are hedonically marked, meaning that "a high fluency is indicative of positive states of the environment or the cognitive system and elicits positive affect" (p. 7). Consumers subsequently (mis)attribute these positive feelings to the product and, as a result, like it and evaluate it more favorable (Shen, Jiang & Adaval, 2009). The fact that those fluency experiences are hedonically marked is explained by several factors, of which two explanations are of special importance in the context of this study: *familiarity* and *prototypicality*. According to Song & Schwarz (2009), consumers (erroneously) infer perceptions of familiarity from a high degree of processing fluency, as they believe familiar information is more easily processed than unfamiliar information. Hence, fluency serves as a cue that a certain stimulus has been encountered before, or is in some way familiar, even when the consumer has actually never encountered the stimulus before. As consumers have a natural "fear of the unknown," they usually experience these familiarity perceptions as positive (Monin, 2003), which leads to improved product evaluations. Besides

that, a higher degree of processing fluency also cues prototypicality (i.e. averageness) and again, consumers have a built-in preference for products that are perceived as common and as prototypical in their product categories (Thornhill & Gangstead, 1993). As a result, perceptions of prototypicality serve as (affective) cues, which consumers use as a signal for evaluations as well (Martindale & Moore, 1988; Winkielman et al., 2003). Supported by these explanations, numerous studies have therefore shown that processing fluency positively influences product evaluations (e.g. Reber et al., 1998; Lee & Labroo, 2004, Shen et al., 2009).

Hence, when the degree of processing fluency is high, perceptions of familiarity and prototypicality are evoked, which consumers use as heuristic cues for their evaluations. Most of the time, these perceptions result in product liking and therefore enhance consumers' product evaluations. On the other hand, Pocheptsova et al. (2010) have indicated that processing *dis*fluency "signals that the product is unfamiliar and uncommon" (p. 1059). For this reason, processing disfluency is believed to be detrimental for product evaluations, as these perceptions are often experienced as more negative – finding support in the previously described constructs of familiarity and prototypicality. However, as the next section will clarify, products that are perceived as unfamiliar, or as less popular and common among the general population, are not necessarily devalued by *every* consumer; some consumers are on the lookout for products that possess those characteristics and might even evaluate them more favorable.

2.3 Consumers' need for uniqueness (CNFU) and its moderating influences

Snyder & Fromkin's (1977) theory of uniqueness states that individuals have a general need to feel and see oneself as different from others. Ruvio (2008) adds to this notion that "all individuals crave uniqueness to some extent. At one NFU extreme, some people desire to be just like everybody else. At the other extreme, people want to be as different and distinct as possible" (p. 445). When consumers feel either slightly similar or highly similar to others, they will strive to regain a certain level of similarity that protects their social identity and enhances their self-perception of uniqueness (Fromkin & Snyder, 1980). Previous research depict the need for uniqueness as a personality characteristic or trait, indicating that consumers differ in their motivation to seek social differentness relative to others (e.g. Snyder & Fromkin, 1977; Fromkin & Snyder, 1980). Therefore, the desired level of similarity consumers try to establish, is subjective and differs for each consumer; consumers differ in their need for uniqueness.

One way to express one's uniqueness is through the acquisition of consumer goods and the visual display of those possessions, as they are often perceived as part of the "extended self" (Belk, 1988; Ruvio, 2008). Derived from the general trait of need for social differentness, Tian

et al. (2001) therefore introduced the concept of "consumers' need for uniqueness" (CNFU), which captures the counterconformity trait of being different in a consumer context. They define CNFU as "the trait of pursuing differentness relative to others through the acquisition, utilizations, and disposition of consumer goods for the purpose of developing and enhancing one's self-image and social image" (p. 52). Regaining or establishing a certain level of similarity can therefore be achieved by either buying, using or disposing of certain products.

Based on previous research, CNFU is said to consist of three dimensions that capture how people fulfill their need for uniqueness: (1) creative choice counterconformity, (2) unpopular choice counterconformity and (3) avoidance of similarity (Tian et al., 2001). The first dimension reflects the fact that consumers try to create a personal style via material goods, in order to establish a distinctive image that expresses their individuality and personal uniqueness (Kron, 1983; Tian et al., 2001). The second dimension holds that consumers make choices that challenge existing consumer norms and thus risk social disapproval. However, consumers with a high need for uniqueness withstand this risk in order to establish their differentness (Ziller, 1964; Tian et al., 2001). Finally, the third dimension refers to the devaluation and avoidance of products or brands that are perceived as being or becoming popular among the general public, in order to move away from the norm and reestablish one's differentness (Tian et al., 2001).

As noted before, processing fluency evokes perceptions of familiarity and prototypicality. Therefore, it is believed that a high degree of processing fluency is always beneficial for product evaluations, as those perceptions usually result in positive affect. However, based on the three dimensions of CNFU, it seems that consumers with a high need for uniqueness do not always value products that evoke those perceptions, but rather prefer products that are perceived as *un*familiar or *un*common and as one-of-a-kind, which is induced by processing *dis*fluency. This seems rather intuitive as products that possess those characteristics do a better job in enabling consumers to establish a distinctive image that expresses their individuality. Those products have a higher chance of deviating from group norms and breaking rules or customs as well; after all, uncommon and rare products risk more social disapproval. Also, products that are perceived as common and more widely available, have a higher chance of being or becoming popular among the general population. As consumers with a high need for uniqueness will seek to avoid popular products in order to maintain their differentness, this indicates that a higher processing fluency might decrease product evaluations as well for consumers with a high need for uniqueness.

2.4 Summary and hypotheses

Based on the reviewed literature, it becomes clear that consumers with a higher need for uniqueness might differ in their evaluations of a product or brand compared to consumers with a lower need for uniqueness, as they value different aspects or characteristics of a product. As a high degree of processing fluency evokes perceptions of familiarity and prototypically, marketers usually make their communications easier to process in order to improve consumers' product evaluations. However, it seems that those perceptions of familiarity, commonness and popularity are exactly what consumers with a higher need for uniqueness devalue, suggesting that a lower degree of processing fluency might be more beneficial for those type of consumers. Especially when linking it to the fact that consumers with a high need for uniqueness are on the lookout for products that are unusual and not commonplace or popular among the general population. As a lower degree of processing fluency elicits opposing perceptions and associations compared to a higher degree of this fluency (e.g. unfamiliar, not common, not widely available), a lower degree of processing fluency might enhance product evaluations for consumers with a high need for uniqueness.

In sum, the perceptions elicited by processing *dis*fluency are valued by consumers with a high need for uniqueness, but are devalued by consumers with a low need for uniqueness. The opposite is true for the perceptions and associations elicited by processing fluency, which consumers with a high need for uniqueness devalue, but consumers with a low need for uniqueness seem to appreciate. Therefore, this study hypothesizes the following:

H1. *When consumers have a low need for uniqueness, they evaluate a product more favorable when shown a marketing communication with a higher degree of processing fluency rather than a lower degree.*

H2. *When consumers have a high need for uniqueness, they evaluate a product more favorable when shown a marketing communication with a lower degree of processing fluency rather than a higher degree.*

Chapter 3: Design and Procedure of the Study

This chapter will set up an experiment to test the hypotheses as developed in Chapter 2. It will begin with the design of the study, after which a product category will be selected that fits the context of the study. The development of the stimulus material will then be covered, followed by the procedure that will discuss each independent variable. A pretest will be conducted as well to judge the manipulation of processing fluency. Finally, the last section will address the dependent variable of this study.

3.1 Design and data collection

This study will employ a 2 (processing fluency: low versus high degree) x 2 (need for uniqueness: low versus high) between-subjects design to test the hypotheses as developed in Chapter 2. Participants will be asked to fill in an online questionnaire in which they are randomly allocated to one of the conditions; they will be shown an advertisement with either a low or high degree of processing fluency, after which the (in)dependent variables are quantified. To gather participants, the online questionnaire will be distributed across various groups on social media (i.e. Facebook, Instagram). Participants will also be approached directly via the messaging app 'Whatsapp'. More information about the participants in the sample will be given in Chapter 4, after the data has been collected and organized.

3.2 Stimulus material and product choice

As mentioned before, this study will test the hypotheses by means of an advertisement in which the degree of processing fluency is manipulated. As addressed in Chapter 2, consumers are more likely to employ a heuristic processing strategy when making decisions that require low cognitive effort. Also, when personal involvement with the product is low, consumers are more likely to employ such a strategy (Chaiken, 1980). Bearing this in mind, consumers will use their perceptions of familiarity and prototypicality as affective cues for product liking in product categories that come with a low cognitive load or when they are not too much involved with the products in that specific category. Hence, and following the study of Pocheptsova et al. (2010), it is therefore decided to use the product category of cheese in this study as well.

Consumers pursue their need for uniqueness relative to others; social differentness and social disapproval can only be achieved if consumers can compare their consumption behavior with others (e.g. Snyder & Fromkin, 1977; Tian et al., 2001). It is therefore decided to use a brand that sells pre-cut cheese cubes with different flavors. These types of cheese are often

served and consumed in public (e.g. at (in)formal drinks and parties) and are therefore judged as more suitable for pursuing social differentness than other types of cheese are.

To reduce the impact of existing associations, or previous experiences participants might have with certain cheese brands, a hypothetical advertisement will be used in combination with a brand that is unknown in the Netherlands. Accordingly, this study will use the logo of "Pembrokeshire," which is a local cheese brand from Wales that is not active on the Dutch market. The final versions of the advertisement can be found in Appendix A.

3.3 Independent variable 1: Processing fluency

Processing fluency will be a manipulated independent variable. In line with previous research, it will be manipulated by using a different font style (e.g. Novemsky et al., 2007; Alter, Oppenheimer, Epley & Eyre, 2007; Pocheptsova et al., 2010). Two versions of a hypothetical advertisement are created that only differ in the font style that is used. One version will use an embossed, difficult-to-read font (representing a low degree of processing fluency), whereas the other version will use a regular, easy-to read font (representing a high degree of processing fluency) (see Appendix A).

3.3.1 Pretest

Both versions of the advertisement will be subjected to a pretest in order to verify if the manipulation of processing fluency was successful (see Appendix B for the questionnaire). Participants will be randomly allocated to either one version of the advertisement. In line with the study of Pocheptsova et al. (2010), the participants will then rate the advertisement on ease of reading (ranging from 1 = 'difficult to read' to 5 = 'easy to read') and the speed of reading (ranging from 1 = 'slowly' to 5 = 'quickly'). The answers in both conditions will be compared to see if the subjective experience of processing the advertisement differs between the two manipulation groups. After rating the advertisement, the participants will be asked to report how many words from the advertisement they did not understand. This question will be asked to judge whether participants that were shown the advertisement with the difficult-to-read font, were less likely to comprehend it, compared to the participants that were shown the advertisement with the easy-to read font. For the pretest to be successful, there would be a significant difference between both the ease and speed of reading, but no significant difference between the number of words consumers did not understand. In this case, the subjective experience of processing the advertisement differs for both versions, but the consumers are equally likely to comprehend both versions of the advertisement.

3.3.2 Results pretest

In total, 72 respondents participated in the pretest (n = 72) and were randomly allocated to either one of the two conditions. Two independent-samples t-tests were conducted to compare the subjective ease of reading the advertisement as well as the speed with which the participants could read the advertisement, in both the high and low fluency condition. For ease of reading, the results indicate that there was a significant difference between the scores for both fluency conditions (M_{low} = 3.03, M_{high} = 4.36; t(70) = 5.32, p < .001). Also for the speed of reading, the scores in the low fluency condition were significantly different from the scores in the high fluency condition (M_{low} = 2.92, M_{high} = 4.11; t(70) = 5.06, p < .001). The results of both tests suggest that reading the advertisement with the low fluency manipulation was (subjectively) more difficult than reading the advertisement with the high fluency manipulation.

As noted before, participants were also asked to report how many words from the advertisement they did not understand, as to judge whether the participants in the low fluency condition were less likely to comprehend the advertisement due to the difficult-to-read font. In the low fluency condition, four participants reported a number other than zero (being either 1, 2 or 3), whereas five participants in the high fluency condition reported there was only one word they did not understand (of which one indicated it was the brand name). A third independent-samples t-test was conducted, of which the results indicated that the number of words that participants in the low fluency condition did not understand, was not significantly different from the number of words participants in the high fluency condition did not understand (M_{low} = 0.19, M_{high} = 0.14; t(70) = -.466, p = .643). Hence, although participants indicated it was more difficult to read the advertisement with a low degree of processing fluency, objectively they understood the advertisements equally well, as the number of words the participants did not understand was not significantly different between both manipulation groups (see Appendix B for an overview of the results). The manipulation of processing fluency, in terms of a different font style, is therefore successful and both versions of the advertisement can be used in the remainder of this study.

3.4 Independent variable 2: CNFU

Consumers' need for uniqueness will be a measured independent variable. The original measurement scale of CNFU (Tian et al., 2001) consists of as many as 31 items. As there is a severe risk of respondents' fatigue when using that much items, the original measurement scale is judged as less suitable for this study. To reduce the length of the questionnaire as well as the phenomenon of respondents' fatigue, Ruvio, Shoham & Makovec Brenčič (2008) developed a

shortened measurement scale, that adhered to the three-dimensional conceptualization. They were able to reduce the original scale to 12 items; 4 items for each dimension. This reduced scale exhibited the same nomological validity as the original scale and a comparison of the two models' goodness-of-fit measures indicated very minor differences (Ruvio et al., 2008). Hence, this study will measure CNFU by using this shortened measurement scale. The 12 items that make up the measurement scale will be measured on a five-point scale (ranging from 1 = 'strongly disagree to 5 = 'strongly agree') (see Appendix C).

CNFU will be measured after the participants have evaluated the product and advertisement (see section 3.5), as to not confound the effects on the dependent variable by means of a response bias that otherwise may occur. In line with Tian et al. (2001), the scores of the 12 items will be summed to create a composite variable that quantifies consumers' *overall* need for uniqueness (ranging from 12 to 60). Tian et al. (2001) deemed this conceptually appropriate as "it is the higher-level construct of consumers' need for uniqueness, rather than its constitutive dimensions, that is of interest in tests of uniqueness theory and marketing and consumer behavior theories, rendering it more important than the lower-level information obtained" (p. 54). After the composite variable has been created, a median split will divide the sample and assign each participant to either the low or high CNFU group. The median split will be conducted to adhere to the 2 (processing fluency: low versus high degree) x 2 (need for uniqueness: low versus high) between-subjects design of this study. Later on, a multiple linear regression will also be performed that treats the summed CNFU score as a continuous variable. In order to do so, the composite score will first be centered around the mean and an interaction variable between this centered CNFU score and processing fluency will be created. This multiple regression will be performed, as the aggregation procedure in the ANCOVAs causes an unnecessary loss of information and only compares the estimated means of the evaluations in both CNFU groups, rather than each evaluation individually.

3.5 Dependent variables

3.5.1 Product evaluation

After the participants have seen either one version of the advertisement, they will be asked to rate the likelihood of buying the product from the advertisement (ranging from 1 = 'very unlikely' to 7 = 'very likely') as well as their degree of agreement with the phrase "I like this product" (ranging from 1 = 'strongly disagree to 7 = 'strongly agree'). The scores of both items will then be averaged to assess consumers' overall product evaluation, which is, again, adapted from the study of Pocheptsova et al. (2010).

3.5.2 Ad evaluation

Although not initially intended, a second dependent variable will be added to the study: the advertisement itself will also be evaluated, as the CNFU group to which the participants belong might moderate the effect that processing fluency has on the evaluation of the ad itself as well, rather than on the evaluation of the product that is advertised only. The evaluation of the advertisement will be quantified using the scale initiated by Homer (1995) and Stafford (1998). This scale measures participants' attitude toward the advertisement by quantifying participants' agreement with seven phrases about the advertisement (e.g. 'The ad was clear' and 'The ad was believable') on a seven-point scale (ranging from 1 = 'strongly disagree' to 7 = 'strongly agree'). As this scale emphasizes the beliefs one holds about particular attributes the advertisement may or may not have, an eighth item will be added that contains a more general evaluation of the advertisement (i.e. 'I liked the ad').

In advance, it seems to be the case that this measurement scale consists of two latent dimensions. One dimension focuses on the subjective experience of processing the advertisement and is expected to contain items that tend to be more cognitive in nature; they are associated with the processing fluency in the advertisement (e.g. 'The ad was easy-to-follow' and 'The ad was clear'). For convenience, this dimension is labeled as the 'fluency dimension' in the remainder of this study. The other dimension focuses on the liking of the advertisement; it is more affective in nature and contains items that reflect the judgement of the content (e.g. 'The ad was interesting and 'I liked the ad'). This second dimension is labeled as the 'liking dimension.' A factor analyses will be conducted to judge whether the data indeed acknowledge these two latent dimensions. The items that load on the 'fluency' dimension will then be used in an additional manipulation check for processing fluency and the items that load on the 'liking' dimension will be averaged and used as the dependent variable.

3.6 Control variable

At the end of the questionnaire, the participants will be asked several closing questions. One question being whether the participant consumes cheese or not. If not, their product evaluation as well as their evaluation of the ad might be biased by their personal preference, rather than the degree of processing fluency. Hence, this question is intended to control for a confounding variables: the participant being either a cheese consumer or not. Adding this variable as a covariate enables to conduct an ANCOVA; one for each dependent variable which control for the effects of this variable. Finally, an open question will leave room for any remarks the participant might have (see Appendix D for the full questionnaire).

Chapter 4: Study Results

This chapter will cover the results of the experiment. The raw dataset will first be prepared and organized to create a useful dataset. Several data points will either be summed or averaged to create the variables needed for the analyses. After that, the assumptions for a two-way ANCOVA will be checked, followed by a manipulation check for the manipulation of processing fluency. The results of the two-way ANCOVA will then be presented, separately for each dependent variable. As there is an unnecessary loss of information when using a two-way ANCOVA – due to the aggregation procedure – the same dataset will also be used in a multiple regression. Again, the assumptions for such a regression will first be checked, after which the results for both regressions will be presented.

4.1 Data preparation

Initially, 169 respondents participated in the study. However, 59 participants did not complete the full questionnaire, which resulted in 110 useful responses. Of those 110 responses, 57 participants were shown the advertisement with the difficult-to-read font and 53 participants were shown the advertisement with the easy-to-read font. To get an equal sample size in both manipulation groups, four more participants were approached to participate and were assigned to the advertisement with the easy-to-read font. Eventually, this lead to a sample size of 114 participants (n = 114), who were evenly distributed among both manipulation groups. Out of the 114 participants, 16 indicated they do not consume cheese – eight participants in the high fluency group and eight participants in the low fluency group. As noted before, their responses might have been biased by the fact they do not consume cheese. Therefore, the analyses will control for this confounding variable by adding it to the analyses as a covariate.

The items measuring CNFU were used in a factor analysis, demonstrating the same three-dimensional conceptualization as previous research. However, the 12 items were summed to create a composite variable that quantified consumers' *overall* need for uniqueness (see section 3.4). After that, a median split (M = 30.50) was performed to assign each participant to either the high or low CNFU group. As explained in section 3.4, in addition to the ANCOVAs that will be conducted, this study will also perform two multiple regressions; one for each dependent variable. In order to conduct these regressions, two additional variables were created: the summed CNFU scores centered around the mean and an interaction variable between this centered CNFU scores and the degree of processing fluency.

The two items measuring participants' product evaluation were reasonably correlated (α = .885) and averaged to form a product evaluation index. The eight items measuring ad evaluation were used in a factor analysis. As expected, this analysis resulted in two dimensions. The items 'The ad was easy-to-follow' and 'The ad was clear' loaded on the 'fluency' dimension and were averaged to create a new variable 'Manipulation_check'(see section 4.3). The items 'The ad was interesting,' 'The ad was well-designed,' 'The ad was attention-getting' and 'I liked the ad' had factor loadings greater than .4 on the 'liking' dimension. Those four items were averaged as well to create the dependent variable 'Ad_evaluation.' The item 'The ad was believable' had factor loadings greater than .4 on both dimensions and is therefore not used in the manipulation check nor is it used in the quantification of the dependent variable. The same holds for the item 'The ad was informative,' which did not have a factor loading greater than .4 on either one of the two dimensions.

4.2 Assumptions two-way ANCOVA

Before running the two-way ANCOVA, several assumptions need to be checked first in order to produce valid results. Ad and product evaluation are both measured at the continuous level. Also, both processing fluency and CNFU group consist of two categorical, independent groups (i.e. 0 = low, 1 = high). Besides, the between-subjects design of this study satisfied the third assumption: independence of the observations. For both dependent continuous variables there are no significant outliers. The observations for both the evaluation of the ad and the product do not follow a normal distribution. However, the statistical analyses used in this study are considered robust tests against this normality assumption, as the sample is sufficiently large as well (n > 30). Finally, Levene's test for homogeneity of variances satisfied the assumption of homoscedasticity for each combination of the groups of the two independent variables (see Appendix E for the results).

4.3 Manipulation check ad evaluation

In addition to the pretest, a manipulation check was performed to determine whether there was a significant difference between the design and intelligibility of both versions of the advertisement, irrespective of the CNFU group to which the respondents belonged (i.e. the high or low group). As noted before, the two items that loaded on the 'fluency' dimension of the evaluation of the ad were averaged and will be used in a 2 (processing fluency: low versus high degree) x 2 (need for uniqueness: low versus high) ANCOVA. The variable that quantifies whether the consumer is a cheese consumer or not, is again added as a covariate to the analysis.

The results of the two-way ANCOVA did not demonstrate a statistically significant interaction effect between the degree of processing fluency and CNFU group, $F(1,109) = .148$, $p = 0.701$, which enables to interpret the main effects. The main effect for the CNFU group was not significant either, $F(1,109) = .032$, $p = .857$. However, the main effect for the degree of processing fluency yielded an F-statistic of $F(1,109) = 22.874$, $p < .001$, indicating a significant difference between the easy-to read version and the difficult-to-read version of the advertisement ($M = 5.61$ versus $M = 4.53$). In addition to that, simple main effects analysis showed that the significant difference between the two versions in terms of processing fluency holds for the participants in the low CNFU group, $F(1,109) = 13.338$, $p < .001$, as well as for the participants in the high CNFU group, $F(1,109) = 9.669$, $p = 0.002$.

Hence, regardless of the CNFU group to which the participants belong, participants evaluated the easy-to-read version as clearer and more easier-to follow than the difficult-to read version. Again, this indicates that the manipulation of processing fluency in terms of font style was successful (see Appendix F for the results).

4.4 Results two-way ANCOVA

4.4.1 Product evaluation

A two-way ANCOVA was conducted that examined the effect of processing fluency and the CNFU group to which the participant belonged on participants' product evaluation. The variable that quantified the participant as being a cheese consumer or not was again added as a covariate. The results showed a statistically significant interaction between the effects of processing fluency and CNFU group on this product evaluation, $F(1,109) = 3.997$, $p = .048$. Simple main effects analysis showed that participants belonging to the low CNFU group evaluated the product that was advertised in the high fluency version of the advertisement more favorable than the product that was advertised in the low fluency version ($M_{high} = 4.35$ versus $M_{low} = 3.23$; $F(1,109) = 7.765$, $p = .006$), finding support for H1. However, participants belonging to the high CNFU group did not evaluate the product in the low fluency version more or less favorable than the product in the high fluency version ($M_{low} = 3.98$ versus $M_{high} = 3.94$; $F(1,109) = 0.002$, $p = .967$), providing no support for H2 (see Table 1 and Figure 2).

Interestingly – though at a significance level of .067 – when shown the low fluency version of the ad, participants belonging to the high CNFU group evaluated the product more favorable than participants belonging to the low CNFU group, $F(1,109) = 3.424$, $p = .067$. When looking at the results in the high fluency group, this difference in product evaluation between both CNFU groups disappears, $F(1,109) = 1.028$, $p = .313$ (see Appendix G for the results).

Table 1

Descriptive Statistics

Dependent Variable: Product_evaluation

Processing_fluency	CNFU_group	Mean	Std. Deviation	N
Low fluency	Low CNFU	3,2308	1,56353	26
	High CNFU	3,9839	1,59418	31
	Total	3,6404	1,61122	57
High fluency	Low CNFU	4,3548	1,46739	31
	High CNFU	3,9423	1,49216	26
	Total	4,1667	1,48003	57

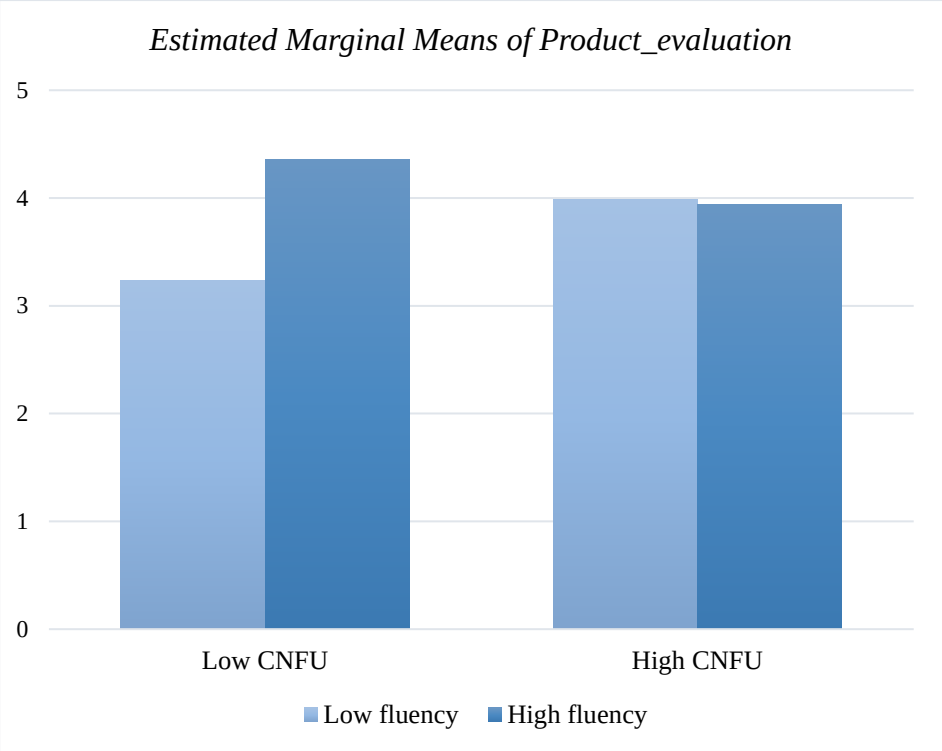


Figure 2. Bar charts of the effects of Processing_fluency

4.4.2 Ad evaluation

A second two-way ANCOVA was conducted that examined the effect of processing fluency and the CNFU group to which the participant belonged on participants' ad evaluation. Again, the variable that quantified whether the participant is a cheese consumer or not was added as a covariate. Although there might not be a strong moderating effect of CNFU on the relationship between processing fluency and participants' *product* evaluation, consumers' need

for uniqueness might still moderate the effect that processing fluency has on the evaluation of the *ad* itself, rather than on the evaluation of the product that is advertised. However, the results of the second two-way ANCOVA show no significant interaction between the effects of processing fluency and CNFU group on ad evaluation, $F(1,109) = .774$, $p = .381$.

The main effect for the CNFU group was not significant either, $F(1,109) = .989$, $p = .322$. However, the main effect for the degree of processing fluency *was* significant, $F(1,109) = 19.853$, $p < .001$, indicating a significant difference between the easy-to read version ($M = 4.20$, $SD = 1.33$) and the difficult-to-read version ($M = 3.15$, $SD = 1.26$), irrespective of the CNFU group to which the participants belonged. Hence, not only participants in the low CNFU group evaluated the ad with a high fluency more favorable than the ad with a low fluency ($M = 4.20$ versus $M = 2.95$; $F(1,109) = 14.224$, $p < .001$), also participants belonging to the high CNFU group evaluated the ad with a high fluency more favorable than the ad with a low fluency ($M = 4.19$ versus $M = 3.32$; $F(1,109) = 6.389$, $p = .013$) (see Appendix H for the results).

4.5 Results multiple linear regression

4.5.1 Assumptions multiple linear regression

As noted before, the data will also be used in a multiple regression, as the ANCOVAs only compare the means of the evaluations in both CNFU groups at an aggregate level, but do not look at the individual level. Before running these multiple linear regressions, again several assumptions need to be checked first in order to create valid results. As noted before, ad and product evaluation are both measured at the continuous level, both processing fluency and CNFU group consist of two categorical, independent groups, and for the dependent variables there are no significant outliers. When looking at the normal P-P plots, the residuals for both dependent variables are approximately normally distributed. Also, when plotting the actual residuals against the predicted residuals, there seems to be homoscedasticity for both independent variables. Because the summed scores of CNFU are centered around the mean, there is no multicollinearity between the predictor variables, which is also indicated by the VIF values. As the residuals for both dependent variables are approximately normally distributed and homoscedastic, the linearity assumption is less relevant (see Appendix I for the results).

4.5.2 Product evaluation

A second multiple regression was run to predict participants' product evaluation based on the degree of processing fluency, participants' centered CNFU scores, the interaction term between those two variables and the participant being a cheese consumer or not. These four

variables statistically significantly predicted product evaluation, $F(4,109) = 4.690$, $p = .002$, $R^2 = .147$. However, only the variable that indicated whether the participant is a cheese consumer or not was statistically significant, $p < .001$. The degree of processing fluency was only significant at a significance level of .056. As the interaction term was not statistically significant ($p = .128$), there is no support found for the proposition that the higher consumers' need for uniqueness gets, the more (versus less) favorable product evaluations become in low (versus high) fluency situations (see Table 2 and Appendix J for the results).

Table 2

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3,808	,204		18,642	,000
	Processing_fluency	,533	,277	,171	1,928	,056
	CNFU_centered	,026	,021	,161	1,210	,229
	Processing_fluency* CNFU_centered	-,044	,029	-,202	-1,533	,128
	Cheese_consumer	-1,360	,400	-,304	-3,401	,001

a. Dependent Variable: Product_evaluation

4.5.3 Ad evaluation

A second multiple regression was run to predict participants' evaluation of the advertisement based on the same four predictor variables as in the previous regression. The four variables statistically significantly predicted ad evaluation, $F(4,109) = 7.216$, $p < .001$, $R^2 = .209$, but only the degree of processing fluency and the participant being a cheese consumer or not were significant predictors in this model ($p < .001$ and $p = .022$ respectively). Hence, although the degree of processing fluency is irrelevant for participants' product evaluation (i.e. it is not a significant predictor), the evaluation of the ad increases ($\beta = 1.081$) when moving from the low to high fluency version of the advertisement. The interaction variable is not significant, again providing no support for the proposition that the higher consumers' need for uniqueness gets, the more (versus less) favorable the evaluation of the advertisement becomes in low (versus high) fluency situations (see Appendix K for the results).

Chapter 5: Conclusions, Discussion, Limitations, Future Research and Recommendations

This final chapter will begin with a summary of the study results as reported in Chapter 4. A discussion of these results will then follow, in which the results are reflected upon, accompanied by the limitations of the study and future research suggestions. Finally, after interpreting the study results, managerial and academic recommendations will be given.

5.1 Conclusions

According to the results of the ANCOVAs, participants belonging to the low CNFU group evaluated both the *ad* and the advertised *product* more favorable when shown the high fluency version of the ad. Hence, consistent with the literature, H1 is supported by the results and a lower degree of processing fluency is rather detrimental for both the ad *and* the product evaluation for consumers with a low need for uniqueness. Also participants belonging to the high CNFU group evaluated the high fluency version of the ad more favorable than the low fluency ad. However, the *products* that were advertised, were evaluated equally favorable in both fluency situations by the participants belonging to the high CNFU group. Therefore, no support was found for the hypothesis that consumers with a high need for uniqueness evaluate a product in a low fluency situation more favorable than in a high fluency situation (H2). Hence, inconsistent with the literature but an interesting contribution, the results of this study indicate that a lower degree of processing fluency is not always detrimental for product evaluations – although it is for the evaluation of the ad – nor is it superior over a higher degree of fluency.

However, the results of the multiple regressions are less conclusive. The multiple regression on product evaluation provides only weak support for the degree of processing fluency being a significant predictor ($p = 0.056$), which is in line with the results of this variable in the ANCOVA. Compared to the regression on ad evaluation, the degree of processing fluency *was* a significant predictor ($p < .001$). However, participants' CNFU score and the interaction between the degree of processing fluency and this CNFU score were *not* significant in both the regression on product and ad evaluation. Therefore, any change in one of those two variables does not lead to a more or less favorable evaluation. Hence, the results of the multiple regression overrule the significant differences found in the ANCOVAs and a higher need for uniqueness does not lead to different evaluations compared to a lower need for uniqueness. Also combined with processing fluency, a higher CNFU does not lead to more favorable evaluations in low fluency situations, nor does it lead to less favorable evaluations in high fluency situations.

In the end – while one of the hypotheses might not have been supported by the results and the multiple regressions did not find an overall moderating effect of CNFU – a lower degree of fluency turned out to be less detrimental for product evaluations than was previously believed (i.e. participants with a high need for uniqueness induced equally favorable product evaluations in both fluency conditions). Therefore, the proposition 'a lower degree of processing fluency leads to less favorable evaluations' found in previous research, might have been a hasty generalization; it does not hold for all type of consumers. Hence, to address the question in the title of this study: less may not be more, but it is certainly not less than more for those who crave uniqueness.

5.2 Discussion, limitations and future research

Although the degree of processing fluency influences the evaluation of the ad, it does not seem to influence the evaluation of the product in general, when looking at the results of the multiple regressions. However, this is most likely caused by the large difference between the participants in terms of their CNFU; while the effect of processing fluency for participants belonging to the low CNFU group was highly significant ($p = 0.006$), the effect of processing fluency for participants belonging to the low CNFU group was highly *in*significant ($p = 0.967$), resulting in a general main effect that was slightly insignificant ($p = 0.055$). Therefore, the results of the multiple regression that suggest the product evaluation is not influenced by the degree of processing fluency should be interpreted with care, as it varies across consumers that differ in their need for uniqueness. Also, the effect of processing fluency on the evaluation of the product has been recognized in previous literature, as became clear in Chapter 1 and 2.

The fact that H2 is not supported by the results, might be explained by the fact that participants' CNFU scores did not – although approximately – follow a normal distribution. This resulted in a median of 30.50 and a mean score of 31.27. As the study used a median split to assign each participant to either the low or high CNFU group, several participants with a CNFU score below the mean were assigned to the high CNFU group. Besides, there was a high concentration of participants' CNFU scores just below the median in the low CNFU group, while in the high CNFU group, there was a bigger spreading among the scores of the participants. For those reasons, the composition of the two CNFU groups in this study might not have been a good reflection of real high versus low CNFU groups, which could explain the insignificant effect found in the high CNFU group. Future research is therefore encouraged to look at more extreme levels; consumers with a lower than average CNFU score versus consumers with a higher than average CNFU score. In addition to that, future research might

search for a turning point (if any) at which a lower degree of processing fluency results in more favorable evaluations, as the results in the high CNFU group look promising.

Although there are several ways for a company to communicate with its consumers, the study used an advertisement to test the hypotheses. An advertisement can be distributed across various media (e.g. newspapers, door-to-door publications, magazines, online banners), which makes the implications of this study applicable across multiple contexts and enlarges the extent to which the results of this study can be generalized to other situations. The successful pretest and manipulation check also increase the internal validity of the study, as they reduce any form of randomization that might threaten this validity. Also, because the study used a hypothetical advertisement with a brand that is unknown in the Netherlands, this ruled out the possibility of confounding variables, enlarging the study's internal validity as well. However, both versions of the advertisement were designed with simple photo editing software. Therefore, future research might use more sophisticated advertisements that better reflect real life practices, to rule out the possibility of other confounding variables or prejudices that might come with the use of 'unrealistic' stimulus materials.

A final limitation of this study that might reduce the validity of this study, is that the questionnaire was completely in English, while it was distributed among mainly Dutch native speakers. Especially the items that measured CNFU may have been hard to understand for those who did not master the English language that well, as some of those items used fairly difficult words and sentence structures . Also, several participants indicated they experienced difficulties with this part and most of the participants that dropped out, left at this point. Therefore, the possible misunderstanding that might have occurred, could have led to faulty responses or an inability of the respondent to answer truthfully, which might threaten the internal validity of the study. Future research could therefore use a translated version of the scales to overcome this problem or approach native speakers of the English language to participate in their studies.

Finally, this study manipulated processing fluency in terms of a different font style, which is a manipulation of the perceptual fluency. Although manipulations of perceptual and conceptual fluency result in a similar signal of fluency and have similar effects on evaluative judgments (see section 2.1), there might be a possibility that consumers' need for uniqueness has a stronger moderating effect on the conceptual fluency, as consumers with a higher need for uniqueness might process the meaning of a stimulus differently or have different semantic knowledge structures to which they link the stimulus. Future research is therefore encouraged to repeat this study with a manipulation of conceptual fluency, to see whether there might be a difference for the moderating effects of CNFU.

5.3 Recommendations

If the degree of processing fluency is beyond the influence of marketers and turns out to be low, marketers are encouraged to target consumers with a higher need for uniqueness. In this situation, the product evaluations do not suffer; they are equally favorable compared to the evaluations induced by a higher degree of processing fluency, while they are less favorable for consumers with a lower need for uniqueness. However, most of the times, marketers are able to exert some influence over the degree of processing fluency in their marketing communications. In this case, marketers are recommended to choose a higher level of processing fluency, as this leads to more favorable evaluations than a lower degree of processing fluency in certain situations. In other situations, it leads to similar evaluations compared to a lower degree of fluency. However, what is certainly true, is that a higher degree of processing fluency is never detrimental for ad and product evaluations and that a lower degree of fluency does not lead to more favorable evaluations.

Future research is recommended to consider consumers' need for uniqueness as a variable that influences the way consumers evaluate products. On its own, CNFU does not influence evaluations, but when combined with different degrees of processing fluency – and possibly other variables that influence evaluations – other effects start to occur.

References

Aaker, D. A. (1996). Measuring brand equity across products and markets. *California management review*, *38*(3), 102.

Alter, A. L., Oppenheimer, D. M., Epley, N., & Eyre, R. N. (2007). Overcoming intuition: metacognitive difficulty activates analytic reasoning. *Journal of Experimental Psychology: General*, *136*(4), 569.

Belk, R. W. (1988). Possessions and the extended self. *Journal of consumer research*, *15*(2), 139-168.

Chaiken, S. (1980). Heuristic versus systematic information processing and the use of source versus message cues in persuasion. *Journal of personality and social psychology*, *39*(5), 752.

Cho, H., & Schwarz, N. (2006). If I don't understand it, it must be new: processing fluency and perceived product innovativeness. *ACR North American Advances*.

Dodds, W. B., Monroe, K. B., & Grewal, D. (1991). Effects of price, brand, and store information on buyers' product evaluations. *Journal of marketing research*, 307-319.

Dragojevic, M., & Giles, H. (2016). I don't like you because you're hard to understand: The role of processing fluency in the language attitudes process. *Human Communication Research*, *42*(3), 396-420.

Elliott, G. R., & Cameron, R. C. (1994). Consumer perception of product quality and the country-of-origin effect. *Journal of international Marketing*, 49-62.

Fromkin, H. L., & Snyder, C. R. (1980). The search for uniqueness and valuation of scarcity. In *Social exchange* (pp. 57-75). Springer, Boston, MA.

Herrmann, A., Zidansek, M., Sprott, D. E., & Spangenberg, E. R. (2013). The power of simplicity: Processing fluency and the effects of olfactory cues on retail sales. *Journal of Retailing*, *89*(1), 30-43.

Homer, P. M. (1995). Ad size as an indicator of perceived advertising costs and effort: The effects on memory and perceptions. *Journal of Advertising*, *24*(4), 1-12.

Hoyer, W. D. (1984). An examination of consumer decision making for a common repeat purchase product. *Journal of consumer research*, *11*(3), 822-829.

Janiszewski, C., & Meyvis, T. (2001). Effects of brand logo complexity, repetition, and spacing on processing fluency and judgment. *Journal of consumer research*, *28*(1), 18-32.

Kron, J. (1983). *Home-psych: The social psychology of home and decoration*. Clarkson Potter.

Lee, A. Y. (2002). Effects of implicit memory on memory-based versus stimulus-based brand choice. *Journal of Marketing Research*, *39*(4), 440-454.

Lee, A. Y., & Aaker, J. L. (2004). Bringing the frame into focus: the influence of regulatory fit on processing fluency and persuasion. *Journal of personality and social psychology*, *86*(2), 205.

Lee, A. Y., & Labroo, A. A. (2004). The effect of conceptual and perceptual fluency on brand evaluation. *Journal of Marketing Research*, *41*(2), 151-165.

Martindale, C., & Moore, K. (1988). Priming, prototypicality, and preference. *Journal of Experimental Psychology: Human Perception and Performance*, *14*(4), 661.

Monin, B. (2003). The warm glow heuristic: when liking leads to familiarity. *Journal of personality and social psychology*, *85*(6), 1035.

Netemeyer, R. G., Krishnan, B., Pullig, C., Wang, G., Yagci, M., Dean, D., ... & Wirth, F. (2004). Developing and validating measures of facets of customer-based brand equity. *Journal of Business Research*, *57*(2), 209-224.

Novemsky, N., Dhar, R., Schwarz, N., & Simonson, I. (2007). Preference fluency in choice. *Journal of Marketing Research*, *44*(3), 347-356.

Olshavsky, R. W., & Granbois, D. H. (1979). Consumer decision making—fact or fiction?. *Journal of consumer research*, *6*(2), 93-100.

Petty, R. E., & Cacioppo, J. T. (1984). The effects of involvement on responses to argument quantity and quality: Central and peripheral routes to persuasion. *Journal of personality and social psychology*, *46*(1), 69.

Pocheptsova, A., Labroo, A. A., & Dhar, R. (2010). Making products feel special: When metacognitive difficulty enhances evaluation. *Journal of Marketing Research, 47*(6), 1059-1069.

Reber, R., & Schwarz, N. (1999). Effects of perceptual fluency on judgments of truth. *Consciousness and cognition, 8*(3), 338-342.

Reber, R., Winkielman, P., & Schwarz, N. (1998). Effects of perceptual fluency on affective judgments. *Psychological science, 9*(1), 45-48.

Ruvio, A. (2008). Unique like everybody else? The dual role of consumers' need for uniqueness. *Psychology & Marketing, 25*(5), 444-464.

Ruvio, A., Shoham, A., & Makovec Brenčič, M. (2008). Consumers' need for uniqueness: short-form scale development and cross-cultural validation. *International Marketing Review, 25*(1), 33-53.

Schwarz, N. (1998). Accessible content and accessibility experiences: The interplay of declarative and experiential information in judgment. *Personality and Social Psychology Review, 2*(2), 87-99.

Schwarz, N. (2004). Metacognitive experiences in consumer judgment and decision making. *Journal of Consumer Psychology, 14*(4), 332-348.

Schwarz, N., Bless, H., Strack, F., Klumpp, G., Rittenauer-Schatka, H., & Simons, A. (1991). Ease of retrieval as information: Another look at the availability heuristic. *Journal of Personality and Social psychology, 61*(2), 195.

Shen, H., Jiang, Y., & Adaval, R. (2009). Contrast and assimilation effects of processing fluency. *Journal of Consumer Research, 36*(5), 876-889.

Snyder, C. R., & Fromkin, H. L. (1977). Abnormality as a positive characteristic: The development and validation of a scale measuring need for uniqueness. *Journal of Abnormal Psychology, 86*(5), 518.

Song, H., & Schwarz, N. (2008). If it's hard to read, it's hard to do: Processing fluency affects effort prediction and motivation. *Psychological Science, 19*(10), 986-988.

Song, H., & Schwarz, N. (2009). If it's difficult to pronounce, it must be risky: Fluency, familiarity, and risk perception. *Psychological Science*, *20*(2), 135-138.

Stafford, M. R. (1998). Advertising sex-typed services: The effects of sex, service type, and employee type on consumer attitudes. *Journal of Advertising*, *27*(2), 65-82.

Thornhill, R., & Gangestad, S. W. (1993). Human facial beauty: Averageness, symmetry, and parasite resistance. *Human nature*, *4*(3), 237-269.

Tian, K. T., Bearden, W. O., & Hunter, G. L. (2001). Consumers' need for uniqueness: Scale development and validation. *Journal of consumer research*, *28*(1), 50-66.

Unkelbach, C. (2007). Reversing the truth effect: Learning the interpretation of processing fluency in judgments of truth. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *33*(1), 219.

Whittlesea, B. W. (1993). Illusions of familiarity. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *19*(6), 1235.

Winkielman, P., Schwarz, N., Fazendeiro, T., & Reber, R. (2003). The hedonic marking of processing fluency: Implications for evaluative judgment. *The psychology of evaluation: Affective processes in cognition and emotion*, 189-217.

Zajonc, R. B. (1968). Attitudinal effects of mere exposure. *Journal of personality and social psychology*, *9*(2p2), 1.

Ziller, R. C. (1964). Individuation and socialization: A theory of assimilation in large organizations. *Human relations*, *17*(4), 341-360.

Appendix A: Stimulus material

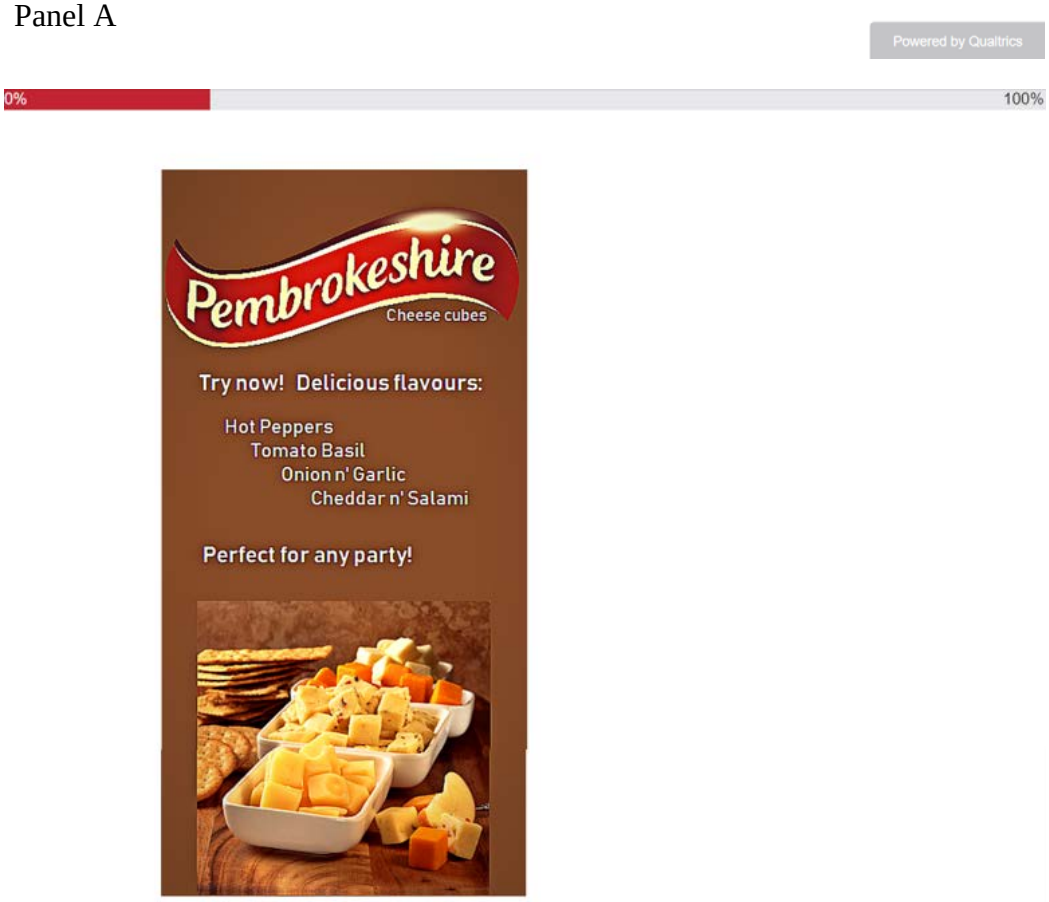
Figure A1. High fluency condition.

Figure A2. Low fluency condition.

Appendix B: Questionnaire pretest

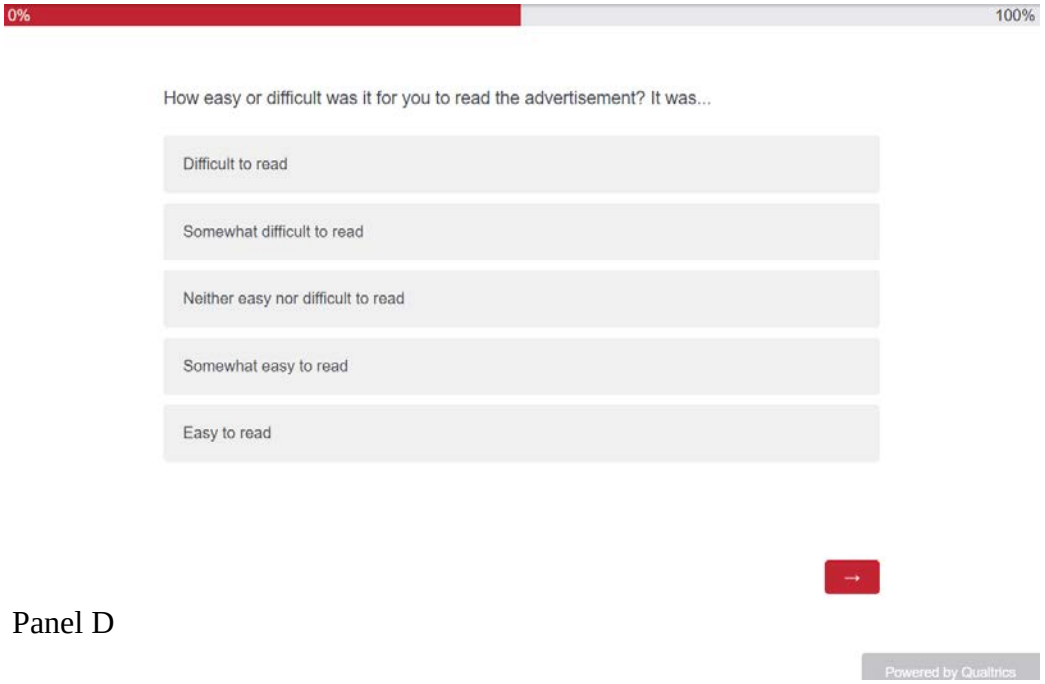
Figure B1. Overview of the questionnaire (pretest).

Panel A

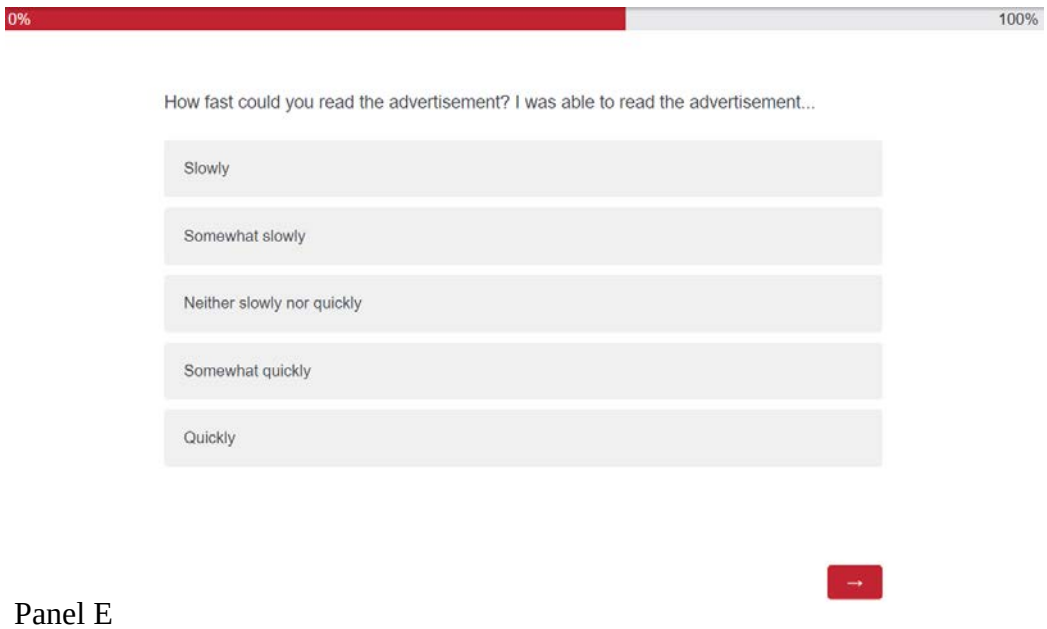


Panel B

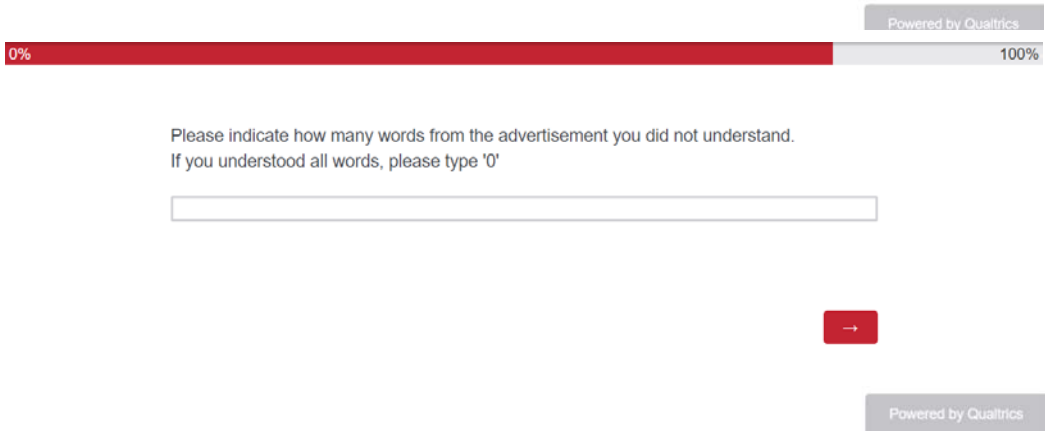
Panel C



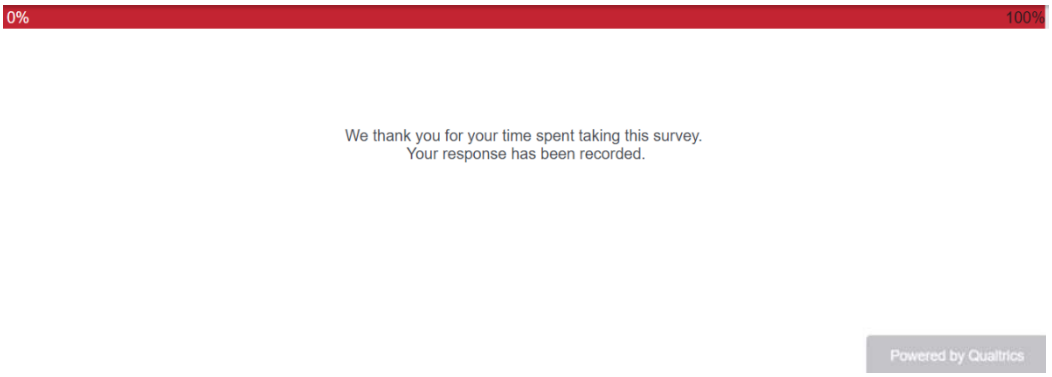
Panel D



Panel E



Panel F



Panel G

Note. Based on the condition that was assigned to the respondent, he or she saw either Panel B or C.

Appendix C: CNFU scale items

Table C1

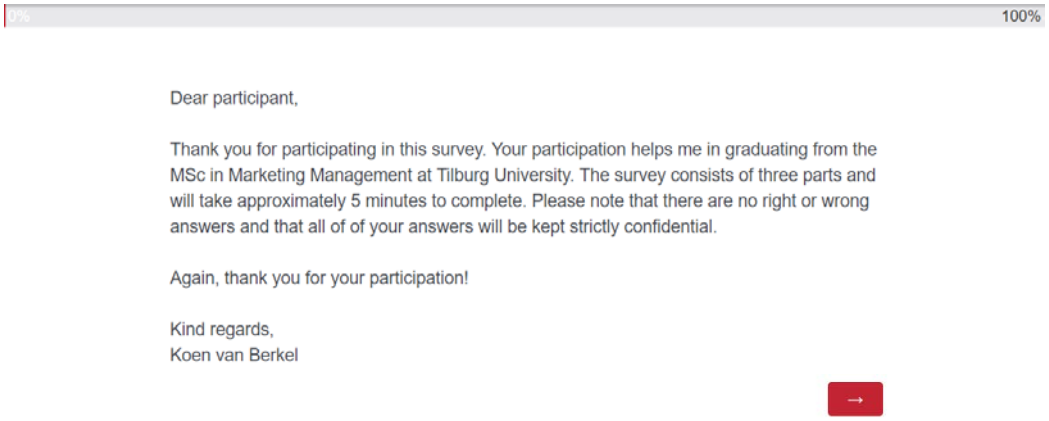
Items making up the dimensions of the shortened CNFU measurement scale

Creative choice counterconformity
I often combine possessions in such a way that I create a personal image for myself that can't be duplicated.
I often try to find a more interesting version of run-of-the-mill products because I enjoy being original.
I actively seek to develop my personal uniqueness by buying special products or brands.
Having an eye for products that are interesting and unusual assists me in establishing a distinctive image.
Unpopular choice counterconformity
When it comes to the products I buy and the situations in which I use them, I have often broken customs and rules.
I have often violated the understood rules of my social group regarding what to buy or own.
I have often gone against the understood rules of my social group regarding when and how certain products are properly used.
I enjoy challenging the prevailing taste of people I know by buying something they wouldn't seem to accept.
Avoidance of similarity
When a product I own becomes popular among the general population, I begin using it less.
I often try to avoid products or brands that I know are bought by the general population.
As a rule, I dislike products or brands that are customarily purchased by everyone.
The more commonplace a product or brand is among the general population, the less interested I am in buying it.

Note. Adapted from "Consumers' need for uniqueness: short-form scale development and cross-cultural validation " by A. Ruvio, A. Shoham and M. Makovec Brenčič, 2008, *International Marketing Review*, *25*(1), 33-53.

Appendix D: Questionnaire

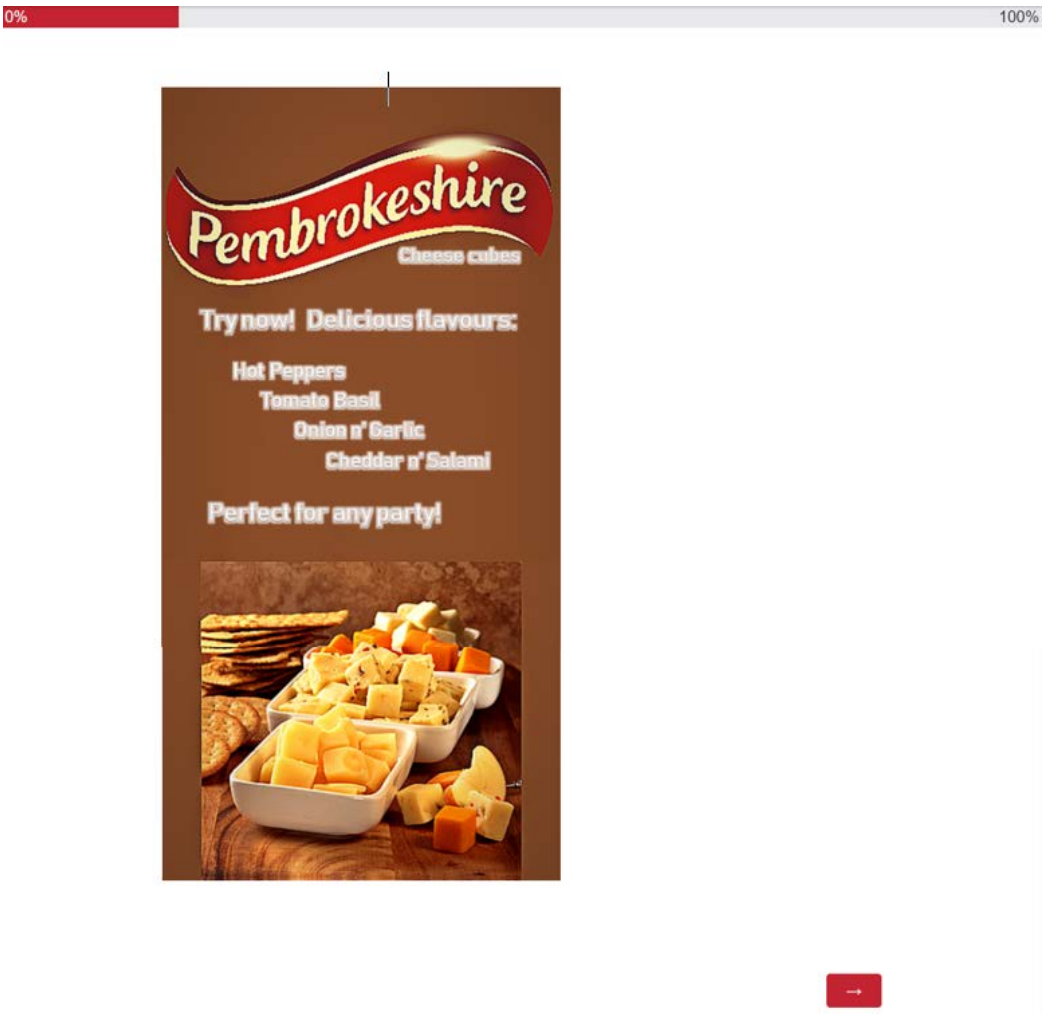
Figure D1. Overview of the questionnaire.



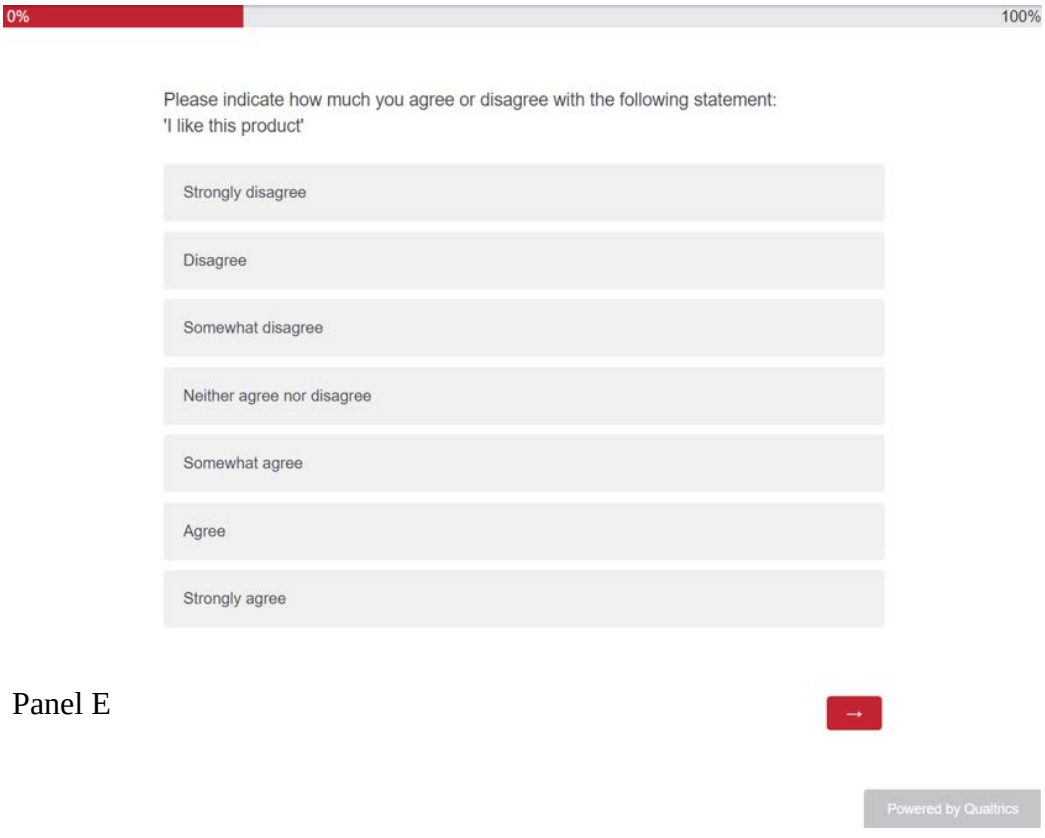
Panel A

Panel B

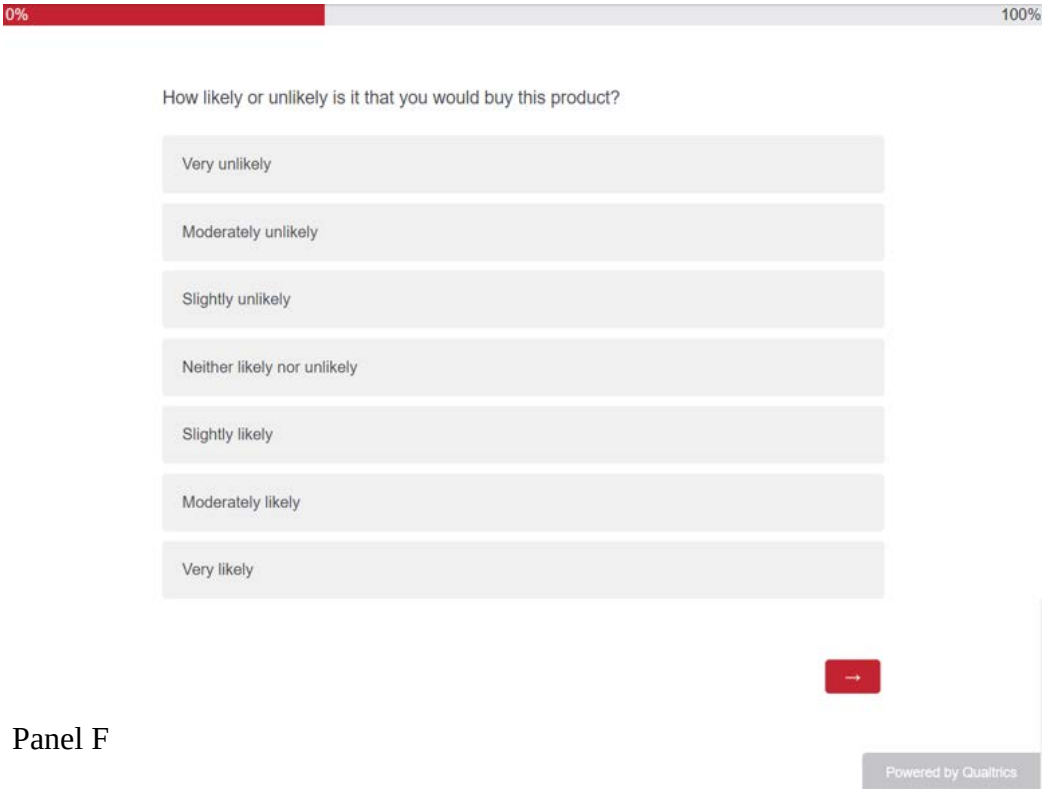
Panel C



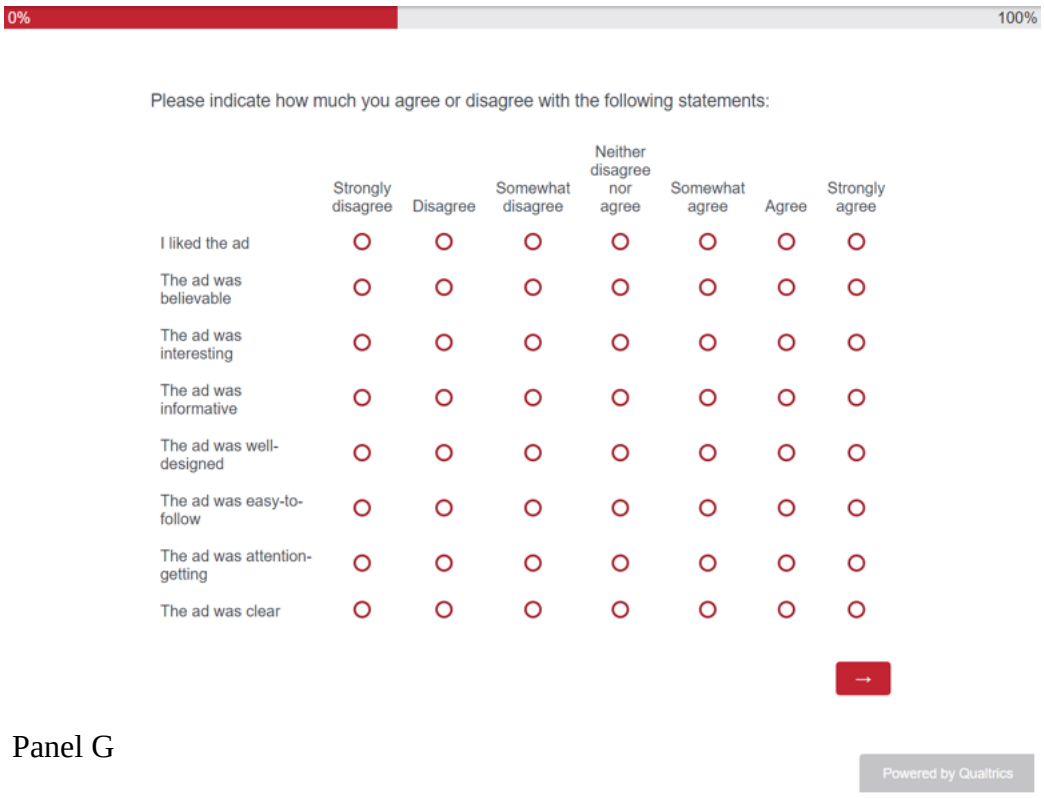
Panel D



Panel E



Panel F

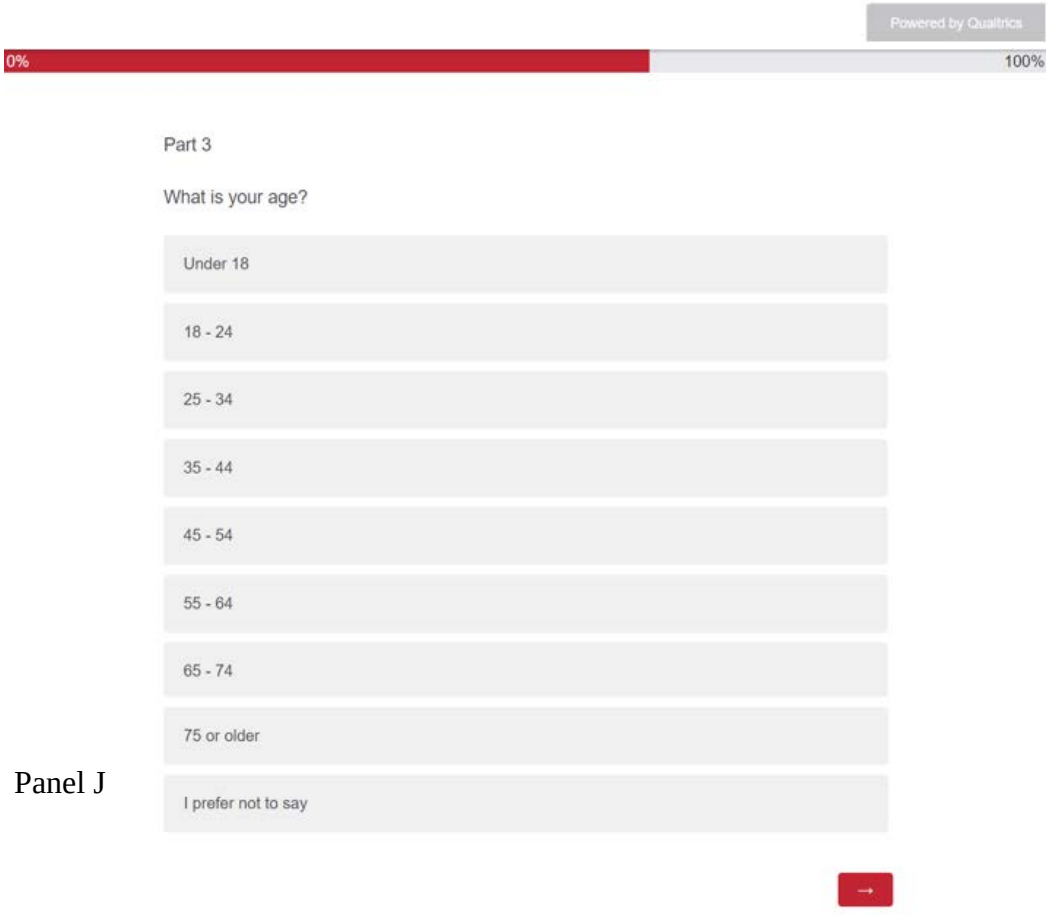


Panel G


0%
100%
Part 2
Please indicate how much you agree or disagree with the following statements:
Strongly disagree
Somewhat disagree
Neither agree nor disagree
Somewhat agree
Strongly agree
When a product I own becomes popular among the general population, I begin using it less.
I actively seek to develop my personal uniqueness by buying special products or brands.
I often try to avoid products or brands that I know are bought by the general population.
I enjoy challenging the prevailing taste of people I know by buying something they wouldn't seem to accept.
When it comes to the products I buy and the situations in which I use them, I have often broken customs and rules.
I often combine possessions in such a way that I create a personal image for myself that can't be duplicated.
→
Powered by Qualtrics

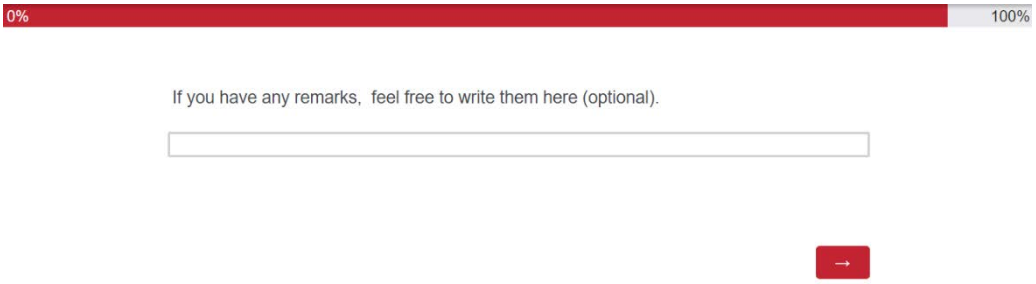
Panel H

Panel I

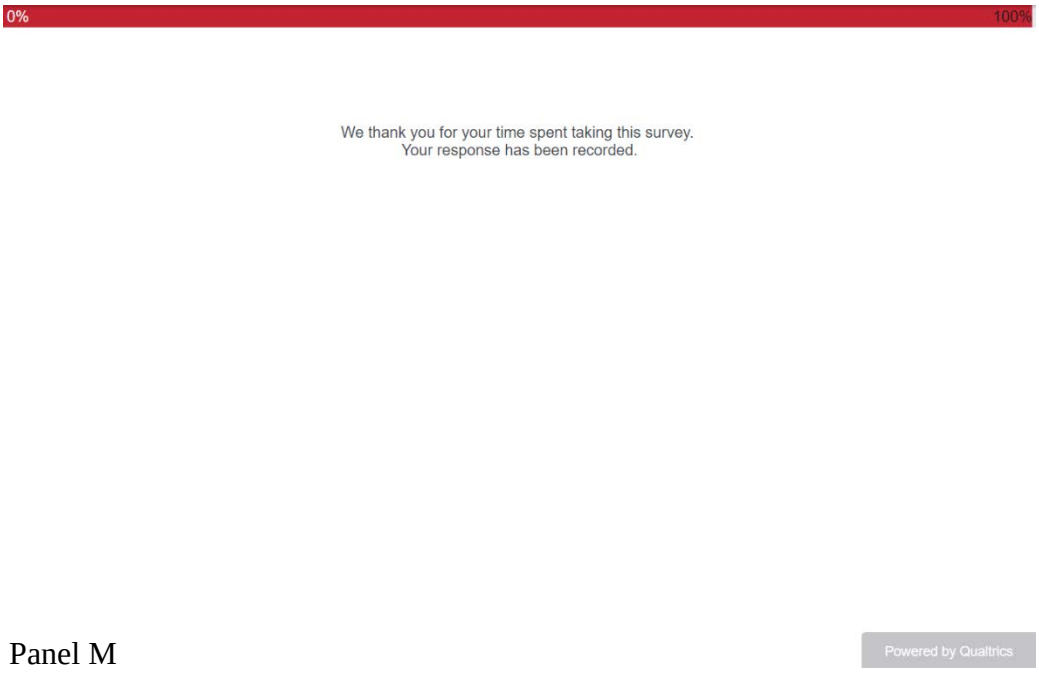


Panel J

Panel K



Panel L



Panel M

Note. Based on the condition that was assigned to the participant, he or she saw either Panel C or D.

Appendix E: Assumptions two-way ANCOVA

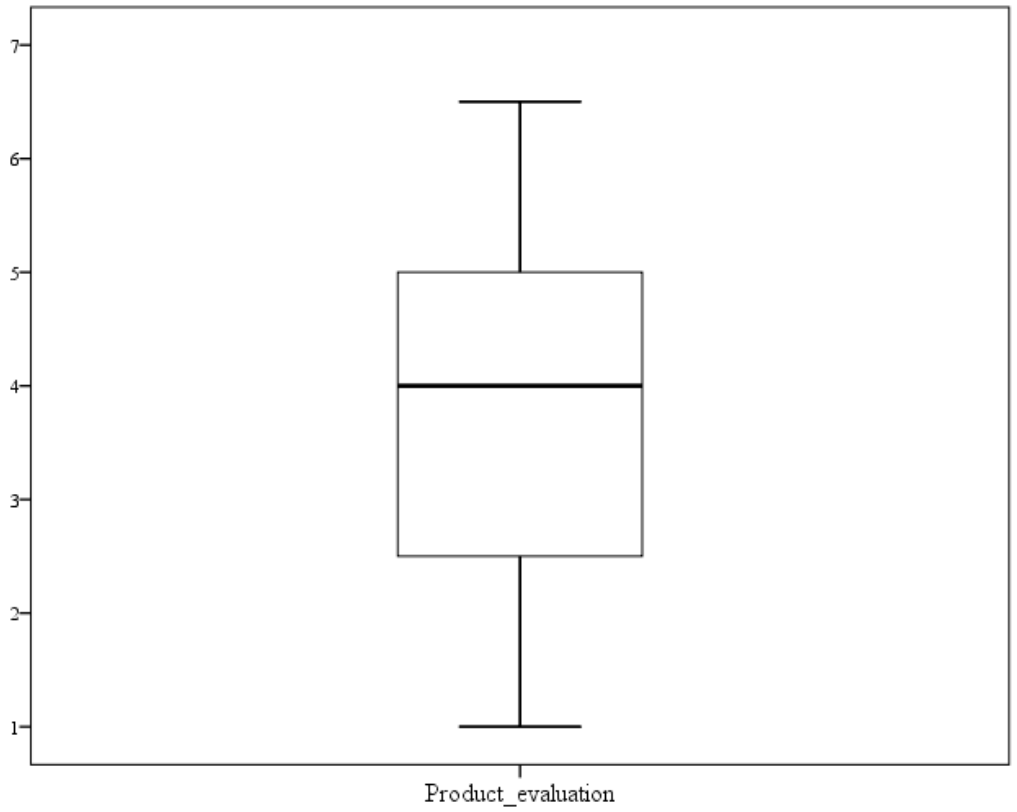


Figure E1. Boxplot for Product_evaluation, showing no significant outliers.

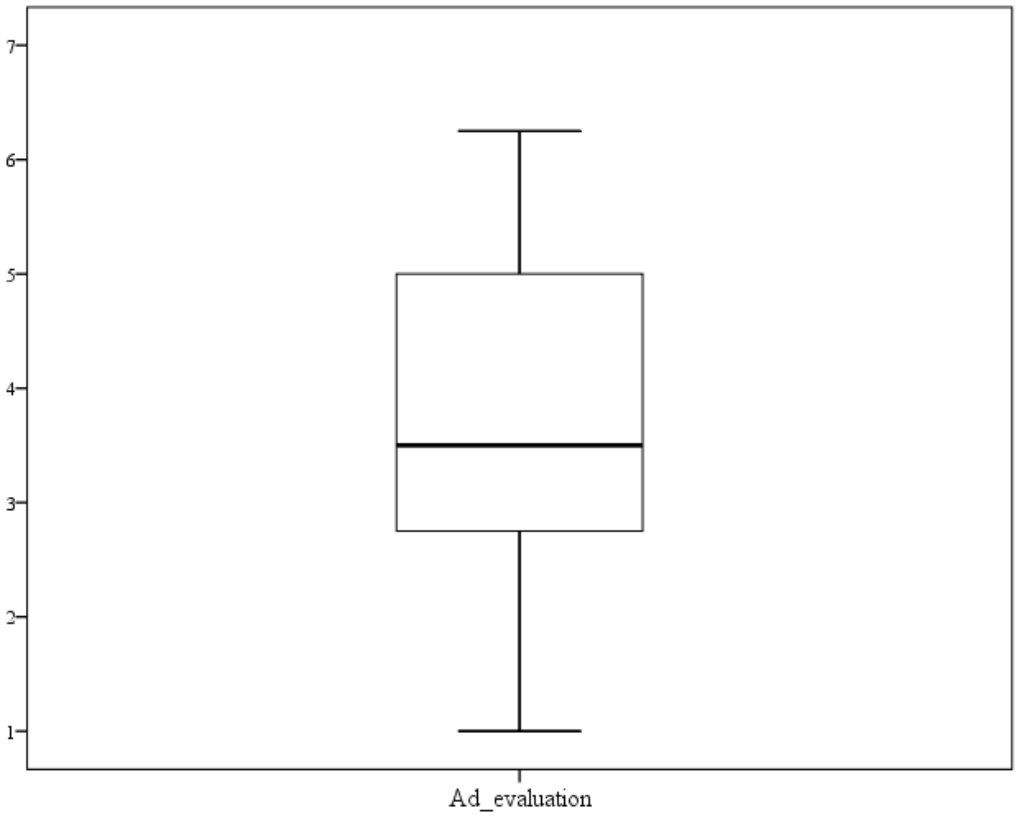


Figure E2. Boxplot for Ad_evaluation, showing no significant outliers.

Table E1

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Product_evaluation	,162	114	,000	,944	114	,000
Ad_evaluation	,224	114	,000	,845	114	,000

a. Lilliefors Significance Correction

Table E2

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

Dependent Variable: Product_evaluation

F	df1	df2	Sig.
,571	3	110	,635

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

a. Design: Intercept + Cheese_consumer + Processing_fluency + CNFU_group + Processing_fluency * CNFU_group

Table E3

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

Dependent Variable: Ad_evaluation

F	df1	df2	Sig.
,808	3	110	,492

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

a. Design: Intercept + Cheese_consumer + Processing_fluency + CNFU_group + Processing_fluency * CNFU_group

Appendix F: Results manipulation check

Table F1

Tests of Between-Subjects Effects

Dependent Variable: Manipulation_check

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Observed Power[b]
Corrected Model	36,941[a]	4	9,235	6,272	,000	,187	,986
Intercept	2424,291	1	2424,291	1646,424	,000	,938	1,000
Cheese_consumer	3,056	1	3,056	2,076	,153	,019	,298
Processing_fluency	33,680	1	33,680	22,874	,000	,173	,997
CNFU_group	,048	1	,048	,032	,857	,000	,054
Processing_fluency * CNFU_group	,218	1	,218	,148	,701	,001	,067
Error	160,498	109	1,472				
Total	3128,000	114					
Corrected Total	197,439	113					

a. R Squared = ,187 (Adjusted R Squared = ,157)

b. Computed using alpha = ,05

Table F2

Factor loadings for the items of Ad_evaluation [a]

	Component 1	2
I liked the ad	,782	
The ad was believable	,530	,618
The ad was interesting	,845	
The ad was informative		
The ad was well-designed	,788	
The ad was easy-to-follow		,842
The ad was attention-getting	,841	
The ad was clear		,873

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Table F3

Descriptive Statistics

Dependent Variable: Manipulation_check

Processing_fluency	CNFU_group	Mean	Std. Deviation	N
Low fluency	Low CNFU	4,4808	1,52631	26
	High CNFU	4,5645	1,35242	31
	Total	4,5263	1,42184	57
High fluency	Low CNFU	5,6452	,83859	31
	High CNFU	5,5769	1,08344	26
	Total	5,6140	,94971	57
Total	Low CNFU	5,1140	1,32631	57
	High CNFU	5,0263	1,32766	57
	Total	5,0702	1,32183	114

Table F4

Univariate Tests

Dependent Variable: Manipulation_check

CNFU_group		Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Observed Power[a]
Low CNFU	Contrast	19,639	1	19,639	13,338	,000	,109	,952
	Error	160,498	109	1,472				
High CNFU	Contrast	14,237	1	14,237	9,669	,002	,081	,869
	Error	160,498	109	1,472				

Each F tests the simple effects of Processing_fluency within each level combination of the other effects shown. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Computed using alpha = ,05

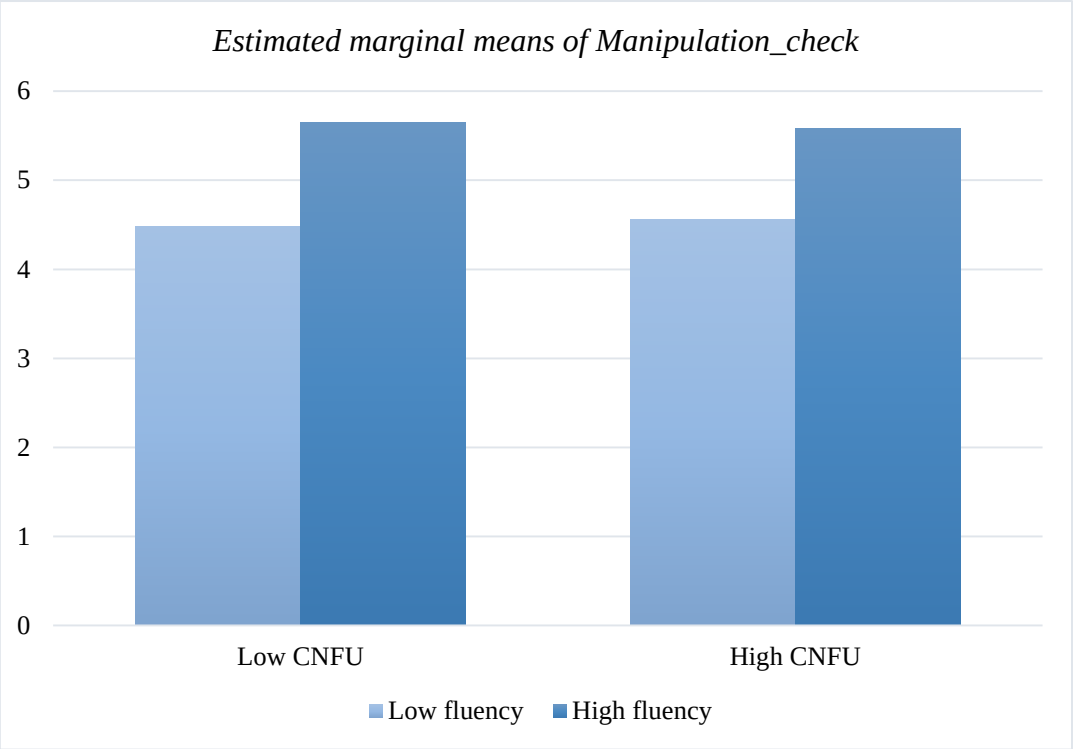


Figure F1. Bar charts of the significant effects of Processing_fluency.

Appendix G: Results ANCOVA (product evaluation)

Table G1

Tests of Between-Subjects Effects

Dependent Variable: Product_evaluation

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Observed Power[b]
Corrected Model	44,060[a]	4	11,015	5,178	,001	,160	,963
Intercept	1608,486	1	1608,486	756,107	,000	,874	1,000
Cheese_consumer	25,739	1	25,739	12,099	,001	,100	,932
Processing_fluency	8,025	1	8,025	3,772	,055	,033	,486
CNFU_group	,149	1	,149	,070	,792	,001	,058
Processing_fluency * CNFU_group	8,503	1	8,503	3,997	,048	,035	,509
Error	231,879	109	2,127				
Total	2013,000	114					
Corrected Total	275,939	113					

a. R Squared = ,160 (Adjusted R Squared = ,129)

b. Computed using alpha = ,05

Table G2

Descriptive Statistics

Dependent Variable: Product_evaluation

Processing_fluency	CNFU_group	Mean	Std. Deviation	N
Low fluency	Low CNFU	3,2308	1,56353	26
	High CNFU	3,9839	1,59418	31
	Total	3,6404	1,61122	57
High fluency	Low CNFU	4,3548	1,46739	31
	High CNFU	3,9423	1,49216	26
	Total	4,1667	1,48003	57
Total	Low CNFU	3,8421	1,60122	57
	High CNFU	3,9649	1,53489	57
	Total	3,9035	1,56267	114

Table G3

Univariate Tests

Dependent Variable: Product_evaluation

Processing_fluency		Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Observed Power[a]
Low fluency	Contrast	8,020	1	8,020	3,424	,067	,030	,450
	Error	231,879	109	2,342				
High fluency	Contrast	2,406	1	2,406	1,028	,313	,009	,171
	Error	231,879	109	2,342				

Each F tests the simple effects of CNFU_group within each level combination of the other effects shown. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Computed using alpha = ,05

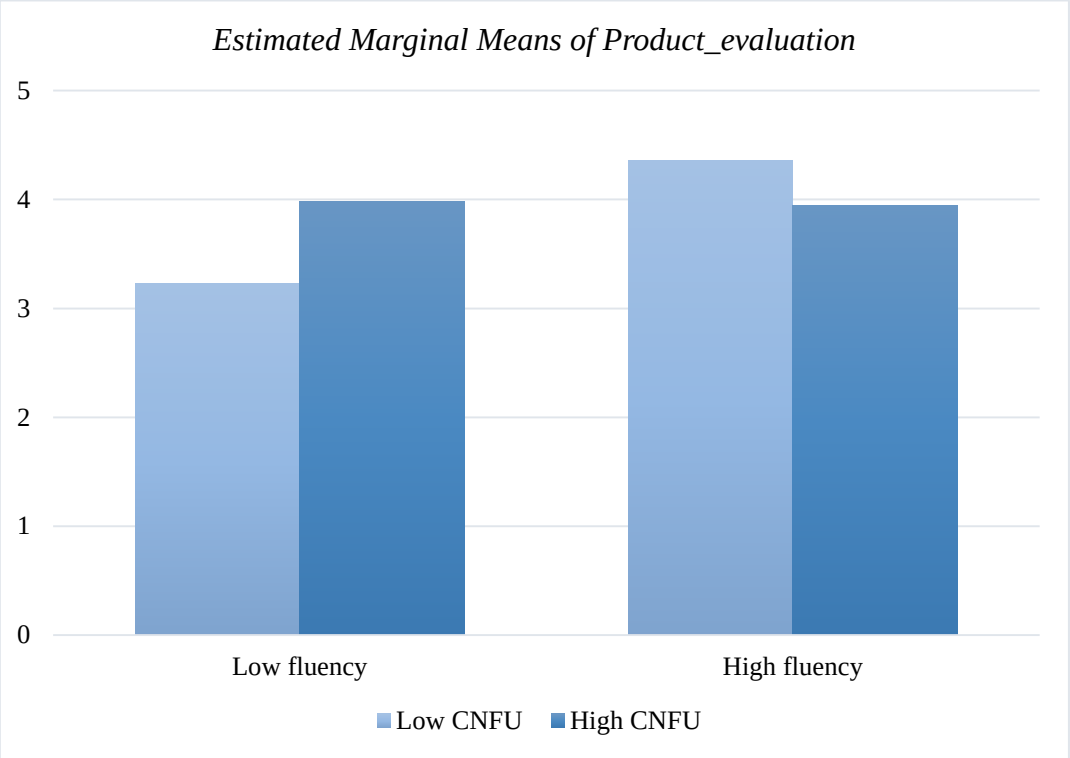


Figure G1. Bar charts of the effects of CNFU_group.

Table G4

Univariate Tests

Dependent Variable: Product_evaluation

CNFU_group		Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Observed Power[a]
Low CNFU	Contrast	16,519	1	16,519	7,765	,006	,067	,789
	Error	231,879	109	2,127				
High CNFU	Contrast	,004	1	,004	,002	,967	,000	,050
	Error	231,879	109	2,127				

Each F tests the simple effects of Processing_fluency within each level combination of the other effects shown. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Computed using alpha = ,05

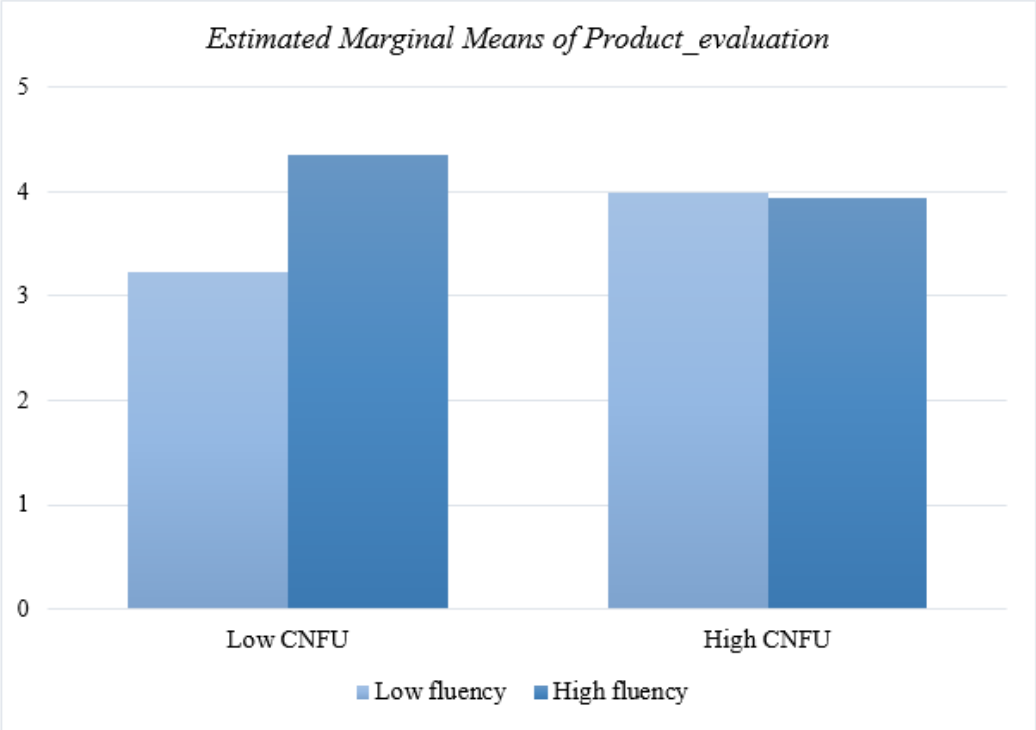


Figure G2. Bar charts of the effects of Processing_fluency.

Appendix H: Results ANCOVA (ad evaluation)

Table H1

Tests of Between-Subjects Effects

Dependent Variable: Ad_evaluation

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Observed Power[b]
Corrected Model	42,205[a]	4	10,551	6,533	,000	,193	,989
Intercept	1222,685	1	1222,685	757,075	,000	,874	1,000
Cheese_consumer	9,206	1	9,206	5,700	,019	,050	,658
Processing_fluency	32,063	1	32,063	19,853	,000	,154	,993
CNFU_group	1,597	1	1,597	,989	,322	,009	,167
Processing_fluency * CNFU_group	1,250	1	1,250	,774	,381	,007	,141
Error	176,036	109	1,615				
Total	1758,250	114					
Corrected Total	218,241	113					

a. R Squared = ,193 (Adjusted R Squared = ,164)

b. Computed using alpha = ,05

Table H2

Descriptive Statistics

Dependent Variable: Ad_evaluation

Processing_fluency	CNFU_group	Mean	Std. Deviation	N
Low fluency	Low CNFU	2,9519	1,11808	26
	High CNFU	3,3226	1,35584	31
	Total	3,1535	1,25602	57
High fluency	Low CNFU	4,2016	1,28682	31
	High CNFU	4,1923	1,40233	26
	Total	4,1974	1,32855	57
Total	Low CNFU	3,6316	1,35629	57
	High CNFU	3,7193	1,43308	57
	Total	3,6754	1,38973	114

Table H3

Univariate Tests

Dependent Variable: Ad_evaluation

Processing_fluency		Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Observed Power[a]
Low fluency	Contrast	2,827	1	2,827	1,751	,189	,016	,259
	Error	176,036	109	1,615				
High fluency	Contrast	,011	1	,011	,007	,933	,000	,051
	Error	176,036	109	1,615				

Each F tests the simple effects of CNFU_group within each level combination of the other effects shown. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Computed using alpha = ,05

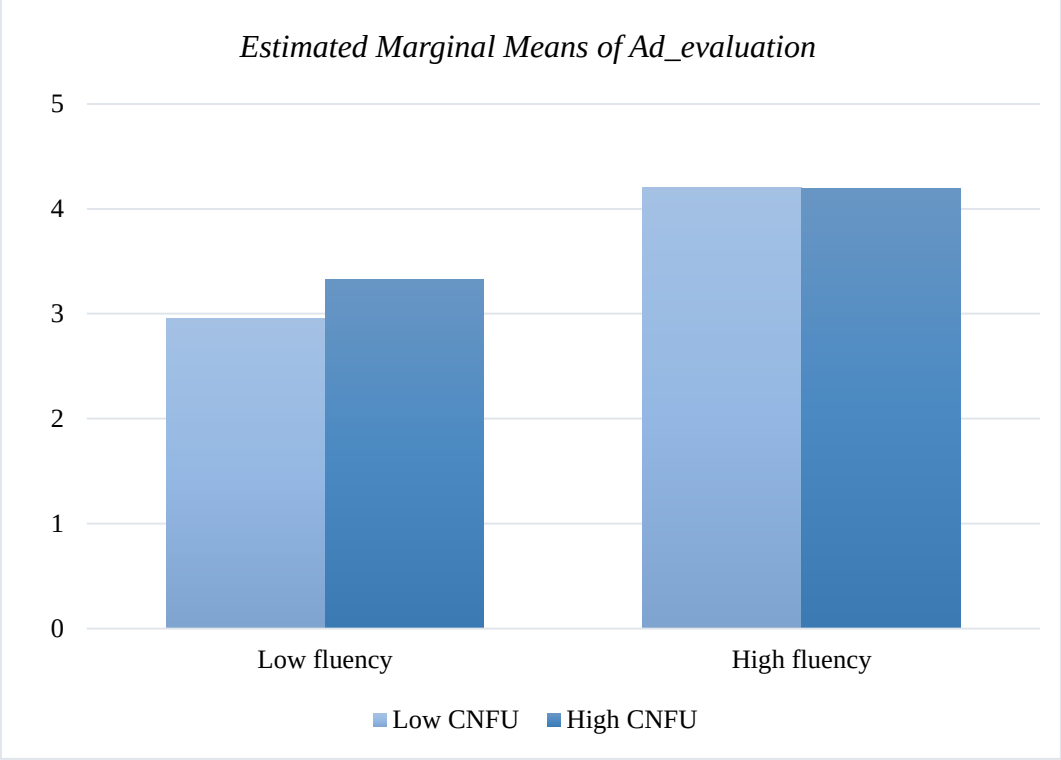


Figure H1. Bar charts of the effects of CNFU_group.

Table H4

Univariate Tests

Dependent Variable: Ad_evaluation

CNFU_group		Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Observed Power[a]
Low CNFU	Contrast	22,972	1	22,972	14,224	,000	,115	,962
	Error	176,036	109	1,615				
High CNFU	Contrast	10,319	1	10,319	6,389	,013	,055	,707
	Error	176,036	109	1,615				

Each F tests the simple effects of Processing_fluency within each level combination of the other effects shown. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Computed using alpha = ,05

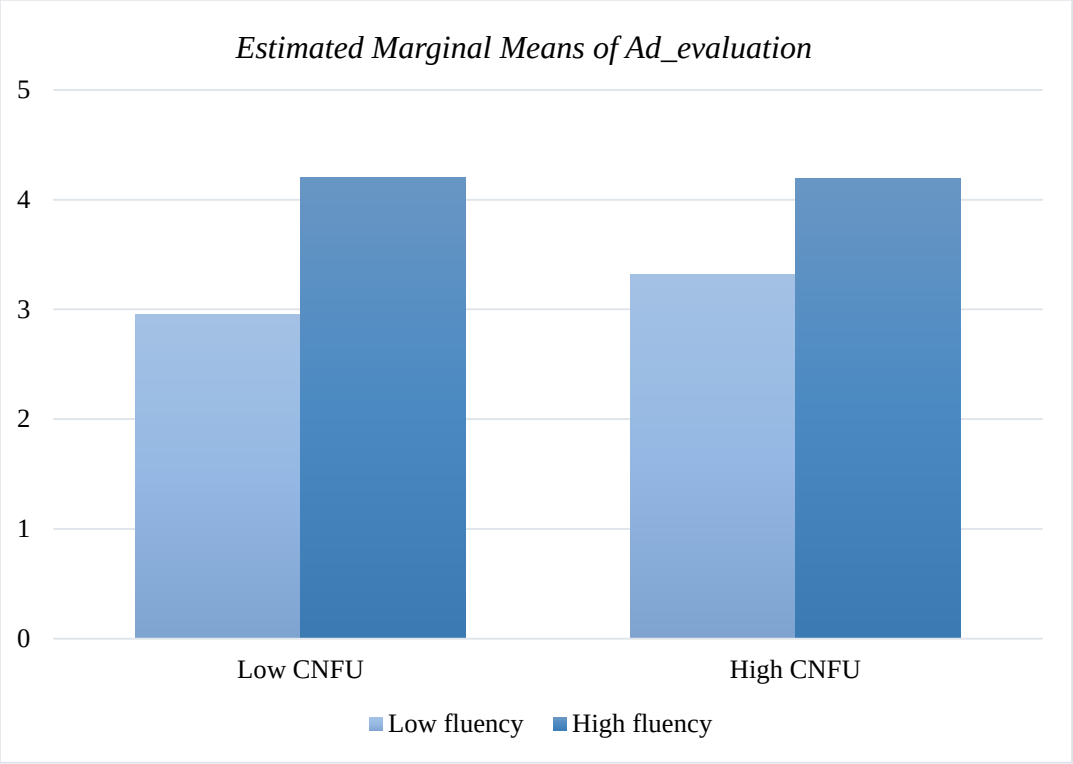


Figure H2. Bar charts of the effects of Processing_fluency.

Appendix I: Assumptions multiple linear regression

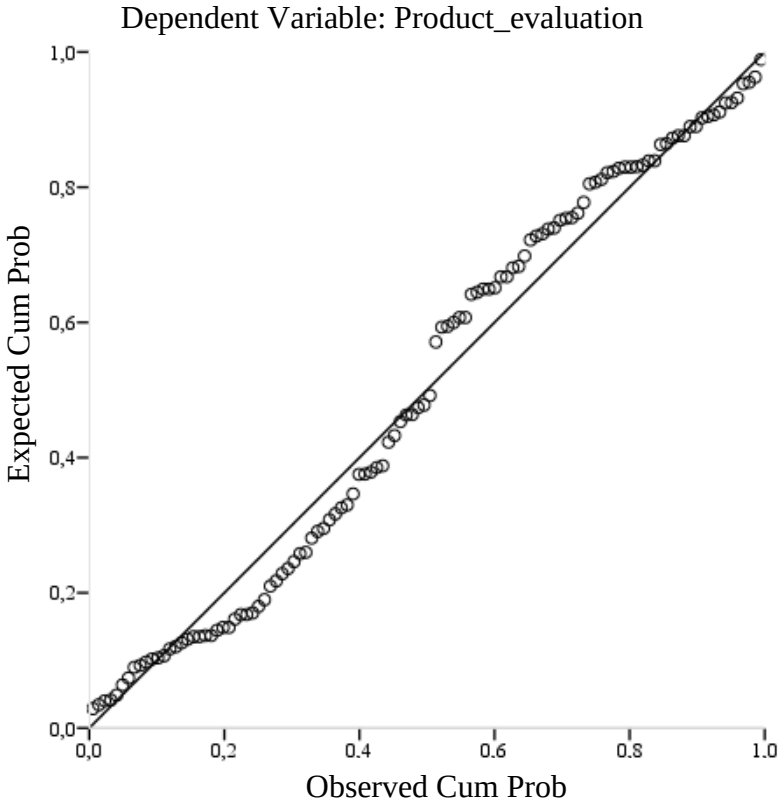


Figure I1. Normal P-P plot of the standardized residuals of Product_evaluation.

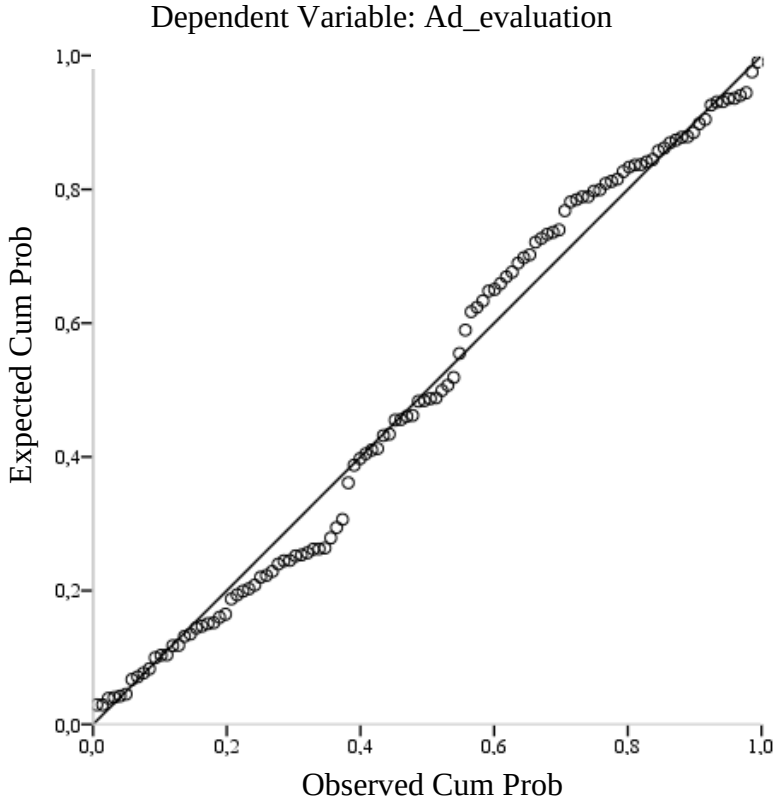


Figure I2. Normal P-P plot of the standardized residuals of Ad_evaluation.

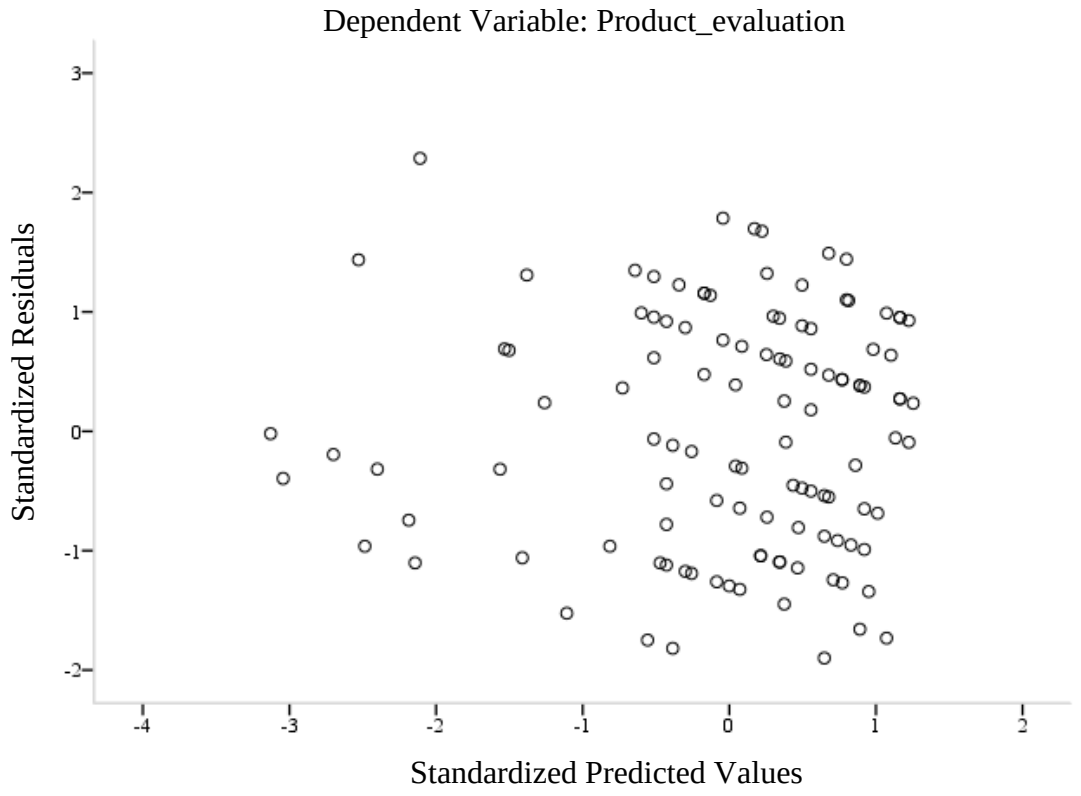


Figure I3. Scatterplot of the residuals of Product_evaluation

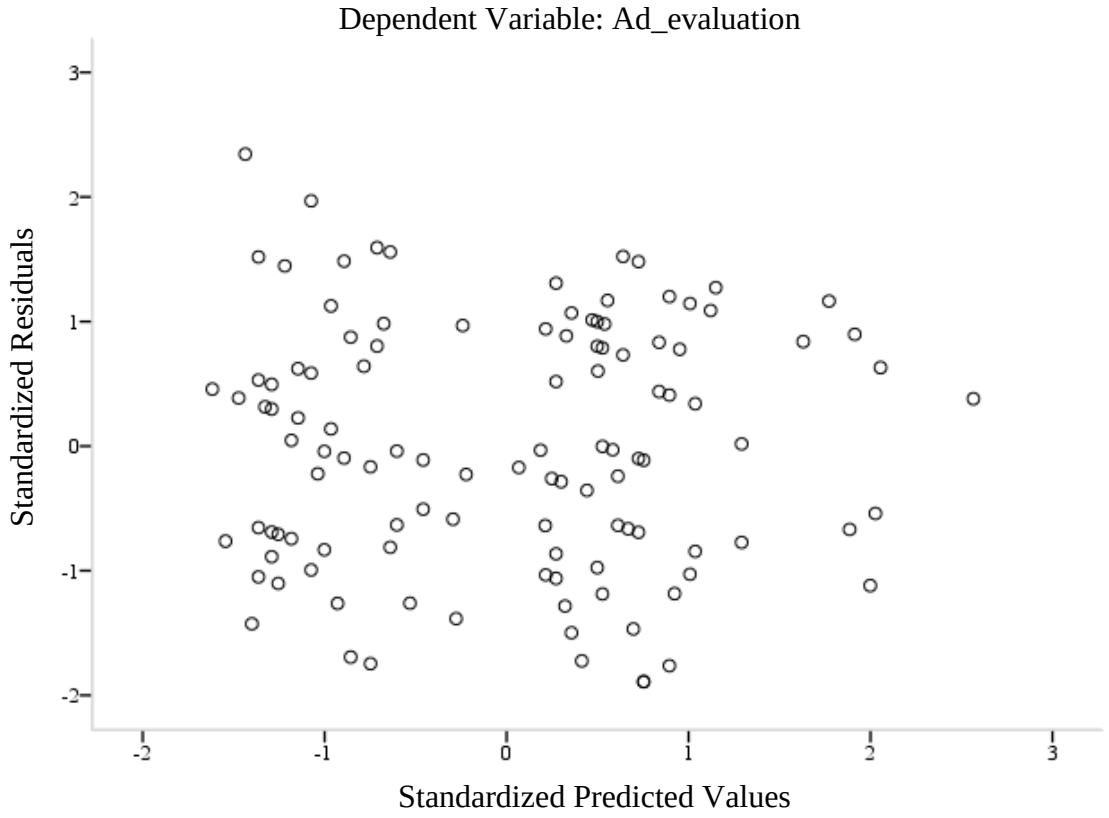


Figure I4. Scatterplot of the residuals of Ad_evaluation

Table I1

VIF values of the predictor variables

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Processing_fluency	,991	1,009
	CNFU_centered	,444	2,253
	CNFU_centered*Processing_fluency	,451	2,216
	Cheese_consumer	,981	1,019

Appendix J: Results regression (product evaluation)

Table J1

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	40,520	4	10,130	4,690	,002[b]
	Residual	235,418	109	2,160		
	Total	275,939	113			

a. Dependent Variable: Product_evaluation

b. Predictors: (Constant), Processing_fluency, CNFU _centered, Processing_fluency* CNFU_ centered, Cheese_consumer

Table J2

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,383[a]	,147	,116	1,46963

a. Predictors: (Constant), Processing_fluency, CNFU _centered, Processing_fluency*CNFU_ centered, Cheese_consumer

b. Dependent Variable: Product_evaluation

Table J3

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3,808	,204		18,642	,000
	Processing_fluency	,533	,277	,171	1,928	,056
	CNFU_centered	,026	,021	,161	1,210	,229
	Processing_fluency* CNFU_centered	-,044	,029	-,202	-1,533	,128
	Cheese_consumer	-1,360	,400	-,304	-3,401	,001

a. Dependent Variable: Product_evaluation

Appendix K: Results regression (ad evaluation)

Table K1

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	43,586	4	10,897	6,800	,000[b]
	Residual	174,655	109	1,602		
	Total	218,241	113			

a. Dependent Variable: Ad_evaluation

b. Predictors: (Constant), Processing_fluency, CNFU _centered, Processing_fluency* CNFU_ centered, Cheese_consumer

Table K2

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,447[a]	,200	,170	1,266

a. Predictors: (Constant), Processing_fluency, CNFU_centered, Processing_fluency* CNFU_ centered, Cheese_consumer

b. Dependent Variable: Ad_evaluation

Table K3

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3,014	,176		17,134	,000
	Processing_fluency	1,081	,238	,391	4,537	,000
	CNFU_centered	,022	,018	,158	1,231	,221
	Processing_fluency* CNFU_centered	-,005	,025	-,025	-,199	,843
	Cheese_consumer	,844	,345	,212	2,450	,016

a. Dependent Variable: Ad_evaluation