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PRIMING EFFECT IN ONLINE FORUMS: THE INFLUENCE OF AFFECTIVE PRIMING ON USERS' RESPONSES TO ONLINE ADVERTISEMENTS

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ABSTRACT

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This thesis investigates affective priming effect on users' responses to online advertisements. Priming effect is a phenomenon emerging when an exposure to a certain stimulus influences the perception of the subsequent stimulus. The priming effect has been studied by both psychologists and marketers, since its unconscious nature provide great possibilities for understanding and managing humans' judging and behaviour. This paper concentrates on affective priming effect occurring in the online space, particularly in online discussion forums. Ad-context congruence and emotional discussion tones were studied as possible influencing factors on response to the ads. Response to the online advertisements was studied by five variables: attitude towards the ad, attitude towards the brand, ad recall, ad recognition, and probability of click. Controlled experiment was implemented to gather the data by providing respondents with fictitious discussion forum screenshot and embedded advertisements of fictitious products. The findings indicate that positive tone of a discussion and contextually related ads lead to more favorable evaluation of the advertised brand, while not having influence on other dependent variables. The results provide insight into affective priming effect online and suggest paths for the further researches in the field.

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Kristina Kuzminskaia

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1. INTRODUCTION

Advertising industry has experienced a huge shift to the online environment recently with the internet advertising income in the USA accounted to almost 60 billion dollars for the year 2015, and almost 33 billion for the first half of 2016 (IAB, 2016a, b). Compound annual growth rate of the internet advertising since 2006 is approximately 14% (IAB, 2016b), therefore, a trend of steady growth in the field is seen for the past decade. Online banner ads (OBA) comprise 10% of the total revenues in 2016, which also include desktop search advertisements, mobile search ads and video advertisements (IAB, 2016b). Current transfer from conventional to the online advertising increased the competition for the limited attention of users (Yoo et al., 2004), and modern companies have to carefully place online advertisements to catch the attention of potential customers. Considering the significance of internet advertising in today's marketing practices, it becomes essential for the companies that employ online advertising to understand the way people react to the online ads in order to enhance the effectiveness of internet advertising.

Issue of increasing people's responses to the advertisements has been widely discussed in terms of traditional marketing, where consumers' cognition and emotions were assigned a great importance from the perspectives of customers' attention to the advertising (Vakratsas and Ambler, 1999; Olney et al., 1991). Studies of factors that influence advertisements' effectiveness were approached from different angles, for instance positive attitude toward the ad and perceived usefulness of online banner advertisement were the main variables in the research of Idemudia and Jones (2015).

Other factors that can have a positive effect on online advertisements studied by researchers related to the online banner's size (Baltas, 2003); location of the OBA (Tangmanee and Prapakornkiat, 2012); period of time a user spends on a web page (Sherman and Deightom, 2001); attitude of users towards the web site (Danaher and Mullarkey, 2003); aim pursued by the users when reading the web page (Danaher and Mullarkey, 2003); and design of a banner

(Lohtia et al., 2003). Therefore, according to the previous studies there are plenty of factors that can be leveraged in order to attract the attention and interest of users to the online advertisements. Overall, it appears that click-through rate that is currently one of the main tools measuring online advertisements' effectiveness has a quite complicated set of prerequisites that determine the probability of click. Although it might be impossible to pursue all of the findings due to their amount and possible complexity of implementing, employing most of them would increase the effectiveness of the OBAs.

From this perspective online advertising is quite vulnerable and current marketing practices must be updated according to the consumers' changing behaviour and the recent advances in the marketing and psychological fields. With the rise of Internet advertising, currently users are exposed to large amount of ads on the Internet every day and these ads are often placed in different media context. The researches showed, that media context might have impact on the processing of advertisements by users (Yi, 1990a; De Pelsmacker et al., 2002). Context might influence the users' responses and attitudes towards the brands and ads. Therefore, it is essential to consider possible impact of the context on advertising. Impact of context on the subsequent interpretations of different concepts is called priming and is studied in the marketing and psychological literature. When discussing the dual-process theory in his book, Kahneman (2011) has considered the priming effect as an influential factor in decision-making. The researcher stated, that priming might be not restricted to just concepts and words influence, but people's actions can be primed by the events of which people are not even aware. In other words, the priming effect might unconsciously influence the people's behaviour.

Priming is one of the pervasive marketing techniques that is used very frequently in the marketing practices (Minton et al., 2016). Yi (1990b, 220) proposed that priming has more advantages over conventional advertisement, since this indirect approach can decrease negative cognitive responses from the audience and eventually increase the ads' effectiveness. The body of literature on priming has provided more than 12,000 articles in the last forty years (Janiszewski and Wyer, 2013, 97). Psychology and marketing literature reviews priming as

unintentional and unconscious phenomena that influences the behaviour and activity of consumers.

1.1. BACKGROUND OF THE STUDY

Interest to the priming concept aroused back in XX century in the psychology field, where researchers attempted to understand the mechanism of retrieval memory operations. For example, one of the first priming studies was conducted by Meyer and Schvaneveldt in 1971, who investigated the semantic effects of congruent and incongruent words. According to Bargh et al. (1996), priming relates to activation of knowledge structures by the situational context. The concept of priming states, that after a certain stimulus was processed by the brain, the subsequent concept or situation will be influenced by the preceding stimulus and highly likely will be interpreted in terms of this stimulus. There is a considerable amount of literature on the process of priming, and as stated by many researchers, the effect of priming might be both conscious and unconscious; however, the majority of studies found priming effect unconscious for the primed people (see e.g. Bargh et al., 1996; Ferguson et al., 2005; Fitzimons et al., 2008). Although the priming theory mainly relates to the psychological field, the topic is of a significant interest for the marketing area as well, since understanding of the mechanisms that can influence the humans' behaviour in a certain way could be utilized in business and provide valuable information for marketing practices. The closest example of priming effect arising in the advertising context is processing the advertisements by users or customers through the prism of preceding context (see Yi, 1990a; Yi, 1990b; Gardner and Wilhelm, 1987).

A growing body of literature has examined priming from both the marketing and psychological perspectives, covering the TV commercials priming (Kamins et al., 1991; Goldberg and Gorn, 1987; Soldow and Principe, 1981); priming with colors (Kristjansson, 2009; Barone and Winterich, 2016; Mandel and Johnson, 2002); scent priming (Lange et al., 2012; Holland et al., 2005); contextual priming (Yao and Wang, 2013; Yi, 1993); positive contagion (Lee et al., 2011) and music priming (North et al., 1999). For instance, the study of North et al. (1999) has revealed that playing a stereotypical music of a certain country leads to better sales of wine

made in this country; moreover, the interviewed customers weren't aware of this effect and behaved unconsciously. Therefore, results of the researches on priming might be applied into marketing environment to increase the effectiveness of marketing practices or promote sales.

Marketing studies on priming effect have indicated, that preceding exposure to the contextual factors can prime specific attributes and increase the probability that customers will understand the product information in terms of these attributes (Yi, 1990a). The study of Yi (1990b) discussed the issue of ambiguity in advertising, when a certain product feature can be perceived by customers in several different ways depending on the last activated attribute (e.g. a large car can be either perceived as safe or fuel-thirsty). The research revealed that context of the advertising can prime certain features that will be likely considered by customers first, i.e. the large car advertisement will be firstly analyzed by consumers in terms of safety, if the preceding context includes editorial article about air safety. Therefore, the priming effect is capable of managing the way advertisements are perceived by the audience, and that reveals new perspectives for the companies and overall advertising industry.

Possibilities of priming effect aren't limited to humans' perception, but the behaviour and the way of thinking are also susceptible to the influence of priming. For instance, study of Bargh et al. (1996) has investigated the automatic and unconscious effect on the students' behaviour. In the experiment, the students had to construct short sentences out of the given words. One part of the participants was primed with the polite words, such as *respect, appreciate, patiently*, the other part of students was provided with the rude words, e.g. *disturb, aggressive, annoyingly,* and the third had neutral priming condition (primed with *optimistically, rapidly, watches, etc.*) to enhance the experiment's reliability and test all of the possible conditions. As a result, students in the rude priming condition were found to be more interruptive when waiting for the next experimental task. The study proved, that students primed with the rude condition have interrupted professor's conversation after the experiment more often and faster than the other participants (the long conversation of professor was intended to test the behaviour of people primed with different conditions). Therefore, the study suggests that passive and automatic activation of the primes made students behave like in the primed behaviour. The automatic

activation of a certain situational behaviour was also discussed in the studies of Fazio et al. (1986), Strauman and Higgins (1987) and Devine (1989). The authors argue that behavioural changes related to the priming conditions happen unintentionally and can become activated automatically, since mostly participants were not aware of the influence of the prime. Therefore, the effect of priming might influence the people's behaviour in the unconscious manner, and if forwarded in the right direction this impact might benefit the businesses.

The marketing field studies have paid strong attention to the factors that can affect customers' response to the advertisement and the priming method was investigated accordingly. For instance, media context of advertisements discussed by Dahlen (2005) revealed, that brand perception can be highly affected by the media choice, where creativity and surprise effect entail positive attitudes towards the brand, better recognition of the brand and enhanced advertisement credibility. The other important factor strongly influencing the evaluation of an ad is the *congruency of the advertisement and the media context where the ad is placed*; this concept was discussed by many authors (Dahlen, 2005; Goldberg and Gorn, 1987; Coulter, 1998; MacInnis and Jaworski, 1989) and called congruency-accessibility hypothesis. The researchers argue, that when ads' elements are relevant to the readers' moods, the ad messages are processed easier by the audience. The priming effect activates the knowledge structures and processing of congruent messages is more intensive and fast (De Pelsmacker, 2002, 50). Moreover, prior exposure to the prime can change the perception and interpretation of the following stimulus; therefore, if an ad is placed in the congruent media context, the evaluations of the ad will be likely enhanced. According to Dahlen (2005), when the media context is relevant, the brand and ad evaluations would be higher, since the reader's cognitive structures that relate media to a brand are activated. Hence, when the media setting is congruent with the ad, the ad credibility is greater. The example of such congruency-accessibility hypothesis can relate to suitcases advertisement placed into the article about traveling (De Pelsmacker, 2002). Research implemented in this study will utilize the findings of the congruency-accessibility hypothesis by creating both contextually congruent and incongruent conditions and observing the effect on the response to advertisement.

Given the current knowledge on priming, its influence has been undertaken by media companies to increase the effect for commercials, thus Turner Entertainment Networks has started incorporating the TV in context system, that places advertisements in the suitable context at appropriate time, for instance when the movie character has an allergy, the commercial with allergy medicine will follow (The New York Times, 2008). Studying connection between the attitude toward the ad and audience's emotional response to the TV programs, Coulter (1998) found that program liking influences the affect on advertisements' evaluation. Therefore, the findings suggest that the higher liking of the program will lead to better attitude towards the embedded ad. In the context of this research related to the online environment, it can be assumed that web site liking might provide similar effects on the attitude towards the ad. However, the web site liking is not controlled in this research since this is another broad topic that incorporates many other factors to consider.

The attitude towards the ad and its determinants were also earlier investigated by MacKenzie and Lutz (1989). Among the other influencing factors previously mentioned in this paper, such as past experience and individual preferences, the researches demonstrated the context influence on attitude towards the ad and brand evaluations. Moreover, the model of influencing factors on attitude towards the ad suggested by MacKenzie and Lutz (1989) states, that editorial context influences the mood, that eventually has in impact on the attitude towards the ad. Therefore, both program or web site liking described earlier in this chapter, and context might influence the attitude towards the embedded ads. The effect of context on the attitude towards the ad and underlying conditions for determining the effect of context will be discussed later in the Chapter 3.

This study will investigate the priming effect on internet forum web-site. Communication of users on the forum web site might have a significant impact on people's perception and judgment and might subsequently affect the users' perception and response to the online banners ads placed on the web pages.

1.2. RESEARCH GAP AND MARKETING IMPLICATIONS

Considering the wide accessibility of the Internet nowadays, it is very easy for customers to search for product information online (Zhu, F., Zhang, X. 2010). Internet provides great possibilities for both consumers to share opinions on a product and companies to advertise the products and promote them via online media channels. Various product reviews shared on the Internet – the electronic word of mouth or eWOM - in written (social media, discussion forums, etc.) and visual (video reviews) forms are influencing the perception and decision-making of other consumers, allowing them to assess products critically before buying. EWOM provides opportunities for potential customers to learn about the experience of a product usage from various people before the purchase and compare their feedback to the company's claims; therefore, eWOM seems to be more credible and trustworthy source of the information. Online discussion platforms are one of the main sources of eWOM, since users are able to share their opinions on various products and then discuss the product experiences. Placing OBAs of the same or similar products on the discussion web pages might contribute to the product perception in different ways, depending on the types of reviews given for the products.

Although the internet advertising is now considered a powerful tool of promoting modern companies, few researchers have investigated the priming effect emerging online. While previous work has been limited to priming effects emerging in the offline space, priming effect occurring online might differ from the findings of priming in the conventional advertisements context. Considering the huge shift of current marketing practices to the online environment, it's essential for marketing managers to understand how the online space might generate priming effect on users and subsequently affect their further behaviour, and that knowledge can be vital for effectiveness of online marketing practices. Moreover, the specific condition when the user generated data is the context for priming effect wasn't studied previously and the findings can shed light on mechanisms of ads placing in the best effective and safest way for the companies.

This paper focuses on the affective priming effect emerging in the Web, namely on the discussion forum web sites. Since each web site has embedded OBAs, the effectiveness of online

ads is an important issue. Considering the anonymity in the internet and possibility for users to post messages on the online forum anonymously or with a fake name, some users might be encouraged to leave unpleasant and sometimes even offensive comments on a topic. Such user-generated content might have a strong priming effect and influence on users' behaviour, including the response to the ads that are placed under or between the discussion messages. Therefore, the issue of marketing automation becomes crucial, since tracking high amount of messages that are posted on the forum every day and matching appropriate advertisement to be embedded might be time consuming and expensive to implement it manually. In comparison, developing a marketing automation tool that is capable of analysing the discussions itself and switching the banners ads on the web site to provide the best solution in a certain discussion page would be beneficial for both web site and company, paying for the advertisement placement.

Advances in the big data analysis would allow utilizing the findings of this research and apply them into practice. Understanding the effect of affective priming occurred online because of the online discussions' emotional tones can contribute to more refined mechanism of ads placing on the web site, e.g. in the cases when congruence of ad and context would significantly influence the users' attitudes and responses to the online advertising banners. An algorithm detecting the discussions' emotional tones concerning a certain topic would highly contribute to the way the OBA's are placed by embedding the ads only in the discussions that create favourable environment for specific products. Incorporating such comprehensive and adaptive approach to OBA's placing would enhance the overall responses to the ads and provide more benefits for the companies.

1.3. RESEARCH QUESTIONS

The main objective of the study is to investigate the affective priming effect arising on the internet forum web pages. Discussions and users' messages are assumed to act as a prime that can affect other users' perceptions of advertising banners placed on the same page. Both thematically congruent and incongruent advertisements will be observed to reveal how the

combination of context and ad influences users' responses to the ads. Response to the ads is the overall term used in the study, that comprises of various variables that indicates how the users' feel about the advertisements, and the variables to measure the response are: attitude toward the ad, attitude toward the brand, ad recall, ad recognition and probability of click.

Main RQ: What is the effect of affective priming and ad-context congruency on users' response to ads?

The study investigates the effect of affective contextual priming in online forums on online advertisements placed on the web site. Previous literature on priming suggests that valence of the context might strongly influence the way advertisements are perceived and responded to. Therefore, the research assumes that different discussion tones that possess emotionally loaded words in the messages might act as primes to affect the cognition and judgment of users. Tone of the discussions creates the affective priming effect on users that are reading or participating in the discussion and this affect is supposed to have an impact on perception of the advertisements that are usually placed below or between the users' messages. Moreover, the congruency of ads with the context is assumed to play an important role in the users' response toward the ads. Hence, the research sub questions relate to affective priming effect and contextual congruence of ads.

SQ1: How does the affective priming influence the users' responses to ads?

The affective priming is assumed to have an effect on the way users will perceive the advertisements depending on the tone of context. The priming effect means that exposure to a certain concept, even if occurred unintentionally and unconsciously, might influence the attitude and reaction toward the following concept. In this study, emotional valence of user generated content (online forum messages) might have an impact on users' moods when they are reading the discussion. In turn, mood can influence the way these people would react to an ad placed on the same web page.

SQ2: How does the congruency of ad and context influence the users' responses to ads?

Congruency studies revealed several different outcomes of congruence effect on ads' response. Thus, when the ad and context are congruent, the evaluations of ads and the advertised brands were higher than in the incongruent condition (Dahlen, 2005; Cannon, 1982). At the same time, some findings in the sphere of ad-context congruence state, that incongruent advertisements are better visible for the audience, since they are distinct from the background context and are easily recognizable from the context (Furnham et al., 2002). Since this research examines the effect of emotional context on the users' response to the embedded ads, it can be assumed that in the case of a strongly negative discussion on a certain topic, the safest option would be placing the irrelevant advertisement, striving to contrast effect. Therefore, the negative affect of people's moods wouldn't associate the congruent products with negative valence and won't create that association for the future. This assumption will be also tested in the research experiment.

1.4. THEORETICAL FRAMEWORK

This study focuses on the influence of affective priming and ad-context congruence on users' responses to the advertising in the environment of online discussion forums. Discussion here is represented as consisting of two main parts – discussion's emotional tone and topic being discussed. It's assumed, that when reading or discussing topics on the discussion forum, audience can be primed contextually with the content's emotional tone, and the priming effect might influence the users' behaviour. The second factor investigated in the frame of this research is ad-context congruence. This concept implies that advertisements embedded in the web pages might be thematically congruent or incongruent with the discussion topic, i.e. relate to similar or different topics. Therefore, the theoretical framework of this research describes the influence of affective priming effect and combination of ad-context congruence on response to the advertisement. The research expects that response to the advertisements will differ depending on the discussion's tone that determines the effect of affective priming and ad-context congruence. Response to advertising incorporates five main variables that will measure the

effect – attitude toward the ad (Aad), attitude toward brand (Ab), ad recall (Adr), ad recognition (Ar) and probability of click (Pc). The theoretical framework is presented on Figure 1.

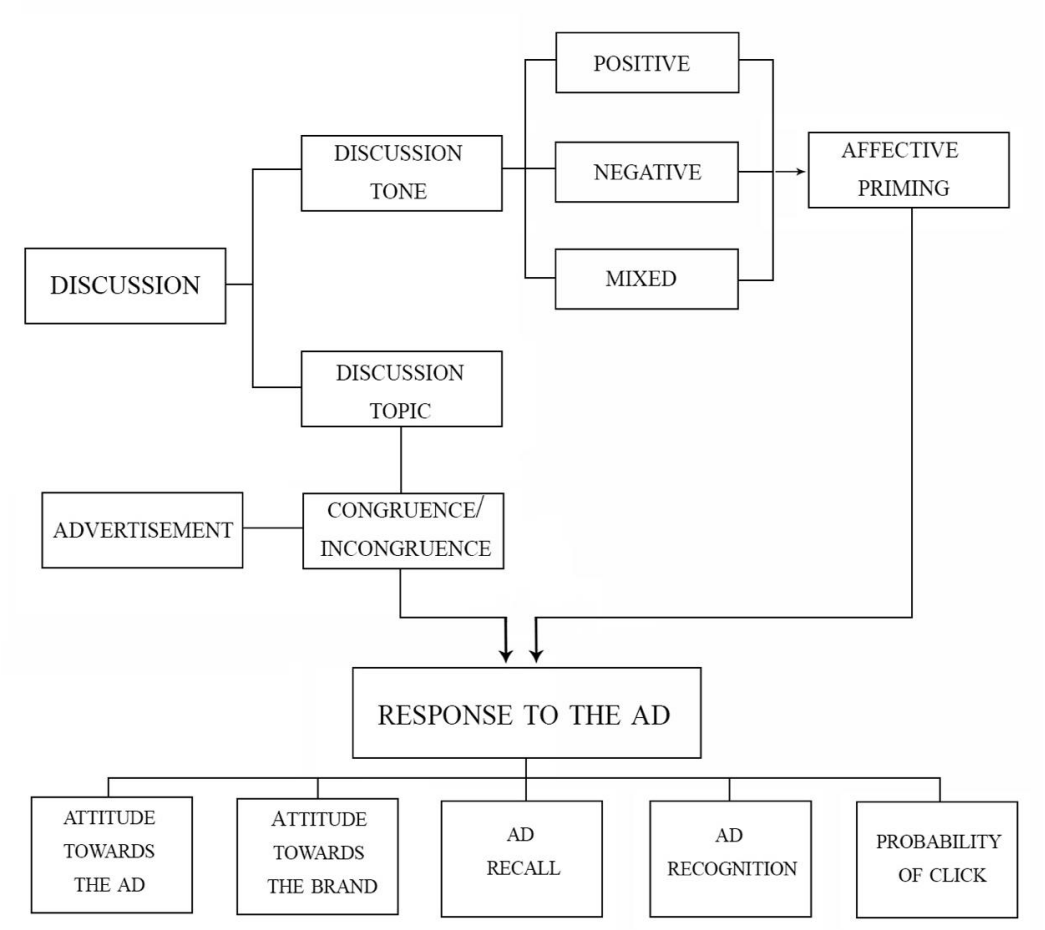

Figure 1. Theoretical Framework.

1.5. KEY CONCEPTS AND DEFINITIONS

Priming – implicit effect of memory when the prior exposure to a certain stimulus influences the response to the subsequent stimulus (Janiszewski and Wyer, 2013).

Affective priming – priming effect occurring because of the valenced target stimuli and relating to changes in judgment of a person to the subsequent stimulus (Spruyt et al., 2007, 95). In the context of this research affective priming relates to effect on consumers' response to the

advertisements after preceding exposure to the advertisement's context (Erdley and D'Agostino 1998).

Valence – emotional value of a concept, e.g. positive or negative (Baumeister et al., 2001, 323).

Ad-context Congruency – similarity of the concepts (De Pelsmacker, 2002, 50); in this study: similarity of discussion topic (context) and advertisement.

Response to ad – concept used in this thesis that combines the variables related to users' overall response to OBAs on the web site.

Attitude toward the ad (Aad) – the concept is defined as "predisposition to respond in a favorable or unfavorable manner to a particular advertising stimulus during a particular exposure occasion" (Lutz, 1985 in MacKenzie, 1989, 49).

Attitude toward brand (Ab) – "relatively enduring, unidimensional summary evaluation of the brand that presumable energizes behaviour" (Spears and Singh, 2004).

Ad recall (Adr) – measure of advertising effectiveness showing the percentage of people who remembers that ad from all the amount of people exposed to the ad. (Television Bureau of Canada, 2014).

Ad recognition (Arc) – variable measuring the percentage of ads that have been recognized by people who have seen them before. (Chun et al., 2014, 363).

Probability of click (Pc) – a metric used in this thesis measuring the intention of users to click the exposed advertisements.

Internet Forum – online discussion platform where users can communicate and exchange information on various topics (PC Magazine Encyclopedia).

Online Banner Advertisement (OBA) – a graphic display that is placed at the web site. This advertisement is commonly used in order to increase the traffic to the advertised web site. (Marketing terms, dictionary).

1.6. RESEARCH DESIGN

The main objective of the study is to understand the way affective priming and ad-context congruency might affect users' perceptions of ads. The experimental study will be used to understand the effect of affective priming and congruence, and the experiment will be implemented on the basis of Finnish online discussion forum. Reward for the participation will be used to attract more respondents to the research.

Primary data will be collected through the survey that imitates the web page of the online discussion forum with designed messages and ads. This model was chosen because it would contribute to understanding of affective priming effect on users in the natural internet environment. In order to keep the environment and users' behaviour as closely to the natural online behaviour as possible, a cover story will be provided to the participants, hiding the original purpose of the study, so the respondents can behave as they would naturally do. Since the study will be conducted with Finnish respondents and mostly the discussion forums in Finland are using Finnish language, the imaginary web pages and messages designed for the experiment will be translated into Finnish language as well.

Discussion forum web site page will be designed purposefully with positive and negative messages to influence users' judgment about ads, and the discussion forum will appear very similar to the actual web site interface to create the feeling of the real online forum. However, since it might be quite rare to find the discussions with purely positive or negative messages, the mixed group of messages will be used as well, with the equal amount of positive and negative messages.

Artificial brand and its advertisements are to be designed as well, to avoid personal brand preferences of users as well as previous experience influence. The design of OBA's is kept as simple as possible to keep the advertisement neutral; the background color is grey, text written on the ads is white, and the content of the ad includes the picture of the advertised product (laptop or a camera), artificial name of the brand, and a short slogan (see Appendix 1 for the advertisements). Such neutral design of the ads is kept to create a situation where the ad is not attracting high level of attention due to its design features, such as vivid colours or animation; rather the experiment's core idea is to test the effect of presented discussion's tone on the OBA, and the main focus of the respondents should be firstly directed towards the presented discussion. Conversely, placing a very eye-catchy advertisement next to the discussion might affect the initial idea of the experiment by shifting the main attention of the respondent to the ad and thereby imposing a risk of responses already influenced by the ads.

The study is 2x2x3 factorial between-subjects design, where the two factors are affective priming occurred because of emotionally valenced context and congruency of ad and context. Two different types of discussions will be provided to compare the effects of congruency, and three different tones of the discussions will be used. Therefore, each respondent will be randomly and evenly assigned to one of the 12 groups to eliminate the influence that might be caused if several different conditions are exposed to the same respondent. Affective priming manipulation will be done through emotional tones of messages on the forum that can prime the respondents in the certain way (positive, neutral or negative).

Independent variables of the research are as follows: affective priming effect (contextual priming with strongly emotionally loaded words) and congruence of ad and text. Dependent variables of the study are: attitude toward the ad (Aad), attitude toward the brand (Ab), recall of ad (Ar), ad recognition (Arc), and probability of click (Pc). The dependent variables relate to the response to ads that is being investigated under the affective priming and congruence condition. Before the experiment, pretest will be carried out to test the tones of the discussion and congruence appearance to the respondents.

1.7. DELIMITATIONS

The study design focuses on the impact of affective priming in the online discussion forums, therefore the results of the research might not be identical for every other types of web sites. Discussion tones used in this research relate to purely positive, purely negative and mixed tones, with mixed consisting of equal amount of positive and negative messages. However, the condition where the same message contains ambivalent information on a product is not studied in this paper due to complexity of including a high number of conditions that might eventually flaw the results. Moreover, since the experiment implies using screenshots of fictitious online forum web page, no interactive effect between the respondent and the users exists, as well as the static nature of OBAs might influence the attention (i.e. OBAs are often very dynamic and eye-catchy due to animation).

Attitude towards OBAs can be affected by respondents' pre-existing attitudes, arose due to previous experiences and possible banner blindness. Skepticism of users towards the advertisements might occur during the research; however, it might be very challenging to control, since such skepticism is a personal attitude. Among the other factors affecting the users' responses to OBAs, previous negative experiences of users were discussed in this paper. Although this is also individual feature, this research will mitigate the effect of possible previous negative experiences using the artificial brand that is not familiar to the respondents, therefore they will not have any negative experiences related to the advertised brand.

Method of the experiment will not include use of eye-tracker; therefore, it is impossible to identify and analyze the paths of users' attention and retention at some subjects. Utilizing eye-tracker in that kind of studies might assist in understanding how the users behave on the web pages after they have been primed. The other limitation of the work relates to the measurement of users' responses, since the variables for analyzing the response don't include other variables commonly used in similar studies, e.g. purchase intention, content appreciation and level of involvement. The study only concentrates on two main factors – affective priming and ad-context congruence, therefore other factors that might be considered are ignored in this research,

e.g. content appreciation. Strong focus on affective priming effect and ad-context congruence is intended to provide the results on how the emotional user-generated content might influence the response to online ad. The described limitations provide the avenue for the future researches in the field of online advertising that could help to enhance and improve the knowledge. The study also limits to the effects of only affective priming (i.e. unconscious responses to the stimuli), not investigating the effects of possible cognitive priming that involves conscious analysis (Kirmani and Yi, 1991). Further studies could also focus on the effects of contextual priming.

Residue effect described in Chapter 2 and representing the residual emotions that are left after a certain event has occurred will not be measured in the scope of this research, since the model of this experiment doesn't expect measuring the effect of emotions in the long-term. However, considering the importance of studying the online behaviour of users nowadays, it could provide the idea for the further researches in the field that could measure the prolonged effect of affective priming on the behavior and decision-making of users online.

1.8. STRUCTURE OF THE THESIS

The first chapter of this paper provides the main idea of the thesis, background of the research and explanation of the concepts used. Background of the study represents literature review on the topic of priming and shows the main studies and information on various priming types. Research questions and theoretical framework of the study are discussed in the first part of the paper as well, along with the key concepts, research design and methodology.

The second section examines theories related to the affective priming concept and explains the mechanisms of priming. Congruence of context and ads is explained in the Chapter 3 through priming effect and cognitive interference mechanism. The experiment and methodology is described in details in the Chapter 4 and conclusions of the study are drawn in the Chapter 5. Chapter 6 provides discussion of the results.

2. EMOTIONS AND DECISION-MAKING

Issue of emotions' influence on decision-making has been widely discussed in the literature by various researchers. Damasio (1994) introduced the somatic markers that can be associated with positive or negative outcome by a person and strongly influence the decision-making and pursuit of a certain behavior. Later, Lowestein and Lerner (2003, 620) have presented the classification of emotions, where the emotions are divided into expected and immediate. Expected emotions relate to anticipated emotional consequences of the result of a certain behavior and immediate emotions imply appearing at the time of decision making. Lowestein and Lerner (2003, 620) argued that although immediate emotions weren't considered in the previous studies, they do have an impact on decision-making by transforming the person's perception of outcome. Thus, they stated that people's behavior is not only determined by the expected result, but can also be changed at any time when a person feels differently than before.

As the importance of emotions to people's behavior and decision-making has been already proved, it is essential for marketing managers to understand the way emotions affect consumers in order to leverage this effect, enhance responses to the OBAs and, consequently, improve the sales. However, more practical approach is needed to make the results applicable for the practitioners and businesses. This chapter presents the concept of priming effect through the prism of theories that attempted to explain the effect, as well as describes the types of priming discussed in the literature. This chapter also focuses on explaining the role of emotions in human decision-making and particularly the interrelation of emotions and affective priming emergence. Overall, this chapter concentrates on presentation of dual-process theory of reasoning and its interpretation in terms of affective priming effect on users' response to OBAs.

2.1. PRIMING THEORIES

Factors causing the effect of priming have been widely investigated by researches and consequently several models were designed in order to develop understanding of the driving

forces of priming effect. For instance, Wyer and Srull (1980) have presented the storage bin model of memory. The researchers argued that the new knowledge acquired by a person is kept at the top of the memory "bin", whereas the oldest memories are stored deeper. Thus, the recent knowledge is fast and easily accessible. The storage bin model proposes, that after the people were primed, they will use the newest knowledge when interpreting and processing the following situation. Therefore, Wyer and Srull (1980) focused on the factor of novelty as vital for the priming effect. In contrast, Higgings et al. (1985) presented the battery model that compares the humans' memory to the battery, suggesting that the frequency factor is crucial for retrieving information from memory. The authors assume, that like in a battery, the activation level of memory is continuous and depends on the frequency of charging. In terms of priming, the model suggests that the more often a person is primed, the more likely is the further use of the primed functions.

The other model frequently used in priming research is the spreading-activation theory firstly suggested by Quillian (1967), and then developed further by Collins and Loftus (1975). The model is build upon assumption that memory represents a sophisticated network of associations between nodes. A concept is considered as a node that has links to other nodes depending on their relativeness to the subject. Links between the nods can be strong (e.g. *red* and *fire* have strong interconnection in the humans' perception) and weak (e.g. *red* and *sunrise*), thus links can be of different criterialities determining how significant is the link for the concept. Collins and Loftus (1975) argue, that activation is spreading between concepts, therefore words related to each other by various attributes become more easily accessible for the memory. For instance, when presenting green color, there is high probability of the very fast recognizing of the word "green". Moreover, the other nods related to "green" might be activated too, for instance "grass". These words in turn generate further associations, and eventually the word "lawn" might be retrieved. Figure 2 shows the example of concepts representation in the spreading-activation theory. Thus, activating the "red" concept might lead to activation of "fire" concept and eventually to "fire engine" and "street".

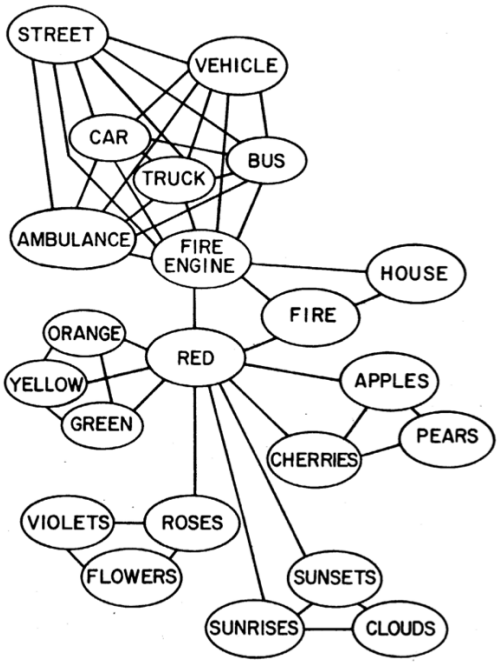

Figure 2. Representation of spreading-activation theory (Collins and Loftus, 1975)

Therefore, activation of the network of nodes starts with the first concepts that a person was exposed to, and then continues accordingly to the individual system of nods created throughout the lifetime. In terms of priming the spreading-activation theory implies that after being primed with a certain concept, the activation is spread on the links of the nods' network, and it is essential to understand that links are themselves working as nodes in this case, e.g. if primed with word "red", the whole relation with the "color" will be involved (Collins and Loftus, 1975, 409).

Other approach that will be mainly discussed in this paper is the dual-process theory of reasoning that explains the concept of priming by two systems that are managing humans' behaviour (Stanovich and West, 2000; Kahneman 2011). The dual-process theory of reasoning implies that there are two systems, named as System 1 and System 2, that are influencing the behavior and decision-making of people (Stanovich and West, 2000). System 1 operates on the unconscious level and deals with simple and affective reactions, as well as the automatic actions that are done by a person on a regular basis (e.g. driving a car when on the empty road, when no strong attention is needed, or reading the text on billboards). On the contrary, System 2 works

with higher attention and cognition, consciously interpreting and analyzing the information. Thus, from the perspective of the dual-process theory, the priming effect might occur during the System 1 activity, when some reactions are emerging quickly and unconsciously, whereas the further analysis and interpretation are analyzed by the System 2 work though the conscious actions. Effect of the dual-process theory will be explained in the details later in this chapter.

2.2. TYPES OF PRIMING

As mentioned above, the concept of priming was widely discussed in the literature over the past 40 years, therefore the current literature provides a deep insight into the priming and its types. Minton et al. (2016) describes three main types of priming, referring to affective, behavioural and cognitive, based on the outcomes of these techniques.

Affective priming

Affective priming implies that a certain stimulus that can affect the feelings or emotions of a person will consistently influence a persons' behaviour and thoughts. For example, target word *wedding* will be processed and responded to faster and more accurately when preceded with congruent word (e.g. *happiness*) than if primed with incongruent word of opposite valence (e.g. *corpse*) (Yao and Wang, 2013, 269). The affective priming effect was discussed in the research of Spruyt et al. (2007), where response time to pictures was investigated. When two congruent pictures were displayed (e.g. both pictures showed happy emotions), the response time was shorter. The same result was yielded in the researches of other authors (Fazio et al., 1986; Hermans et al., 1994). The affective priming was also investigated in terms of words' concreteness; thus, Yao and Wang (2013) found strong effect of the positive congruent-abstract words, whereas concrete and negative words didn't reveal fast responses and priming effect. Most of the literature on the affective priming topic has concentrated on the arousal and valence perspectives (e.g. De Houwer et al., 2002; Ferguson et al., 2005; Duckworth et al., 2002) and the results in general indicate faster responses when the prime and target were of the same

valence, rather than of the opposite. Table 1 summarizes the main findings of the literature on affective priming.

Table 1. Affective priming literature summary

Authors	Research	Results
De Houwer, J. D., Hermans, D., Rothermunf, K., Wentura, D. (2002)	Affective priming effect entailed by different valence and congruency of primes	Congruency significantly facilitates the interpretation of subsequent stimuli
Duckworth, K. L., Barght, J. A., Garcia, M., Chaiken, S. (2002)	Priming effect of the novel stimuli	Exposure to novel prime is evaluated automatically and influences interpretation of the subsequent stimuli
Fazio, R. H. (2001)	Overview of automatic attitude activation and affective priming	Literature on affective priming has experienced significant progress during the last 20 years. Further research in the field recommended for mediating mechanisms and complexity of associative evaluations.
Ferguson, M. J., Bargh, J. A., Nayak, D. A. (2004)	Affective priming and automatic evaluation of subsequent stimuli after being primed with words of different valence	Automatic evaluations have impact on judgement of the following stimuli
Spruyt, A., Hermans, D., Houwer, J. D., Vandromme, H., Eelen, P. (2007)	Congruency effect on affective priming	Congruency proportion of priming stimulus affects the priming effect in the evaluation function but doesn't has impact on naming task
Yao, Z., Wang, Z. (2013)	Impact of concreteness of emotional words on affective priming	Affectively congruent-abstract concepts are processed faster than incongruent-abstract concepts
Yi, Y. (1990a)	Interpretation of ambiguous product information	Affective priming strongly influences ad effectiveness through attitude towards the ad.
Coulter, K. S. (1998)	Effect of emotions to TV programs on attitude toward the ad	Program liking influences the program-induced affect on evaluation of advertisements

Behavioural priming

Behavioural priming refers to "increased participation in prime-activated behaviours" (Minton et al., 2016, 3). In other words, behavioural priming means that a certain prime can influence or

alter the behaviour of consumers. Literature on the topic of priming has provided a large variety of behavioral priming studies. Effect of priming on behavior was investigated, for instance, in the study of Fitzimons et al. (2008), where brand logos were served as primes before the creativity task. The participants were firstly exposed to the logo of either Apple or IBM and then implemented the "unusual uses" test. As a result, people primed with Apple logo behaved more creatively than the IBM primed participants. The interesting fact is that Apple logo wasn't perceived more attractive or positive by the participants (Fitzimons et al, 2008, 25). Therefore, the image of the Apple company as highly innovative and creative, supported with the marketing slogans like "Think Differently" is able to unconsciously activate the creativity in the primed respondents.

One of the experiments conducted by Bargh et al. (1996) shows the unconscious influence on the people's cognition and behaviour by priming. Participants of the experiment were divided into two groups, where one of the groups was given list of neutral words for the scrambled-sentence task, and the second group had the words related to elderly stereotype, such as *old, lonely, retired,* etc. Eventually, participants that were primed with the elderly condition had slower speed of walking when leaving the office. At the same time, no participants have admitted that the experiment could influence them in any way. The experiment was replicated and revealed the same results, what can indicate that people can be primed and then behave differently unintentionally. Bargh et al. (1996, 242) state that it is possible to trigger social behaviour automatically by environment features. Other researchers on the trait construct have also proved that the recent use of a stereotype might have unintended influence on the behaviour (see Higgings, 1989; Wyer and Srull, 1989). Unintentional effect of priming on consumer behaviour was also investigated in the study of North et al. (1999), where the wine department was researched for two weeks. When the French music was played in the department, French wines outsold the German ones and vice versa, therefore the people were primed with music and this influenced their product preferences.

Minton et al. (2008) suggested two subtypes of the behavioral priming in their framework – procedural and goal priming techniques. Procedural priming has long-term effect on a consumer

behaviour compared with other priming method. When researching the procedural knowledge, Shen and Wyer (2008) and Smith (1990) have found the effect of procedural knowledge to develop slowly or after a short delay, but having a long-term impact. Goal priming oriented to a certain goal achievement can change the customers' behaviour by pursuing the achievement. One of the main differences of goal priming is that the goals decay after they are achieved and people are not intended to pursue the previous behaviour (Forster et al., 2009). Table 2 represents brief overview of behavioral priming studies.

Table 2. Behavioural priming literature summary

Authors	Research	Results
Bargh, J. A., Chen, M., Burrows, L. (1996)	Automatic activation of trait constructs and stereotypes	Priming with trait constructs and stereotypes yield unconscious activation and influence on the behaviour
Devine, P. G. (1989)	Effect of automatic stereotype activation on prejudice	Stereotypes on a certain race can get activated automatically and unconsciously, even if contradicts with the persons' beliefs, therefore allowing unintentional race bias
Fitzimons, G. M., Chartrand, T. L., Fitzimons, G. J. (2008)	Brand exposure effect on behaviour	Brand exposure leads to automatic activation and unconscious effect on behaviour
Higgings, E. T., Bargh, J. A., Lombardi, W. (1985).	Priming effect on categorization of stimuli	Categorization of the subsequent stimuli based on the recently exposed prime after the short delay; categorization based on more frequent primes after the long delay
North, A. C., Hargreaves, D. J., McKendrick, J. (1999)	National associations priming by music	Music primes related knowledge and entails unconscious effect on behaviour
Strauman, T. J., & Higgins, E. T. (1987)	Automatic activation of personal discrepancies	Attributes relevant to the personality automatically activate cognitive structures and mismatches cause emotional discomfort
Wyer, R. S., Srull, T. K. (1980)	Accessibility of primed structures and social perception based on traits	Enhanced accessibility of the trait category increases the probability of this category to be used in the interpretation of subsequent information

Cognitive priming

Cognitive priming relates to changes in the thoughts influenced by the prime (Minton et al., 2008). The research of Youjae Yi (1990a) on priming in printing advertising showed that priming customers with the context does have the impact on customers' perception of the product. For instance, crime story can activate safety issues in the customers' minds and interpretation of the following product advertisement will be based on this activated attribute. Active concepts are more accessible when interpreting information, and it is highly likely that customers will use these concepts in the products analysis. Contextual materials activate certain product attributes that guide customers on how to interpret the product information (Yi, 1990b). The researcher also argues, that this way can influence the consumers' beliefs on the advertising brand, and the key factor is to activate the appropriate attribute in the ad context. De Pelsmacker et al. (2002) investigated the effect of context and ad congruency on the ad effectiveness (namely, attitude towards the ad and brand recall), and found the relationship between the level of involvement into context and ad-context congruency. Congruency of context and ads was also researched in other and the researches highlight the importance of congruency between ad context and mention, and result in higher brand and ad evaluations studies (Yi, 1990b; Schmitt, 1994; Gardner and Wilhelm, 1987).

Contextual priming as a method of cognitive priming is of a great interest particularly for the marketing field, since contextual advertisements are able to outperform the conventional ones (Chun et al., 2014), due to a high interest of customers toward a particular topic. Previous studies on context priming have indicated the influence of contextual priming on the customers' decision-making and attitudes toward the brand and ad. Moreover, the effect of priming is rather implicit and consumers are usually not consciously aware of influence, as reported in the studies (see Shmitt, 1994; Bargh et al., 1996; Ferguson et al., 2004). Contextual priming emerges in the situation when people are influenced by the context information, e.g. article content or even article headline, and perceive further stimulus through the primed concept, e.g. when reading negative comments about a certain car brand, the online ad of a car on the same page might be perceived negatively. When the context positively primes certain attributes that relate to the

advertised product, the overall ad and brand evaluations will be increased. Moreover, the perceived consistency of context and advertisement yields higher responses and better evaluation of such advertising, as described above. Although the priming effect doesn't always entail positive results, it is still possible to manage the content and ads presented on the web pages. Table 3 summarizes the findings of cognitive and contextual priming effects.

Table 3. Cognitive priming literature summary

Authors	Research	Results
Chun, K. Y., Song, J. H., Hollenbeck, C. R., Lee, J. (2014)	Effectiveness of online contextual advertisements and complexity of OBAs	Contextual advertising increases brand recognition and positive attitude toward the ad; less complex contextual advertising yield better recall and attitude
Dahlen, M. (2005)	Creative media choice as a context	Creative media in the ads enhances brand attitude and ad credibility. Congruence of context and product and surprise are important
De Pelsmacker, P., Geuens, M., Anckaert, P. (2002)	Context appreciation effect and impact of congruency of context and ad	Higher appreciation of program automatically might enhance the evaluation of ad placed in this context; low involved users have better attitude toward the add embedded in congruent context; highly involved customers rate higher contrasting context and ad
Gardner, M. P. & Wilhelm, F. O. (1987)	Context-induced mood effect on advertising effectiveness	Context-induced mood has a significant impact on attitude toward the brand and ad; ad-type itself influences attitude
Goldberg, M. E. & Gorn, G. J. (1987)	Mood of TV program influence on perception of embedded commercials	Commercials are more effective when embedded in happy programs
Meyer & Schvaneveldt (1971)	Semantic effect in recognizing pairs of words	Retrieval framework designed based on the research
Schmitt, B. H. (1994)	Contextual priming of visual information	Context influences interpretation of the visual information especially if the ambiguity is present; positive and negative primes have equal priming effect on nonverbal information interpretation
Soldow, G. F. & Principe, V. (1981)	Involvement influence on commercials effectiveness	Commercials are less effective in highly involving environments
Yi, Y. (1990a)	Contextual priming effect on advertisements' perception	Contextual cognitive priming influences the ad's interpretation; cognitive priming influences through attitude toward the brand.

Yi, Y. (1990b)	Contextual priming effect	Ambiguous advertising information can be interpreted in terms of the exposed factors, that can prime certain attribute of a product
Yi, Y. (1993)	Contextual priming effect	Contextual information primes customers and moderates brand and ad valuation

This research will focus mainly on affective priming method to reveal the effect of online discussions' emotional tones on subsequent evaluation of advertisements, which can be thematically congruent or incongruent with the related discussion web page. Majority of literature provided in the marketing field on priming topic was focused mainly on printed advertisements, and studies on priming effect acquired in the online space is scarce. However, considering the significant move of marketing and advertising to online spaces, it is essential to investigate and understand the crucial factors that influence the ads' effectiveness. Although the previous literature based on conventional print advertisements does provide important insights into the priming and its effect on advertising, the internet advertising might be exposed to other factors. For instance, the online space is more dynamic and noisy than in printed publications, and that can easily distract users as well as easily attract their attention. Moreover, the overwhelming number of online ads are exposed to people of the whole world every day and there is a huge competition for the users' attention to the ads; therefore, understanding the driving forces that might increase the effectiveness of ads and make people click or remember a certain advertisement is crucial nowadays. As found in the multiple studies, the advertisements are always placed in some environment, and this context influences the perception and evaluation of ads. Hence, it is vital nowadays to reveal the way context might influence people's response to the advertisements.

2.3. DUAL-PROCESS THEORY OF REASONING

Psychological research has provided a lot of papers on emotions' effect on decision-making (see, e.g. Damasio, 1994; Baumeister et al., 2007). Results of these studies appeared different depending on the experiments and perspectives of the work. Some of the authors stated, that emotional state might influence the people's behaviour and be the driving force for the irrational

or even self-destructive results. Pure rationality was supposed to provide the best decisions not influenced by emotional factor, and based only on prudent intentions. (Leith and Baumeister, 1996). For instance, the term of "impulsive buying" reflects the negative influence of emotions, that makes customers vulnerable for some marketing techniques and makes them behave differently than they would do without any influence. In that sense, the emotions seem to provide an adverse effect on people's behaviour and decision-making.

However, the psychological literature that focused on the absence of emotions caused by brain damages revealed, that lack of emotions prevented people from rational decision making in a way that people were unable to learn from their own mistakes (Damasio, 1994). Therefore, the researcher has highlighted the need for emotions, that can unconsciously guide people's thinking and behaviour. Emotions are essential for the personality, because they determine our self that differentiates our thinking from e.g. thinking of a computer (Smith and Kemp-Wheeler, 1996). Thus, the researchers agree in the sense that emotions are inherent part of humans' personality and they might have an influence on behavior and decision-making through various mechanisms (see also Baumeister et al., 2007; Schwarz, 2000; Lowenstein and Lerner, 2003).

Despite the long-term studies in the field of emotional impact on decision-making, no uniform framework existed that would fully explain the impact of emotions on the behaviour. Two main conflicting approaches were generally undertaken by the researchers, with one perspective stating that emotions have a direct and immediate impact on the decision-making (see Kunst-Wilson and Zajonc, 1980) and the other arguing that decision-making process works through cognitive processes that afterwards influence the behaviour (Baumeister et al., 2007). Chaiken and Trope (1999) stated that automatic effects and conscious emotions are related to two different types of cognitive processes that are always analyzed by the brain. However, in their paper on emotional effect on behaviour, Baumeister et al. (2007) argued, that avoidance of cognitive processes by the emotions relate to simple and fast automatic reactions that don't need conscious analysis, and more complex emotions are on the contrary analyzed and processes consciously. Therefore, the results of these studies pointed on two distinct processes, one of

them responsible for fast reactions that don't require strong analytical processing, and the second that implies slower conscious analysis of a person.

Automatic processes that are mainly unconscious and inherent to almost all the forms of organisms have a strong influence on the behaviour. In contrast, conscious processes are always controlled and analyzed, and although their influence is more limited compared to the automatic affects, the conscious processes enhance the adaptability of behaviour. (Bargh, 1994) When investigating the nature of conscious emotions, Damasio (1994), Baumester et al. (2006), and Baumeister (2005) discovered that one of the functions supported by conscious emotions is the creation of a residue after certain events occur, so the subsequent similar event would produce the automatic effects as a response to them. For instance, if after a certain event a person feels sad, the upcoming similar event would automatically make a person feel this way by creating a strong association, and thereby avoiding processes of experiencing the entire emotion again. The same applies to good emotions, when exposure to a similar event will influence a person's feelings. However, although both positive and negative emotions give rise to the residue effect, the negative emotions were found to produce more residue and stronger effect that transfers to the following situations (see Baumeister et al., 2001). The researchers state that people are more sensitive to bad emotions and that can be the explanation for this effect. Since negative emotions can be considered dangerous for the human's survival, the brain's aim is to avoid these emotions; thus, such strong response to the situations entailing negative feelings can be a protective mechanism of our organisms. Therefore, this effect might stem from the organisms' desire to survive, and the situations that induce negative emotions might be considered dangerous by the organism and the effect arises every time a similar threat emerges. In this research, the residue effect will not be measured due to nature of the experiment, that will be conducted only one time.

Despite the previous conflicts in defining a single way that emotions influence decision-making, a theory combining these two approaches has emerged and attracted the attention of researchers. The dual process theory was firstly suggested by William James in 1890 and stated that emotions influence automatic, simple affective reactions (e.g. liking something) and this effect might

influence fast decision-making. This study assumes that affective reactions generated during the exposure to a web page might affect the online behaviour of the users, i.e. responses to the embedded ads. In the scope of this research, it is assumed that reading discussions on the online forum web site will produce fast affective reactions of users depending on the emotional tone of the discussion, and subsequently these affective reactions will affect the responses to the embedded advertisements placed on the same web page. Since the affective reactions originate quickly and even unconsciously, the respondents themselves could be unaware of this effect, and the findings on the users' behaviour online could be very beneficial considering the role Internet is playing now for the business.

In his book, James (1890, 451) stated, that "the stream of our thought is like a river. On the whole, easy simple flowing predominates in it, the drift of things in with the pull of gravity, and effortless attention is the rule. But at intervals a log-jam occurs, stops the current, creates an eddy, and makes things temporarily move the other way. If a real river could feel, it would feel these eddies and setbacks as places of effort". Therefore, the researcher defined the prerequisites for the modern, developed and modified, dual-process theory of reasoning, that was earlier named him as "pluralistic monism". As James (1890) explained the two processes, the experience comes only when a certain event was processed consciously and with attention, otherwise even if attending to a situation but not turning on the consciousness, the experience will not emerge. Later, similar theory was developed by Evans in 1984, when he proposed heuristic and analytic processes to be responsible for the dual process reasoning model. Current interest for the dual processing theory was reflected in the area of decision making (e.g. see Gilovich and Griffin, 2002) and neuropsychology field (Evans, 2003).

Among the recent researches on dual process theory, Daniel Kahneman has greatly contributed to the development and understanding of the system. Kahneman (2011) has adopted the terms of System 1 and System 2 initially proposed by Stanovich and West (2000) to explain the way two different processes influence people's decision-making. Since a strong attention was paid to the topic, various names for the processes were designed, depending on authors. For instance, the two systems guided human behaviour were called as heuristic and analytic (Evans, 1984),

automatic and controlled processing (Shiffrin and Schneider, 1977), and associative and rule-based systems by Sloman (1996). Table 4 represents the main names for the processes as well as their properties proposed by various researchers.

System 1 relates to fast and unconscious reactions generated to an object or a situation, as well as daily activities that are operated by people automatically without analysis. As seen from the Table 4, the main names of the System 1 relate to associate system, implicit cognition or automatic processing. These names point the main properties of the System 1, that unconsciously and automatically works through associative processes. On the other hand, suggested names for the System 2 relate to analytic processing, rational system and controlled processing (see Table 4). The System 2 is a more demanding process that requires analytical and conscious thinking. Therefore, the dual-process theory is a representation of two distinct processes that are guiding humans' behaviour depending on a situation. More detailed characteristics of each of the Systems are described in the next subchapters.

Table 4. Terms and properties of the two systems. Source: Stanovich and West (2000)

	System 1	System 2
Dual-Process Theories:		
Sloman (1996)	associative system	rule-based system
Evans (1984;1989)	heuristic processing	analytic processing
Evans & Over (1996)	tacit thought processes	explicit thought processes
Reber (1993)	implicit cognition	explicit learning
Levinson (1995)	interactional intelligence	analytic intelligence
Epstein (1994)	experiential system	rational system
Pollock (1991)	quick and inflexible modules	intellection
Hammond (1996)	intuitive cognition	analytical cognition
Klein (1998)	recognition-primed decisions	rational choice strategy
Johnson-Laird (1983)	implicit inferences	explicit inferences
Shiffrin & Schneider (1977)	automatic processing	controlled processing
Posner & Snyder (1975)	automatic activation	conscious processing system
Properties:	associative	rule-based
	holistic	analytic
	automatic	controlled
	relatively undemanding of cognitive capacity	demanding of cognitive capacity
	relatively fast	relatively slow
	acquisition by biology, exposure, and personal experience	acquisition by cultural and formal tuition
Task Construal	highly contextualized	decontextualized
	personalized	depersonalized
	conversational and socialized	asocial
Type of Intelligence Indexed:	interactional (conversational implicature)	analytic (psychometric IQ)

2.3.1. System 1

As discussed by Kahneman (2011), the two systems are shaping humans' behaviour, thoughts and eventually decision-making through different mechanisms that are activated by various situations. Thus, the main distinction between System 1 and System 2 is that System 1 works on an unconscious level and is always active, taking the responsibility of interpreting fast and usual information and working through previous habits, emotions and experience. Evans (2003, 454) argued, that System 1 is old and shared with other animals, whereas System 2 is recent in terms of evolution and reflects the humans' side through abstract reasoning and hypothetical thinking. However, the memory and attention capacity of System 2 is more limited, as it requires more efforts and energy from the organism.

System 1 helps people to save time and effort, and as mentioned by the author many times, efforts and especially energy spent on these efforts are significant for the organism. Since every living creature strives to survive, saving efforts for the future is essential and vital to all organisms, therefore the brain tries to devote minimum of efforts on solving everyday problems. According to Kahneman (2011, 35), System 1 is shared by all the animals, and allows us perceiving the world, orienting our attention and feeling fear when the danger to our life emerges nearby. One of the examples of the System 1 work suggested by the researcher was the fear of a large animal – if imagine that a person would face a tiger in the natural environment, the mechanism of the System 1 would work through launching the sense of fear and making a person run or escape the tiger. During this process, a human doesn't have time to analyze the possible danger and outcomes, such as the size, speed and hunger of a predator, because this can cost a life; rather the process happens in fractions of a second without conscious analysis and interpretation of the situation. In a daily life, the responsibilities of a System 1 can be spread on basic daily activities such as reading the words written in a large font on the streets billboards and driving a car "automatically" when the road is empty.

A significant feature of the System 1 is that it is always active and people cannot stop using it, e.g. even against our will we will still understand the words told to us in our native language – and that's what System 1 is also automatically responsible for. The other example of the System 1 work is reflected in the Muller-Lyer illusion (Figure 2). The two lines drawn on the picture are perceived as being different in length, and this is the feeling perceived by the System 1. However, if measure the lines with a rule it becomes evident that length of these lines is the same, but the arrows on the sides create an illusion of different sizes, and at this point System 2 is taking over the thinking. The interesting fact is that even after measuring and understanding that the lines are of the same length, people still seeing them as different – meaning that System 1 is still prevailing against our will.

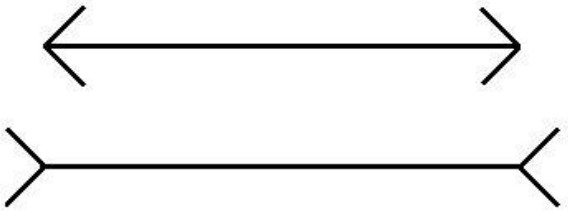

Figure 3. Muller-Lyer Illusion.

According to the findings of McLeod et al. (1998) description of the System 1 processes can be in associative learning processes. Moreover, as stated by Evans (2003, 454) processes of System 1 are very fast and automatic, and only the final product is felt consciously by a person. System 1 works swiftly and helps people to make very fast solutions, that are hard to change or adjust analytically because of the speed. One of the examples of System 1 work can be automation of stereotypes, discussed in the research of Bargh (1996). The researcher found, that exposure to a features distinctive to a particular group forms an automatic activation of stereotypes. The explanation of this phenomenon stands in the ability of System 1 to simplify the information for processing and labeling subjects in order to make a fast decision.

As stated above, System 1 is always active without conscious control of this function and the system mainly operates automatically and quickly. When interpreting the impressions and feelings, System 1 forms a base for the further beliefs and choices of System 2 (Kahneman, 2011). While System 1 receives the emotional condition as a response to the environment, it's incapable of creating deep thoughts and beliefs, since that require more profound and slower approach of the System 2 (Kahneman, 2011, 34). Therefore, the System 1 might be called a basic process characteristic to most of the animals, quickly guiding the simple and everyday decisions in order to save the time and energy on decision-making in ordinary situations.

2.3.2. System 2

The development of System 2 is quite recent in evolutionary terms (Evans, 2003) and the system is perceived to be uniquely human. More slow processes of the System 2 define its low-effort

mode that is on most of the time, whereas the System 1 is capable of processing the situations itself. The sequential nature of System 2 uses the central working memory system to proceed and that was of a great interest for the psychologists (Evans, 2003, 454). System 2 works through analysis and logic, stands for rational thinking and is only activated if the System 1 can't make the appropriate conclusions. As explained by Kahneman (2011), System 1 is vital to all the animals and this determines the simplicity of the process. On the other hand, System 2 is vital to humans, and this defines our ability to think rationally and logically.

As described by Kahneman (2011), System 2 is quite "lazy" to work, since it consumes a lot of efforts and mental activities, and as already mentioned, our organism tries to minimize unnecessary energy consumption to ensure later survival. Therefore, System 2 is active when the humans' attention is activated, e.g. searching some concepts in our memory, parking a car in a narrow place, filling in a tax form. All similar actions make people concentrate, focus their attention and think carefully. Essential fact about the systems is that we cannot control whether we use System 1 or System 2 in our thinking, and moreover we cannot notice the moment when the prevailing effect is devoted to a certain system. Moreover, humans have a limited capacity of attention that is required for noticing and analyzing situation, and this capacity varies among different people, therefore when concentrating our attention on a certain concept, the attention is drawn from the other ones (Evans, 2003; Capon et al., 2003; Markovits et al., 2002).

The "Invisible Gorilla" study conducted by Chabris and Simons (1999), has proved this fact. The experiment involved people that were watching a video with a basketball game with a task to count all the passes in one team. During the match, a woman in a gorilla costume comes in and stays in the middle of the scene for several seconds. The findings state, that half of the participants haven't noticed the appearance of a gorilla and were sure that this couldn't happen because otherwise they would notice such surprising event. This study represents the limits of our attention and blindness that occurs when people are focused on a particular factor. In terms of dual-process theory, System 2 is active at the time people are concentrating on counting the passes during the game and that explains the occurred blindness to other actions on the video, since System 2 consumes a lot of mental activities and efforts, and can't keep focus on all the

actions simultaneously. The highlighted factor was that people who didn't notice a gorilla in the video couldn't believe that they could skip such an obvious and noticeable object.

Although the System 2 possesses limited capacity and slower overall speed of processes, it allows people thinking hypothetically and abstractedly. It means that people can make decision based not only on the previous experience of similar situations, but also building the hypotheses and predicting possible outcomes of a certain behavior.

Both System 1 and System 2 are always activated with the difference of their modes – System 1 is always working in its full capacity, and System 2 is usually in the low-effort mode and turns on only if needed. System 1 is prevailing in our daily life decision and actions, and is rarely modified by the System 2, for instance people usually trust their impressions, feelings and desires (Kahneman, 2011, 39). The Table 5 incorporates the main distinctive features of these systems combined by Evans and Stanovich (2013) from different sources to create overall understanding of the systems' attributes.

Table 5. Attributes of dual-process systems. Source: Evans and Stanovich (2013, 225)

Type 1 process (intuitive)	Type 2 process (reflective)
Defining features	
Does not require working memory	*Requires working memory*
Autonomous	*Cognitive decoupling; mental simulation*
Typical correlates	
Fast	Slow
High capacity	Capacity limited
Parallel	Serial
Nonconscious	Conscious
Biased responses	Normative responses
Contextualized	Abstract
Automatic	Controlled
Associative	Rule-based
Experience-based decision making	Consequential decision making
Independent of cognitive ability	Correlated with cognitive ability
System 1 (old mind)	System 2 (new mind)
Evolved early	Evolved late
Similar to animal cognition	Distinctively human
Implicit knowledge	Explicit knowledge
Basic emotions	Complex emotions

As summarized in the Table 5, the main features of the System 1 relate to fast speed of operation, unconscious and automatic type of work and associative thinking. On the other hand, System 2 is characterized by such features as slow process with limited capacity, but allowing for conscious and consequential decision-making. Moreover, System 1 embraces the basic emotions, whereas System 2 creates more complex emotions intrinsic to humans. The further development of the dual-process theory is described in the next section.

2.4. DUAL-PROCESS THEORY ONLINE

As described in previous section, both systems are always active differing in a mode of their activity. Thus, applying the dual-process theory of reasoning into scope of this research, namely users' online behaviour, both systems will participate in the information search and discussion forum communication. Firstly, System 1 will be responsible for the scanning and clicking

behaviour, since these types of activity don't require strong analysis efforts to understand whether a web page is worth to open. As explained by Mathewson and Moran (2016), search results scanning and clicking is very familiar to the users, like the driving habits, hence users don't have to think much when making those activities. Further, System 2 turns active when the content is read and digested. Therefore, System 1 will form the initial attitudes toward the web page and content through fast responses to the indicators on the web page, in case of this paper through emotional tone of the messages and the System 2 will analyse the actual content and its applicability to the search need. The experiment conducted within the framework of this research will observe the System 1 effect by measuring the attitudes towards the web site after the exposure to this web site's page.

Online behaviour can be more likely affected in the rapid way since when being exposed to large amounts of information, users are swiftly choosing whether they continue to read an article or switch to the other web page. Moreover, fast responses are also caused by familiarity of the activity, since nowadays most of the people use the internet on a daily basis and have brought searching the information online to automatized process. The same applies to the exposure to advertisements, since almost every web site now is containing various OBAs. This research is focused on an effect that emerges when certain emotions evoked during the web site surfing might define the users' responses toward online ads. Hence, as the System 1 operates fast responses to the external conditions, it is supposed that affective reactions might flow in an unconscious manner in the situations requiring simple reaction and the online behaviour is eventually influenced. According to Klauer (1997), a cognitive appraisal model of emotions states that people assess stimuli as a positive or negative at a very early states of emotions' emergence; therefore, the labelling an object with a certain valence is done very fast. Hence, this paper will research the effect of emotional discussions on the provided web page on users' responses to the OBA embedded on the web page. According to the discussed studies, the presented discussions will quickly form an attitude of the users towards the presented web site, that will subsequently affect the responses to the OBAs (the measured variables related to the responses to the ads are attitude towards the ad, attitude towards the brand, ad recall and probability of click).

The term “affect” relates to automatic responses to situations, as defined by Baumeister (2005). Applying the dual process theory to priming effects, it can be assumed that affective priming would relate to the fast responses directly guided by emotional state of a person sometimes so fast that it happens unconsciously. Such reactions have to be short and simple, allowing emotions experienced at the moment to have a direct impact, and avoiding cognitive processes that might delay response to the stimuli, i.e. such reactions would relate to the scope of System 1 functioning. Baumeister (2005, 247) highlights, that affective reactions relate to a quick emotional feeling, such as perceiving an object good or bad. Moreover, Winkielman and Tryjilo (2007) argue that affect can be also distinguished on the basis of valence, i.e. if something is positive or negative. Studies supporting the dual emotional process theory also emphasize the difference between an affect and a complete emotion. It has been proposed, that in comparison with a complex emotion, that involves cognitive mechanisms for its analysis, affect is a quick and simple response. Affective responses can emerge automatically and very swiftly, taking tiny fractions of a second, and similarly they can scatter fast as well. Due to their fast emergence and high influence on the subsequent emotions and behaviour, affective responses guide the human’s behaviour to any type of situations. Considering the simplicity of this phenomenon, it is possible that such responses of an opposite valence are experienced at the same time to the same stimulus.

This study concentrates on the assumption that affective reactions generated in response to the stimuli will subsequently affect the further behaviour; therefore, exposure to an online web page with the context of a certain valence (positive, negative or mixed) might affect the users’ behaviour and influence their decision-making as well as perception of the web page. Thus, the responses to the embedded ads will be measured after the exposure to understand the nature of affective reactions in the online environment.

Moreover, the effect of affective response might be also influenced by halo effect, explained by Kahneman (2011) in his book about dual-process theory of reasoning. The halo effect implies the overall judging based on single like or dislike, for instance when feeling a sympathy towards a person, all of the related features of that person can appear attractive as well, such as the voice,

manner of speaking, the way of thinking as well as the external attributes. On the contrary, when a person is causing a disgust, the whole character can be seen unpleasing. The same can be applied to an online forum that is a core of this paper research. For example, if the web site users like the web page and discussion, they will probably be positively set towards the other information upcoming on the web page, if they don't have specific banner blindness or negative attitude towards the advertising. Therefore, the prestige of the web site can influence the attitudes towards the advertisements on that page. Measuring halo effect in this study might be challenging due to the experiment design, since the respondents will be only provided with a screenshot from the unfamiliar fictitious web page.

2.5. AFFECTIVE PRIMING ONLINE

Advertisements are not existing in a vacuum, rather the ads are usually embedded into various types of context, e.g. editorial (articles), video (TV programs), audio (radio) or even user generated (social networks). Since the primary intention of a user is directed toward the context, an increasing number of studies in 20th century have pointed the importance of surrounding context on the advertising effectiveness (see Yi 1990a, 1990b, 1993; Gardner and Wilhelm, 1987; Goldberg and Gorn, 1987). For instance, in their review of priming effect on advertising effectiveness, Yi and Kirmani (1991) argued that context of advertisements provides at least two types of impact on ads' effectiveness – affective and cognitive influence. The difference between those two is that affective influence has a quite fast effect based on mood induced during the exposure to the context. Affective reactions are usually directed towards the attitude toward the ad that subsequently might have effect on evaluation of brand and intention to buy a product. On the other hand, cognitive effect of context relates to processing of product information in a conscious way (Yi and Kirmani, 1991; Yi, 1990b). This paper focuses on affective priming effects emerging in the highly emotional user-generated context.

The importance of advertising context was investigated by many researchers recently, and overall results indicated influence of the context on the advertising effectiveness. Thus, when studying the automatic priming effects, Erdley and D'Agostino (1988) have concluded, that

when exposed to the advertisements, people automatically and unconsciously generate affective responses to the context, and these responses might influence the further decision-making of the consumers. Lutz (1985) argued that users' affective state at the time of exposure to the ads is determinative to the attitude towards the ad. The significance of context's effective tone was also stated by Goldberg and Gorn (1987) in their research on how tone of the TV programs might influence the commercials perception. Overall, the marketing and psychological studies provided on the subject of affective responses and emotional effects on ads' effectiveness resulted in higher evaluations of advertisements when the context was more positive and lower evaluations when the content evoked negative feelings.

Advertising context usually has an emotional tone that can entail affective reactions. Several studies have investigated the effect of evoked emotions on the attitude towards the ad, and its subsequent effect on brand evaluations (see, e.g. Erdley and D'Agostino 1988; MacKenzie and Lutz 1989). In general, previous literature has focused on the assumption that the effectiveness of commercials can be enhanced by embedding advertisements into positive and happy context (Coulter 1998; Goldberg and Gorn, 1987). Since the perception and evaluation of advertisements is a complicated issue involving various factors, the other constructs were paid attention in the literature, such as program liking (Murry, Lastovicks and Singh, 1992). While emotions induced during exposure to the context (e.g. TV program or editorial context) relate to a temporary effect, program liking provides more stable base for judgement, supporting the halo effect explained by Kahneman (2011). Overall, the studies have revealed that the same valence of program liking and emotions evoked by a program lead to easier prediction of the possible ads' evaluations (Goldberg and Gorn 1987). When liking and emotions are positive, the higher assessment of the embedded ads is highly possible, whereas both negative feelings induced by the program with a negative attitude towards the program will entail worse evaluations of advertisements. In a case when program liking and feelings induced by the program are of the opposite valence, Murry et al. (1992) state that program liking would provide more accurate predictions and will have more influence on the ad's evaluation. Therefore, in the scope of this research, positive attitude towards the web site would be a prerequisite for successful advertisements' effectiveness. However, since a fictitious web site will be used in the

research, the respondents will not have any previous experience with the web site, therefore their attitude towards the web site will be mainly based on the first impression and affective reactions entailed by the presented discussions. This effect will be controlled in the experiment as a part of the confound check by measuring the respondents' attitude towards the web site. In comparison, a favourite web site of a user that has a high level of reputation might induce positive feelings regarding the embedded advertisements.

According to Yi (1990a), affective priming effect appears due to fast generated affective reactions to the context which have an impact on attitude toward the ad, which in turn influence attitude toward the brand, and eventually purchase intention (see Figure 4). The other perspective of this scheme is presented on Figure 5, where affective priming has a straight influence on attitude towards the ad, that subsequently affects attitude towards the brand and the purchase intentions. In this study, probability of click will be measured instead of purchase intention, since the primary aim of the embedded OBAs is to encourage people to firstly click the advertisement.

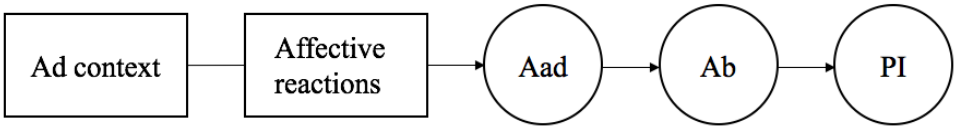

Figure 4. Affective Priming Effect model. Adapted from Yi (1990a).

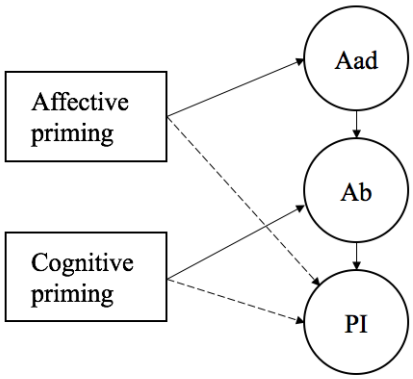

Figure 5. Affective and cognitive priming effects. Adapted from Yi (1990a)

Therefore, exposure to the ad context will create fast affective reactions, that are capable of influencing the user's attitude towards the ad and brand. Thus, ad context plays a pivotal role in the effectiveness of the embedded advertisements, since when being mainly focused on a context, a user will unconsciously be influenced in term of further responses to the advertisements. Since nowadays various web sites are common advertising platform, it is essential to understand the effects of context of these web sites, since various context might increase or lower the ads' effectiveness.

This chapter has also described the effects of affective priming on people's behavior and decision-making, and combining the importance of the context and affective reactions that might be influenced by positive or negative appeals of the context, the emotional load of the context plays important role for the ads' effectiveness. Therefore, it becomes vital to distinguish between the advantageous and risky types of context based on the emotional valence of these context. Based on this information the first hypothesis is derived:

Hypothesis 1: it's hypothesized that positive tone of a discussion will entail more favorable responses towards the ad.

Since response towards the ad in this paper is comprised of five dependent variables, the Hypothesis 1 will be derived for each variable separately:

Hypothesis 1a: positive tone of a discussion will lead to more positive attitude towards the ad.

Hypothesis 1b: positive tone of a discussion will lead to more positive attitude towards the brand.

Hypothesis 1c: positive tone of a discussion will lead to higher advertisement recall.

Hypothesis 1d: positive tone of a discussion will lead to better ad recognition.

Hypothesis 1e: positive tone of a discussion will lead to higher probability of click.

According to the theories described above, emotional tone of the context is able to elicit certain feelings in audience, thereby influencing their further evaluation of the next information. Moreover, considering the user-created content on online forum discussions, the emotional tone of such context can be strongly emotionally valenced depending on users' messages. Anonymity and often the impunity for any type of a comment that a user can leave on the web page allows people not controlling the posted messages. User-generated content is not always carefully checked by the moderators, and negative discussions sometimes transferring onto personal discussions are posted and available to all the users visiting the page. Previous studies (Gardner and Wilhelm, 1987; Yi, 1990a; Coulter, 1998; Goldberg and Gorn, 1987) have shown that positive context is in general very beneficial for the advertisements, since it elicits positive feelings in audience that spread over the further information processed, and responses to the advertisements are better. Thereby, we assume that positive tone of the context will positively affect users' further perception and evaluation of embedded advertisements.

3. AD-CONTEXT CONGRUENCE

Ad context was assigned a significant importance in previous literature, since the effect of context on advertisements has shown the influence on ads' perception (see De Pelsmacker et al. 2005; Goldberg and Gorn 1987; Soldow and Principe 1981). Attempts on explaining the nature of this influence led to two main opposite perspectives and theories developed, that are described in this chapter. Namely, the chapter describes the phenomena of priming and input interference.

3.1. AD-CONTEXT CONGRUENCE AND PRIMING EFFECT

Correspondence of context and embedded ads was studied in both perspectives of traditional (editorials and TV) and digital (online) advertising. The widely used term – congruence – relates to similarity of the context and the embedded ad. The other definition of ad-context congruence implies that it is a degree of thematic similarity of advertisements to adjacent content (Zanjani et al., 2011). Since advertisements are embedded into various types of context, the marketing researches have attempted to understand the effect of ad and context congruence in order to reveal the best ways of utilizing the congruence concept. Studies on ad-context congruence and its implications on advertising effectiveness have led to two contrasting perspectives on the subject – positive and negative impact of the congruence on ads' effectiveness, priming effect and input interference respectively. Studies on priming effect have indicated more favourable response to the advertisements that are placed in congruent context (see Yi 1990a, 1993; Dahlen, 2005). On the other hand, some studies resulted in lower evaluation of congruent ads (e.g. Furham et al., 2002) and were explained by input interference.

Considering the importance of context for ads' effectiveness and huge amount of OBAs in the internet space, understanding the effect of context in various situations is crucial for modern internet advertising. Exposing the same audience to the same message in different context might yield different results (Segev et al., 2011), and that highlights the significance of this effect especially in the user-created content's space, such as online discussion forum studied in this

paper. This kind of context can vary drastically due to users' conversation flows and depend on their moods, emotions and a great number of other factors relating to personal preferences and behaviour models.

More effective evaluation of ads embedded into congruent context was mainly explained by the effect of priming (Zanjani et al., 2011). Thus, the embedded ads are better remembered when the context and ad relate to similar topic (Zanjani et al., 2011), since similar content primes user and makes the retrieval of related information faster and easier. This perspective is also consistent with the spreading activation theory suggested by Collins and Loftus (1975), that states that activation of a certain concept leads to distribution of the activation to all the close related concepts in a person's mind. According to priming effect, recent exposure to a certain concept in the context enhances the accessibility of this concept, facilitating the recall of that concept later in the evaluation of further stimuli (Yi 1990a, 1990b). Therefore, congruent ads must be easier to remember for the audience.

This research focuses on online advertising on a specific type of web sites relating to online discussion forums. Topics of discussions on that types of web site vary greatly, starting from the thematic web sites on a certain topic to large forums including wide range of topics to discuss limited only by the users' imagination. Therefore, combining the findings from the previous researches on the ad-context congruence effect, is can be assumed that congruent ads will be better and easier perceived by readers of online forums. The second hypothesis states:

Hypothesis 2: congruent ads will receive more favorable responses from the online forums' readers.

As with the previous hypothesis, since response to advertisements in this paper includes 5 different variables, the Hypothesis 2 is also divided into parts:

Hypothesis 2a: attitude towards the ad will be more favorable for contextually congruent ads rather for incongruent ads.

***Hypothesis 2b**:* attitude towards the brand will be higher for contextually congruent ads rather for incongruent ads.

***Hypothesis 2c**:* ad recall will be higher for contextually congruent ads rather for incongruent ads.

***Hypothesis 2d**:* ad recognition will be better for contextually congruent ads rather for incongruent ads.

***Hypothesis 2e**:* probability of click will be higher for contextually congruent ads rather for incongruent ads.

Study of Moorman et al. (2002) on congruence effect on attitude toward the ad revealed that thematic congruence doesn't display significant difference in attitudes towards congruent and incongruent ads. However, when considering the effect of respondents' positive feelings (due to challenging inducing of negative feelings, they were excluded from the further analysis), the results indicated that positive affect increases attitude towards the ad. Therefore, emotions elicited during exposure to the context are able to influence the attitude toward the embedded ads (Moorman et al., 2002). Considering this finding regarding the emotions' influence on congruent and incongruent ad, this study will test the influence of positive emotions as well as the negative ones, through the affective priming effect on the web page.

4. METHODOLOGY

This chapter explains the methodology and design of the research along with the data collection procedures. The aim of this research is to reveal the effect of affective priming and ad-context congruence on advertising effectiveness in the online forum environment. Controlled experiment will be conducted to gather the data and the study's methodology is based on quantitative method. Quantitative method is used to gain insight into the users' behavior and provide statistically valid results that might be later applied in the marketing field and increase the effectiveness of advertisements.

4.1. DATA COLLECTION

The research design consists of screenshot of online discussion page with embedded advertisement. Users' messages used in the experiment were taken from various online forums' messages, while the web site, products discussed, their brands and advertisement are fictitious. While using real messages or part of the messages contribute to more realistic design, non-existing web site, brand names and advertisements are used to avoid any confounding and influence of the previous experiences and personal preferences.

The 2x2x3 between subjects' design is used, where the two congruence conditions (contextually congruent and incongruent advertisements) and three emotional conditions (positive, negative and mixed discussion tones) are varied. Moreover, two different discussions are used to provide higher quality of the results, therefore the total number of conditions tested is 12 (2 congruence conditions x 3 emotional conditions x 2 topics of discussions). Each respondent is randomly assigned to one of the twelve conditions and is provided with questions measuring the main studied variables as well as questions related to manipulation and confounding checks. Manipulation check questions intended to explore how the perceived tone of the discussions (positive, negative and mixed) and congruence (ad-context congruent and not congruent) conditions are perceived by the real respondents.

Confound check was used as well to reveal the possible confounding by other factors not considered in the research, such as possible influence on the respondents' mood, the involvement of the respondents, and web site liking. The fictitious screenshot of the online forum web page was designed with several types of discussion tones and advertisements.

In order to make sure the design of experiment is reliable two pretests were conducted with subsequent corrections based on pretests' results (see Figure 7 and 8 for examples of surveys used in the first and second pretests respectively; and Appendix 2 and 4 for the messages used in the pretests). Manipulation checks were done to make sure the intended conditions of messages tones (positive, negative and mixed) and ad-context congruence conditions (congruent or incongruent) are perceived by the respondents as intended. The design itself was tested as well, to make sure the design idea is well-founded. Messages used in the first pretest were later updated for the second pretest and the actual experiment.

Three types of discussion tones were provided to the test group and perception of the discussion tones was asked from the respondents, whether the discussion seem positive, negative or neutral (ambivalent) to them. Ad-context congruence condition was measured in the similar fashion, by providing respondents with the designed discussions' "screenshots" and asking whether they consider embedded ads relating or not relating to the discussion topic.

After running two preliminary experiments in order to test the proposed study design, the final experiment design was refined. With all the issues regarding the research design left the same as described previously in this chapter (quantitative approach, 2x2x3 between-subjects design with tone of discussion and ad-context congruence factors, with two different discussion topics), the screenshot itself was improved and translated into the Finnish language on professional translations' web site (Gengo.com). The survey was distributed via the popular Finnish discussion forum web site (Suomi24.fi) with advertisement on the top of the web page inviting to participate in the survey for the opportunity to win a prize. Incentive for attracting more participants was a lottery with 5 online gift cards each worth €50 (Super Lahja Kortti). The data

gathering time was limited to one week, but this period of time allowed to receive 1897 responses. Figure 9 shows one of the screenshots used in the final experiment.

Data was collected during the weeks 4-5 (from 23 January to 30 January 2018) via the link published on Suomi24 web site inviting to participate in a survey in order to have a chance of winning a prize (Figure 6).

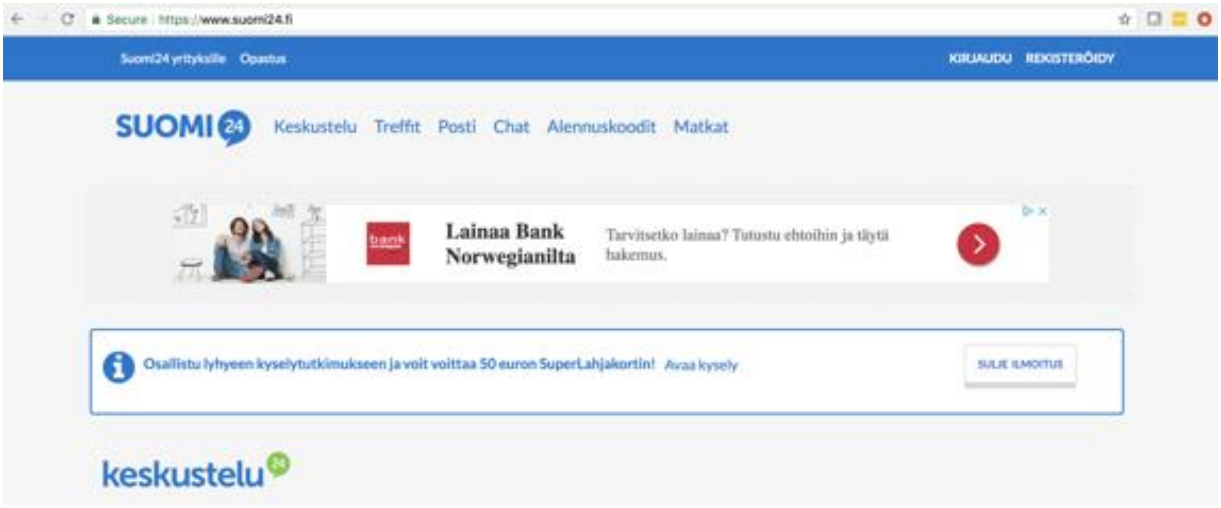

Figure 6. Invitation to participate in the survey

Overall, 1168 completed responses were gathered (the whole amount of responses was 2251 with 1083 of empty submitted answers). Among the respondents, 50.6% men and 47.6% women took part in the survey; 1.8% of people answered “other” in the gender asking question. Age of the respondents varied from “less than 18” to “85 or older” with the most numerous age groups of “45-54” and “55-64” with 24.9% and 23.8% respectively. Such wide distribution of the age groups participated in the survey is defined by the platform announcing the survey, since discussion forums might be used by people of various ages. Since the survey was announced on the Finnish web site and was conducted in Finnish language, majority of the participants were Finnish (98.6%).

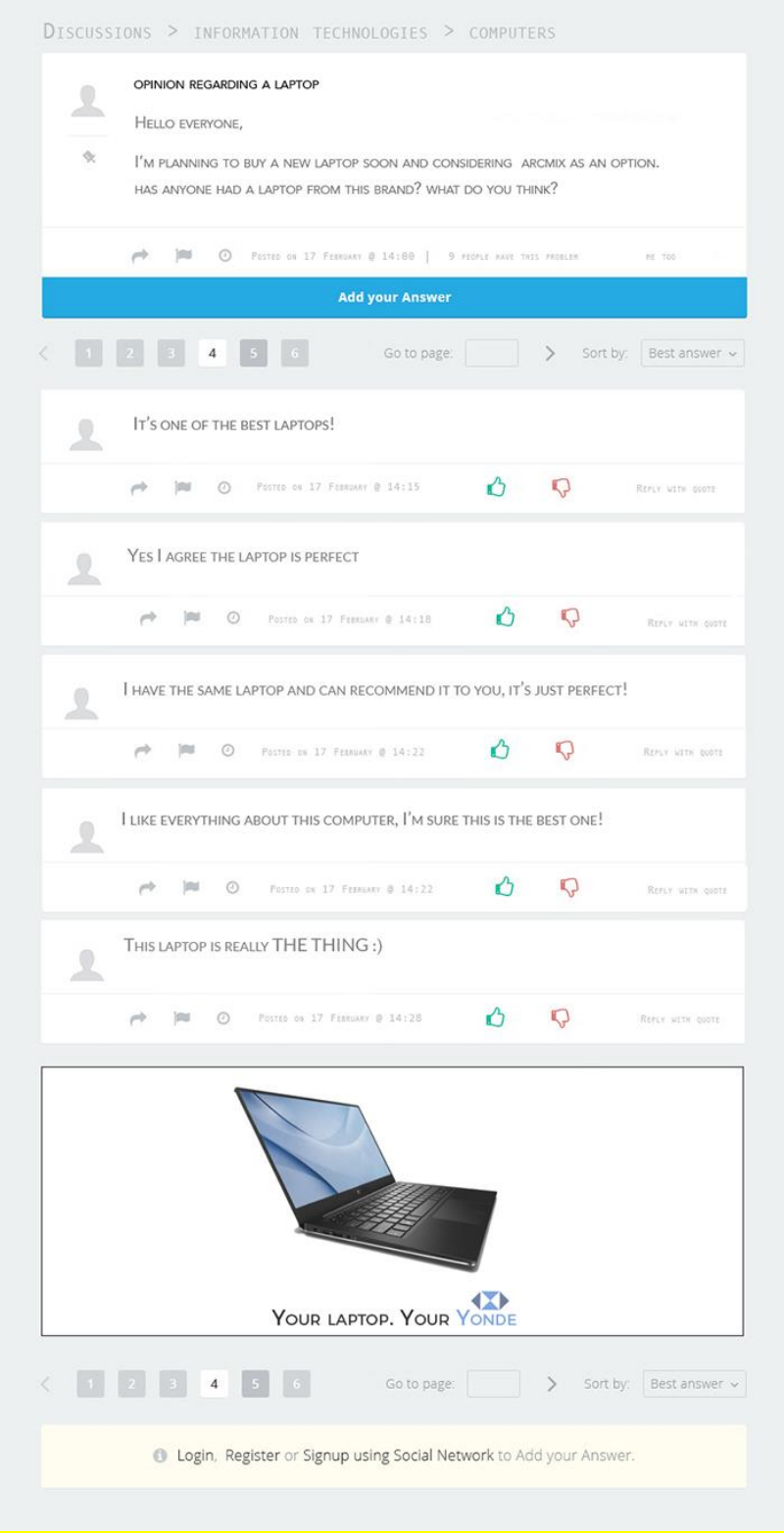

Figure 7. Screenshot example used in the first pretest

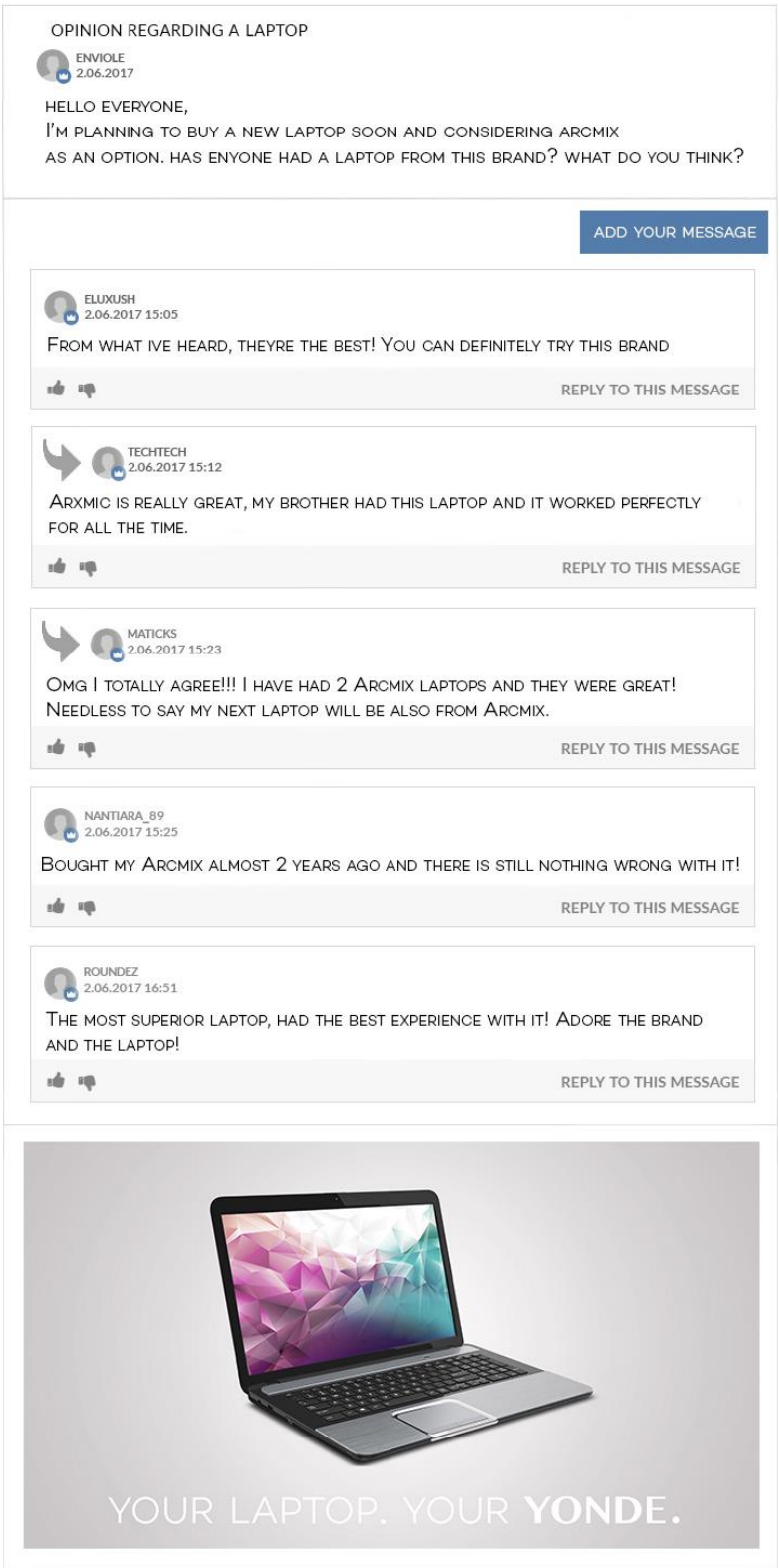

Figure 8. Screenshot example used in the second pretest

Figure 9. Screenshot example used in the final experiment

4.1.1. Valence of the messages

Initially proposed neutral tone of the discussion to serve as a base group was later considered unreliable, since purely neutral discussions and messages barely exist, and each message tends to be valenced even at a slight degree. Therefore, the ambivalent condition was decided to take place instead of neutral, providing mixed messages of both positive and negative valences. Overall 5 discussion messages were used in the experiment, based on the average number of discussion messages fitting into one screen without scrolling down; out of 5 messages 2 were negative (e.g. "From what ive heard, theyre not the best…"), 2 positive (e.g. "Arxmic is really great, my brother had this laptop and it worked perfectly for all the time."), and 1 as neutral as possible ("It all depends on what you want the laptop for"). Switching to mixed discussion intended to provide respondents with more realistic image of the online discussions and is serving as a base discussion with various opinions, comparing to purely positive and negative conditions. Messages and their emotional tones are represented in the Table 6.

Since all the messages were taken from various online forums, the spelling was retained to maintain realistic representation of people discussing online. Five negative messages found on the Internet served as a base for the positive messages, where negative words were changed into positive to keep the messages as structurally similar as possible.

Table 6. Messages used in the experiment

Negative	Positive	Mixed
From what ive heard, theyre not the best… Try something different.	From what ive heard, theyre one of the best! You can definitely try this brand	Arxmic is really great, my brother had this laptop and it worked perfectly for all the time.
Arcmix really sucks my brothers laptop messed up before he got any good use of it and he bought it brand new.	Arxmic is really great, my brother had this laptop and it worked perfectly for all the time.	Omg I totally agree!!! I have had 2 Arcmix laptops and they were great! Needless to say my next laptop will be also from Arcmix.

Omg I totally agree!!! I have had 2 Arcmix laptops in one week and theyre both faulty!!! Needless to say ive decided to not go with Arcmix anymore.	Omg I totally agree!!! I have had 2 Arcmix laptops and they were great! Needless to say my next laptop will be also from Arcmix.	From what ive heard, theyre not the best…
Bought my Arcmix almost 2 years ago and had so many problems with it!	Bought my Arcmix almost 2 years ago and there's still nothing wrong with it!	It all depends on what you want the laptop for.
Trashiest of laptops, Had the worst experience multiple times a year. Terrified of the name and the product now	The most superior laptop, had the best experience with it! Adore the brand and the laptop!	Trashiest of laptops, Had the worst experience multiple times a year. Terrified of the name and the product now

4.1.2. Discussion topics

Topic chosen for the discussion related to asking opinions regarding a laptop model (mentioned as the Arcmix brand in the message and created via a random brand names generator). Related and contextually congruent advertisement represented a laptop with a non-existing brand name Yonde, also generated randomly on a web site. Incongruent advertisement represented a camera with the same brand name Yonde. The same brand name is used to both products, since only one discussion will be displayed to one respondent to provide cleaner results and avoid effects of previous exposure on the further results. All the advertisements and discussion page were designed in Photoshop to avoid exposure to familiar brands.

4.2. MEASURES AND MEASUREMENT ASSESSMENT

This chapter introduces the measures used in the first and second pretests, and eventually describes the measures used in the main experiment. The respondents were firstly presented with the introduction message assuring the anonymity of the answers and briefly explaining the purpose of the respondents. Then one of the twelve screenshots imitating the online forum discussion was showed to participants (the distribution of surveys' versions was random and

even among the respondents). Respondents didn't have the possibility to return back to the previous page to see the screenshot or a question once again, since ad recall was measured along with the other metrics, and it was essential to get honest responses.

4.2.1. First pretest

First pretest questionnaire comprised of 16 questions, where 2 questions relate to manipulation check, 5 questions measure possible confounding, 3 questions measuring the dependent variables and 6 questions were used to collect demographic data (see Appendix 2 for the tables with questions). The respondents were presented with a screenshot from a fictitious online discussion forum web site and were asked questions regarding this screenshot. The questions in details are discussed below.

Manipulation check

Ad-context congruence was measured with bipolar 5-point scale, asking the respondents to rate how do the discussion topic and advertisement relate to each other. Metrics used on the sides of bipolar scale were: not compatible/compatible, not a good fit/a good fit, not appropriate/appropriate (taken from Rifon et al., 2004)

Perceived tone of the shown discussion was measured by asking participants to rate on 5-point Likert scale how do the agree or disagree with three statements describing the discussion tone ("The tone of this discussion is positive", "The tone of this discussion is negative", "The tone of this discussion is a mixture of positive and negative messages")

Dependent variables

In order to conduct manipulation checks it was essential to include ad recall and recognition measures, since manipulation check was studying ad-context congruence.

Ad recall was studied by simply asking the participants if they recall seeing the ad, with “yes” or “no” answer options. Further ad recall was measured by asking those participants who recalled seeing the ad to choose the product category of the shown advertisement with 4 options (camera, cell phone, computer, and “I don’t remember” option)ю

Ad recognition was measured by showing the participants 2 advertisements pictures and asking to choose the one that was presented on the screenshot. “I don’t remember” option was also used.

Confounding check

Attitude towards the web site was measured on 3-items 5-point Likert scale, where the participants were asked to rate how do the agree or disagree with the statements relating to web site. The statements used: “I would like to visit this web site again in the future”, “I feel comfortable in reading the discussion on this web site”, “. I feel surfing this web site is a good way to spend my time”. (Chen and Wells, 1999).

Perceived trustworthiness of the web site was measured on bipolar 5-point scale with “untrustworthy” and “trustworthy” items on the sides.

Perceived trustworthiness of the messages was also measured using 5-point bipolar scale with “suspicious” and “trustful” items on the scale’s sides.

Involvement was measured with 3-items 7-point Likert scale asking the respondents to rate their interest for the discussed product (“This is a product that interests me”, “I am not at all familiar with the product”. “I definitely have a “wanting” for this product”). (Lastovicka and Gardner, 1979).

Mood change was also measured as a part of the confound check, the participants were asked to rate their mood according to the statements on a 7-point 4-items Likert scale. The statements

used: “Currently, I am in a good mood”, “As I answer these questions I feel cheerful”, “For some reason I am not very comfortable right now”, “. At this moment I feel edgy or irritable”. (Peterson and Sauber, 1983).

Demographic data

Demographic questions used covered the following issues: gender, age, highest degree or school, nationality, occupation and income.

4.2.2. Second pretest

Second pretest was conducted with overall 20 questions used, the main studied variables were also involved in the pretest to assess the study design. Tables with all the questions and referenced is presented in Appendix 4.

Manipulation check

Ad-context congruence and perceived discussion tone were measured as in the first pretest.

Ad-context congruence was measured as in Rifon et al. (2004), with 5-point 3-items bipolar matrix (“not compatible/compatible”, “not a good fit/a good fit”, “not appropriate/appropriate” items). Perceived discussion tone was measured by 3-items 5-oiint Likert scale with statements related to discussion tone: “The tone of this discussion is positive”, “The tone of this discussion is negative”, “The tone of this discussion is a mixture of positive and negative messages”.

Confounding check

Attitude towards the ad was measured as in the first pretest by asking participants to rate on 7-point Likert scale how do they agree or disagree with the statements: “I would like to visit this

web site again in the future", "I feel comfortable in reading the discussion on this web site", ". I feel surfing this web site is a good way to spend my time". (Chen and Wells, 1999).
Perceived trustworthiness of the web site and the messages were also measured the same way as in the first pretest, with 5-point bipolar scales with "untrustworthy-trustworthy" items for the web site trustworthiness, and "suspicious-trustful" items for the perceived trustworthiness of the messages.

Perceived credibility of the discussion measures were added in this pretest. The respondents were asked to rate how well the presented adjectives describe the discussion on 3-item 7-point scale from 1 to 7, where 1 – describes very poorly, 7 – describes very well. The adjectives used: accurate, authentic, believable. (Appelman and Sundar, 2016).

Involvement was measured like in the first pretest as in Lastovicka and Gardner (1979). 7-point Likert scale was used with three statements: "This is a product that interests me", "I am not at all familiar with the product", "I definitely have a "wanting" for this product".

Possible mood change of the respondents was also measured like in the first pretest with 4-items 7-point Likert scale where the respondents were asked to rate their mood according to the statements (Peterson and Sauber, 1983). The statements: "Currently, I am in a good mood", "As I answer these questions I feel cheerful", "For some reason I am not very comfortable right now", ". At this moment I feel edgy or irritable".

Dependent variables

Measures for the dependent variables were studied during the second pretest as well.
Ad recall was measured like in the previous pretest by firstly asking participant if they recall seeing the ad, and then suggesting product categories of the advertised product. Ad recognition was also measured in the same manner like in the first pretest by asking participants to choose the correct advertisement.

Attitude towards the ad was measured like in Yi (1990a), by asking participants to evaluate the shown advertisement on 4-items 7-point bipolar scale. The items used on the sides of bipolar scales: bad/good, boring/interesting, dislike/like, irritating/not irritating.
Attitude towards the brand measure was taken from Luz, MacKenzie and Belch (1986). The respondents were asked to assess their overall feelings about using the Yonde (advertised) product. 7-point 3-item bipolar scale was used, where the item were: unfavorable/favorable, bad/good, foolish/wise.

Probability of click was measured by 7-point 3-item bipolar scale with these items: unlikely/likely, improbable/probable, impossible/possible (Lutz, MacKenzie and Belch, 1986).

Demographic questions

Demographic questions asked for the information about participants' gender, age, highest education degree, nationality, occupation and income.

4.2.3. Experiment

Overall, the survey contained 18 questions, with 6 related to confound check questions, checking the possible factors influencing the responses; 2 manipulation check questions; 5 questions related to the dependent variables, and 6 demographic questions. The questionnaire is enclosed in the Appendix 6.

Manipulation check

Perceived ad-context congruence was measured in the same manner as in the previous two pretests, where the respondents were asked to rate how do the discussion topic and advertisement relate to each other on 5-point bipolar scale with items: "not compatible/compatible", "not a good fit/a good fit", "not appropriate/appropriate" (Rifon et al., 2004).

Measure for the perceived discussion tone was also the same, and the respondents were asked to evaluate on 3-item 5-point Likert scale the statements: “The tone of this discussion is positive”, “The tone of this discussion is negative”, “The tone of this discussion is a mixture of positive and negative messages”.

Confounding check

Attitude towards the web site was measured with measures taken from Chen and Wells (1999) like in the two previous pretests. 5-point 3-items Likert scale was used with three items: “I would like to visit this web site again in the future”, “I feel comfortable in reading the discussion on this web site”, “. I feel surfing this web site is a good way to spend my time”.

Perceived trustworthiness of the web site and messages were also tested in the same way like in the previous pretests with 5-point bipolar scales.

Perceived credibility of the messages was included in the experiment like in the second pretest. The participants were asked to evaluate how well do three adjectives describe messages from 1 to 7 on a 7-point scale. The adjectives used were: accurate, authentic, believable. (Appelman and Sundar, 2016).

Product involvement was also measured like previously by asking participants to rate the statements regarding the discussed product (Lastovicka and Gardner, 1979).

Mood of the participants was measured in the same way like in the previous pretests by 4-item 7-point Likert scale (Peterson and Sauber, 1983). Respondents were asked to rate the statements regarding their feelings at the moment: “Currently, I am in a good mood”, “As I answer these questions I feel cheerful”, “For some reason I am not very comfortable right now”, “. At this moment I feel edgy or irritable”.

Dependent variables

Ad recall was measured by asking the participants whether they recall seeing an ad on the presented screenshot with “yes” and “no” options. The skip logic was used if a respondent didn’t remember seeing the ad, since further questions related to ad.

Ad recognition in the experiment was measured in a slightly different manner than in the previous pretests – a respondent was provided with 8 different advertisements and was asked to choose the ad that was presented previously. All the advertisements had similar style but featured different products.

Attitude towards the ad was measured by scales taken from Yi (1990a). A respondent was asked to evaluate the advertisement on 5-point 4-item bipolar scale with these items: bad/good, boring/interesting, dislike/like, irritating/not irritating.

Attitude towards the brand was measured by asking the participants to evaluate the usage of the Yonde product on 5-point 3-item bipolar scale (Lutz et al., 1986). The items used: unfavorable/favorable, bad/good, foolish/wise.

Probability of click was measured by 5-point bipolar scale with three items: unlikely/likely, improbable/probable, impossible/possible (Lutz, MacKenzie and Belch, 1986).

Demographic questions

Demographic questions related to the information about participants’ gender, age, highest education degree, nationality, occupation and income.

4.3. CONFOUND FACTORS RELATED TO THE STUDY

As mentioned previously, the literature has provided various factors that are able to influence users' response to the advertising. This chapter covers possible confounding factors that are capable of influencing the results of this research and the means of controlling those factors.

4.3.1. Involvement

Since the process of ads' evaluation by users is a sophisticated operation covering various cognitive processes, congruence itself is not the only factor influencing the ads' perception. A variety of factors also having an impact on advertising effectiveness along with congruence condition were widely discussed in the literature. Such factors related to involvement (Segev 2014), typology of user's behavior (Zanjani et al. 2011), emotional tone of the context (Goldber and Gorn 1987) and psychological responses to context based on congruence and context induced feelings (Moorman et al. 2002). This research focuses mainly on the emotional tone of the context as crucial factor in the online space, that in turn activates the affective reactions of the users' and influence the further behavior online.

The involvement factors might play a significant role in perceiving and assessing the embedded advertisement. High involvement into the context increases better evaluation of congruent ads, whereas low involvement into the ad context increases evaluations of incongruent ads (Segev and Wang, 2014).

Soldow and Principe (1981) have stated the importance of involvement into the context, since their study indicated that when the customers are highly involved into the program, the advertisements are mainly perceived obstructive and annoying and the audience in general is less receptive and attentive to commercials. Dependence of ads' evaluations on the program involvement was also found by Steiner (1966), who argues that the more interesting is the program for people, the more objectionable the commercial appears to the audience. In terms of this study, the level of involvement to the discussion forums might vary, however, when people are requesting or discussing a certain topic, the involvement and interest to the conversation might be quite high, and this might be an obstacle for the online banner advertisements and their

effectiveness. Overall, involvement has an indirect impact on priming itself, since highly involved into the context people might have such a strong focus on context, that advertisements are simply not noticed by the readers, and the priming effect to advertisements doesn't occur at all. Moreover, Google (2014) has stated that 56.1% of OBAs are not actually seen by people, and while the technical factors like ad's place on the web site, size and style might affect the viewability, the involvement to the context can be also a crucial factor. Studying the banner blindness, Dreze and Hussherr (2003), also found that half of the banner advertisements are not attended to and the significant finding is that users consciously avoid looking at ads. Involvement is a controlled factor in this study and is measured with model used by Lastovicka and Gardner (1979).

4.3.2. Trustworthiness

Since the respondents will be presented with a screenshot of unfamiliar discussion forum, the perceived trustworthiness of the web site and messages might influence the results. According to researches in the field of trustworthiness of online content, the negative messages are expected to be perceived as more trustworthy than the positive ones, since even if left anonymously, positive messages are often perceived as encouraging to make a purchase, and might be created by the companies. For instance, Pan and Chiou (2011) stated that negative eWOM about a certain product is considered more trustworthy than the positive ones. Moreover, the existence of social relationships with users might have a moderating effect, and in the case of weak social relationships, the negative messages are likely to be perceived more trustworthy than the positive messages. In the case of discussion forum where many users are able to leave their opinions, mostly unfamiliar people to a person will be sharing their opinions on a certain subject, thereby increasing the effect of perceiving negative messages as more trustworthy. Therefore, the study proposes that both positive and negative messages will be perceived by people as credible while they are posted by people with whom a user has social relationships. In other words, a person is more confident in the opinions of familiar people than of the anonymous people who might purse their own goals while posting the messages.

Moreover, perceiving negative messages as more credible, since the negative information was approved to have greater impact (Baumeister et al., 2001) and while choosing a product, e.g. laptop or camera used in this research, a user tries to estimate the approximate performance of a product and tries to minimize possible problems related to this product. Therefore, perceiving negative information as more trustworthy might seem more rational for the people, since it might contribute to avoidance of possible problems in the future. However, this effect is not the core of this research and should be separately studied in different conditions, e.g. on different source than online forum and different product.

Despite the prevalence of both online and conventional advertising, certain problems regarding the advertisements and consumers' trust to the ads have been discussed in the current marketing and psychological literature (Obermiller et al., 2005; Friestad and Wright, 1995; Soh et al., 2009). Friestad and Wright (1995) stated, that customers are automatically skeptical about the advertisements. The researchers claimed, that consumers' attitudes towards advertising is mostly negative and customers are unwilling to blindly follow the advertisements' calls and that affects the effectiveness of advertising campaigns a lot. Hoch (2002, 450) has provided more detailed explanation for the negative attitudes to the advertising and argued that customers are very skeptical of the advertising claims especially when the customers' experience has already been negative. In that case, subsequent attitudes are already affected by the negative experience and the consumer's trust is undermined. Additionally, Obermiller et al. (2005, 15) revealed, that skeptical consumers less like and less rely on the advertising. Although it is nearly impossible to control the effect of previous experiences on current respondents' attitudes, this research will try to minimize this influence by providing ads of the artificial brands that are not familiar to the respondents, thereby eliminating the probability of negative experiences related to that brand. On the other hand, skepticism of people towards the ad is impossible to control, since this is highly individual feature and in the real life one must expect some degree of skepticism towards the advertising from a fraction of users.

5. ANALYSES AND RESULTS

This chapter firstly presents results of the pretests, then describes analyses and results of the final experiment.

5.1. FIRST PRETEST RESULTS

First pretest was conducted to assess the research design, and manipulation and confounding checks were implemented to test the study.

5.1.1. Manipulation check

Tone of the discussion

Manipulation check revealed, that respondents have perceived tones of the presented discussions in the intended way. The respondents were presented with three statements, describing the emotional tone of the presented forum discussion and were asked to rate how do they agree or disagree with the statements on a 5-point Likert scale. The one-way ANOVA test was used to determine the manipulation's success and the analysis showed statistically significant differences between the groups (see Appendix 3A for the descriptive means of the groups and the ANOVA table). The analysis of variance showed that effect of tone on evaluation of the statements was statistically significant:

"*Tone of the discussions shown in the beginning of survey is positive".* ANOVA determined the statistically significant differences between the groups of various conditions ($F(2, 170)=73.171$, $p<.001$).

"Tone of the discussions shown in the beginning of survey is negative". ANOVA test revealed statistically significant differences between the different conditions ($F(2,171)=78.378$, $p<.001$).

"Tone of the discussions shown in the beginning of survey is a mixture of positive and negative messages". ANOVA test showed statistically significant differences between the groups ($F(2,171)=2.063$, $p<.001$).

Further post-hoc Tukey test revealed that all the groups' values are statistically significant at the 0,05 level (see Appendix 3A). Therefore, the tone of discussion manipulation was successful.

Ad-context congruence

For measuring congruence/incongruence of the embedded ads and discussions, a three-item seven-point scale was used (not compatible/compatible, not a good fit/a good fit, not appropriate/appropriate) suggested by Rifon et al. (2004). An independent samples t-test was implemented to compare the perceived ad/context congruence by the respondents in the congruence and incongruence conditions. The t-test showed significant differences in the score for "*compatible/not compatible"* rating in congruent condition ($M=4.16$; $SD=.842$) and incongruent condition ($M=2.77$; $SD=1.273$); $t(110)=6.903$, $p<0.001$. Similarly, "*not a good fit/a good fit"* statements showed significant differences in congruent ($M=3.98$; $SD=.915$) and incongruent ($M=2.85$; $SD=1.185$) conditions; $t(110)=5.670$, $p=0.001$. Third statement evaluation also revealed differences in both congruent ($M=4.02$; $SD=.795$) and incongruent ($M=2.87$; $SD=1.235$) conditions; $t(110)=5.955$, $p<0.001$ (see Appendix 3b for the detailed results in group statistics and T-test). The analysis revealed that the manipulation was successful and respondents have perceived the congruence/incongruence conditions as intended (see the tables in Appendix 3B).

Overall, the manipulation performed for both the discussions tones and ad-context congruence was successful and the main created conditions were perceived by the respondents as intended.

5.1.2. Confound check

This chapter briefly covers the results of the conducted confound check among various variables to ensure that no external effect was done on the respondents' answers.

Attitude towards the web site

Since the screenshots featured non-existing online forum web site, the respondents' attitudes towards unfamiliar web site were evaluated on the three-item five-point Likert scale. The respondents were asked to evaluate how do they agree or disagree with the statements related to the web site liking, suggested by Chen and Wells (1999). The three sentences stated: "I would like to visit this web site again in the future"; "I feel comfortable in reading the discussion on this web site"; and "I feel surfing this web site is a good way to spend my time". Overall analysis has shown that respondents had more favourable attitude towards the web site with mixed tone of the discussion rather than when the tone of discussions was purely positive or negative (Table 7, see the full table in Appendix 3C).

Table 7. Descriptives table for attitude towards the web site.

		N	Mean	Std. Deviation	Std. Error
Please read the statements and indicate how do you agree or disagree with each of them. - I would like to visit this web site again in the future	Positive	59	3,98	1,320	,172
	Negative	60	3,67	1,633	,211
	Mixed	57	4,00	1,427	,189
	Total	176	3,88	1,467	,111
Please read the statements and indicate how do you agree or disagree with each of them. - I feel comfortable in reading the discussion on this web site	Positive	59	4,42	1,441	,188
	Negative	60	4,12	1,823	,235
	Mixed	57	4,56	1,559	,206
	Total	176	4,36	1,619	,122
Please read the statements and indicate how do you agree or disagree with each of them. - I feel surfing this web site is a good way to spend my time	Positive	59	3,27	1,448	,189
	Negative	60	3,05	1,620	,209
	Mixed	57	3,40	1,602	,212
	Total	176	3,24	1,557	,117

However, one-way ANOVA has shown that differences are not statistically significant (see Appendix 3C). This might be explained by the fact that respondents were presented with only one screenshot from the unfamiliar discussion forum, and the topic of the discussion was predetermined by the experiment, not by the respondents' preferences; therefore, the attitude towards the web site was approximately similar and generally favourable among the respondents. Overall, since no statistically significant differences were found, the attitude towards the web site is not acting as a confounding variable that might affect the experiment's results.

Web site trustworthiness

Since the research design implies presenting screenshots of discussions of different emotional tones, it was essential to test the perceived trustworthiness. The respondents were asked to evaluate the web site on 5-point bipolar scale from untrustworthy to trustworthy based on the shown screenshot. Overall, the mixed tone of discussion provided higher means for the question, with the mean of 2.93, comparing the means of positive 2.53 and negative 2.50 tones of the discussion (Table 8, also see Appendix 3D for the graphically represented means' plot).

Table 8. Descriptives table for the web site trustworthiness.

After reading the discussion, how trustworthy does the web site seem to you? - Untrustworthy:Trustworthy

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Positive	59	2,53	1,072	,140	2,25	2,80	1	5
Negative	60	2,50	1,112	,144	2,21	2,79	1	5
Mixed	57	2,93	1,132	,150	2,63	3,23	1	5
Total	176	2,65	1,117	,084	2,48	2,81	1	5

However, the ANOVA test revealed that F(2, 173)=2, 753, p=.067; therefore, according, to the ANOVA test the differences between groups are not statistically significant (Table 9).

Table 9. ANOVA for the web site trustworthiness.

ANOVA

After reading the discussion, how trustworthy does the web site seem to you? - Untrustworthy:Trustworthy

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6,728	2	3,364	2,753	,067
Within Groups	211,431	173	1,222		
Total	218,159	175			

Although the ANOVA results stated not statistically significant differences between the groups, the p-value (p=0,067) is slightly above the level of significance value (p=.05); therefore, the possible confounding of the trustworthiness perceptions will be studied. Overall, it appears that respondents are more trustful about the web site with mixed messages, rather for the pure positive or negative ones.

Messages trustworthiness

5-point bipolar scale was used to determine the perceived suspiciousness or trustworthiness of the presented messages on the discussion forum page. Overall, higher mean was demonstrated for the negative messages and the lower – for the positive, implying that some respondents are eager to perceive purely positive messages as fake. However, ANOVA test revealed that F(2,172)=.909, p=.405; showing not statistically significant differences between the groups (see Appendix 3E for the detailed information). Therefore, the perceived trustworthiness of the messages is not expected to affect the results of the experiment.

Ad recall

Ad recall measure was used to track the possible banner blindness and understand whether respondents pay attention to the OBAs if it's not specified in the survey task. According to the results of pretest, t-test revealed that incongruent ads' had a higher degree of recall than ads congruent to the context; however, the difference between groups is not statistically significant:

congruence condition M=1.42; SD=.496; incongruent condition M=1.30; SD=.461; t(174)=1.641, p=.103. Further ANOVA analysis of the possible influence of tone of the discussion on ad recall also didn't reveal any statistically significant differences (Appendix 3F).

Product involvement

Level of involvement to the product discussed was used to reveal the possible confounding. Three-item seven-point Likert scale was introduced to the respondents with three statements proposed by Lastovicka and Gardner (1979). The sentences stated: *"This is a product that interests me"; "I am not at all familiar with the product"; "I definitely have a "wanting" for this product"*. One-way ANOVA test was implemented to test the relationship between the product involvement and tone of the discussion. Overall, ANOVA test has revealed no statistically significant differences between the groups. However, the p-value for the first item (p=.082) is slightly above the level of significance value (p=.05) therefore the possible confounding should be studied before the experiment. For the detailed results see the Appendix 3G.

Mood

Since the discussions presented to the respondents had different discussions tone (positive, negative and mix), a confound check was needed to understand the possible effects on the answers. The respondents were presented with 4 statements and were asked to answer how do the agree or disagree with the statements. The suggested sentences stated: "Currently, I am in a good mood", "As I answer these questions, I feel cheerful", "For some reason I am not very comfortable right now", "At this moment I feel edgy or irritable". The scale was adopted from Peterson and Sauber, 1983. One-way ANOVA test didn't reveal any statistically significant differences between the groups, therefore the confounding is successful (see Appendix 3H for the details).

5.2. SECOND PRETEST RESULTS

After analysis of the first pretest results, it was agreed to conduct the second pretest to ensure the reliability of the research design, since web site trustworthiness and product involvement tested in in the first pretest have provided quite vague information on possible confounding in the research. The new survey design was modified to provide more realistic screenshot of the fictitious web site, messages used in the screenshots were gathered from various existing discussion forums; advertisements were updated as well to look more natural. See the questionnaire of the second pretest in Appendix 4.

5.2.1. Manipulation check

Manipulation check was done in order to test the new design of the screenshot and reveal if the discussion tone and congruence conditions are perceived as intended.

Tone of the discussion

Perceived tone of discussion was measured with 3-item 5-point Likert scale ("*Tone of the discussion shown in the beginning of survey is positive/negative/mixture of positive and negative messages"*). ANOVA analysis has revealed statistically significant differences between the groups in each condition (see Appendix 5A).

"Tone of the discussion in the beginning of survey is positive". ANOVA showed statistically significant results between the groups ($F(2,73)=13.054$; $p<.001$).
"Tone of the discussion in the beginning of survey is negative." ANOVA test revealed statistically significant differences between the groups ($F(2, 73)=21.124$, $p<.001$).
"Tone of the discussion in the beginning of survey is a mixture of positive and negative messages". ANOVA test represented statistically significant results between the groups ($F(2,73)=6.738$, $p=.002$).

Ad-context congruence

Ad-context congruence was measured with 3-item 5-point scale asking participants to rate how do the discussion topic and advertisement relate to each other (not compatible/compatible, not a good fit/a good fit, not corresponding/corresponding).

Overall, the manipulation was successful and the respondents have perceived congruent and incongruent conditions as intended (Appendix 5B). T-test revealed significant differences in the "*compatible/not compatible"* measures in congruent condition (M=4.12; SD=1.013) and incongruent condition (M=2.79; SD=1.285), t(47)=4,008, p<.001. Similarly, "*not a good fit/a good fit"* showed successful manipulation in congruent (M=3.92; SD=.997) and incongruent conditions (M=2.83; SD=1.239), t(47)=3.374, p<.001. "*Not corresponding/corresponding"* item also provided similar results in participants' perceived at-context congruence in congruent (M=3.92; SD=1.115) and incongruent (M=2.46; SD=1.215) conditions, t(47)=4.382, p<.001

5.2.2. Confound check

Confound check was implemented to test if the new design might provide any factors that could influence the respondents' answers.

Attitude towards the web site

Attitude towards the web site was measured in the same way as in the first pretest with 3-item 5-point Likert scale (I would like to visit this web site in the future; I feel comfortable in reading the discussion on this web site; I feel surfing this web site is a good way to spend my time). Attitude towards the web site was analysed in terms of tones of the discussions provided. Analysis didn't reveal any influence of discussion tone on the web site attitude, meaning that discussion tones don't influence the attitude towards the web site in the study (Appendix 5C).

Web site and messages trustworthiness

Analysis of trustworthiness of the web site and messages in terms of discussion tones didn't show statistically significant differences between the groups, meaning that discussion tones don't influence the perceived trustworthiness of the web site and messages (Appendix 5D).

Ad recall

T-test was used to analyse the ad recall results in terms of contextually congruent and incongruent advertisements; no effect of congruency was found.

Product involvement

Another approach to measuring involvement was taken in the second pretest after some uncertainty in the results in the first pretest. The metrics was adapted from Zaichkowsky (1985) and represented 5-items bipolar 5-point scale used to assess product involvement of the participants. Participants were asked to describe their interest for the discussed product and rate on the bipolar scales unimportant-important, of concern to no concern, means nothing-means a lot to me, doesn't matter-matters a lot, insignificant-significant. Discussion tone wasn't found to influence the product involvement. However, T-test test for the effect of ad-context congruence was found to influence the product involvement, the mean was higher for the congruent conditions, meaning that people had more interest towards the product when the congruent ad was showed (Appendix 5E).

Mood

ANOVA test didn't reveal any influence of discussion tones on the respondents' feelings (Appendix 5F).

Overall, the confound and manipulation checks were implemented successfully, meaning that respondents perceived represented information in the intended way and there is no influence of potential factors on people's responses.

5.3. HYPOTHESIS TESTING

Hypothesis testing was implemented after the experiment's pre-test with the gathered data. The main objective of the hypothesis test was to understand whether the assumptions stated in the hypotheses are true and can be applied to the entire population.

Hypothesis testing was performed with the factor analysis in SPSS software. Variables used in the hypothesis testing related to attitude towards the web site (Q2), perceived ad-context congruence (Q8), product involvement (Q9) and mood of the respondents (Q10). Two of the four questions in determining the mood of the respondents had reverse scale ("for some reason I am not very comfortable right now" and "at this moment I feel edgy or irritable"); therefore, recoding was done for these variables to facilitate the factor analysis. One of the product involvement variables was recoded as well ("I am not at all familiar with the product"). Overall 13 variables were tested on their correlations (Q2 – 3 variables, Q8 – 3 variables, Q9 – 3 variables, Q10 – 4 variables).

Intention of the factor analysis was to reveal the possible correlations among the variables and seek for the smaller number of the composite variables that will represent the same amount of the information as all the initial variables. Kaiser-Meyer-Olkin value of .696 indicates the middling value, meaning that the extracted factors will have enough variance. In evaluation of communalities, the lowest communality values were found for the recoded variable measuring product involvement ("I am not at all familiar with the product"), meaning that a little variance in this variable is accounted for by all the extracted factors (see Table 10).

Table 10. Communalities of variables.

Communalities

	Initial	Extraction
Please read the statements and indicate how do you agree or disagree with each of them. - I would like to visit this web site again in the future	,640	,738

Please read the statements and indicate how do you agree or disagree with each of them. - I feel comfortable in reading the discussion on this web site	,536	,453
Please read the statements and indicate how do you agree or disagree with each of them. - I feel surfing this web site is a good way to spend my time	,367	,405
Please rate how do the discussion topic and advertisement relate to each other. - Not compatible:Compatible	,642	,698
Please rate how do the discussion topic and advertisement relate to each other. - Not a good fit:A good fit	,726	,778
Please rate how do the discussion topic and advertisement relate to each other. - Not corresponding:Corresponding	,743	,849
How would you describe your interest for the laptop discussed? - This is a product that interests me	,379	,278
How would you describe your interest for the laptop discussed? - I definitely have a "wanting" for this product	,393	,333
Please, rate your mood according to the statements. - Currently, I am in a good mood	,531	,515
Please, rate your mood according to the statements. - As I answer these questions I feel cheerful	,494	,468
Please, rate your mood according to the statements. – For some reason I am not very comfortable right now	,593	,697
Please, rate your mood according to the statements. – At this moment I feel edgy or irritable	,509	,551

Extraction Method: Principal Axis Factoring.

Number of factors was determined on the Eigenvalues and scree plot, two measures were used to ensure the correct number of factors, since using only one way might lead to different results. According to the eigenvalues, 4 factors were decided to use, since only four factors had values >1 (Table 11). The same result was found on the scree plot, where the number of factors is determined by the latest point on the graph before the flattest line starts (Figure 14).

Table 11. Eigenvalues of factors.

Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,506	29,217	29,217	3,166	26,385	26,385	2,365	19,710	19,710
2	2,413	20,107	49,324	2,039	16,991	43,375	2,018	16,821	36,530
3	2,011	16,758	66,081	1,704	14,201	57,576	1,888	15,735	52,266
4	,979	8,156	74,238	,573	4,771	62,347	1,210	10,082	62,347
5	,696	5,801	80,039						
6	,606	5,049	85,088						
7	,480	4,001	89,089						
8	,403	3,356	92,444						
9	,297	2,476	94,920						
10	,246	2,049	96,969						
11	,216	1,800	98,770						
12	,148	1,230	100,000						

Extraction Method: Principal Axis Factoring.

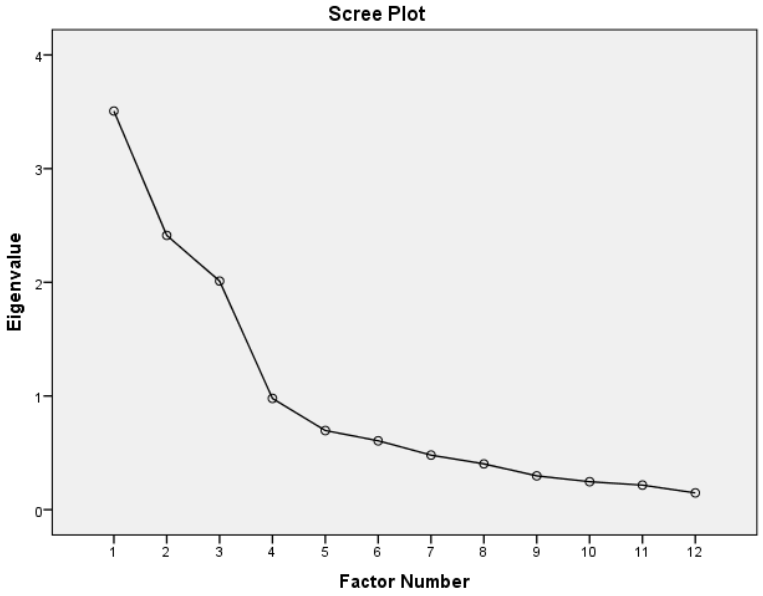

Figure 10. Scree plot

After the number of factors was estimated, the structure matrix was assessed to see the loadings of the studies variables on the factors. Distribution of variables on factors corresponded to the initial variables' groups (see the Table 12). According to the structure matrix showing the distribution of variables on the factors, four groups of variables were distinguished: 3 variables in the factor 1 related to the web site attitude, 4 variables in the factor 2 related to the respondents' moods, 3 variables of the factor 3 showing the perceived ad-context congruence, and 2 variables of the factor 4 representing the product involvement.

Table 12. Factor Matrix.

Rotated Factor Matrix[a]

	Factor			
	1	2	3	4
Please read the statements and indicate how do you agree or disagree with each of them. - I would like to visit this web site again in the future			,925	
Please read the statements and indicate how do you agree or disagree with each of them. - I feel comfortable in reading the discussion on this web site			,691	

Please read the statements and indicate how do you agree or disagree with each of them. - I feel surfing this web site is a good way to spend my time			,539	
Please rate how do the discussion topic and advertisement relate to each other. - Not compatible:Compatible	,835			
Please rate how do the discussion topic and advertisement relate to each other. - Not a good fit:A good fit	,863			
Please rate how do the discussion topic and advertisement relate to each other. - Not corresponding:Corresponding	,914			
How would you describe your interest for the laptop discussed? - This is a product that interests me				,603
How would you describe your interest for the laptop discussed? - I definitely have a "wanting" for this product				,771
Please, rate your mood according to the statements. - Currently, I am in a good mood		,649		
Please, rate your mood according to the statements. - As I answer these questions I feel cheerful		,597		
Please, rate your mood according to the statements. - For some reason I am not very comfortable right now		,805		
Please, rate your mood according to the statements. - At this moment I feel edgy or irritable		,732		

Extraction Method: Principal Axis Factoring.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 5 iterations.

In order to test the generalizability of the hypothesis, the Cronbach's alphas for the factors are computed (see Table 13). Cronbach's alpha values for all the variables is above .6 meaning that the items in the variables' groups are consistent enough to provide adequate level of reliability.

Table 13. Cronbach's alphas of variables' groups.

Variables' groups	Cronbach's Alpha	N of items
Ad-context congruence	.909	3 ("Not compatible:Compatible"; "Not a good fit:A good fit"; "Not corresponding:Corresponding")
Respondents' mood	.808 .788	4 ("Currently, I am in a good mood"; "As I answer these

		questions I feel cheerful"; "For some reason I am not very comfortable right now"; "At this moment I feel edgy or irritable")
Web site attitude	.811	3 ("I would like to visit this web site again in the future"; "- I feel comfortable in reading the discussion on this web site"; "I feel surfing this web site is a good way to spend my time")
Product involvement	.690	2 ("This is a product that interests me"; "I definitely have a "wanting" for this product")

5.4. FINAL EXPERIMENT RESULTS

This chapter represents the results of the final experiment.

Overall, 1168 people have participated in the survey with 50.6% men, 47.6% women and 1.8% of people indicated "other" gender. Overall amount of the received responses was 2251 with approximately 1080-1100 answers missing in each question. Mostly the participants were from the 35-44 (18.5%), 45-54 (24.9%) and 55-64 (23.8) age groups. Majority of the respondents indicated "high school" as the highest degree achieved (43.7%). Occupation of the respondents mainly related to full-day employment (38.3%) and retired (27.2%). Since the survey was conducted in Finnish and on Finnish web site, most of the participants had Finnish nationality (98.6%) and the respondents' yearly income distributed mostly among "less than €10,000" – 19.2%, "€10,000-€19,999" – 22.5%, "€30,000-€39,999" – 17.2% and "€20,000-€29.999" – 16.5%.

5.4.1. Manipulation and confound checks

Manipulation check questions are introduced by ad-context congruence and discussion tone items. Confound check questions include attitude towards the web site, web-site and messages trustworthiness, perceived credibility of the discussion, product involvement, and mood of the respondents. The results are presented below.

Ad-context congruence

Congruence of ad and context was represented by two conditions – congruent and incongruent, where two topics and two types of advertisements were used. Congruent conditions were manipulated by the same product discussed in the presented discussion and advertisement, and products chosen were laptop and camera. On the contrary, incongruent conditions represented different topics and advertisements, e.g. in the discussion about laptops an ad with camera was placed, and vice versa. Ad-context congruence (Q8) was measured by 3-items bipolar 5-point matrix, measuring the perceived congruence of the discussion and advertisement by "*not compatible/compatible*", "*not a good fit/a good fit*", "*not appropriate/appropriate*" (Rifon et al., 2004). The used metrics were translated into the Finnish language. T-test has shown, that ad-context congruence was perceived as intended as measured by the three items:

"*Not compatible/compatible"* in congruent condition (M=3.94, SD=1.13) and incongruent condition (M=2.42, SD=1.25), t(417)=13.101, p<.001.
"*Not a good fit/a good fit"* measures have shown M=3.94, SD=1.13 for the congruent condition and M=2.57, SD=1.29 for the incongruent condition, t(409)=11.538, p<.001.
"*Not appropriate/appropriate"* item has shown M=3.62, SD=1.23; M=2.94, SD=1.23 for the congruent and incongruent conditions respectively; t(413)=5.533, p<.001.

Therefore, results of the T-test represent differences in the means of the tested groups with higher means conditions perceived as more congruent and lower means for conditions perceived less congruent (as measured on 5-point bipolar scales). P-values indicate that all tested groups'

differences are statistically significant, meaning that people perceived ad-context congruence and incongruence in the intended way and the manipulation was successful (see Appendix 7A for more details).

Discussion tone

Discussion tone was represented by three different emotional tones – purely positive, purely negative and mix of positive and negative messages (see Appendix X for the messages used in the experiment). Perceived discussion tone (Q14) was measured by 3-items 5-point Likert scale. One-way ANOVA analysis has shown statistically significant differences between the groups, therefore, the manipulation was also successful:

"The tone of this discussion is positive". ANOVA has shown statistically significant differences between the groups ($F(2, 1146)=228.802$, $p<.001$).
"The tone of this discussion is a mixture of positive and negative messages". ANOVA test has proved that differences between the groups are statistically significant ($F(2, 1141)=121.603$, $p<.001$).
" The tone of this discussion is negative". ANOVA test results: ($F(2, 1139)=214.622$, $p<.001$).

Post-hoc Tukey test has shown that differences among all the studied groups are statistically significant (see the Appendix 7B). Thus, the manipulation of discussion tones was successful.

Attitude towards the web site

Like in the previous tests, attitude towards the web site was studied as a possible confounding variable that might affect the respondents' replies. Attitude towards the web site (Q2) was measured by 3-item 5-point Likert scale, asking the respondents to rate how do they agree or disagree with 3 statements regarding the web site (the measures taken from Chen and Wells, 1999; see Appendix 6 for the statements).

ANOVA analysis has shown statistically significant difference in the means' groups for the second statement "*I feel comfortable in reading the discussion on this web site*" with results (F(2, 1154)=3.893, p=.021). Post-hoc Tukey test has shown that the main difference was between the groups with positive (M=3.71, SD=1.802, p=.020) and negative (M=3.38, SD=1.691, p=.020) discussion tones (see Appendix 7C for the tables). Means of these groups indicate that the respondents reading positive discussion felt more comfortable (M=3.71) than those respondents who had the negative discussion (M=3.38).

Two other statements weren't found to have statistically significant differences.

Web-site and messages trustworthiness

Trustworthiness of the web site and messages in the discussion were used in confounding check in order to study possible effect of those variables on the respondents' answers. Trustworthiness of the web site (Q3) was measured on 5-point bipolar scale from*"Untrustworthy"* to "*Trustworthy*" and was analyzed with one-way ANOVA test in terms of discussion tone. ANOVA analysis didn't reveal any statistically significant differences between the groups, therefore, the discussion tone didn't have an impact on perceived trustworthiness of the web site and couldn't affect the respondents' responses. See Appendix 7D for ANOVA tables.

Trustworthiness of the messages shown on the screenshot (Q4) was also measured on 5-point bipolar scale from*" Suspicious"* to "*Trustful"*. ANOVA test with discussion tones as independent variables didn't reveal the possible impact of the messages trustworthiness (see Appendix 7E). Hence, the perceived trustworthiness of the web site and messages wasn't influenced by discussion tones, and no confounding effect was found.

Perceived credibility of the discussion

Along with trustworthiness, the perceived credibility of the discussion (Q5) was tested as a part of the confounding check. The credibility was measured on 3-item 7-point scale, where the

respondents were asked to rank from 1 to 7, how well the presented adjectives describe the discussion (measure taken from Appelman and Sundar, 2016). ANOVA test didn't show any effect of discussion tone on perceived credibility, therefore, the confound check of this variable was successful (see Appendix 7F for more detail information).

Product involvement

Product involvement was studied by 3-item 7-point Likert scale, where the respondents were presented with three statements about the discussed product *("This is a product that interests me", "I am not at all familiar with the product", "I definitely have a "wanting" for this product"*), the measurements were taken from Lastovicka and Gardner (1979). Product involvement (Q12) was tested with two possible influencing independent factors – discussion tones (one-way ANOVA test) and ad-context congruence (T-test). None of the tests have revealed statistically significant differences between the means, therefore, no confounding effect of the product involvement was found (see Appendix 7G).

Mood of the respondents

Lastly, as a part of the confound check mood of the respondents was tested (Q13). Mood of the respondents was assessed with 4-item 7-point Likert scale. The statements used in the measure: *"Currently, I am in a good mood", "As I answer these questions I feel cheerful"," For some reason I am not very comfortable right now", "At this moment I feel edgy or irritable"* (taken from Peterson and Sauber (1983) and translated into Finnish language).

ANOVA test didn't show any effect of discussion tones on the respondents' moods, therefore, no confounding effect of mood was found (see Appendix 7H).

5.5. RESULTS

The main variables studied in this thesis are: attitude towards the ad (AAD), attitude towards the brand (AB), probability of click (PC), ad recall (ADR), and ad recognition (AR). These five

variables comprise the overall concept called response to the ads in this study. The study attempted to investigate the affective priming effect in the online space, and the thesis focused on online discussion forums as a platform. This study assumes that affective priming effect might occur when reading or participating in emotionally valenced online discussions might in turn affect the way the users will respond to the advertisements placed on the web page. The hypotheses proposed in the theoretical part based on previous studies are:

Hypothesis 1: it's hypothesized that positive tone of a discussion will entail more favorable responses towards the ad.

Since five dependent variables are studied in this thesis, Hypothesis 1 was divided into five parts to reveal the impact on each of the variables:

Hypothesis 1a: positive tone of a discussion will lead to more positive attitude towards the ad.
Hypothesis 1b: positive tone of a discussion will lead to more positive attitude towards the brand.
Hypothesis 1c: positive tone of a discussion will lead to higher advertisement recall.
Hypothesis 1d: positive tone of a discussion will lead to better ad recognition.
Hypothesis 1e: positive tone of a discussion will lead to higher probability of click.
Hypothesis 2: congruent ads will receive more favorable responses from the online forums' readers.

Similarly, Hypothesis 2 was also derived for each variable:

Hypothesis 2a: attitude towards the ad will be more favorable for contextually congruent ads rather for incongruent ads.
Hypothesis 2b*:* attitude towards the brand will be higher for contextually congruent ads rather for incongruent ads.
Hypothesis 2c*:* ad recall will be higher for contextually congruent ads rather for incongruent ads.

***Hypothesis 2d**:* ad recognition will be better for contextually congruent ads rather for incongruent ads.

***Hypothesis 2e**:* probability of click will be higher for contextually congruent ads rather for incongruent ads.

The analyses further presented in this chapter seek to test the hypotheses and reveal possible interrelations between the studied factors.

Attitude towards the ad

Attitude towards the ad was measured on a 4-item 5-point bipolar scale (taken from Yi, 1990a). The participants were asked to rate the advertisement shown on the screenshot on these scales: *"Bad/Good", "Boring/Interesting", "Dislike/Like", "Irritating/Not irritating".* One-way ANOVA analysis was run with discussion tone as an independent variable. Table 14 represents the means for each group in different discussion tones.

Table 14. Cell means for Attitude Towards the Ad.

Attitude towards the ad	Discussion tone	N	Mean	Std. Deviation
Evaluate the shown advertisement – Bad:Good	Positive	151	3,02	1,029
	Negative	133	3,09	1,018
	Mixed	126	2,97	1,043
	Total	410	3,03	1,029
Evaluate the shown advertisement - Boring:Interesting	Positive	150	2,64	1,089
	Negative	133	2,59	1,066
	Mixed	125	2,64	1,027
	Total	408	2,63	1,060
Evaluate the shown advertisement – Dislike:Like	Positive	149	3,13	,791
	Negative	131	3,11	,891
	Mixed	123	3,06	,852
	Total	403	3,10	,842
Evaluate the shown advertisement – Irritating:Not irritating	Positive	149	3,36	1,008
	Negative	131	3,32	1,152
	Mixed	124	3,25	1,049
	Total	404	3,31	1,067

Observing the means, no consistency or pattern was found – the first scale has higher mean in negative condition, the second item has the same highest means in positive and mixed discussion tones, the third and fourth scales have shown highest means in the positive discussion tone. ANOVA test was run to study the possible influence of discussion tone on the evaluations of advertisements. Results of the test didn't show statistically significant difference between the groups' means:

"*Bad/Good*". ANOVA test has shown F(2, 407)=.459, p=.632.

"Boring/Interesting". ANOVA test hasn't revealed any statistically significant differences between the groups: F(2, 405)=.084, p=.919

"Dislike/Like". Similarly, no effect was found in this item (F(2,400)=.258, p=.772).

"Irritating/Not irritating". ANOVA test result: F(2, 401)=.378, p=.686

Table 15. ANOVA test for Attitude Towards the Ad.

ANOVA						
		Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Evaluate the shown advertisement – Bad:Good	Between Groups	,974	2	,487	,459	,632
	Within Groups	431,731	407	1,061		
	Total	432,705	409			
Evaluate the shown advertisement - Boring:Interesting	Between Groups	,190	2	,095	,084	,919
	Within Groups	457,435	405	1,129		
	Total	457,625	407			
Evaluate the shown advertisement – Dislike:Like	Between Groups	,368	2	,184	,258	,772
	Within Groups	284,461	400	,711		
	Total	284,829	402			
Evaluate the shown advertisement – Irritating:Not irritating	Between Groups	,863	2	,431	,378	,686
	Within Groups	458,214	401	1,143		
	Total	459,077	403			

Therefore, no expected effect of discussion tone on attitude towards the ad was found. Similar situations have already been presented in affective priming studies, when a replication study on affective priming effect didn't show similar results to the original paper (Russ, 2003). Analysis of the question's frequencies has shown, that more than a half of the respondents have chosen the middle value when answering the question (see the Figure 11 presented below).

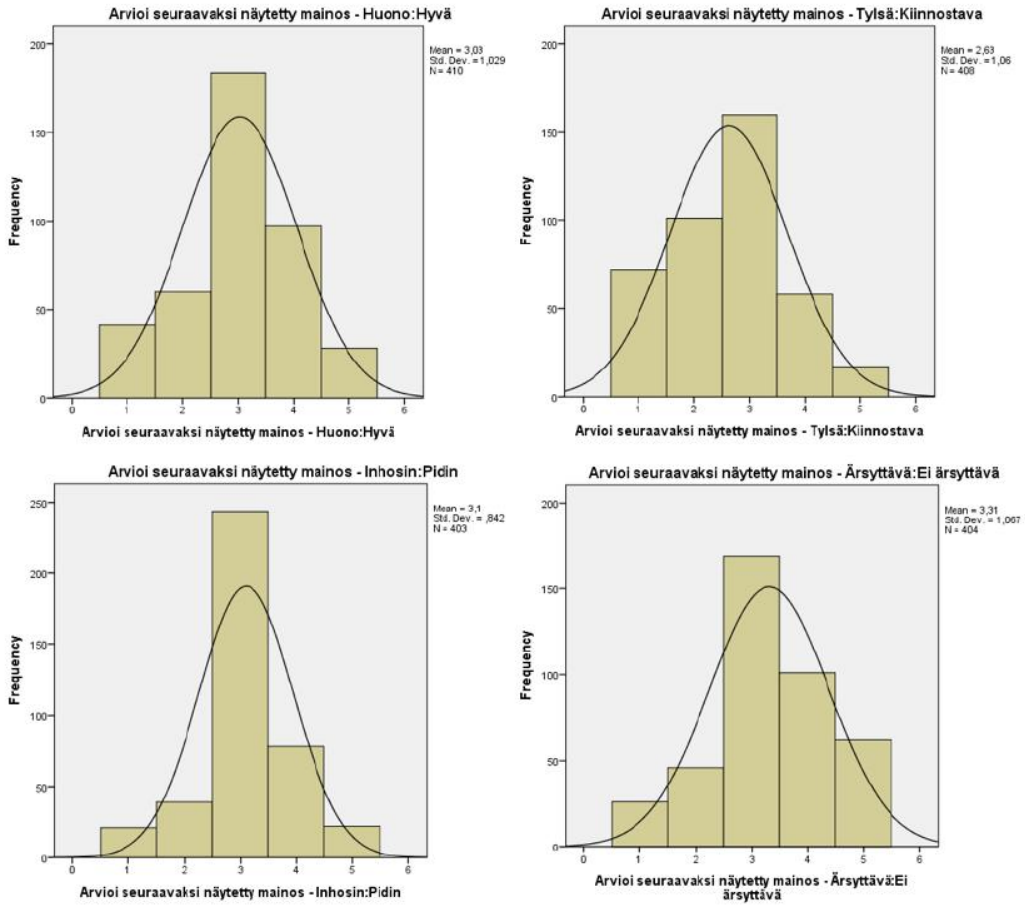

Figure 11. Histograms for Attitude Towards the Ad

Hypothesis 1a: positive tone of a discussion will lead to more positive attitude towards the ad.

Therefore, Hypothesis 1a is not supported by the findings of this experiment.

T-test was run to see the possible influence of ad-context congruence on attitude towards the ad. Table 16 represents the mean and standard deviations for the metric's items in congruent and incongruent conditions (see the T-test table in Appendix 7I).

Table 16. Statistics of Attitude Towards the Ad.

Group Statistics					
Attitude towards the ad	**Congruence**	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Evaluate the shown advertisement – Bad:Good	congruent	196	3,09	1,039	,074
	incongruent	214	2,97	1,018	,070
Evaluate the shown advertisement - Boring:Interesting	congruent	195	2,64	1,023	,073
	incongruent	213	2,61	1,096	,075
Evaluate the shown advertisement – Dislike:Like	congruent	192	3,10	,818	,059
	incongruent	211	3,10	,864	,060
Evaluate the shown advertisement – Irritating:Not irritating	congruent	192	3,30	1,083	,078
	incongruent	212	3,33	1,055	,072

Results indicated no effect of congruence on the variable:

"Bad/Good" – M=3.09, SD=1.039 in congruent condition, M=2.97, SD=1.018 in incongruent condition; t(408)=1.225, p=.221

"Boring/Interesting" – M=2.64, SD=1.023 in congruent condition, M=2.61, SD=1.096 in incongruent; t(406)=.292, p=.771

"Dislike/Like" – congruent condition M=3.10, SD=.818; M=3.10, SD=.864 incongruent condition; t(401)=.055, p=.956

"Irritating/Not irritating" – mean in congruent condition M=3.30, SD=1.083; mean in incongruent condition M=3.33, SD=1.055; t(402)=-.313, p=.754

Therefore, no influence of ad-context congruence was found (see Appendix 7I for the T-test table) and Hypothesis 2a is not supported:

Hypothesis 2a: attitude towards the ad will be more favorable for contextually congruent ads rather for incongruent ads.

As seen on the histograms above and in the Table 17, middle value of 3 is prevailing in the answers, and middle-value answers account for almost a half or even more.

Table 17. Frequencies for Attitude Towards the Ad.

Scales/Points	**1**	**2**	**3**	**4**	**5**	**Total**
Bad:Good	41	60	184	97	28	410
Boring:Interesting	72	101	160	58	17	408
Dislike:Like	21	39	243	78	22	403
Irritating:Not irritating	26	46	169	101	62	404

Although the results don't correspond to the expected behavior and no pattern was found in the analyses, this finding provides ideas for the further researches, where other approaches and factors could be utilized. For instance, this study used quite neutral advertisements without bright and vivid colours, and no calls to actions were involved in the advertisements' design. Having these features could add more realistic effect to the experiment. Assessing an advertisement of unfamiliar product might be also challenging for the people, and type of the product both in the advertisement and discussion might have different degree of interest for the people, therefore, uncontrolled experiment could be run where people are able to surf the discussion pages that seem to be more interesting for them. Other possibility for studying this effect further might be learning the topics of interest of the respondents in advance to provide them with text on familiar topics. Another option for studying this issue could be using another metrics of measuring the attitude towards the ad (e.g. as in Lutz et al., 1986).

Attitude towards the brand

Attitude towards the brand was measured as in Lutz, MacKenzie and Belch (1986) with 3-item 7-point bipolar scale where the respondents were asked to rate their feelings of using the Yonde's product. One-way ANOVA test was run with discussion tones as independent variables. Table 18 represents the groups' means:

Table 18. Cell means for Attitude Towards the Brand.

Attitude towards the brand	Discussion tone	N	Mean	Std. Deviation
Please assess your overall feeling about using the Yonde product – Unfavorable:Favorable	Positive	151	3,25	1,570
	Negative	133	2,80	,983
	Mixed	129	2,61	,946
	Total	413	2,90	1,248
Please assess your overall feeling about using the Yonde product – Bad:Good	Positive	148	3,47	1,576
	Negative	131	2,85	,907
	Mixed	128	2,66	,907
	Total	407	3,02	1,243
Please assess your overall feeling about using the Yonde product – Foolish:Wise	Positive	146	3,47	1,505
	Negative	131	2,92	,891
	Mixed	125	2,74	,932
	Total	402	3,06	1,201

As seen in the Table 18, means in the evaluations of brand are higher in positive condition. Visualized results are presented in the Figure 12 below:

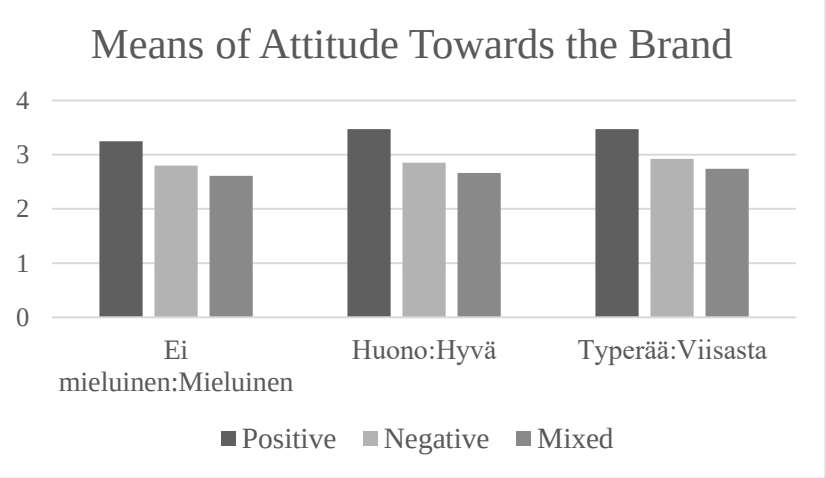

Figure 12. Means of Attitude Towards the Brand

Therefore, assessment of brand is higher when the discussion on the web page is positive. These findings were also tested with ANOVA test to see whether these results are statistically significant, tone of the discussion was independent variable. Results of the ANOVA test:

"Unfavorable/Favorable" – ANOVA test revealed statistically significant differences between the groups' means (F(2, 410)=10.066, p<.001).

"Bad/Good" item has also shown statistically significant differences (F(2, 404)=17.693, p<.001).

"Foolish/Wise" - results of the ANOVA test: F(2, 399)=19.472, p<.001.

Table 19. ANOVA test for Attitude Towards the Brand.

ANOVA						
		Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Please assess your overall feeling about using the Yonde product – Unfavorable:Favorable	Between Groups	30,053	2	15,027	10,066	,000
	Within Groups	612,073	410	1,493		
	Total	642,126	412			
Please assess your overall feeling about using the Yonde product – Bad:Good	Between Groups	50,486	2	25,243	17,693	,000
	Within Groups	576,393	404	1,427		
	Total	626,880	406			
Please assess your overall feeling about using the Yonde product – Foolish:Wise	Between Groups	38,945	2	19,472	14,405	,000
	Within Groups	539,373	399	1,352		
	Total	578,318	401			

Post-hoc Tukey test was run in order to determine the exact groups with statistically significant differences, and the results shown that the respondents rated the brand higher in all the measured items when the discussion tone was positive:

"Unfavorable/Favorable"- M=3.25, SD=1.570, p<.001

"Bad/Good" – M=3,47, SD=1.576, p<.001

"Foolish/Wise" – M=3,47, SD=1.505, p<.001

The findings state that positive tone of a discussion has an effect on evaluations of brands that are advertised on the same web page. Therefore, Hypothesis 1b is supported by the findings:

Hypothesis 1b: positive tone of a discussion will lead to more positive attitude towards the brand.

The variables were also tested with congruence as an independent variable. T-test was run and the results indicated that in congruent conditions the attitude towards the brand are higher (see the T-test table in Appendix 7J):

Table 20. Statistics for the Attitude Towards the Brand.

Attitude Towards the Brand	Congruence	N	Mean	Std. Deviation	Std. Error Mean
Please assess your overall feeling about using the Yonde product – Unfavorable:Favorable	Congruent	194	3,13	1,500	,108
	Incongruent	219	2,70	,929	,063
Please assess your overall feeling about using the Yonde product – Bad:Good	Congruent	193	3,26	1,519	,109
	Incongruent	214	2,80	,873	,060
Please assess your overall feeling about using the Yonde product – Foolish:Wise	Congruent	191	3,28	1,467	,106
	Incongruent	211	2,87	,852	,059

"Unfavorable/Favorable" measures showed M=3.13, SD=1.500 for the congruent condition and M=2.70, SD=.929 for the incongruent one, t(314)=3.492, p=.001

"Bad/Good" – M=3.26, SD=1.519 in congruent and M=2.80, SD-,873 for incongruent conditions, t(299)=3.693, p<.001

"Foolish/Wise" – M=3.28, SD=1.467 for congruent and M=2.87, SD=.852 for the incongruent, t(298)=3.426, p=.001

Therefore, results of the T-test indicate that ad-context congruence has an impact on the evaluations of advertised brand with higher evaluations for congruent advertisements and that proves the ***Hypothesis 2b***:

Hypothesis 2b*:* attitude towards the brand will be higher for contextually congruent ads rather for incongruent ads.

Overall, the analyses results state, that positive discussion tone elicits better evaluations of the brand advertised on the same web page, with even higher evaluations if the advertisement is contextually congruent. This supports the ***Hypothesis 1b*** and proposes that affective priming effect influences the users' attitude towards the advertised brands in the online environment. Moreover, the findings also prove the ***Hypothesis 2b*** by indicating the attitude towards the brand was also higher for the contextually congruent advertisements. These findings provide opportunities for the marketers to increase the effectiveness of advertising and brand perception by inserting contextually congruent ads into web pages that possess positive emotional load.

Ad recall

Ad recall was measured by simply asking the participants whether they recall seeing the ad on the screenshot of the discussion. If answered "no", a skip-logic was activated in the survey that passed all the ad-related questions. Among the respondents, 36.1% have claimed to recall seeing an ad on the shown screenshot, and 63.9% replied negatively. Low ad recall rates are usual nowadays, as found by Dreze and Hussherr (2003) half of the online ads are not seen by the users. Table 21 represents statistics of the variable:

Table 21. Statistics for Ad Recall

Ad recall	Congruence	N	Mean	Std. Deviation	Std. Error Mean
Do you recall seeing the ad on the	Congruent	586	1,66	,475	,020
	Incongruent	577	1,62	,486	,020

discussion's screenshot?					

Chi-Square test of independence was done in order to study the possible connections between the ad recall and discussion tone (see Appendix 7K for the details). Overall, Chi-Square test didn't reveal any influence of discussion tone on ad recall with p=.771

Therefore, no effect was found for Hypothesis 1c:

Hypothesis 1c: positive tone of a discussion will lead to higher advertisement recall.

T-test was run with ad-context congruence as an independent variable and results indicated higher mean for the congruent condition: M=1.66, SD=.475 in congruent condition, and M=1.62, SD=.486 for the incongruent. However, the results weren't found statistically significant (t(1159)=1.297, p=.195), the T-test table is attached in Appendix 7K. Hence, the ad recall wasn't found to be influenced by discussion tones or ad-context congruence and also ***Hypothesis 2c*** wasn't supported by the results:

Hypothesis 2c*:* ad recall will be higher for contextually congruent ads rather for incongruent ads.

One of the possible explanations of the effect might lie in the goal orientation of the respondents. Study of Danaher and Mullarkey (2003) has investigated the factors affecting the recall of online ads, and one of the found factors was goal orientation. When goal-directed, users are less likely to notice an advertisement on the web page, and to increase the ad recall and recognition, a user should have a longer exposure to the web page (Danaher and Mullarkey, 2003, 260). Considering the suggested incentive for completing the survey (5 gift cards worth €50 each), the respondents could have a goal-orientation of finishing the survey to get a prize; therefore, the goal attainment can make the respondents behaving not in a natural way.

Ad recognition

Ad recognition measure asked participants to choose the ad that was placed on the screenshot among 8 advertisements (see Appendix 1 for all the 8 advertisements used). The second advertisement was always correct (fictitious ad of laptop or a camera was used according to the discussion topic), and the second answer's option was labeled as "correct" in SPSS, while all the others as "incorrect". Overall, 378 respondents have answered this question, and the recognition rate of the correct advertisement is 96.3% percent. Cross tabulation was run in SPSS to reveal the possible dependence of ad recognition on discussion tone and ad-context congruence. However, the wrong choices were most likely based on random effect rather on relations (see Appendix 7L). Therefore, effect of discussion tone and ad-context congruence on the ad recognition level wasn't found in the analyses. Chi-Square test on ad recognition and discussion tone didn't indicate any effect of tone with p=.442 (see Appendix 7L for more details). Chi-Square test on ad recognition and ad-context congruence also didn't show any effect of congruence with p=.427 (see Appendix 7L for the tables).

The same as with ad recall, the possible explanation of this effect might be the goal orientation of the respondents to finish the survey. Therefore, no support was found for the ***Hypothesis 1d*** and ***Hypothesis 2d***:

Hypothesis 1d: positive tone of a discussion will lead to better ad recognition.
Hypothesis 2d*:* ad recognition will be better for contextually congruent ads rather for incongruent ads.

Probability of click

Probability of click was measured by scale suggested in MacKenzie and Lutz (1989) for measuring the purchase intention. Since the experiment design didn't allow clicking the advertisement, it was agreed to estimate the probability of clicking behavior. The respondents were asked to assess the probability of clicking the ad on 5-point 3-item bipolar scale. The

variable was tested with one-way ANOVA test with discussion tone as an independent variable. Results of the ANOVA test haven't shown any effect of discussion tone on the probability of click.

Table 22. Cell means for Probability of Click.

Probability of Click	Discussion tone	N	Mean	Std. Deviation
Please assess the probability that you would click the Yonde ad - Unlikely:Likely	Positive	151	1,95	1,176
	Negative	137	1,85	1,061
	Mixed	127	1,82	1,191
	Total	415	1,88	1,143
Please assess the probability that you would click the Yonde ad – Improbable/Probable	Positive	149	1,98	1,106
	Negative	135	1,84	1,021
	Mixed	126	1,86	1,122
	Total	410	1,90	1,083
Please assess the probability that you would click the Yonde ad – Impossible:Possible	Positive	150	2,53	1,133
	Negative	135	2,47	1,043
	Mixed	122	2,42	1,170
	Total	407	2,48	1,114

"Unlikely/Likely"- ANOVA test hasn't revealed statistically significant differences between the groups (F(2, 412)=.474, p=.623).

"Improbable/Probable" – no statistically significant differences were found (F(2, 407)=.679, p=.508).

"Impossible/Possible" – similarly to the previous measures, no effect was found (F(2, 404)=.320, p=.727).

Therefore, Hypothesis 1e wasn't proved:

Hypothesis 1e: positive tone of a discussion will lead to higher probability of click.

Table 23. ANOVA test for Probability of Click.

ANOVA					
	Sum of Squares	df	Mean Square	F	Sig.

Please assess the probability that you would click the Yonde ad - Unlikely:Likely	Between Groups	1,241	2	,621	,474	,623
	Within Groups	539,491	412	1,309		
	Total	540,733	414			
Please assess the probability that you would click the Yonde ad – Improbable/Probable	Between Groups	1,596	2	,798	,679	,508
	Within Groups	478,102	407	1,175		
	Total	479,698	409			
Please assess the probability that you would click the Yonde ad – Impossible:Possible	Between Groups	,795	2	,398	,320	,727
	Within Groups	502,733	404	1,244		
	Total	503,528	406			

Similarly, T-test was run to evaluate the possible effect of ad-context congruence on the probability of click, and no effect of congruence was found to affect the intentions of users to click the advertisement (see Appendix 7M for the T-test tables).

"Unlikely/Likely" – congruent condition M=1.89, SD=1.147; incongruent M=1.87, SD=1.142; t(413)=.221, p=.825

"Improbable/Probable" – congruent M=1.91, SD=1.080; incongruent M=1.89, SD=1.088; t(408)=.180, p=.857

"Impossible/Possible" – congruent condition M=2.46, SD=1.113; incongruent M=2.49, SD=2.116; t(405)=-.262, p=.793

According to the results, ***Hypothesis 2e*** wasn't supported:

Hypothesis 2e*:* probability of click will be higher for contextually congruent ads rather for incongruent ads.

Therefore, analysis of the probability of click has shown that various discussion tones and ad-context congruence are not affecting the variable. The effect might be explained by the overall

low click through rates, since overabundance of online advertisements affects the users' willingness to click the ads and a phenomenon of banner blindness has emerged (Cho and Cheon, 2004, 89). For instance, Google Adwords industry benchmarks states that average click-through rate for display ads across all industries is .35% (WordStream, 2018) or even .05% as counted by other agencies (Smart Insights, 2018). Moreover, the presented advertisement displayed unfamiliar brand and product, and that could also affect the decisions of the respondents in some way, e.g. findings of Dahlen (2001, 28) suggest that unfamiliar new brands reach higher click-through rates with increased repetition of ads. Personal preferences to certain products or, on the contrary, absence of the interest for this type of product (shown on the advertisement) might also be the explanations of the result. As discussed in the section of Attitude Towards the Ad, although the expected results weren't gained, this provides paths for the further researches in the field, for instance, running a similar study with familiar products' ads or agreed in advance topics of interest.

6. DISCUSSION

6.1. DISCUSSION OF THE RESULTS

This thesis researched affective priming effect emerging online on the discussion forums. Affective priming effect relates to influence of preceding stimulus to the subsequent one, meaning that exposure to a certain web page might influence the way the online advertisements on this page are perceived. The main factors studied in this paper were discussion tone and ad-context congruence; three discussion tones were used in the experiment (positive, negative and mixed) and contextually congruent and incongruent ads were studied. Affective priming in this paper is studied through the prism of dual-process theory of reasoning, implying that two systems are controlling the thinking processes, where the System 1 is responsible for unconscious effects like affective priming, and System 2 relates to conscious and cognitive processing. Five main variables were used in the experiment in order to investigate the effect of affective priming online on responses to online ads: attitude towards the ad and brand, probability of click, ad recall and recognition.

According to the analyses' results, two hypotheses were supported by findings:

Hypothesis 1b: positive tone of a discussion will lead to more positive attitude towards the brand.

Hypothesis 2b*:* attitude towards the brand will be higher for contextually congruent ads rather for incongruent ads.

The results indicate, that attitude towards the advertised brand will be higher when the advertisement is placed in congruent or positive context. This provides opportunities for both businesses and researchers of the priming effect. While including this knowledge into business practices might help in achieving better brand perception for businesses, it is still important to study the mechanisms of priming under other conditions, such as varying the topics, platforms and other factors.

The fact that other hypotheses (attitude towards the ad, ad recall, ad recognition and probability of click) were not supported by the results is not a failure, but rather an important insight into the way priming effect works, by influencing only one studied factor in the readers' minds. Moreover, this results contrasts with study by Yi (1990a), where he proposes that evaluation of brand goes only after the attitude towards the brand is determined. But since Yi (1990a) has studied priming effect in printed newspapers and this study concentrates in more dynamic environment like online forum, the possible explanation of the effect might lie in the platforms' difference, and this provides path for further researches of the sequence of priming influence.

6.2. MANAGERIAL CONTRIBUTIONS

The findings state, that tone of the discussion and ad-context congruence have an effect on evaluations of the advertised brand, while other variables didn't show any dependence on tones and congruence. As found, brand is evaluated higher when the advertisement is placed in positive and in contextually congruent web page. This result provides valuable information for the marketers, since inserting advertisements in appropriate context might increase the evaluations of a brand, and eventually contribute to the brand awareness, recognition and better sales. These findings also suggest that affective priming does exist in the online space, and it is capable of influencing the perception of users unconsciously. While not affecting the assessment of an ad itself, the advertised brand is influenced directly by the priming, changing the evaluations of users by emotional tone of the web page and contextual congruence of an ad and text.

In the world of marketing automation findings of this thesis might be utilized with an automated approach, when filters on the web site could track the emotional tone and topic of the web site content, and then place the most advantageous advertisements for the companies in the carousel ad places.

6.3. THEORETICAL CONTRIBUTIONS

This result contrasts with the assumption of Yi (1990a), that ad context firstly elicits affective reactions, which influence attitude towards the brand, that in turn affects the attitude towards the brand and this influences the purchase intentions. While purchase intention wasn't investigated in the scope of this research, this sequence isn't supported by the findings of this study. Attitude towards the ad wasn't found to be influenced by context and affective reactions, while attitude towards the brand showed a strong correlation with the discussion tone. Findings of this paper state, that attitude towards the brand is directly influenced by the affective tone of the context, skipping the attitude towards the ad itself.

Dual-processing theory is used in this thesis to explain the occurring effect – exposed to a web page users firstly elicit certain emotions towards the web page through the System 1 work, and these emotions depend on the discussion tone, while the System 2 starts working when cognitive abilities are needed, e.g. to process the new information discussed about the product. Affective reactions are unconscious and originate in a fast manner, without conscious understanding of the feelings or reasons preceding those feelings. Since the study didn't find the effect of affective priming on all the variables, the paths for new researches exist to investigate the other variables and possible factors affecting them.

6.4. LIMITATIONS AND FUTURE RESEARCH

The study of this thesis was focused on a certain type of a web site – discussion forum, while online advertisements are placed on various web sites, where the affective reactions might also take place. If researching the online forums, design of this study implied that users have only discussed the product, but sometimes such discussions are going beyond the subject and may eventually transfer into personal talks and this effect wasn't studied in this paper. Studying other types of discussions might shed more light on the factors that actually influence the people's behavior. Researching other types of web sites with both user-generated content and media type of content might extent the knowledge in the field of priming effect in the online space. For

instance, one of the paths for the future researches is to investigate whether reading content not relating to a product directly (e.g. bad news) is capable of elicit similar affective reactions and influence the responses towards the ad on this web page.

The study was limited to two discussion topics (about a laptop and a camera), however, if choosing a topic of interest for each respondent, the extent of the found effect could vary. This proposes ideas for the further researches where the sample could consist of people who are interested in the discussed topic. No eye tracker was used in this study, however, having a possibility to track the eye movements of the respondents could provide more information on the parts of discussion that had more impact and attracted more attention of the respondents. Since this study has found effect contrasting with previous researches (e.g. Yi, 1990a), and attitude towards the ad wasn't found to be influenced by the affective tone of the content, studying the possible factors could provide more information in this field.

Overall, online priming effect has perspectives for further researches that might contribute to both the theoretical marketing knowledge and then be applied into practice to facilitate the process of matching appropriate advertisements and content for better results.

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APPENDIX 1 – Advertisements used in the experiment


YOUR PHONE. YOUR YONDE.


YOUR BLENDER. YOUR YONDE.


YOUR HEADPHONES. YOUR YONDE.


YOUR SPEAKERS. YOUR YONDE.


YOUR TABLET. YOUR YONDE.

APPENDIX 2 – Pretest survey questions

Question	Answers and format	Measured
Q1: Please read the statements and indicate how do you agree or disagree with each of them.	1. I would like to visit this web site again in the future 2. I feel comfortable in reading the discussion on this web site 3. I feel surfing this web site is a good way to spend my time. (from Chen and Wells, 1999) 5-point Likert scale	Attitude towards the web site is measured. Confound check.
Q2: After reading the discussion, how trustworthy does the web site seem to you?	Untrustworthy – trustworthy. Bipolar 5-point scale	Measuring the perceived trustworthiness of the web site. Confound check.
Q3: After reading the discussion, how suspicious or trustful you are of the messages?	Suspicious – trustful. Bipolar 5-point scale	Measuring the perceived trustworthiness of the messages, since positive and negative conditions have strongly valenced emotional messages of only one type. Confound check.
Q4: Do you recall seeing the ad on the discussion's screenshot?	Yes – No. If No – skip 3 next questions.	Ad recall measured. Confound check.
Q5: Do you remember the product category of the advertised product?	Options: camera, cell phone, computer, I don't remember	Ad recall measured. Confound check.
Q6: Do you remember which ad was shown on the screenshot?	2 pictures of the presented ads; none of them	Ad recognition measured. Confound check.
Q7: Please rate how do the discussion topic and advertisement below relate to each other.	1. Not compatible/compatible 2. Not a good fit/good fi 3.Not appropriate/appropriate. (Rifon et 1l., 2004). Bipolar 5-point matrix	Manipulation check, the perceived ad-context congruence is measured.
Q8: (First pretest) How would you describe your interest for the product discussed?	1. This is a product that interests me. 2. I am not at all familiar with the product. 3. I definitely have a "wanting" for this product. (Lastovicka and Gardner, 1979) 7-point Likert scale.	Measuring the involvement. Confound check.
Q9: Please, rate your mood according to the statements.	1. Currently, I am in a good mood 2. As I answer these questions I feel cheerful 3. For some reason I am not very comfortable right now	Measuring the mood changed because of the messages. Confound check.

	4. At this moment I feel edgy or irritable. (Peterson and Sauber, 1983). 7-point Likert scale.	
Q10: Please read the statements and indicate how do you agree or disagree with each of them.	1. The tone of this discussion is positive. 2. The tone of this discussion is a mixture of positive and negative messages. 3. The tone of this discussion is negative. Measure: Likert 5-point scale	Manipulation check, the perceived intended emotional tone of the discussions is measured.
Q11: Please indicate your gender	Male-Female	Demographic data
Q12: Please indicate your age	Under 18; 18-24; 25-34; 35-44; 45-54; 55-64; 65-74; 75-84; 85 or older	Demographic data
Q13: what is the highest degree or level of school you have completed?		Demographic data
Q14: Please indicate your nationality	List of nationalities	Demographic data
Q15: Are you currently…?	Employment/occupation	Demographic data
Q16: Please indicate your approximate yearly income	Range of incomes	Demographic data

APPENDIX 3 – Manipulation check results

a) Descriptive statistics of the discussion tone manipulation, post-hoc Tukey test, and ANOVA table

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Please read the statements and indicate how do you agree or disagree with each of them. - Tone of the discussion shown in the beginning of survey is positive	Positive	58	4,21	,853	,112	3,98	4,43	2	5
	Negative	60	2,00	1,207	,156	1,69	2,31	1	5
	Mixed	55	3,36	,890	,120	3,12	3,60	1	5
	Total	173	3,17	1,357	,103	2,97	3,38	1	5
Please read the statements and indicate how do you agree or disagree with each of them. - Tone of the discussion shown in the beginning of survey is negative	Positive	58	1,72	,854	,112	1,50	1,95	1	5
	Negative	60	4,03	1,207	,156	3,72	4,35	1	5
	Mixed	56	2,63	,926	,124	2,38	2,87	1	5
	Total	174	2,81	1,391	,105	2,60	3,02	1	5
Please read the statements and indicate how do you agree or disagree with each of them. - Tone of the discussion shown in the beginning of survey is a mixture of positive and negative messages	Positive	58	2,22	,956	,126	1,97	2,48	1	5
	Negative	60	2,47	1,295	,167	2,13	2,80	1	5
	Mixed	56	3,45	,971	,130	3,19	3,71	1	5
	Total	174	2,70	1,203	,091	2,52	2,88	1	5

Multiple Comparisons

Tukey HSD

Dependent Variable	(I) Tone of the discussion	(J) Tone of the discussion	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Please read the statements and indicate how do you agree or disagree with each of them. - Tone of the discussion shown in the beginning of survey is positive	Positive	Negative	2,207*	,184	,000	1,77	2,64
		Mixed	,843*	,188	,000	,40	1,29
	Negative	Positive	-2,207*	,184	,000	-2,64	-1,77
		Mixed	-1,364*	,187	,000	-1,81	-,92
	Mixed	Positive	-,843*	,188	,000	-1,29	-,40
		Negative	1,364*	,187	,000	,92	1,81
Please read the statements and indicate how do you agree or disagree with each of them. - Tone of the discussion shown in the beginning of survey is negative	Positive	Negative	-2,309*	,186	,000	-2,75	-1,87
		Mixed	-,901*	,189	,000	-1,35	-,45
	Negative	Positive	2,309*	,186	,000	1,87	2,75
		Mixed	1,408*	,188	,000	,96	1,85
	Mixed	Positive	,901*	,189	,000	,45	1,35
		Negative	-1,408*	,188	,000	-1,85	-,96
Please read the statements and indicate how do you agree or disagree with each of them. - Tone of the discussion shown in the beginning of survey is a mixture of positive and negative messages	Positive	Negative	-,243	,201	,449	-,72	,23
		Mixed	-1,222*	,204	,000	-1,70	-,74
	Negative	Positive	,243	,201	,449	-,23	,72
		Mixed	-,980*	,202	,000	-1,46	-,50
	Mixed	Positive	1,222*	,204	,000	,74	1,70
		Negative	,980*	,202	,000	,50	1,46

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

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Please read the statements and indicate how do you agree or disagree with each of them. - Tone of the discussion shown in the beginning of survey is positive	Between Groups	146,553	2	73,277	73,171	,000
	Within Groups	170,245	170	1,001		
	Total	316,798	172			
Please read the statements and indicate how do you agree or disagree with each of them. - Tone of the discussion shown in the beginning of survey is negative	Between Groups	160,097	2	80,048	78,378	,000
	Within Groups	174,645	171	1,021		
	Total	334,741	173			
Please read the statements and indicate how do you agree or disagree with each of them. - Tone of the discussion shown in the beginning of survey is a mixture of positive and negative messages	Between Groups	47,601	2	23,800	20,063	,000
	Within Groups	202,859	171	1,186		
	Total	250,460	173			

b) T-test and group statistics for the congruence manipulation

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
Please rate how do the discussion topic and advertisement relate to each other. - Not compatible:Compatible	Equal variances assumed	30,011	,000	6,617	110	,000	1,386	,209	,971	1,801
	Equal variances not assumed			6,903	106,213	,000	1,386	,201	,988	1,784
Please rate how do the discussion topic and advertisement relate to each other. - Not a good fit:A good fit	Equal variances assumed	12,771	,001	5,516	110	,000	1,125	,204	,721	1,529
	Equal variances not assumed			5,670	109,808	,000	1,125	,198	,732	1,518
Please rate how do the discussion topic and advertisement relate to each other. - Not corresponding: Corresponding	Equal variances assumed	25,218	,000	5,695	110	,000	1,149	,202	,749	1,549
	Equal variances not assumed			5,955	105,233	,000	1,149	,193	,766	1,532

Group Statistics

	Congruence	N	Mean	Std. Deviation	Std. Error Mean
Please rate how do the discussion topic and advertisement relate to each other. - Not compatible:Compatible	Congruent	50	4,16	,842	,119
	Incongruent	62	2,77	1,273	,162
Please rate how do the discussion topic and advertisement relate to each other. - Not a good fit:A good fit	Congruent	50	3,98	,915	,129
	Incongruent	62	2,85	1,185	,151
Please rate how do the discussion topic and advertisement relate to each other. - Not corresponding: Corresponding	Congruent	50	4,02	,795	,112
	Incongruent	62	2,87	1,235	,157

c) Descriptives table and ANOVA for attitude towards the web site (attitude towards the web site x tone of the discussion)

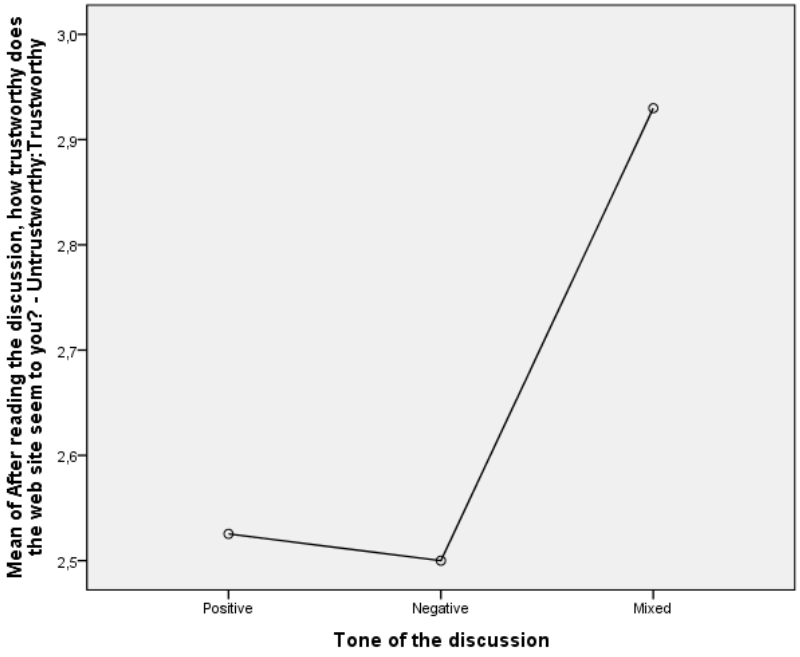
Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Please read the statements and indicate how do you agree or disagree with each of them. - I would like to visit this web site again in the future	Positive	59	3,98	1,320	,172	3,64	4,33	1	7
	Negative	60	3,67	1,633	,211	3,24	4,09	1	7
	Mixed	57	4,00	1,427	,189	3,62	4,38	1	7
	Total	176	3,88	1,467	,111	3,66	4,10	1	7
Please read the statements and indicate how do you agree or disagree with each of them. - I feel comfortable in reading the discussion on this web site	Positive	59	4,42	1,441	,188	4,05	4,80	1	6
	Negative	60	4,12	1,823	,235	3,65	4,59	1	7
	Mixed	57	4,56	1,559	,206	4,15	4,97	1	7
	Total	176	4,36	1,619	,122	4,12	4,60	1	7
Please read the statements and indicate how do you agree or disagree with each of them. - I feel surfing this web site is a good way to spend my time	Positive	59	3,27	1,448	,189	2,89	3,65	1	6
	Negative	60	3,05	1,620	,209	2,63	3,47	1	7
	Mixed	57	3,40	1,602	,212	2,98	3,83	1	7
	Total	176	3,24	1,557	,117	3,01	3,47	1	7

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Please read the statements and indicate how do you agree or disagree with each of them. - I would like to visit this web site again in the future	Between Groups	4,178	2	2,089	,971	,381
	Within Groups	372,316	173	2,152		
	Total	376,494	175			
Please read the statements and indicate how do you agree or disagree with each of them. - I feel comfortable in reading the discussion on this web site	Between Groups	6,102	2	3,051	1,166	,314
	Within Groups	452,625	173	2,616		
	Total	458,727	175			
Please read the statements and indicate how do you agree or disagree with each of them. - I feel surfing this web site is a good way to spend my time	Between Groups	3,747	2	1,873	,771	,464
	Within Groups	420,230	173	2,429		
	Total	423,977	175			

d) Means' plot for the perceived web site trustworthiness (web site trustworthiness x tone of the discussion)



e) Descriptives table, means' plot and ANOVA for the perceived messages trustworthiness (message trustworthiness x tone of the discussion).

Descriptives

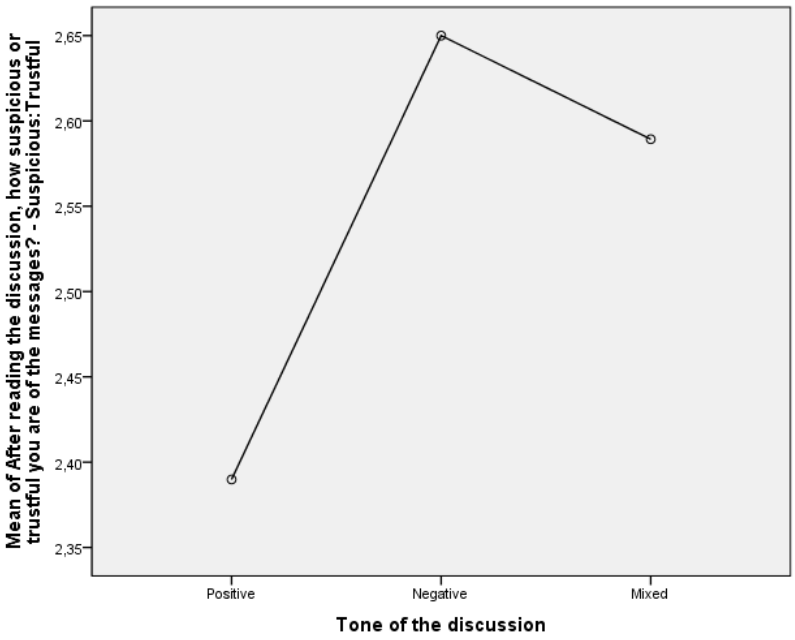
After reading the discussion, how suspicious or trustful you are of the messages? - Suspicious:Trustful

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Positive	59	2,39	1,034	,135	2,12	2,66	1	4
Negative	60	2,65	1,205	,156	2,34	2,96	1	5
Mixed	56	2,59	1,041	,139	2,31	2,87	1	4
Total	175	2,54	1,097	,083	2,38	2,71	1	5

ANOVA

After reading the discussion, how suspicious or trustful you are of the messages? - Suspicious:Trustful

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2,191	2	1,096	,909	,405
Within Groups	207,237	172	1,205		
Total	209,429	174			



f) Ad recall group statistics, T-test (ad recall x congruence), and ANOVA (ad recall x tone of the discussion)

Group Statistics

	Congruence	N	Mean	Std. Deviation	Std. Error Mean
Do you recall seeing the ad on the discussion's screenshot?	Congruent	86	1,42	,496	,054
	Incongruent	90	1,30	,461	,049

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
Do you recall seeing the ad on the discussion's screenshot?	Equal variances assumed	9,527	,002	1,644	174	,102	,119	,072	-,024	,261
	Equal variances not assumed			1,641	171,552	,103	,119	,072	-,024	,261

Do you recall seeing the ad on the discussion's screenshot?

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,866	2	,433	1,893	,154
Within Groups	39,583	173	,229		
Total	40,449	175			

g) Product involvement ANOVA results (product involvement x tone of the discussion).

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
How would you describe your interest for the laptop discussed? - This is a product that interests me	Between Groups	12,930	2	6,465	2,539	,082
	Within Groups	438,007	172	2,547		
	Total	450,937	174			
How would you describe your interest for the laptop discussed? - I am not at all familiar with the product	Between Groups	9,210	2	4,605	1,456	,236
	Within Groups	543,968	172	3,163		
	Total	553,177	174			
How would you describe your interest for the laptop discussed? - I definitely have a "wanting" for this product	Between Groups	7,402	2	3,701	2,137	,121
	Within Groups	297,935	172	1,732		
	Total	305,337	174			

h) Mood of the respondents, ANOVA results (mood x tone of the discussion).

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Please, rate your mood according to the statements. - Currently, I am in a good mood	Between Groups	1,602	2	,801	,505	,604
	Within Groups	272,592	172	1,585		
	Total	274,194	174			
Please, rate your mood according to the statements. - As I answer these questions I feel cheerful	Between Groups	,166	2	,083	,054	,948
	Within Groups	265,548	172	1,544		
	Total	265,714	174			
Please, rate your mood according to the statements. - For some reason I am not very comfortable right now	Between Groups	4,958	2	2,479	1,040	,356
	Within Groups	409,899	172	2,383		
	Total	414,857	174			
Please, rate your mood according to the statements. - At this moment I feel edgy or irritable	Between Groups	7,027	2	3,513	1,535	,218
	Within Groups	391,278	171	2,288		
	Total	398,305	173			

APPENDIX 4 – Second Pretest Questions

Question	Answers and format	Measured
Q1 Screenshot		
Q2: Please read the statements and indicate how do you agree or disagree with each of them.	1. I would like to visit this web site again in the future 2. I feel comfortable in reading the discussion on this web site 3. I feel surfing this web site is a good way to spend my time. (from Chen and Wells, 1999) 5-point Likert scale	Attitude towards the web site is measured. Confound check.
Q3: After reading the discussion, how trustworthy does the web site seem to you?	Untrustworthy – trustworthy. Bipolar 5-point scale	Measuring the perceived trustworthiness of the web site. Confound check.
Q4: After reading the discussion, how suspicious or trustful you are of the messages?	Suspicious – trustful. Bipolar 5-point scale	Measuring the perceived trustworthiness of the messages, since positive and negative conditions have strongly valenced emotional messages of only one type. Confound check.
Q5: Please rate, how well these adjectives describe the discussion on the scale fro 1 to 7, where 1 – describes very poorly, 7 – describes very well	Accurate, Authentic, Believable. 3-item 7-point bipolar scale	Perceived credibility of the messages (Appelman and Sundar, 2016)
Q6: Do you recall seeing the ad on the discussion's screenshot?	Yes – No. If No – skip 3 next questions.	Ad recall measured. Confound check.
Q7: Do you remember the product category of the advertised product?	Options: camera, cell phone, computer, TV, I don't remember	Ad recall measured. Confound check.
Q8: Do you remember which ad was shown on the screenshot?	2 pictures of the presented ads; 2 ads with TV and cell phone that weren't used; none of them	Ad recognition measured. Confound check.
Q9: Please rate how do the discussion topic and advertisement below relate to each other.	1. Not compatible/compatible 2. Not a good fit/good fi 3. Not appropriate/appropriate. (Rifon et 1l., 2004). Bipolar 5-point matrix	Manipulation check, the perceived ad-context congruence is measured.
Q10: Please evaluate the shown advertiement	1. Bad/good 2. Boring/interesting 3. Dislike/ilke 4. Irritating/not irritating 7-point 4-item bipolar scale, (Yi, 1990a)	Attitude towards the ad measured; dependent variable
Q11: Please assess your overall feelings about using the Yonde product	1. Unfavourable/favourable 2. Bad/Good 3. Foolish/Wise	Attitude towards the brand, dependent variable

	7-point 3-item bipolar scale, (Lutz, MacKenzie and Belch, 1986)	
Q12: Please assess the probability that you would click the Yonde ad.	1. Unlikely/likely 2. Improbable/probable 3. Impossible/possible 7-point 3-item bipolar scale, Yi, MacKenzie	Probability of click, dependent variable
Q13: How would you describe your interest for the product discussed?	1. This is a product that interests me. 2. I am not at all familiar with the product. 3. I definitely have a "wanting" for this product. (Lastovicka and Gardner, 1979) 7-point Likert scale.	Measuring the involvement. Confound check.
Q14: Please, rate your mood according to the statements.	1. Currently, I am in a good mood 2. As I answer these questions I feel cheerful 3. For some reason I am not very comfortable right now 4. At this moment I feel edgy or irritable. (Peterson and Sauber, 1983). 7-point Likert scale.	Measuring the mood changed because of the messages. Confound check.
Q15: Please read the statements and indicate how do you agree or disagree with each of them.	1. The tone of this discussion is positive. 2. The tone of this discussion is a mixture of positive and negative messages. 3. The tone of this discussion is negative. Measure: Likert 5-point scale	Manipulation check, the perceived intended emotional tone of the discussions is measured.
Q16: Please indicate your gender	Male-Female	Demographic data
Q17: Please indicate your age	Under 18; 18-24; 25-34; 35-44; 45-54; 55-64; 65-74; 75-84; 85 or older	Demographic data
Q18: what is the highest degree or level of school you have completed?		Demographic data
Q19: Please indicate your nationality		Demographic data
Q20: Are you currently…?	Employment/occupation	Demographic data
Q21: Please indicate your approximate yearly income		Demographic data

APPENDIX 5 – Second Pretest Results

a) Descriptives table and ANOVA results for tone of the discussion manipulation check.

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Please read the statements and indicate how do you agree or disagree with each of them. - Tone of the discussion shown in the beginning of survey is positive	positive	25	4,20	,816	,163	3,86	4,54	2	5
	negative	27	2,63	1,245	,240	2,14	3,12	1	5
	mixed	24	3,33	1,204	,246	2,82	3,84	1	5
	Total	76	3,37	1,274	,146	3,08	3,66	1	5
Please read the statements and indicate how do you agree or disagree with each of them. - Tone of the discussion shown in the beginning of survey is negative	positive	25	1,76	,831	,166	1,42	2,10	1	4
	negative	27	3,52	1,189	,229	3,05	3,99	1	5
	mixed	24	2,33	,917	,187	1,95	2,72	1	4
	Total	76	2,57	1,237	,142	2,28	2,85	1	5
Please read the statements and indicate how do you agree or disagree with each of them. - Tone of the discussion shown in the beginning of survey is a mixture of positive and negative messages	positive	25	2,48	1,046	,209	2,05	2,91	1	5
	negative	27	3,07	1,269	,244	2,57	3,58	1	5
	mixed	24	3,67	1,049	,214	3,22	4,11	2	5
	Total	76	3,07	1,215	,139	2,79	3,34	1	5

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Please read the statements and indicate how do you agree or disagree with each of them. - Tone of the discussion shown in the beginning of survey is positive	Between Groups	32,055	2	16,027	13,054	,000
	Within Groups	89,630	73	1,228		
	Total	121,684	75			
Please read the statements and indicate how do you agree or disagree with each of them. - Tone of the discussion shown in the beginning of survey is negative	Between Groups	42,037	2	21,018	21,124	,000
	Within Groups	72,634	73	,995		
	Total	114,671	75			
Please read the statements and indicate how do you agree or disagree with each of them. - Tone of the discussion shown in the beginning of survey is a mixture of positive and negative messages	Between Groups	17,246	2	8,623	6,738	,002
	Within Groups	93,425	73	1,280		
	Total	110,671	75			

b) T-test and group statistics of ad-context congruence manipulation check

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
Please rate how do the discussion topic and advertisement relate to each other. - Not compatible:Compatible	Equal variances assumed	5,143	,028	4,028	47	,000	1,328	,330	,665	1,992
	Equal variances not assumed			4,008	43,728	,000	1,328	,331	,660	1,996
Please rate how do the discussion topic and advertisement relate to each other. - Not a good fit:A good fit	Equal variances assumed	4,769	,034	3,389	47	,001	1,087	,321	,442	1,732
	Equal variances not assumed			3,374	44,123	,002	1,087	,322	,438	1,736
Please rate how do the discussion topic and advertisement relate to each other. - Not corresponding: Corresponding	Equal variances assumed	1,875	,177	4,390	47	,000	1,462	,333	,792	2,131
	Equal variances not assumed			4,382	46,251	,000	1,462	,334	,790	2,133

Group Statistics

	Congruence	N	Mean	Std. Deviation	Std. Error Mean
Please rate how do the discussion topic and advertisement relate to each other. - Not compatible:Compatible	congruent	25	4,12	1,013	,203
	incongruent	24	2,79	1,285	,262
Please rate how do the discussion topic and advertisement relate to each other. - Not a good fit:A good fit	congruent	25	3,92	,997	,199
	incongruent	24	2,83	1,239	,253
Please rate how do the discussion topic and advertisement relate to each other. - Not corresponding: Corresponding	congruent	25	3,92	1,115	,223
	incongruent	24	2,46	1,215	,248

c) Attitude towards the web site, ANOVA table

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Please read the statements and indicate how do you agree or disagree with each of them. - I would like to visit this web site again in the future	Between Groups	5,675	2	2,837	1,426	,246
	Within Groups	165,128	83	1,989		
	Total	170,802	85			
Please read the statements and indicate how do you agree or disagree with each of them. - I feel comfortable in reading the discussion on this web site	Between Groups	,718	2	,359	,115	,892
	Within Groups	259,654	83	3,128		
	Total	260,372	85			
Please read the statements and indicate how do you agree or disagree with each of them. - I feel surfing this web site is a good way to spend my time	Between Groups	4,495	2	2,247	,718	,491
	Within Groups	259,843	83	3,131		
	Total	264,337	85			

d) Web site ad messages trustworthiness, ANOVA and descriptives

Descriptives

After reading the discussion, how trustworthy does the web site seem to you? - Untrustworthy:Trustworthy

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
positive	26	2,85	1,223	,240	2,35	3,34	1	5
negative	32	3,06	1,216	,215	2,62	3,50	1	5
mixed	27	2,81	1,111	,214	2,38	3,25	1	5
Total	85	2,92	1,177	,128	2,66	3,17	1	5

ANOVA

After reading the discussion, how trustworthy does the web site seem to you? - Untrustworthy:Trustworthy

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1,090	2	,545	,387	,680
Within Groups	115,334	82	1,407		
Total	116,424	84			

Descriptives

After reading the discussion, how suspicious or trustful you are of the messages? - Suspicious:Trustful

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
positive	26	2,62	1,267	,249	2,10	3,13	1	4
negative	32	3,09	1,279	,226	2,63	3,55	1	5
mixed	27	2,67	1,271	,245	2,16	3,17	1	5
Total	85	2,81	1,277	,139	2,54	3,09	1	5

ANOVA

After reading the discussion, how suspicious or trustful you are of the messages? - Suspicious:Trustful

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4,116	2	2,058	1,270	,286
Within Groups	132,873	82	1,620		
Total	136,988	84			

e) Product involvement, ANOVA table

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
How would you describe your interest for the discussed product? - Unimportant:Important	Between Groups	21,750	2	10,875	1,531	,223
	Within Groups	518,500	73	7,103		
	Total	540,250	75			
How would you describe your interest for the discussed product? - Of concern to me:Of no concern	Between Groups	58,722	2	29,361	4,066	,021
	Within Groups	519,944	72	7,221		
	Total	578,667	74			
How would you describe your interest for the discussed product? - Means nothing:Means a lot to me	Between Groups	34,763	2	17,381	2,556	,084
	Within Groups	503,185	74	6,800		
	Total	537,948	76			
How would you describe your interest for the discussed product? - Doesn't matter:Matters to me	Between Groups	28,809	2	14,404	1,895	,158
	Within Groups	554,823	73	7,600		
	Total	583,632	75			
How would you describe your interest for the discussed product? - Insignificant:Significant	Between Groups	45,007	2	22,504	2,939	,059
	Within Groups	559,032	73	7,658		
	Total	604,039	75			

f) Mood measure, ANOVA table

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Please, rate your mood according to the statements. - Currently, I am in a good mood	Between Groups	,149	2	,074	,054	,947
	Within Groups	100,588	73	1,378		
	Total	100,737	75			
Please, rate your mood according to the statements. - As I answer these questions I feel cheerful	Between Groups	2,079	2	1,040	,530	,591
	Within Groups	143,118	73	1,961		
	Total	145,197	75			
Please, rate your mood according to the statements. - For some reason I am not very comfortable right now	Between Groups	2,360	2	1,180	,476	,623
	Within Groups	180,798	73	2,477		
	Total	183,158	75			
Please, rate your mood according to the statements. - At this moment I feel edgy or irritable	Between Groups	,499	2	,250	,098	,907
	Within Groups	186,185	73	2,550		
	Total	186,684	75			

APPENDIX 6 – Final Questionnaire (Questions In Finnish)

Question	Answers	Measure
Q1: Screenshot		
Q2: Seuraavat väittämät koskevat äskeisessä kuvakaappauksessa näkemääsi keskustelua. Arvioi seuraavaksi missä määrin olet samaa tai eri mieltä väittämien kanssa.	1. Haluaisin käydä tällä keskustelupalstalla joskus uudelleen. 2. Minusta on mukavaa lukea tällä keskustelupalstalla käytyä keskustelua. 3. Minusta tuntuu, että tämän keskustelupalstan selailu on hyvä ajanviettotapa.	Attitude towards the web site (confound check). Measure from Chen and Wells (1999). 5-point Likert scale.
Q3: Keskustelun luettuasi, kuinka luotettavalta näkemäsi keskustelupalsta sinusta vaikuttaa?	Epäluotettava - luotettava.	Perceived trustworthiness of the web site (confound check). Bipolar 5-point scale.
Q4: Keskustelun luettuasi, kuinka paljon epäilet viestejä tai luotat niihin?	Epäilen - luotan.	Perceived trustworthiness of the messages (confound check). Bipolar 5-point scale.
Q5: Arvioi, kuinka hyvin nämä adjektiivit kuvaavat keskustelua skaalalla yhdestä seitsemään. 1 - kuvaa erittäin huonosti, 7 - kuvaa erittäin hyvin.	1. Paikkansapitävä 2. Aito 3. Uskottava.	Perseived credibility of the messages (confound check), 3-item 7-point bipolar scale. From Appelman & Sundar (2016).
Q6: Muistatko nähneesi mainoksen keskustelun kuvankaappauksessa?	Kyllä/En	Ad recall measure (dependent variable).
Q7: Muistatko mikä mainos näkyi kuvankaappauksessa?	8 pictures of advertisements are shown.	Ad recognition measured (dependent variable).
Q8: Arvioi, kuinka hyvin keskustelun aihe ja alla oleva mainos liittyvät toisiinsa..	1. Ei yhteensopiva/yhteensopiva 2. Ei sovi/sopii 3. Ei asianmukainen/asianmukainen	Perceived ad-context congruence (manipulation check). Bipolar 3-item 5.point scale. From Rifon et al. (2004).
Q9: Arvioi seuraavaksi näytetty mainos	1. Huono/Hyvä 2. Tylsä/Kiinnostava 3. En pitänyt/Pidin 4. Ärsyttävä/Ei ärsyttävä	Attitude towards the ad (dependent variable). 5-point 4-item bipolar scale (from Yi, 1990a).
Q10: Arvioi ylipäätään tunteesi Yonde-tuotteen käyttämisestä.	1. Ei mieluinen/Mieluinen 2. Huono/Hyvä 3. Typerää/Viisasta	Attitude towards the brand (dependent variable). 5-point 3-item bipolar scale. From Lutz et al. (1986).
Q11: Arvioi todennäköisyys sille, että klikkaisit Yonde-mainosta.	1. Tuskin/Luultavasti 2.Epätodennäköistä/Todennäköistä 3. Mahdotonta/Mahdollista	Probability of click (dependent variable). 5-point 3-item bipolar scale (from MacKenzie and Lutz, 1989)

Q12: 6. Kuinka kuvailisit kiinnostustasi keskusteltua tuotetta kohtaan?	1. Tämä tuote kiinnostaa minua. 2. En tunne tätä tuotetta ollenkaan. 3. Haluaisin ehdottomasti tämän tuotteen itselleni.	Product involvement (confound check). 3-item 5-point Likert scale (Lastovicka and Gardner, 1979).
Q13: Arvioi mielialasi näiden väittämien avulla.	1. Olen tällä hetkellä hyvällä tuulella. 2. Vastatessani näihin kysymyksiin tunnen itseni iloiseksi. 3. Jostain syystä minulla ei ole kovin mukava olo. 4. Tällä hetkellä tunnen itseni hermostuneeksi tai ärtyisäksi.	Mood (confound check). 4-item 7-point Likert scale. From Peterson and Sauber (1983)
Q14: Luethan väittämät ja merkitset, missä määrin olet samaa tai eri mieltä niiden kanssa.	1. Keskustelun sävy on positiivinen. 2. Keskustelun sävy on sekoitus positiivisia ja negatiivisia viestejä. 3. Keskustelun sävy on negatiivinen.	Perceived discussion tone (manipulation check). 3-item 5-point Likert scale.
Q15: Sukupuoli	1. Mies 2. Nainen 3. Muu	Demographic data
Q16: Ikä	Alle 18; 18-24; 25-34; 35-44; 45-54; 55-64; 65-74; 75-84; 85 tai vaihempi	Demographic data
Q17: Mikä on korkein saavuttamasi koulutusaste tai tutkinto?	Peruskoulu, toisen asteen koulutus, jonkin verran korkeakouluopintoja, kandidaatintutkinto, maisterintutkinto, ammattikorkeakoulututkinto, tohtorintutkinto	Demographic data
Q18: Oletko tällä hetkellä... ?	Kokopäiväisessä työssä, osa-aikaisessa työssä, työtön ja etsin työtä, työtön mutta en etsi työtä, eläkkeellä, opiskelija, työkyvytön	Demographic data
Q19: Kansallisuutesi		Demographic data
Q20: Vuositulot		Demographic data
Q21: Arvomme kaikkien vastaneiden kesken viisi 50 euron SuperLahjaKorttia. Ole hyvä ja jätä sähköpostiosoitteesi osallistuaksesi arvontaan, jotta voimme ottaa sinun yhteyttä mikäli voitat.		

APPENDIX 7 – Experiment's Analyses

a) Group statistics and T-text for Ad-context Congruence (Q8) manipulation check.

Group Statistics

	Congruence	N	Mean	Std. Deviation	Std. Error Mean
Arvioi, kuinka hyvin keskustelun aihe ja alla oleva mainos liittyvät toisiinsa - Ei yhteensopiva: Yhteensopiva	congruent	199	3,94	1,129	,080
	incongruent	220	2,42	1,249	,084
Arvioi, kuinka hyvin keskustelun aihe ja alla oleva mainos liittyvät toisiinsa - Ei sovi:Sopii	congruent	197	3,94	1,126	,080
	incongruent	215	2,57	1,287	,088
Arvioi, kuinka hyvin keskustelun aihe ja alla oleva mainos liittyvät toisiinsa - Ei asianmukainen: Asianmukainen	congruent	201	3,62	1,231	,087
	incongruent	214	2,94	1,279	,087

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
Arvioi, kuinka hyvin keskustelun aihe ja alla oleva mainos liittyvät toisiinsa - Ei yhteensopiva: Yhteensopiva	Equal variances assumed	13,979	,000	13,034	417	,000	1,522	,117	1,292	1,752
	Equal variances not assumed			13,101	417,000	,000	1,522	,116	1,294	1,750
Arvioi, kuinka hyvin keskustelun aihe ja alla oleva mainos liittyvät toisiinsa - Ei sovi:Sopii	Equal variances assumed	16,548	,000	11,471	410	,000	1,372	,120	1,137	1,607
	Equal variances not assumed			11,538	409,123	,000	1,372	,119	1,138	1,606
Arvioi, kuinka hyvin keskustelun aihe ja alla oleva mainos liittyvät toisiinsa - Ei asianmukainen: Asianmukainen	Equal variances assumed	,041	,839	5,533	413	,000	,683	,123	,440	,925
	Equal variances not assumed			5,540	412,738	,000	,683	,123	,440	,925

b) Manipulation check for Discussion Tone (Q14): descriptives table, ANOVA and post-hoc Tukey test.

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Luethan väittämät ja merkitset, missä määrin olet samaa tai eri mieltä niiden kanssa. - Keskustelun sävy on positiivinen	positive	400	3,75	,904	,045	3,66	3,83	1	5
	negative	373	2,30	1,000	,052	2,20	2,40	1	5
	mixed	376	2,99	,914	,047	2,89	3,08	1	5
	Total	1149	3,03	1,110	,033	2,96	3,09	1	5
Luethan väittämät ja merkitset, missä määrin olet samaa tai eri mieltä niiden kanssa. - Keskustelun sävy on sekoitus positiivisia ja negatiivisia viestejä	positive	398	2,47	,932	,047	2,38	2,56	1	5
	negative	369	2,87	1,095	,057	2,76	2,98	1	5
	mixed	377	3,57	,943	,049	3,47	3,67	1	5
	Total	1144	2,96	1,091	,032	2,90	3,03	1	5
Luethan väittämät ja merkitset, missä määrin olet samaa tai eri mieltä niiden kanssa. - Keskustelun sävy on negatiivinen	positive	397	2,05	,931	,047	1,96	2,14	1	5
	negative	371	3,52	1,106	,057	3,40	3,63	1	5
	mixed	374	2,71	,899	,047	2,61	2,80	1	5
	Total	1142	2,74	1,151	,034	2,67	2,81	1	5

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Luethan väittämät ja merkitset, missä määrin olet samaa tai eri mieltä niiden kanssa. - Keskustelun sävy on positiivinen	Between Groups	403,815	2	201,908	228,802	,000
	Within Groups	1011,293	1146	,882		
	Total	1415,109	1148			
Luethan väittämät ja merkitset, missä määrin olet samaa tai eri mieltä niiden kanssa. - Keskustelun sävy on sekoitus positiivisia ja negatiivisia viestejä	Between Groups	238,845	2	119,422	121,603	,000
	Within Groups	1120,539	1141	,982		
	Total	1359,384	1143			
Luethan väittämät ja merkitset, missä määrin olet samaa tai eri mieltä niiden kanssa. - Keskustelun sävy on negatiivinen	Between Groups	413,520	2	206,760	214,622	,000
	Within Groups	1097,276	1139	,963		
	Total	1510,796	1141			

Multiple Comparisons

Tukey HSD

Dependent Variable	(I) Tone	(J) Tone	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Luethan väittämät ja merkitset, missä määrin olet samaa tai eri mieltä niiden kanssa. - Keskustelun sävy on positiivinen	positive	negative	1,445*	,068	,000	1,29	1,60
		mixed	,758*	,067	,000	,60	,92
	negative	positive	-1,445*	,068	,000	-1,60	-1,29
		mixed	-,686*	,069	,000	-,85	-,53
	mixed	positive	-,758*	,067	,000	-,92	-,60
		negative	,686*	,069	,000	,53	,85
Luethan väittämät ja merkitset, missä määrin olet samaa tai eri mieltä niiden kanssa. - Keskustelun sävy on sekoitus positiivisia ja negatiivisia viestejä	positive	negative	-,403*	,072	,000	-,57	-,23
		mixed	-1,100*	,071	,000	-1,27	-,93
	negative	positive	,403*	,072	,000	,23	,57
		mixed	-,698*	,073	,000	-,87	-,53
	mixed	positive	1,100*	,071	,000	,93	1,27
		negative	,698*	,073	,000	,53	,87
Luethan väittämät ja merkitset, missä määrin olet samaa tai eri mieltä niiden kanssa. - Keskustelun sävy on negatiivinen	positive	negative	-1,467*	,071	,000	-1,63	-1,30
		mixed	-,656*	,071	,000	-,82	-,49
	negative	positive	1,467*	,071	,000	1,30	1,63
		mixed	,812*	,072	,000	,64	,98
	mixed	positive	,656*	,071	,000	,49	,82
		negative	-,812*	,072	,000	-,98	-,64

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

c) Confounding check of Attitude towards the Web site (Q2) – descriptives, ANOVA test and post-hoc Tukey test.

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Seuraavat väittämät koskevat äskeisessä kuvakaappauksessa näkemääsi keskustelua. Arvioi seuraavaksi missä määrin olet samaa tai eri mieltä väittämien kanssa. - Haluaisin käydä tällä keskustelupalstalla joskus uudelleen	positive	413	3,51	1,733	,085	3,34	3,68	1	7
	negative	376	3,38	1,689	,087	3,20	3,55	1	7
	mixed	380	3,29	1,611	,083	3,12	3,45	1	7
	Total	1169	3,39	1,681	,049	3,30	3,49	1	7
Seuraavat väittämät koskevat äskeisessä kuvakaappauksessa näkemääsi keskustelua. Arvioi seuraavaksi missä määrin olet samaa tai eri mieltä väittämien kanssa. - Minusta on mukavaa lukea tällä keskustelupalstalla käytyä keskustelua	positive	405	3,71	1,802	,090	3,53	3,88	1	7
	negative	375	3,38	1,691	,087	3,20	3,55	1	7
	mixed	377	3,47	1,682	,087	3,30	3,64	1	7
	Total	1157	3,52	1,732	,051	3,42	3,62	1	7
Seuraavat väittämät koskevat äskeisessä kuvakaappauksessa näkemääsi keskustelua. Arvioi seuraavaksi missä määrin olet samaa tai eri mieltä väittämien kanssa. - Minusta tuntuu, että tämän keskustelupalstan selailu on hyvä ajanviettotapa	positive	403	3,50	1,771	,088	3,33	3,67	1	7
	negative	372	3,24	1,720	,089	3,06	3,41	1	7
	mixed	375	3,28	1,725	,089	3,10	3,45	1	7
	Total	1150	3,34	1,742	,051	3,24	3,44	1	7

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Seuraavat väittämät koskevat äskeisessä kuvakaappauksessa näkemääsi keskustelua. Arvioi seuraavaksi missä määrin olet samaa tai eri mieltä väittämien kanssa. - Haluaisin käydä tällä keskustelupalstalla joskus uudelleen	Between Groups	10,143	2	5,071	1,797	,166
	Within Groups	3291,060	1166	2,823		
	Total	3301,203	1168			
Seuraavat väittämät koskevat äskeisessä kuvakaappauksessa näkemääsi keskustelua. Arvioi seuraavaksi missä määrin olet samaa tai eri mieltä väittämien kanssa. - Minusta on mukavaa lukea tällä keskustelupalstalla käytyä keskustelua	Between Groups	23,249	2	11,624	3,893	,021
	Within Groups	3445,439	1154	2,986		
	Total	3468,688	1156			
Seuraavat väittämät koskevat äskeisessä kuvakaappauksessa näkemääsi keskustelua. Arvioi seuraavaksi missä määrin olet samaa tai eri mieltä väittämien kanssa. - Minusta tuntuu, että tämän keskustelupalstan selailu on hyvä ajanviettotapa	Between Groups	15,712	2	7,856	2,596	,075
	Within Groups	3471,614	1147	3,027		
	Total	3487,326	1149			

Tukey HSD

Dependent Variable	(I) Tone	(J) Tone	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Seuraavat väittämät koskevat äskeisessä kuvakaappauksessa näkemääsi keskustelua. Arvioi seuraavaksi missä määrin olet samaa tai eri mieltä väittämien kanssa. - Haluaisin käydä tällä keskustelupalstalla joskus uudelleen	positive	negative	,136	,120	,493	-,15	,42
		mixed	,224	,119	,146	-,06	,50
	negative	positive	-,136	,120	,493	-,42	,15
		mixed	,088	,122	,751	-,20	,37
	mixed	positive	-,224	,119	,146	-,50	,06
		negative	-,088	,122	,751	-,37	,20
Seuraavat väittämät koskevat äskeisessä kuvakaappauksessa näkemääsi keskustelua. Arvioi seuraavaksi missä määrin olet samaa tai eri mieltä väittämien kanssa. - Minusta on mukavaa lukea tällä keskustelupalstalla käytyä keskustelua	positive	negative	,333*	,124	,020	,04	,62
		mixed	,242	,124	,124	-,05	,53
	negative	positive	-,333*	,124	,020	-,62	-,04
		mixed	-,091	,126	,751	-,39	,20
	mixed	positive	-,242	,124	,124	-,53	,05
		negative	,091	,126	,751	-,20	,39
Seuraavat väittämät koskevat äskeisessä kuvakaappauksessa näkemääsi keskustelua. Arvioi seuraavaksi missä määrin olet samaa tai eri mieltä väittämien kanssa. - Minusta tuntuu, että tämän keskustelupalstan selailu on hyvä ajanviettotapa	positive	negative	,262	,125	,091	-,03	,56
		mixed	,224	,125	,172	-,07	,52
	negative	positive	-,262	,125	,091	-,56	,03
		mixed	-,038	,127	,952	-,34	,26
	mixed	positive	-,224	,125	,172	-,52	,07
		negative	,038	,127	,952	-,26	,34

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

d) Confounding check for perceived trustworthiness of the discussion forum (Q3) – descriptives and ANOVA tables.

Descriptives

Keskustelun luettuasi, kuinka luotettavalta näkemäsi keskustelupalsta sinusta vaikuttaa? - Epäluotettava:Luotettava

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
positive	412	2,58	1,184	,058	2,47	2,70	1	5
negative	375	2,50	1,118	,058	2,39	2,62	1	5
mixed	379	2,43	1,055	,054	2,32	2,54	1	5
Total	1166	2,51	1,123	,033	2,44	2,57	1	5

ANOVA

Keskustelun luettuasi, kuinka luotettavalta näkemäsi keskustelupalsta sinusta vaikuttaa? - Epäluotettava:Luotettava

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4,595	2	2,298	1,824	,162
Within Groups	1464,835	1163	1,260		
Total	1469,431	1165			

e) Confounding check for perceived trustworthiness of the messages (Q4) – descriptives and ANOVA tables.

Descriptives

Keskustelun luettuasi, kuinka paljon epäilet viestejä tai luotat niihin? - Epäilen:Luotan

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
positive	409	2,36	1,103	,055	2,25	2,47	1	5
negative	371	2,37	1,097	,057	2,26	2,49	1	5
mixed	375	2,22	,996	,051	2,12	2,33	1	5
Total	1155	2,32	1,069	,031	2,26	2,38	1	5

ANOVA

Keskustelun luettuasi, kuinka paljon epäilet viestejä tai luotat niihin? - Epäilen:Luotan

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5,279	2	2,640	2,317	,099
Within Groups	1312,551	1152	1,139		
Total	1317,830	1154			

f) Perceived credibility of the discussion (Q5), confounding check – descriptives and ANOVA tables.

Descriptives

						95% Confidence Interval for Mean			
		N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
Arvioi, kuinka hyvin nämä adjektiivit kuvaavat keskustelua skaalalla yhdestä seitsemään. 1 - kuvaa erittäin huonosti, 7 - kuvaa erittäin hyvin. - Paikkansapitävä	positive	410	3,32	1,667	,082	3,16	3,48	1	7
	negative	372	3,25	1,576	,082	3,09	3,41	1	7
	mixed	378	3,16	1,457	,075	3,01	3,30	1	7
	Total	1160	3,24	1,572	,046	3,15	3,33	1	7
Arvioi, kuinka hyvin nämä adjektiivit kuvaavat keskustelua skaalalla yhdestä seitsemään. 1 - kuvaa erittäin huonosti, 7 - kuvaa erittäin hyvin. - Aito	positive	407	3,30	1,729	,086	3,13	3,47	1	7
	negative	372	3,43	1,648	,085	3,26	3,60	1	7
	mixed	379	3,33	1,506	,077	3,18	3,48	1	7
	Total	1158	3,35	1,632	,048	3,26	3,45	1	7
Arvioi, kuinka hyvin nämä adjektiivit kuvaavat keskustelua skaalalla yhdestä seitsemään. 1 - kuvaa erittäin huonosti, 7 - kuvaa erittäin hyvin. - Uskottava	positive	405	3,19	1,733	,086	3,02	3,36	1	7
	negative	375	3,25	1,635	,084	3,08	3,41	1	7
	mixed	378	3,03	1,522	,078	2,88	3,19	1	7
	Total	1158	3,16	1,636	,048	3,06	3,25	1	7

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Arvioi, kuinka hyvin nämä adjektiivit kuvaavat keskustelua skaalalla yhdestä seitsemään. 1 - kuvaa erittäin huonosti, 7 - kuvaa erittäin hyvin. - Paikkansapitävä	Between Groups	5,123	2	2,562	1,037	,355
	Within Groups	2858,321	1157	2,470		
	Total	2863,445	1159			
Arvioi, kuinka hyvin nämä adjektiivit kuvaavat keskustelua skaalalla yhdestä seitsemään. 1 - kuvaa erittäin huonosti, 7 - kuvaa erittäin hyvin. - Aito	Between Groups	3,465	2	1,732	,650	,522
	Within Groups	3078,784	1155	2,666		
	Total	3082,249	1157			
Arvioi, kuinka hyvin nämä adjektiivit kuvaavat keskustelua skaalalla yhdestä seitsemään. 1 - kuvaa erittäin huonosti, 7 - kuvaa erittäin hyvin. - Uskottava	Between Groups	9,234	2	4,617	1,728	,178
	Within Groups	3086,787	1155	2,673		
	Total	3096,021	1157			

g) Discussed product involvement (Q12), confounding check – descriptives and ANOVA table; statistics and T-test tables.

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Kuinka kuvailisit kiinnostustasi keskusteltua tuotetta kohtaan? - Tämä tuote kiinnostaa minua	positive	402	2,28	1,069	,053	2,17	2,38	1	5
	negative	372	2,20	1,013	,053	2,10	2,31	1	5
	mixed	378	2,25	1,076	,055	2,14	2,35	1	5
	Total	1152	2,24	1,053	,031	2,18	2,30	1	5
Kuinka kuvailisit kiinnostustasi keskusteltua tuotetta kohtaan? - En tunne tätä tuotetta ollenkaan	positive	400	3,75	1,408	,070	3,61	3,89	1	5
	negative	374	3,57	1,440	,074	3,42	3,71	1	5
	mixed	372	3,57	1,458	,076	3,42	3,72	1	5
	Total	1146	3,63	1,437	,042	3,55	3,71	1	5
Kuinka kuvailisit kiinnostustasi keskusteltua tuotetta kohtaan? - Haluaisin ehdottomasti tämän tuotteen itselleni	positive	401	2,05	1,055	,053	1,95	2,16	1	5
	negative	369	1,94	1,013	,053	1,84	2,05	1	5
	mixed	371	1,95	1,022	,053	1,85	2,06	1	5
	Total	1141	1,99	1,031	,031	1,93	2,05	1	5

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Kuinka kuvailisit kiinnostustasi keskusteltua tuotetta kohtaan? - Tämä tuote kiinnostaa minua	Between Groups	1,002	2	,501	,451	,637
	Within Groups	1274,943	1149	1,110		
	Total	1275,944	1151			
Kuinka kuvailisit kiinnostustasi keskusteltua tuotetta kohtaan? - En tunne tätä tuotetta ollenkaan	Between Groups	8,357	2	4,179	2,029	,132
	Within Groups	2354,509	1143	2,060		
	Total	2362,866	1145			
Kuinka kuvailisit kiinnostustasi keskusteltua tuotetta kohtaan? - Haluaisin ehdottomasti tämän tuotteen itselleni	Between Groups	2,957	2	1,478	1,392	,249
	Within Groups	1208,819	1138	1,062		
	Total	1211,776	1140			

Group Statistics

	Congruence	N	Mean	Std. Deviation	Std. Error Mean
Kuinka kuvailisit kiinnostustasi keskusteltua tuotetta kohtaan? - Tämä tuote kiinnostaa minua	congruent	581	2,21	1,027	,043
	incongruent	571	2,28	1,079	,045
Kuinka kuvailisit kiinnostustasi keskusteltua tuotetta kohtaan? - En tunne tätä tuotetta ollenkaan	congruent	579	3,71	1,406	,058
	incongruent	567	3,55	1,464	,061
Kuinka kuvailisit kiinnostustasi keskusteltua tuotetta kohtaan? - Haluaisin ehdottomasti tämän tuotteen itselleni	congruent	576	1,99	1,047	,044
	incongruent	565	1,99	1,016	,043

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
Kuinka kuvailisit kiinnostustasi keskusteltua tuotetta kohtaan? - Tämä tuote kiinnostaa minua	Equal variances assumed	1,680	,195	-1,188	1150	,235	-,074	,062	-,195	,048
	Equal variances not assumed			-1,187	1144,892	,235	-,074	,062	-,195	,048
Kuinka kuvailisit kiinnostustasi keskusteltua tuotetta kohtaan? - En tunne tätä tuotetta ollenkaan	Equal variances assumed	2,673	,102	1,924	1144	,055	,163	,085	-,003	,329
	Equal variances not assumed			1,923	1139,764	,055	,163	,085	-,003	,329
Kuinka kuvailisit kiinnostustasi keskusteltua tuotetta kohtaan? - Haluaisin ehdottomasti tämän tuotteen itselleni	Equal variances assumed	,181	,670	,004	1139	,996	,000	,061	-,120	,120
	Equal variances not assumed			,004	1138,870	,996	,000	,061	-,120	,120

h) Mood of the respondents (Q13), confounding check – descriptives and ANOVA tables.

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Arvioi mielialasi näiden väittämien avulla. - Olen tällä hetkellä hyvällä tuulella	positive	404	5,18	1,396	,069	5,04	5,32	1	7
	negative	373	4,95	1,463	,076	4,81	5,10	1	7
	mixed	377	5,06	1,437	,074	4,92	5,21	1	7
	Total	1154	5,07	1,433	,042	4,99	5,15	1	7
Arvioi mielialasi näiden väittämien avulla. - Vastatessani näihin kysymyksiin tunnen itseni iloiseksi	positive	402	4,32	1,431	,071	4,18	4,46	1	7
	negative	370	4,21	1,450	,075	4,06	4,36	1	7
	mixed	375	4,39	1,473	,076	4,25	4,54	1	7
	Total	1147	4,31	1,452	,043	4,23	4,39	1	7
Arvioi mielialasi näiden väittämien avulla. - Jostain syystä minulla ei ole kovin mukava olo	positive	402	3,08	1,598	,080	2,92	3,24	1	7
	negative	371	3,17	1,595	,083	3,01	3,34	1	7
	mixed	375	3,02	1,607	,083	2,86	3,18	1	7
	Total	1148	3,09	1,600	,047	3,00	3,18	1	7
Arvioi mielialasi näiden väittämien avulla. - Tällä hetkellä tunnen itseni hermostuneeksi tai ärtyisäksi	positive	402	2,62	1,594	,079	2,47	2,78	1	7
	negative	368	2,72	1,590	,083	2,56	2,89	1	7
	mixed	373	2,60	1,603	,083	2,44	2,76	1	7
	Total	1143	2,65	1,595	,047	2,56	2,74	1	7

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Arvioi mielialasi näiden väittämien avulla. - Olen tällä hetkellä hyvällä tuulella	Between Groups	9,947	2	4,974	2,427	,089
	Within Groups	2358,507	1151	2,049		
	Total	2368,454	1153			
Arvioi mielialasi näiden väittämien avulla. - Vastatessani näihin kysymyksiin tunnen itseni iloiseksi	Between Groups	6,376	2	3,188	1,514	,220
	Within Groups	2408,751	1144	2,106		
	Total	2415,126	1146			
Arvioi mielialasi näiden väittämien avulla. - Jostain syystä minulla ei ole kovin mukava olo	Between Groups	4,337	2	2,168	,847	,429
	Within Groups	2930,242	1145	2,559		
	Total	2934,578	1147			
Arvioi mielialasi näiden väittämien avulla. - Tällä hetkellä tunnen itseni hermostuneeksi tai ärtyisäksi	Between Groups	3,125	2	1,562	,614	,541
	Within Groups	2901,489	1140	2,545		
	Total	2904,614	1142			

i) Attitude towards the Ad – T-test table

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
Arvioi seuraavaksi näytetty mainos - Huono: Hyvä	Equal variances assumed	,427	,514	1,225	408	,221	,125	,102	-,075	,324
	Equal variances not assumed			1,224	403,293	,222	,125	,102	-,075	,325
Arvioi seuraavaksi näytetty mainos - Tylsä: Kiinnostava	Equal variances assumed	2,344	,127	,292	406	,771	,031	,105	-,176	,238
	Equal variances not assumed			,293	405,850	,770	,031	,105	-,176	,237
Arvioi seuraavaksi näytetty mainos - Inhosin: Pidin	Equal variances assumed	,137	,712	,055	401	,956	,005	,084	-,161	,170
	Equal variances not assumed			,055	400,363	,956	,005	,084	-,160	,169
Arvioi seuraavaksi näytetty mainos - Ärsyttävä:Ei ärsyttävä	Equal variances assumed	,057	,811	-,313	402	,754	-,033	,106	-,243	,176
	Equal variances not assumed			-,313	395,762	,755	-,033	,107	-,243	,176

j) Attitude towards the Brand (Q10) – T-test table

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
Arvioi ylipäätään tunteesi Yonde-tuotteen käyttämisestä - Ei mieluinen:Mieluinen	Equal variances assumed	18,527	,000	3,588	411	,000	,435	,121	,197	,674
	Equal variances not assumed			3,492	314,233	,001	,435	,125	,190	,681
Arvioi ylipäätään tunteesi Yonde-tuotteen käyttämisestä - Huono: Hyvä	Equal variances assumed	31,534	,000	3,790	405	,000	,460	,121	,221	,699
	Equal variances not assumed			3,693	299,481	,000	,460	,125	,215	,705
Arvioi ylipäätään tunteesi Yonde-tuotteen käyttämisestä - Typerää: Viisasta	Equal variances assumed	41,109	,000	3,512	400	,000	,415	,118	,183	,648
	Equal variances not assumed			3,426	298,498	,001	,415	,121	,177	,654

k) Ad recall (Q6) –crosstabs, Chi-Square test and bar chart; statistics and T-test tables.

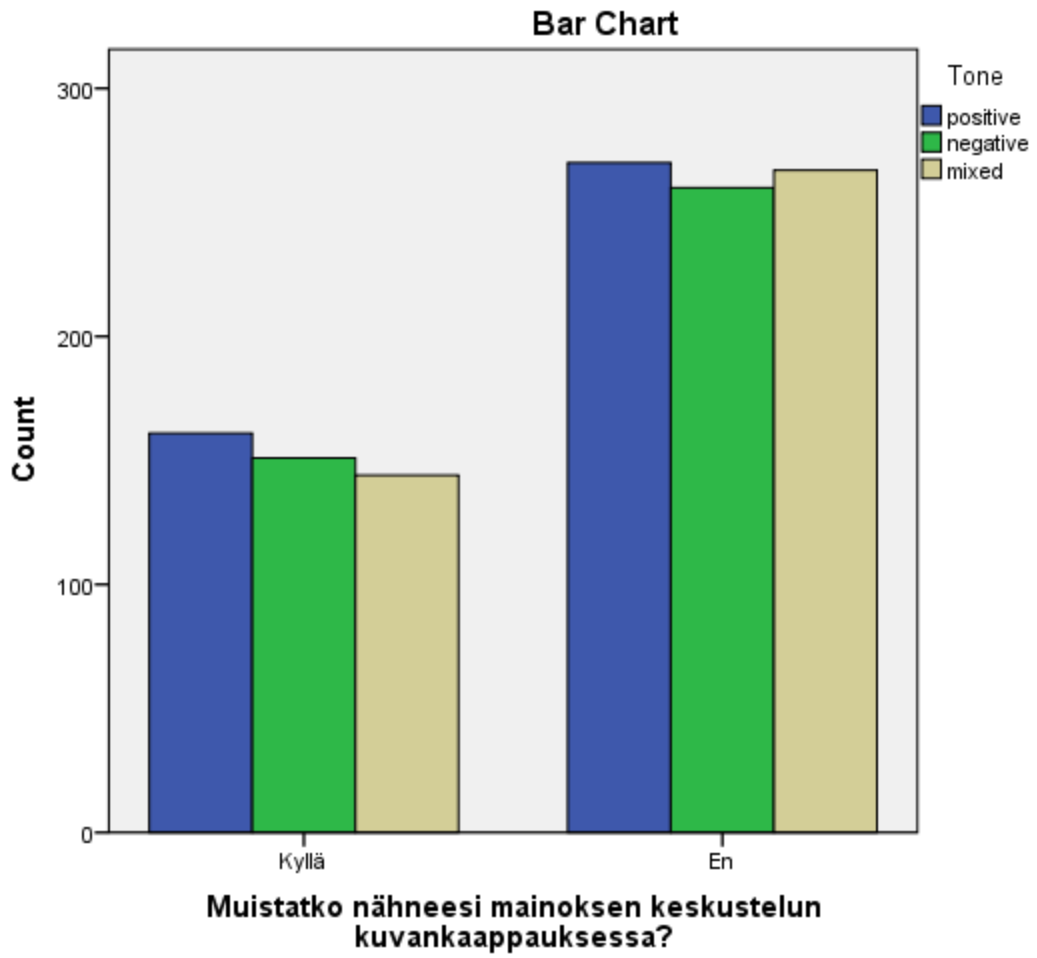
Muistatko nähneesi mainoksen keskustelun kuvankaappauksessa? * Tone Crosstabulation

			Tone			Total
			positive	negative	mixed	
Muistatko nähneesi mainoksen keskustelun kuvankaappauksessa?	Kyllä	Count	161	151	144	456
		% within Muistatko nähneesi mainoksen keskustelun kuvankaappauksessa?	35,3%	33,1%	31,6%	100,0%
		% within Tone	37,4%	36,7%	35,0%	36,4%
		% of Total	12,8%	12,1%	11,5%	36,4%
	En	Count	270	260	267	797
		% within Muistatko nähneesi mainoksen keskustelun kuvankaappauksessa?	33,9%	32,6%	33,5%	100,0%
		% within Tone	62,6%	63,3%	65,0%	63,6%
		% of Total	21,5%	20,8%	21,3%	63,6%
Total		Count	431	411	411	1253
		% within Muistatko nähneesi mainoksen keskustelun kuvankaappauksessa?	34,4%	32,8%	32,8%	100,0%
		% within Tone	100,0%	100,0%	100,0%	100,0%
		% of Total	34,4%	32,8%	32,8%	100,0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	,520[a]	2	,771
Likelihood Ratio	,521	2	,770
Linear-by-Linear Association	,485	1	,486
N of Valid Cases	1253		

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 149,57.



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
Muistatko nähneesi mainoksen keskustelun kuvankaappauksessa?	Equal variances assumed	6,640	,010	1,297	1161	,195	,037	,028	-,019	,092
	Equal variances not assumed			1,297	1159,369	,195	,037	,028	-,019	,092

l) Ad recognition (Q7) Frequences, Crosstabs for ad recognition*discussion tone, Chi-Square test and bar chart; crosstabs for ad recognition*congruence, Chi-Square test and bar chart.

Muistatko
mikä mainos näkyi kuvankaappauksessa?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	IM_bCTeGiS5t79Bswt	4	,2	1,1	1,1
	IM_8BaOupc79EzZF7T	146	7,7	38,6	39,7
	IM_9YlVRz8TDiYj0Xz	1	,1	,3	39,9
	IM_5mRJqQrudMvFtOt	3	,2	,8	40,7
	IM_9pBKhnj3Sjr3LDL	2	,1	,5	41,3
	IM_4MBfB0eppTz0rgV	218	11,5	57,7	98,9
	IM_1EXYm6EnzlqVVtP	4	,2	1,1	100,0
	Total	378	19,9	100,0	
Missing	System	1519	80,1		
Total		1897	100,0		

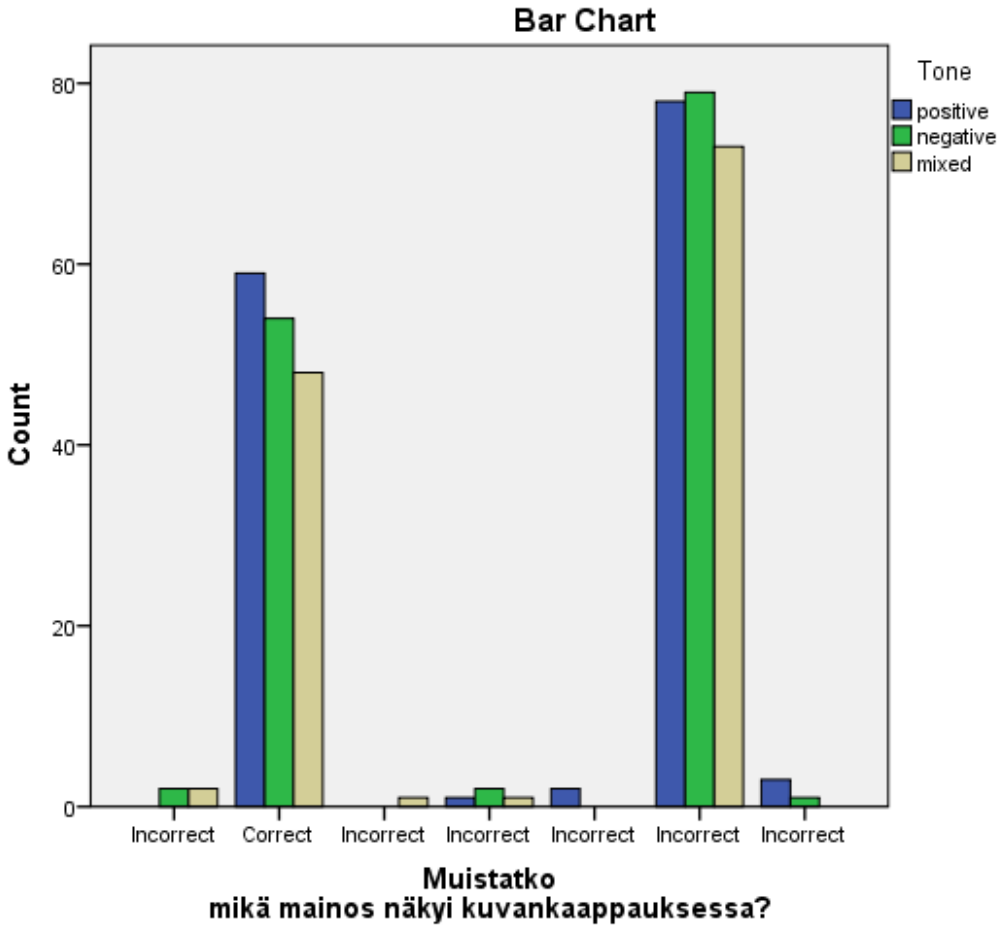
Muistatko mikä mainos näkyi kuvankaappauksessa? * Tone Crosstabulation

			Tone			
			positive	negative	mixed	Total
Muistatko mikä mainos näkyi kuvankaappauksessa?	Incorrect	Count	0	2	2	4
		% within Muistatko mikä mainos näkyi kuvankaappauksessa?	0,0%	50,0%	50,0%	100,0%
		% within Tone	0,0%	1,4%	1,6%	1,0%
		% of Total	0,0%	0,5%	0,5%	1,0%
	Correct	Count	59	54	48	161
		% within Muistatko mikä mainos näkyi kuvankaappauksessa?	36,6%	33,5%	29,8%	100,0%
		% within Tone	41,3%	39,1%	38,4%	39,7%
		% of Total	14,5%	13,3%	11,8%	39,7%
	Incorrect	Count	0	0	1	1
		% within Muistatko mikä mainos näkyi kuvankaappauksessa?	0,0%	0,0%	100,0%	100,0%
		% within Tone	0,0%	0,0%	0,8%	0,2%
		% of Total	0,0%	0,0%	0,2%	0,2%
	Incorrect	Count	1	2	1	4
		% within Muistatko mikä mainos näkyi kuvankaappauksessa?	25,0%	50,0%	25,0%	100,0%
		% within Tone	0,7%	1,4%	0,8%	1,0%
		% of Total	0,2%	0,5%	0,2%	1,0%
	Incorrect	Count	2	0	0	2
		% within Muistatko mikä mainos näkyi kuvankaappauksessa?	100,0%	0,0%	0,0%	100,0%
		% within Tone	1,4%	0,0%	0,0%	0,5%
		% of Total	0,5%	0,0%	0,0%	0,5%
	Incorrect	Count	78	79	73	230
		% within Muistatko mikä mainos näkyi kuvankaappauksessa?	33,9%	34,3%	31,7%	100,0%
		% within Tone	54,5%	57,2%	58,4%	56,7%
		% of Total	19,2%	19,5%	18,0%	56,7%
	Incorrect	Count	3	1	0	4
		% within Muistatko mikä mainos näkyi kuvankaappauksessa?	75,0%	25,0%	0,0%	100,0%
		% within Tone	2,1%	0,7%	0,0%	1,0%
		% of Total	0,7%	0,2%	0,0%	1,0%
Total		Count	143	138	125	406
		% within Muistatko mikä mainos näkyi kuvankaappauksessa?	35,2%	34,0%	30,8%	100,0%
		% within Tone	100,0%	100,0%	100,0%	100,0%
		% of Total	35,2%	34,0%	30,8%	100,0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	12,044[a]	12	,442
Likelihood Ratio	14,716	12	,257
Linear-by-Linear Association	,002	1	,964
N of Valid Cases	406		

a. 15 cells (71,4%) have expected count less than 5. The minimum expected count is ,31.



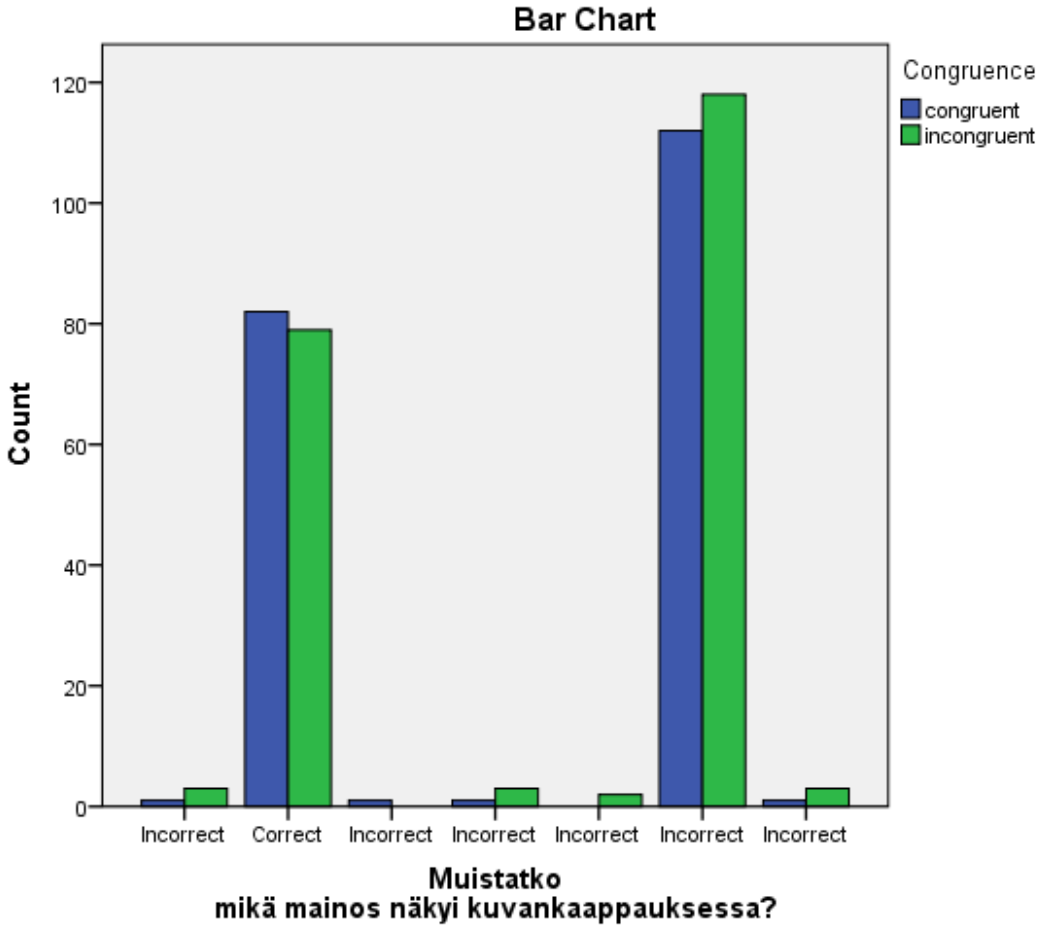
Muistatko mikä mainos näkyi kuvankaappauksessa? * Congruence Crosstabulation

			Congruence		
			congruent	incongruent	Total
Muistatko mikä mainos näkyi kuvankaappauksessa?	Incorrect	Count	1	3	4
		% within Muistatko mikä mainos näkyi kuvankaappauksessa?	25,0%	75,0%	100,0%
		% within Congruence	0,5%	1,4%	1,0%
		% of Total	0,2%	0,7%	1,0%
	Correct	Count	82	79	161
		% within Muistatko mikä mainos näkyi kuvankaappauksessa?	50,9%	49,1%	100,0%
		% within Congruence	41,4%	38,0%	39,7%
		% of Total	20,2%	19,5%	39,7%
	Incorrect	Count	1	0	1
		% within Muistatko mikä mainos näkyi kuvankaappauksessa?	100,0%	0,0%	100,0%
		% within Congruence	0,5%	0,0%	0,2%
		% of Total	0,2%	0,0%	0,2%
	Incorrect	Count	1	3	4
		% within Muistatko mikä mainos näkyi kuvankaappauksessa?	25,0%	75,0%	100,0%
		% within Congruence	0,5%	1,4%	1,0%
		% of Total	0,2%	0,7%	1,0%
	Incorrect	Count	0	2	2
		% within Muistatko mikä mainos näkyi kuvankaappauksessa?	0,0%	100,0%	100,0%
		% within Congruence	0,0%	1,0%	0,5%
		% of Total	0,0%	0,5%	0,5%
	Incorrect	Count	112	118	230
		% within Muistatko mikä mainos näkyi kuvankaappauksessa?	48,7%	51,3%	100,0%
		% within Congruence	56,6%	56,7%	56,7%
		% of Total	27,6%	29,1%	56,7%
	Incorrect	Count	1	3	4
		% within Muistatko mikä mainos näkyi kuvankaappauksessa?	25,0%	75,0%	100,0%
		% within Congruence	0,5%	1,4%	1,0%
		% of Total	0,2%	0,7%	1,0%
Total		Count	198	208	406
		% within Muistatko mikä mainos näkyi kuvankaappauksessa?	48,8%	51,2%	100,0%
		% within Congruence	100,0%	100,0%	100,0%
		% of Total	48,8%	51,2%	100,0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	5,970[a]	6	,427
Likelihood Ratio	7,264	6	,297
Linear-by-Linear Association	,207	1	,649
N of Valid Cases	406		

a. 10 cells (71,4%) have expected count less than 5. The minimum expected count is ,49.



m) Probability of click (Q11) – statistics and T-test tables.

Group Statistics

	Congruence	N	Mean	Std. Deviation	Std. Error Mean
Arvioi todennäköisyys sille, että klikkaisit Yonde-mainosta. - Tuskin: Luultavasti	congruent	200	1,89	1,147	,081
	incongruent	215	1,87	1,142	,078
Arvioi todennäköisyys sille, että klikkaisit Yonde-mainosta. - Epätodennäköistä: Todennäköistä	congruent	195	1,91	1,080	,077
	incongruent	215	1,89	1,088	,074
Arvioi todennäköisyys sille, että klikkaisit Yonde-mainosta. - Mahdotonta: Mahdollista	congruent	195	2,46	1,113	,080
	incongruent	212	2,49	1,116	,077

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
Arvioi todennäköisyys sille, että klikkaisit Yonde-mainosta. - Tuskin: Luultavasti	Equal variances assumed	,252	,616	,221	413	,825	,025	,112	-,196	,246
	Equal variances not assumed			,221	410,600	,825	,025	,112	-,196	,246
Arvioi todennäköisyys sille, että klikkaisit Yonde-mainosta. - Epätodennäköistä: Todennäköistä	Equal variances assumed	,014	,906	,180	408	,857	,019	,107	-,191	,230
	Equal variances not assumed			,180	404,673	,857	,019	,107	-,191	,230
Arvioi todennäköisyys sille, että klikkaisit Yonde-mainosta. - Mahdotonta: Mahdollista	Equal variances assumed	,010	,919	-,262	405	,793	-,029	,111	-,247	,188
	Equal variances not assumed			-,262	402,356	,793	-,029	,111	-,246	,188