



# DID YOU REALLY SEE THE AD?

Influence of Congruent and Incongruent  
advertisements in Interactive and Passive medium  
types on Consumers' attitudes and Memory

MASTER THESIS  
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**INFLUENCE OF CONGRUENT  
AND INCONGRUENT  
ADVERTISEMENTS IN  
INTERACTIVE AND PASSIVE  
MEDIUM TYPES ON  
CONSUMERS' ATTITUDES  
AND MEMORY**

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## VOORWOORD

14 juli 2016! Het einde van deze reis. De dag waarop mijn doel is bereikt als het gaat om mijn studie Communication Studies aan de Universiteit Twente. Ik kan concluderen dat het een reis was met veel ontdekkingen en nieuwe inzichten. Na mijn opleiding Commerciële Economie aan de Saxion Deventer heb ik de bewuste keuze gemaakt om deze nieuwe uitdaging aan te gaan. Met een stukje onzekerheid ben ik begonnen aan dit nieuwe avontuur. En nu, bijna twee jaar na de start van dit avontuur staat mijn scriptie op papier. Ik ben trots op mezelf! En trots op deze Master Scriptie.

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Met trots presenteer ik mijn Master Scriptie. Veel leesplezier gewenst!

*Annelot Vrerink*

## ABSTRACT

**Purpose** – In these days, since the rise of the internet, the use of ‘new media’ has increased. Mobile phones, mobile devices, computers and laptops with wireless access cannot be missed. Valuable and exceptional campaigns were created to generate positive rewards. For example positive attitudes toward brands and recall and recognition of the brands. This study focuses on the extent of which different advertisements displayed on different medium types affect consumer’s attitudes and the extent of memory.

**Methodology** – In this study, a fictitious website and application, with the name HolyHealth, is designed in order to gain data. Two medium types are used to manipulate the independent variable ‘level of interactivity’. The app is considered interactive and the website passive. HolyHealth is specifically designed for this study. The purpose, design and content of both medium types are similar. The second independent variable in this study is the ‘level of congruency’. This variable was manipulated through placing incongruent advertisements with an unhealthy purpose and congruent advertisement with a healthy purpose on the HolyHealth page. In total 124 respondents participated in this study. All respondents were students with a Dutch nationality. About half of the students were assigned to the app condition and the other half were assigned to the website condition. Within these two groups half of the respondents were exposed to the incongruent condition and half of the respondents to the congruent condition. So, in total 4 conditions were presented. Before the respondents were introduced to the website or app, a short introduction was given, whereafter they were guided through the mediums with a special written protocol. After following the protocol the respondents were asked to fill in the questionnaire.

**Findings**– In this study the ‘level of involvement’ was included as covariate. The results of this experimental study revealed that both independent variables had influence on consumer’s attitudes and the extent of memory. A positive effect was found for the independent variable ‘level of congruency’ on recall and recognition. Which shows that in the incongruent condition people better recall and recognize brands, instead of the congruent condition. The second independent variable in this study was the ‘level of interactivity’. It was found that the ‘level of interactivity’ positively affect the extent of recognition, but no positive effect was found on the extent of recall. According to the consumer attitudes, only a positive effect was found of ‘the level of interactivity’ on attitude toward the medium. Theoretically, it means that whether congruent and incongruent advertisements were used in passive or interactive mediums were presented it has no effect on attitude toward the brand and attitude toward the advertisements. However, practically some assumptions can be made. Moreover, the results showed one marginal interaction effect between ‘the level of interactivity’ and ‘level of congruency’ on recognition. These findings indicate that in the app condition no differences were found between the extent of recognition in the incongruent and congruent condition. However, in the passive condition, individuals recognize the incongruent advertisements better than the congruent advertisements.

**Conclusion** – The results indicate that the use of incongruent advertisements positively affect the extent of memory (recall and recognition). Regarding the level of interactivity, results also indicate that an interactive medium type positively influences the extent memory. It also can be concluded that ‘the level of interactivity’ positively influences the attitude toward the medium.

No significant differences were found of the level of interactivity and/or the level of congruency on consumers' attitudes like the attitude toward the brand and the attitude toward the advertisement. The findings provide valuable starting points for marketers and online developers, for example, to use congruent or incongruent advertisements in combination with interactive or passive medium types to affect consumers' attitudes and the extent of memory. Because, various stakeholders have different interests it is necessary to evaluate and discuss these wishes. The ideal situation for marketers is to put incongruent advertisements in an interactive medium. However, it was found that this situation did not influence consumers attitudes. Practically, marketers must think wisely about their choices because of different interests of the stakeholders. For example, for developers of healthy online platform where several health issues will be discussed, it is not desirable to distract the online visitor with unhealthy advertisements. However, in this study a healthy platform is created in the form of an app and website. Results could possibly differ while choosing another subject or environment. Therefore, it could be interesting to find out whether this results apply to other purposes. Also, this research can be conducted for another target group, because in this study only students were asked to participate in this study.

*Keywords: online advertising, new media, congruency, interactivity, applications, websites, advertisements.*

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# INTRODUCTION



# 1. INTRODUCTION

*“When you are a visitor of online mediums, you cannot ignore the influence of advertising”*

With the introduction of high speed wireless internet technologies and the increasing possession of mobile phones, tablets, laptops and computer for example, the new media technology is taking the stage and disrupts traditional advertising. It can be concluded that new forms of advertising develop rapidly. These emerging ways to communicate in forms of advertising with the public are seen as effective by marketers (Nittala, 2011). Marketers are constantly looking for new possibilities which can add to the advertising media mix in order to reach their marketing goals. Where the most important goals were to increase positive effects in terms of attitudes and level of recall.

The role of online marketing is becoming more and more important in these days for the reason that the main part of the population has access to the internet. In 2015 more than 90% of the Dutch population had access to the internet via smartphones, tablets and laptops (Van der Kolk, 2015). The largest share are young adults between 12 and 25 years.

Mobile phones, laptops, tablets and other devices can be used for several purposes. They function as communication and entertainment devices, internet access sources, cameras and even to render payment. According to this development, marketers put their marketing campaigns online. While looking at specific rates it can be concluded that the online advertising market has grown with 11.3% from 2013 until 2014 and is still growing at the moment.

This study focuses on the use of advertisements in different medium types. A mobile application is one of the two medium types because there is a lack of research in the effects of mobile ads on consumer responses like attitudes and behaviours (Park et al, 2008). Aalto et al. (2004) and Li and Du (2012) focus on the technology issues of mobile advertising rather than on the effects of consumer responses in terms of attitudes and behaviour regarding advertising itself, the brand and the product or service advertised. Other have focused on how factors in mobile ads affect, positively or negatively, consumers' attitudes or behaviours (Nittala, 2011). Mobile ads can be defined as text- and graphic based messages that are sent from mobile devices to consumers (Yu, 2013). It can be concluded that mobile advertising differs from traditional advertising. The most differentiating factors according to Bauer et al. (2005) are the interactivity and the way of targeting the message to a specific group.

Two medium types were used to manipulate the level of interactivity. Liu and Shrum (2002) expanded the definition of interactivity to “the degree to which two or more communication parties can act on each other, on the communication medium, and on the messages and the degree to which such influence are synchronized” (p. 54). Whereas television, radio and print media are described as forms of traditional media, interactivity is seen as the main characteristic of online advertising (Karimova, 2011). A website and an application is used to manipulate the level of interactivity. Where the application was developed to be interactive. A BMI-check was implemented where respondents can exchange information. The website is developed to be passive. No information can be exchanged. Respondents can only read about health related issues.

The second independent variable which is widely studied in social psychology is level of congruency used in advertisements that affect consumer responses. In the advertising and marketing literature, congruency is used to indicate consumer perceptions of similarity between subjects (Rifon et al., 2004). Van Rompay and Pruyn (2008), argued that in marketing and consumer research congruency express across or within marketing mix elements and is basically considered as an important antecedent of brand and product evaluations. A lot of research in several domains talk about congruency and incongruency. The study of Bhawe, Jain and Roy (2013) suggests that congruence of the advertisement context with the app makes consumers more positively oriented toward the app. Thus, marketers should try to match the context of the app with the context of the advertisement to gain better results.

The present study aims to explore the consumer attitudes and the extent of memory while two medium types were manipulated by the level of congruency and interactivity. Therefore the following research question can be addressed:

*“To what extent do the level of congruency and the level of interactivity of the medium affect consumers’ attitudes and memory?”*

# Literature Review

## 2. LITERATURE REVIEW

### 2.1. The changing nature of advertising

The developments in the history of advertising have a big timeline. Advertising exists for thousands of years, and ranges from very basic word-of-mouth to newspapers, radio, television and the internet. In 1450, the printing press was invented and this ultimately led to mass-production of brochures and flyers. Magazines appeared in 1730, and the first paid advertisements were printed in France in 1836. In a short time print ads were used everywhere and also newspapers were seen as an accessible medium. Radio advertising began in 1922 (Bennet, 2012). As the radio medium is used to communicate from a radio station to a listener, organisations quickly realized the potential of advertising on the radio. The American Association of Advertising Agencies started to send out the first working television advertisement after World War II (Tungate, 2007). However, in that time not every household could afford a television. In the 90's TV advertising prices increased as a big percentage worldwide has a television meaning it has been an effective way to reach the target group (Krugman, 1965). Approximately 25 years ago the first online advert was sold and after this development online advertising became very popular (Bourne, 2013). In these days a lot of people have access to wireless smartphones, tablets or computers so marketers make use of this possibility to reach the audiences via online channels, but do not ignore the traditional marketing possibilities. In the next two sections a distinction is made between media communication instruments in the traditional environment and the online environment.

#### 2.1.1. Traditional marketing

Traditional marketing has been used by companies for years now, some refer to it as 'old media'. But nevertheless, marketers argued that traditional marketing is not less important these days. Via traditional marketing consumers are passively exposed to product information, as examples are information on billboards, in newsletters, flyers, commercials and other printed ads. Therefore, it can be concluded that traditional marketing can be conceptualized as a one-way communication performance because of the lack of interactivity (Bezjian-Avery, Calder and Iacobucci, 1998). One of the most common forms of traditional marketing has been the local newspaper and phone book, which were solid media and marketing channels for many business owners to rely on (Lavinsky, 2013). When using traditional advertising, consumers have no influence on the order in which they are exposed to advertisements or other information. Where traditional marketing is seen as a linear string or a one-way communication perspective, new media is focussing on more interactivity between the sender and the receiver (Pavlou and Stewart, 2015). The development of traditional marketing cannot be reduced, marketers still choose to combine online and offline activities to reinforce positive results. Nevertheless, it can be concluded that traditional marketing is not less important, but the online world predominates (Lavinsky, 2013; Pavlou and Stewart, 2015).

#### 2.1.2. New Media

Since 1960 'new media' is used as a term to illustrate digital media like Internet and the World Wide Web. The different possibilities the new media offers are perceived as important features (Frankwatching, 2006). According to 'The Millennial Generation' new media became more and more attractive and is seen as an important target group in case of advertising. Millennials range from the early 80's to the first few years of the 21<sup>st</sup> century. It can be stated that this group grew

up with new medium types (Newman, 2015). New media refers to content that is easily accessible via digital media. Berthon et al. (2008) stated that traditional one-way communication in marketing has been transformed into a multi-dimensional two-way perspective. This new marketing perspective presents new challenges and possibilities for companies as purchase decisions are increasingly influenced by the social media platforms like Facebook and Twitter.

## 2.2. The focus of the current study

This study focuses on the extent of which different advertisements displayed on different medium types affect consumer's attitudes and memory. An interactive and passive medium were chosen to manipulate the level of interactivity. Therefore, a website and an application with the aim of giving health related information was designed. A suitable brand name and logo was chosen for these two marketing channels, namely HolyHealth. The application is manipulated as interactive through import a BMI check. Respondents participating in this study had the possibility to fill in their length, weight, and their ideal weight. In the passive condition only information and no feedback could be gathered. However, also different health facts and recipes were shared. These were equal for both conditions (app and website condition). Also, the lay out and look of the website and app were the same.

The level of congruency has been an important topic in marketing and advertising research. Therefore, this independent variable was implemented in this study. Park, Milberg and Lawson (1991) refer to congruence as the perceived fit among an object and its membership or the suitability of a product with a specific brand for example. Congruent advertisements (ads that fit the purpose of HolyHealth) and incongruent advertisements (ads that do not fit the purpose of HolyHealth) were used to manipulate the level of congruency. Thus, the level of interactivity in combination with the level of congruency of the advertisements are the two main independent variables in this study.

Liu and Shrum (2002) defined interactivity as "the degree to which two or more communication parties can act on each other, on the communication media, and on the messages and the degree to which such influence are synchronised" (p. 54). Because the use of different online medium types has increased rapidly around the world, the online environment has become the fastest growing advertising medium. Therefore, in this study two online medium types were chosen to explore the influence of congruent and incongruent advertisements. Although, the congruency variable is widely studied and is used in different perspectives, just a few studies were conducted in the online environment. Most studies regarding advertising congruency are performed related to traditional media or the use of celebrities (Hung, 2000; Furnham, Gunter and Walsh 1998; Misra and Beatty, 1990). Researchers argue that a good combination between advertisements and brands and celebrity can generate advantages in form of positive attitudes and positive behaviour like the willingness to purchase the product. At the same time, it provides a better attention towards the advertisement and memorability of the advertisement. (Misra and Beatty, 1990). However, Heckler and Childers (1992) found that irrelevant and unexpected ads will be better recalled than relevant and expected ads. Because of the lack of information regarding the level of interactivity in combination with the level of congruency an experimental design was performed.

### 2.3. Online advertising

Online advertising has been founded in 1994 when the first banner ad has been sold. The price asked for the ad was based on the number of impressions (individuals who saw the ad). This price strategy has been copied from the traditional media model for this sort of brand advertising. Online advertising methods are, arguably, leading to significant reductions in transactions costs between merchants and consumers. The methods enable merchants to deliver information that is targeted to those consumers who value the information the most and are most likely to act on it. An oft-quoted line in the advertising business states ruefully: "Half the money I spend on advertising is wasted". The fundamental differences between online and traditional advertising result from a combination of internet technologies and the nature of the web. The structure of online communications makes it easy for publishers and advertisements networks to learn considerably more about online users than has been possible with traditional media such as print, radio, and television (Evans, 2009).

### 2.4. Interactivity

The term "interactivity" had been widely studied before the world wide web became into being. At the moment, the level of interactivity contains an important role in order to gain the desirable effects of marketing activities while using new media. The basic assumption that is made in literature is that, in general, interactivity is associated with new communication technologies, especially the world wide web and internet. The extent of the level of interactivity varies between mediums. There is no specific standard for what makes a medium more interactive than another, as it is quite ambiguous (Kioussis, 2002). Because interactivity increased control of the content that appeared and offered a way to communicate with other consumers, advertisement and a mediums for example, it is likely to link interactivity to involvement (Zaichkowsky, 1993).

Now a more explicit explanation can be given about the independent variable interactivity which is used in this study. Interactivity can be related to the attribute of interpersonal communication (Morris and Ogan, 1996). Some researchers argued that interactivity is a property of a certain medium (Gao et al., 2009). For example general characteristics such as user control and reciprocal communication and features such as chatrooms and registration forms can be assigned to interactivity (Coyle and Thorson, 2001; Steuer, 1992). Interactivity can be seen as a construct which can be used as the condition of communication where simultaneous and continuous exchanges occur and which is accompanied with a social binding force (Rafaeli and Sudweeks, 2006). An interactive way of communication is seen as more personal than traditional media (e.g. television, radio and newspapers) for the reason that it is a one way perspective, so the capacity for feedback is limited. Among new media, interactivity is normally connected to: computers, cellular communications, digital communication, the world wide web etc. (Kioussis, 2002). A website, which is developed to be passive, and an application, which is developed to be interactive, are used to measure the construct of interactivity. Interactivity provided in mobile communication is assumed to be different, because of the unique characteristics of mobile communication on handheld devices (Barnes, 2002).

While most definitions about the level of interactivity in communication can be assigned to the technological and communication context aspects, others will see interactivity as a perception. For that reason some definitions will be summarized. There are many different definitions for interactivity. Steuer (1992) defines interactivity as "the extent to which user can participate in modifying the form and content of a mediated environment in real time" (p. 14). A more technological-driven communication definition is given by Jensen (1998), as cited by Kioussis

(2002), who argued that interactivity is “a measure of a media’s potential ability to let the user exert an influence on the content and/or form of the mediated communication” (p. 201). Liu and Shrum (2002) proposed in their study three dimensions of interactivity: 1) active role, 2) two-way communication and 3) synchronicity.

After getting a better understanding of how interactivity is defined a more detailed description will be given of how interactivity is used in social science in relation to consumer responses. Engagement and personal relevance are two important concepts while discussing interactivity. According to Vivek et al. (2012) interactive consumers experiences can be interpreted as the act of engaging. Where engagement means that people are involved in an object or activity (2009). Besides, personal relevance can be also linked to interactivity. Personal relevance is an essential characteristic for involvement which is in general used to measure attitudes (Petty and Cacioppo, 1981). For example, when people want to lose weight they were possibly engaged in health related issues and experienced a BMI check as a useful option.

Liu and Shrum (2002), found that a higher degree of interactivity yields better advertising effects in terms of favourable attitude toward the target advertisement, favourable attitude toward the brand and high purchase intention: Macias (2003) found that using interactive communication features improves comprehension of interactive advertising websites; Wu (1999) measured participants’ attitudes toward particular websites and their perceived interactivity of the websites. Wu (1999) found that there was a strong correlation between user’s attitudes toward websites and the perceived level of interactivity. McMillan and Hwang (2002) conducted a study where interactivity and involvement with the subject of a website were two predictors of positive attitudes toward the website. Peng et al. (2004) argued in their study that interactivity has been the largest predictor of attitude towards a website.

However, Coyle and Thorson (2001) did not find such relationships between interactivity and attitudes toward websites in their experiment. Even more contradictorily, Bezjian-Avery et al. (1998) found that the traditional advertisement is better than the interactive advertisement, because the interactive advertisement could inhibit consumers’ cognitive processing. In this study it is expected that the level of interactivity affects consumer responses for the reason that the level of interactivity is expected to affect consumer responses because previous studies showed that interactions with an online medium induces cognitive and emotional effects with consumers. This suggests that individuals were high involved (Jiang et al. 2010).

#### 2.4.1. Influence of the level of interactivity on recall and recognition

In literature a lot of research is done regarding the level of interactivity on recall and recognition. Danaher and Mullarkey (2003) examined that quantity of text and the colour of the web page background could influence recall and recognition. Norris and Colman (1992) found that recall and recognition are negatively correlated with reader involvement in a magazine context. Which means that the less peripheral material, for example advertisements, you remember, the more the reader is involved with the text of the magazine. According to Mackay et al. (2009) the prominence of product placement is one of the factors that may affect recall. Wilson and Till (2013) used recall as a factor for effectiveness in their study. They conducted a study in the field of cinema advertising. In marketing studies, recall is often used as an dependent variable to measure its effectiveness. To understand how people can recall and/or recognize advertisements it is useful to know something about the human brain.

Chessa and Murre (2007) presented a neurocognitive model in their study to summarise how memory works. Memory of human beings is built upon two concepts. First, during an exposure (e.g. advertisement), a memory is encoded as a number of characteristic items, also called representations. The representations could be activated by a memory cue, for example through a product category when a brand name has to be recalled. The second concept can be assigned to neurobiological evidence that memory is stored in the brains. According to Chessa and Murre (2007) memory and retention are processes consist of four phases: 1) Encoding, 2) Storage, 3) Retrieval and 4) Recall.

According to Lang (2000), recognition is the most simple task because the item will be presented to the participant and contains multiple cues in order to allow the respondent to recall the information. Recognition is a more sensitive measure of memory instead of recall. Recognition can be interpreted as indexing whether information was encoded. In the literature review which is done, it was established that interactivity was associated with involvement. In the study from Petty, Cacioppo and Schumann (1983) an experimental design was established. Well-known and unknown sports celebrities were used to manipulate a magazine advertisement. Individuals with high and individuals with low product involvement were assigned to one of the four conditions. Results showed that high involved people better recognize and recall the purposed advertisement.

Therefore, the following hypotheses were established.

*H1: An interactive medium will positively affect recall.*

*H2: An interactive medium will positively affect recognition.*

## 2.5. Level of congruency

In literature a lot of research is performed regarding the influence of incongruency and congruency. Congruency can be explained as a fit or no fit between the information that is processed to the consumer and the consumers' previously developed expectations. It have to keep in mind that explanations of the congruency effect can vary across different studies. Congruency can be explained as the old adage that "birds of a feather flock together" (Fleck and Quester, 2007). With this expression they want to express that cohesion between elements is important. Congruency has been included in many studies applying to different views of marketing. Sometimes the word congruency is substituted by other synonyms. A literature review on the topic of congruency notes that a variety of terms are used interchangeably. Typical words related to the topic of congruency are: fit, typicality and similarity (Fleck and Quester, 2007). For example, Boush and Loken (1991) use typicality of a brand extension to refer to similarity. Aaker and Keller (1990) used the synonym fit to express congruency, which occurs when a new product is introduced and is perceived as a logical innovation or extension expected from the brand by consumers.

A lot of studies explored the pros and cons of congruency and incongruency by focussing both on verbal and non-verbal information. Different conclusions can be summed up in relation to how individuals process information. Attention to the advertisement, recognition and recall of the advertiser and their attitude toward the ad are important dependent variables while talking about the effects of congruent and incongruent advertisements (Moore et al., 2004). Although, it sounds logic to choose for congruency instead of incongruency, because a fit between an event



and a celebrity looks much more stronger than when no fit exist. However, in literature this is not always substantiated. Therefore, in the next section different studies will be explained to get a better understanding of how congruency and incongruency are used in the marketing field.

### 2.5.1. Congruent and incongruent effects in literature

Graeff (1996) found that congruency between product image and self-image is positively related to consumers' evaluations. Graeff (1996) examined the moderating effects of self-monitoring and public/private consumption on the image congruence hypothesis. The image congruence hypothesis suggests that the greater the degree of congruency between brand image and self-image, the more favourable the evaluations of the brand hold by consumers. This research found that for publicly consumed brands the relationship between brand evaluations and image congruence has been significantly stronger for high self-monitors than for low self-monitors.

Congruency can also be linked to the effect of sponsoring. Keller (2003) examined the influence of congruency for the effect of sponsoring and argued that it is important to select the right endorsers and/or events to match the brand. Marketers could hire famous athletes for their service/products in order to create a positive image among the target group. Endorsers use their own leverage to gain positive associations for brands in the minds of consumers (McCracken, 1989).

Van Rompay et al. (2010) examined the effects of picture-text congruence in the online environment on consumer responses. The research has been conducted in the online environment of a hotel booking site. Results show that picture-text congruence positively affect product attitude via processing fluency. However, only when the participants have a high need for cognition. Thematic congruency enhances advertisement recall (Moorman et al., 2002) and produces stronger target associations and more positive evaluations instead of neutral or incongruent media (Dahlen, 2005). A congruent context eases comprehension of the advertising (e.g., Goodstein 1993; Kamins, Marks, and Skinner 1991). However, a premise for the facilitating effect of congruence on processing is that consumers would otherwise experience some difficulty in comprehending the advertisement (e.g., Goodstein 1993). Whereas this is often the case in advertising experiments using mock brands and unfamiliar exposure vehicles (e.g., Dahlén 2005). Most of the advertising in major media is sponsored by established and well-known brands. Advertising for these brands activates consumers' prior knowledge of the brands (so-called brand schemata), which guides attention and processing of the information content (Kent and Allen, 1994).

In general, information that is consistent in meaning with the exciting brand will be better remembered, rather than information that is inconsistent (Keller, 1993). In the study of Misra and Beatty (1990), they investigated the already empirical tested influence of matching a spokesperson with a brand. Brand congruence, in this study, implies that the important characteristics of a spokesperson are consistent with the important elements of the brand. Misra and Beatty (1990) showed that celebrity-brand congruence enhances the effectiveness of advertising. For example, recall is found to be improved if there is a fit between celebrity and brand. Besides, this fit should lead to a high memorability in consumers' minds. The study of Bhawe, Jain and Roy (2013) suggest that the level of congruency of the ad context in combination with the purpose of a mobile application makes consumers more positively oriented toward the applications. Thus, marketers should try to match the context of the app with the context of the ad to gain better results.

Heckler and Childers (1992) performed a study about the effect of incongruity on recall and formed a basis for the perceptions regarding the level of incongruity. After 1992, more and more researchers discussed the effect of incongruity. According to Heckler and Childers (1992) incongruity is a multidimensional concept with different perceptions. Therefore this can lead to different effects regarding memory. The study from Heckler and Childers (1992) focused on two dimensions which were closely related to incongruity; relevance and expectation. They explored to what extent relevant, not relevant, expected and unexpected information in advertisements influenced the level of recall and recognition. In this experimental study four advertisements were shown to the respondents. After two days the level of recall and recognition were measured. This study reveals that unexpected ads with relevant information are better recalled and recognized in contrast to expected ads with no relevant information.

McCoy et al. (2007) also addressed their study to the level of congruency and incongruency regarding online advertisements on brand recognition. Two advertisements were displayed on two different websites. The first ad was congruent regarding the purpose of the website and the second ad was incongruent regarding the purpose of the website. Respondents were randomly assigned to one of the two scenarios. Results showed that respondents recognize the incongruent condition better instead of the congruent condition. This result applies not only for the advertisement, but also had a positive effect regarding the level of recognition of the website. In addition, Heckler and Childers (1992) and McCoy et al. (2007), also Lang and Dahlén (2003) argues that incongruity between advertisements and a well-known brands has a positive effect on attitude and recognition. In their study a distinction was made between congruent and incongruent ads and well-known brands and unknown brands. Lange and Dahlén (2003) found that incongruity between the advertisement with a well-known brand and a website will strengthen associations with that brand. Subsequently this has a positive effect on attitude and recognition.

#### 2.5.2. Influence of the level of congruency on recall and recognition

The study of Heckler and Childer (1992) found that incongruent information in advertisements positively affect recall and recognition. Also McCoy et al. (2007) found positive results when the purpose of the medium did not match the purpose of the ad, so an incongruent situation was set up. However, Van Rompay (2010) found that picture-text congruency in a web design positively affect consumer responses via processing fluency but only for participants high in need for cognition. (Van Rompay, 2010). Also Shen and Chen (2007) argued that when the context of the advertisement and the advertised brand were congruent this leads to more positive judgments. Because for both congruent and incongruent conditions significant differences were found, the following hypotheses were established:

*H3: The level of congruency between the advertisement and the purpose of the medium affect recall.*

*H4: The level of congruency between the advertisement and the purpose of the medium affect recognition.*

#### 2.6. Consumer attitudes

The dependent variables in this study, next to recall and recognition, were consumer attitudes like; attitude toward the brand, attitude toward the advertisement and attitude toward the medium. An attitude of a consumer can be assigned to many things. Gardner (1985) argued that

an attitude belongs to the general evaluation of the brand. Brand attitude is very important, due to the reason that it is closely related to consumer behaviour (Keller, 1993). In the field of marketing a lot of studies were conducted about what attitudes consumers hold towards products, services, brands, mediums and advertisements. It can be concluded that attitudes are a popular research topic in marketing studies for two reasons. First, as mentioned before, attitudes predict consumer behaviour, and second, several theoretical frameworks are available from social psychologist (Eagly and Chaiken, 1993). An attitude is the favourable or unfavourable evaluation of a person (Spears and Singh, 2004). According to Krosnick and Petty (1995) two characteristics of an attitude can be mentioned. First, an attitude is addressed to an object. Second, an attitude have an evaluative nature, in other words, an distinction is hold between something good or bad toward an object. In this study several hypotheses were established regarding the previous mentioned attitudes. It was expected that the level of interactivity and the level of congruency have an influence on consumers' attitudes.

For that reason, the following hypotheses were established:

*H5: Congruency between the advertisement and the purpose of the medium positively affect the attitude toward the brand*

*H6: Congruent advertisements, instead of an incongruent advertisements, positively affect the attitude toward the advertisement.*

*H7: Congruent advertisements, instead of an incongruent advertisements, positively affect the attitude toward the medium.*

*H8: An interactive medium positively influence the attitude toward the brand.*

*H9: An interactive medium positively influence the attitude toward the advertisement.*

*H10: An interactive medium positively influence the attitude toward the medium.*

## 2.7. Covariate: Involvement

Research found that personal involvement affect the responses to advertising (Zaichkowsky, 1985). Since the construct of involvement is seen as an important factor in studying the effectiveness of advertising, this construct is seen as a covariate in this study. The aim of this study is examining into what extent the level of involvement may have an impact on consumer attitude, recall and recognition.

Although no specific definition can be assigned to involvement, it can be stated that personal relevance is an important factor. Pavlou and Stewart (2002) argued that consumer involvement defines the importance and relevance that consumers attribute to an advertisement or a product and refers to a subjective psychological state of the consumer. Researchers in social and consumer psychology emphasized that there is a need to make a distinction between high and low involvement situations (Petty and Cacioppo, 1981). Petty and Cacioppo (1981) stated that in high involvement situations, the persuasive message has a high degree of personal relevance, whereas in low involvement situations, the personal relevance is much lower. Researchers in social psychology concluded that different variables can affect persuasion under high and low involvement conditions. For example, Petty and Cacioppo (1983), argued that argument quality contained in a message had a greater impact under the condition of high involvement rather than low involvement. This is so called the central route in the Elaboration Likelihood model. The second route in this ELM-model is the peripheral route. However, when following the peripheral route instead of the central route, cues such as expertise, credibility and attractiveness had a greater impact on persuasion under conditions of low involvement rather than high involvement (Petty, Cacioppo & Schumann, 1983; Petty, Cacioppo and Goldman, 1981). In this study people were asked to what extent they were concerned about their health. For example, people who are following a diet and going to the gym five times a week are probably more interested in HolyHealth. In the study of Petty, Cacioppo & Schumann (1983) respondents were manipulated to the high involvement and low involvement condition. In their study they found that the involvement manipulation had a significant impact on free recall of the product category, in the high involvement condition subject were better recalled than in the low involvement condition. The same results can be assigned to recognition. For that reason, the following hypotheses were established:

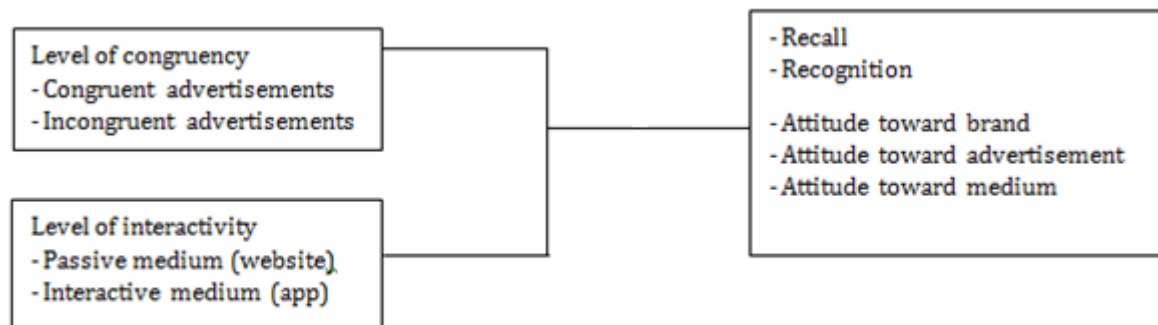
*H11: When people are concerned about their health they will be better in recognizing and recalling advertisements.*

*H12: When people are concerned about their health the attitudes toward the brand, advertisements and medium will be more positive in the congruent condition*

## 2.8. Conceptual design

This study proposes that both independent variables, level of congruency and level of interactivity, will affect recall, recognition, attitude toward the medium, attitude toward the brand and attitude toward the advertisement. The level of involvement regarding health is used as a covariate in this study. In figure 1, the designed research model is presented, including the constructs and relationships.

Figure 1.



# PRE-STUDY

## 3. PRE-STUDY

### 3.1. Method Pre-study

In this study, it is important to choose the right ads from brands in the medium types due to the reason that in the main study the independent variable congruency between the purpose of the medium and the advertisements is used as an important construct. The purpose of the two medium types (app and website) is to give visitors insight in principles about health. A fitting name is devised, namely HolyHealth. In the app and website of HolyHealth healthy recipes can be found and BMI can be checked. According to this, 11 incongruent advertisements and 11 congruent advertisements related to health are selected. For proper results only well-known brands are used to collect useful data.

In Qualtrics a questionnaire is developed and diffused via snowball sampling. First, the respondents were thanked for their participation in this research. Instructions were provided before the respondents were confronted with the scenario about HolyHealth. After that, a brief explanation was given about the purpose of HolyHealth. Then, the respondents were informed about what was expected of them. In total, the respondents were assigned to 22 advertisements. Half of the advertisements were expected to be seen as congruent and the other half were expected to be seen as incongruent. On a five-point Likert scale the congruency level of the advertisement with HolyHealth was measured. The Likert scale range from 1 as “very inappropriate” to 5 as “very appropriate”. The higher the score the more congruent the advertisement. The lower the score, the less incongruent the advertisement. Results can be found in table 3.2.

### 3.2. Results Pre-study

In total 25 respondents complete the questionnaire. More females (n=14) than men (n=11) participated in the pre-test. The age of the participants range from 14 until 57. The average age was 30,72 (SD = 13,615). Results of the pre-test were exported to SPSS. Results indicated that all the advertisements which were expected to be congruent also seen as congruent by the participants. This assumption was correctly made and applies also to the incongruent advertisements and was also correct. In total three congruent and three incongruent advertisements were used in this study. For the congruent condition the advertisements of Campina (M = 4.28), Optimel (M = 4.28) and Albert Heijn Biologisch (4.20) were seen as most congruent. For the incongruent advertisements the averages were all equal. The brands which will be used are: Lays (M = 1.40), Martini (M = 1.40) and Ben and Jerry's (M = 1.40). The brands, with advertisements, are displayed in Appendix IV. In table 3.1, the demographics of the respondents were presented and in table 3.2. the mean scores of the brands including the standard deviations were presented.

Tabel 3.1.

#### Gender & Age of the respondents

Gender	Frequency	Percentage
Male	11	(44 %)
Female	14	(56 %)
Total		(100 %)

Tabel 3.2.

**Results pre-test**

<u>Brand</u>	M	SD	<u>Brand</u>	M	SD
Asics	4.00	1.00	Milka	1.56	0.92
McDonalds	1.56	1.04	<b>Campina</b>	<b>4.28</b>	<b>0.89</b>
Coca Cola	1.68	0.80	Pickwick	3.80	1.00
Sourcy	3.40	1.29	<b>Ben and Jerry's</b>	<b>1.40</b>	<b>0.71</b>
Eat Natural	4.08	1.00	Remia	1.48	0.87
Chocomel	2.12	1.17	Appelsientje	4.00	1.04
Unox	1.64	0.86	RedBand	1.57	0.99
<b>Albert Heijn Biologisch</b>	<b>4.20</b>	<b>1.16</b>	<b>Optimel</b>	<b>4.28</b>	<b>0.84</b>
Heineken	1.48	1.16	Lidl	4.12	1.48
Becel	4.12	1.01	<b>Lays</b>	<b>1.40</b>	<b>0.76</b>
Cool Best	3.52	1.09	<b>Martini</b>	<b>1.40</b>	<b>0.76</b>



# **METHODS:**

## **MAIN STUDY**

## 4. METHODS: MAIN STUDY

### 4.1. Research design

To test the hypotheses and address the main research question of this study a 2 (congruent advertisements vs. incongruent advertisements) x 2 (interactive medium vs. passive medium) experimental design was used. The level of congruency and the level of interactivity are in this research the chosen independent variables and the dependent variables in this study included dimensions of consumer responses. The chosen dependent variables were: attitude toward the brand, attitude toward the advertisements, attitude toward the medium and recall and recognition. Furthermore, the variable involvement (high versus low) was included as covariate in this study to measure if it moderates the impact of the independent variables have on the dependent variables. In total four conditions were implemented. Each respondent was assigned to one of the four conditions.

### 4.2. Procedure

At the University of Twente and in the personal environment of the researcher respondents were asked to participate in this study. Respondents who participated in this study were all students. At first, the respondents had to read an introduction about the purpose of HolyHealth. The introduction was written due to the reason that people got an understanding of the aim of the HolyHealth page. The introduction was equal for all conditions. After reading the introduction a protocol of how to use the app and the website was presented. Because the respondents treat the app and website in different ways, two protocols were written in order to lead the respondents correctly through the medium. A protocol has been used because otherwise people could leave the medium after a few seconds and skip over pages. Respondents in the app condition used Samsung tablets where the app was already installed, and respondents in the website condition used their own laptop or computer. In total 61 respondents were assigned to the congruent condition, regardless whether the app or the website was used and 63 respondents were assigned to the incongruent condition, regardless whether the app or the website was used. When the protocol was completed, they were asked to press on a button, in order to be routed to the questionnaire. Respondents who participated in the website condition filled in the questionnaire via their own laptop or computer. Respondents who participated in the app condition filled in the questionnaire via the tablets.

First, respondents must answer questions related to their demographics. After that, respondents answered questions regarding congruency, interactivity, brand attitude, advertisement attitude, medium attitude, recall, recognition and involvement were asked. Last, they were asked if they met the app condition or the website condition to make the data file complete so that no misunderstanding could be made. Qualtrics Software was used to develop the questionnaire and SPSS (version 22) was used to analyse all collected data.

### 4.3. Stimulus material

This study manipulated the two independent variables into four scenarios. The congruency level was manipulated through using advertisements of brands that did or did not have a 'fit' with the purpose of HolyHealth. In total three advertisements were used and were distributed over different pages in the app and website. In all conditions the sizes of the chosen advertisements were almost equal. Some ads were more horizontal outlined and others were more vertical outlined, but in both conditions the ads were placed at the same pages and at the same places. However, no account could be taken regarding the screen size.

The independent variable interactivity was manipulated through the use of a website and a app. The website serves as a passive medium in contrast to the app condition. Therefore, no information of the respondent and no form of feedback was given. In contrast to the app condition, a BMI (Body Mass Index) check was implemented in the app. People have to fill in their current weight, target weight and weight of the previous year. Subsequently, the respondent got to see some graphs with plots to check the BMI development. Afterwards, the respondents were assigned to a colour zone. Based on the relevant zone an appropriate advice was given. This condition is indicated as interactive for the reason information was easily collected and there was high speed rate information given back to the respondent. It can be concluded that there was feedback between the medium and the respondent. In figure 4.1. and 4.2. several screenshots of the app condition and website condition were presented.

Figure 4.1.  
- App condition

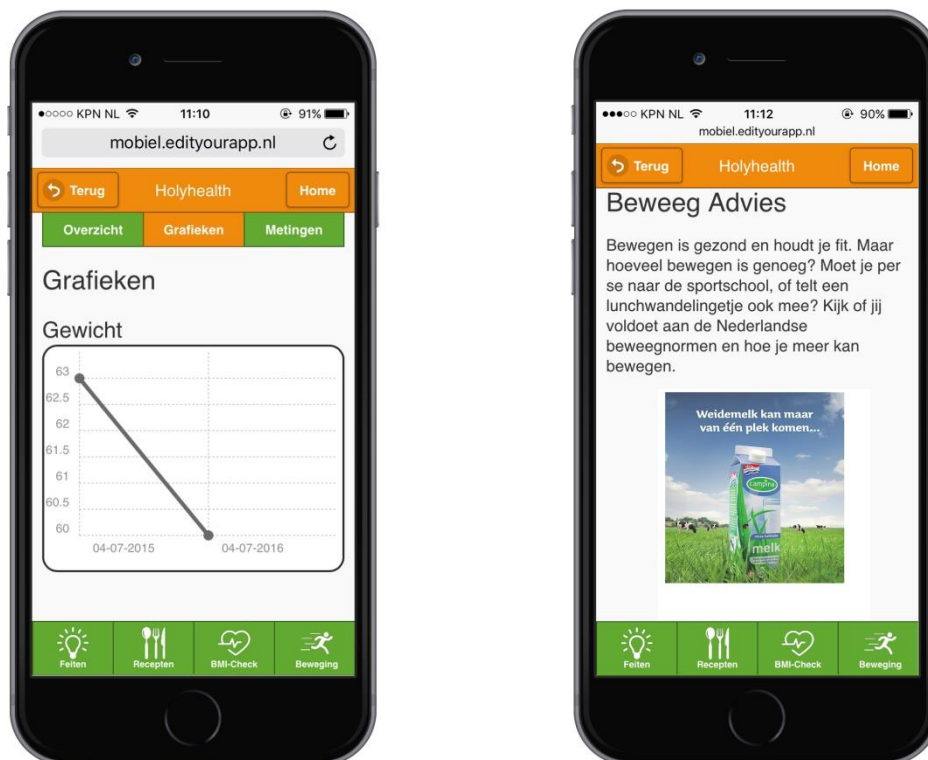
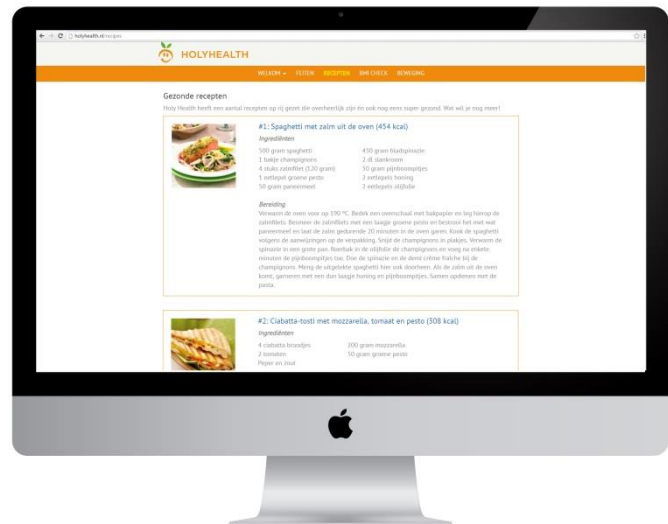
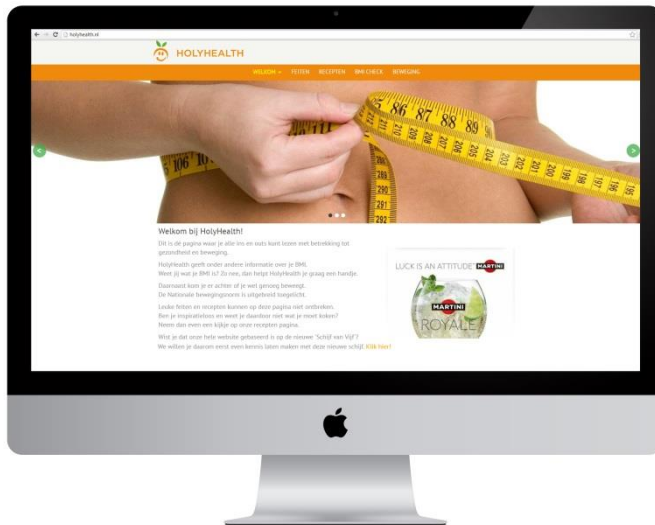


Figure 4.2.  
- Website condition



#### 4.4. Respondents

In total 124 respondents participated in this study. Of these participants, 63 were female (50.8%) and 61 (49.2%) were male. The mean age of the respondents was 22.19 (SD=2.76) with a minimum age of 18 and a maximum age of 32. Participants in this study were only Dutch residents, and were distributed via face-to-face contact at the University of Twente and in the personal environment of the researcher. A conscious choice is made to select only Bachelor students and University students who are studying at the moment of asking. Because, in 2015 more than 90% of the Dutch population have access to the internet via smartphones, tablets and laptops for example The largest share of which are young adults between 12 and 25 years (Van der Kolk, 2015). The demographics of the respondents can be found in table 4.1.

Table 4.1.

##### **Gender & Age of the respondents**

Gender	Frequency	Percentage
Male	61	(49.2 %)
Female	63	(50.8 %)
Total	124	(100 %)

The participants in this study were assigned to one of the four conditions; app + congruent advertisement, app + incongruent advertisements, website + congruent advertisements and website + incongruent advertisements. The distribution of the four conditions can be found in table 4.2.

Table 4.2.

##### **Distribution of the conditions among respondents**

		Congruent + App	Congruent + Website	
Gender	Male	15	15	
	Female	15	16	
Total		30	31	
		Incongruent + App	Incongruent + Website	
Gender	Male	15	16	
	Female	15	17	
Total		30	33	124
		Congruent + App	Congruent + Website	
Age	M	22.23	20.87	
	SD	2.555	2.247	
		Incongruent + App	Incongruent + Website	
Age	M	23.17	22.48	
	SD	2.972	2.830	

## 4.5. Measurements

The questionnaire which was developed for this study consist of four different types of questions; demographic questions, manipulation check questions, questions regarding the dependent variables and one question regarding the covariate in this study. The demographic questions were implemented to see the characteristics of the sample. The manipulation check questions were implemented to check whether the respondents understand the manipulation regarding the level of congruency of the advertisements and to check to what extent the respondents perceive the mediums as interactive. The questions regarding the dependent variables were related to attitude toward the brand, attitude toward the advertisement, attitude toward the medium, recall and recognition. The items could possibly be influenced by the two independent variables.

### 4.5.1. Demographic questions

In total three different questions were added to the questionnaire to see what the characteristics of the samples were. The chosen demographic questions in this questionnaire were: “what is your age?”, “what is your gender?”, and “which study program are you following at the moment?”. The last question about education could be answered with Bachelor or University. No further detailed questions concerning demographic data were asked because of privacy circumstances and to prevent drop-off of the respondents. The demographic questions were presented in the beginning of the questionnaire.

### 4.5.2. Manipulation checks

The manipulation check was performed for the two independent variables (level of congruency of the advertisements and the level of interactivity of the mediums). For this study two advertisement conditions for the level of congruency were made. After the pre-test was conducted three advertisements for the congruent condition and three advertisements for the incongruent condition were used to manipulate this independent variable. The question regarding this manipulation was: “To what extent does brand X fits with the purpose of HolyHealth?”. A difference has been found regarding the review of the advertisements between the congruent and incongruent condition. The results of the manipulation can be found in table 4.4.

Table 4.4.  
**Manipulation check**

Congruent Condition		Incongruent condition	
App	Mean	App	Mean
Campina	3.67	Ben and Jerry's	1.60
AH Biologisch	3.93	Lays	1.50
Optimel	3.67	Martini	1.67
Congruent Condition		Incongruent condition	
Website	Mean	Website	Mean
Campina	3.71	Ben and Jerry's	1.48
AH Biologisch	3.81	Lays	1.36
Optimel	3.65	Martini	1.73
Average Mean	3.74		1.56

In order to manipulate the second independent variable 'interactivity' two different medium types were chosen. The app has to be viewed as interactive and the website has to be viewed as passive. On a five-point Likert scale the respondents could answer to what extent they judge the medium as interactive or passive with (varying from 1 as "no frequent interaction" to 5 as "frequent interaction". A difference has been found regarding the interactivity of the medium. An independent sample T-test was conducted between the app condition ( $M = 3.32$ ,  $SD = 1.017$ ) versus the website condition ( $M = 2.44$ ,  $SD = 1.125$ ) where a significant difference was found regarding the perceptions about the level of interactivity held by the respondents ( $t(4.555) = 1.049$ ;  $p < .05$ ). It can be concluded that both manipulations for the independent variables have worked in this study.

#### 4.5.3. Dependent variables

##### ***Recall***

In this study the dependent variable 'recall' indicates whether the respondents remember the presented brands in the mediums. An open question, where no helpful cues were mentioned, has been used to collect data. In total three advertisements of different brands were used in both medium types. For every brand which is mentioned one point can be gathered with a maximum of three points and a minimum of zero points. Results were categorized in the following groups; 0 = recalling no brand, 1 = recalling one brand, 2 = recalling two brands and 3 = recalling three brands. No points will be deducted in case of recalling a brand which is not presented.

##### ***Recognition***

In this study the dependent variable 'recognition' indicates whether the respondents recognized the presented brands in the mediums. A closed question, with helpful cues, has been included in the questionnaire. After the 'recall' question the respondents were asked which brands they have seen. In total nine brands were mentioned; Aquafresh, Greetz, Nivea, Lays, Ben and Jerry's, Optimel, Campina and Albert Heijn Biologisch. The first three brands were not displayed in the congruent or incongruent condition, the second three brands were displayed in the incongruent condition and the last three brands were mentioned in the congruent condition. For every brand, which was mentioned, one point can be gathered with a maximum of three points and a minimum of zero points. Results were categorized in the following groups; 0 = recognize no brand, 1 = recognize one brand, 2 = recognizing two brands and 3 = recognizing three brands. No points will be deducted in case of recalling a brand when was not presented.

##### ***Attitude toward the brand***

In this study the attitude towards the brand is measured via one question. Respondents were asked "What do you think of brand X?". A five-point Likert scale was used to measure this question (varying from 1 as "does not appeal to me" to 5 as "does appeal to me"). Only an opinion was asked for the brand displayed and related to the incongruent or congruent condition. So, in total three questions regarding three brands were implemented in the questionnaire. For the congruent condition this was: Campina, Optimel and Albert Heijn Biologisch and for the incongruent condition this was: Ben and Jerry's, Martini and Campina.

##### ***Attitude toward the advertisement***

In this study the attitude towards the advertisement is measured via one question. Respondents were asked "What do you think of the advertisement of brand X?". A five-point Likert scale was used to measure this question (varying from 1 as "does not appeal to me" to 5 as "does appeal to me"). Only an opinion was asked for the brand related to the incongruent or congruent

condition. So, in total three questions regarding to three brands were implemented in the questionnaire. For the congruent condition this was: Campina, Optimel and Albert Heijn Biologisch and for the incongruent condition this was: Ben and Jerry's, Martini and Campina.

#### ***Attitude toward the medium***

Attitude towards the medium was measured by using a five-point Likert scale (varying from 1 as "totally disagree" to 5 as "totally agree"). The items to measure this construct were based on the study of Wu (1999). Attitude towards the medium was measured by the following items: "I think HolyHealth is trustworthy", "I think HolyHealth is reliable" and "I think HolyHealth is professional". For this construct the Cronbach's Alpha was measured ( $\alpha = .839$ ). The outcome of the Alpha was above the 0.7 margin, which argued that all items regarding the construct were seen as reliable, so there was a perfect internal consistency.

#### **4.5.4. Covariate: Involvement**

The purpose of HolyHealth was to inform and educate people about health. Involvement was measured using the statement: "I am working on my health". This statement was measured using a five-point Likert Scale ranging from 1 as "totally disagree" to 5 as "totally agree". No significant difference has been found between male ( $M = 3.22$ ) and female ( $M = 3.32$ ) as both are concerned with their health.



# RESULTS:

## MAIN STUDY

## 5. RESULTS: MAIN STUDY

An analysis of variance (ANOVA) with  $\alpha = .05$  was performed to examine the relationship between the variables in the research model. The dependent variables were: recall, recognition, attitude toward the brand, attitude toward the advertisement and attitude toward the medium. The independent variables were: level of congruency and level of interactivity. The level of involvement was used as covariate in this study.

### 5.1. Main effects

#### 5.1.1. Recall

A significant main effect was found of 'the level of congruency' on recall ( $F(1,119) = 5.40, p = 0.02$ ). In table 5.1., the results of the ANOVA are presented. Based on this significant result, it can be concluded that individuals better recall brands in the incongruent condition instead of the congruent condition.

Table 5.1.

#### Mean scores on the level of recall

			Congruent condition N = 61	Incongruent condition N = 63
Recall	F	p-value	Mean (SD)	Mean (SD)
	5.4	0.02	0.92 (0.80)	1.27 (0.85)

In addition, the results showed a marginal effect of 'the level of interactivity' on recall ( $F(1,119) = 5.71, p = 0.10$ ). In table 5.2. the results of the ANOVA were presented. Individuals recall (marginal) more brands in app condition instead of the website condition.

Table 5.2.

#### Mean scores on the level of recall

			App condition N = 60	Website condition N = 64
Recall	F	p-value	Mean (SD)	Mean (SD)
	5.71	0.10	1.22 (0.83)	0.98 (0.85)

#### 5.1.2. Recognition

The results showed a significant main effect of 'level of congruency' on recognition ( $F(1,119) = 5.35, p = 0.02$ ). In table 5.2. the results of the ANOVA were presented. Based on this significant result, it can be concluded that individuals better recognize brands in the incongruent condition instead of the congruent condition

Table 5.3.

#### Mean scores on the level of recognition

			Congruent condition N = 61	Incongruent condition N = 63
Recognition	F	p-value	Mean (SD)	Mean (SD)
	5.35	0.02	2.02 (0.72)	2.33 (0.76)

In addition, results showed a significant main effect of 'level of interactivity' on recognition ( $F(1,119) = 5.71, p = 0.01$ ). Based on these results, it can be assumed that individuals better recognize brands in the interactive condition instead of the passive condition.

Table 5.4.

**Mean scores on the level of recognition**

			App condition N = 61	Website condition N = 63
<b>Recognition</b>	F	p-value	Mean (SD)	Mean (SD)
	5.71	0.01	2.33 (0.73)	2.03 (0.76)

#### 5.1.3. Attitude toward the brand

No significant main effect was found of 'level of congruency' on the attitude toward the brand ( $F(1,119) = 1.21, p = 0.27$ ). There was also no significant main effect of 'level of interactivity' on attitude toward the brand ( $F(1,119) = 0.86, p = 0.36$ ). Based on these results, it can be assumed that regardless whether the participant was situated in a passive or interactive medium, the attitude toward the brand will not significantly differ.

#### 5.1.4. Attitude toward the advertisement

No significant main effect was found of 'level of congruency' on the attitude toward the advertisement ( $F(1,119) = 0.87, p = 0.35$ ). There was also no significant main effect of 'level of interactivity' on attitude toward the advertisement ( $F(1,119) = 1.73, p = 0.19$ ). Based on these results, it can be assumed that regardless whether the participant was situated in a passive or interactive medium, the attitude toward the advertisement will not significantly.

#### 5.1.5. Attitude toward the medium

No significant main effect was found of 'level of congruency' on the attitude toward the medium,  $F(1,119) = 0.87, p = 0.35$ . In addition, a marginal effect was found of 'level of interactivity' on attitude toward the medium ( $F(1,119) = 3.29, p = 0.07$ ). In table 5.7. the results of the ANOVA were presented. The results show that in the app condition participants hold a more positive attitude instead of the website condition.

Table 5.7.

**Mean scores on the attitude towards the medium**

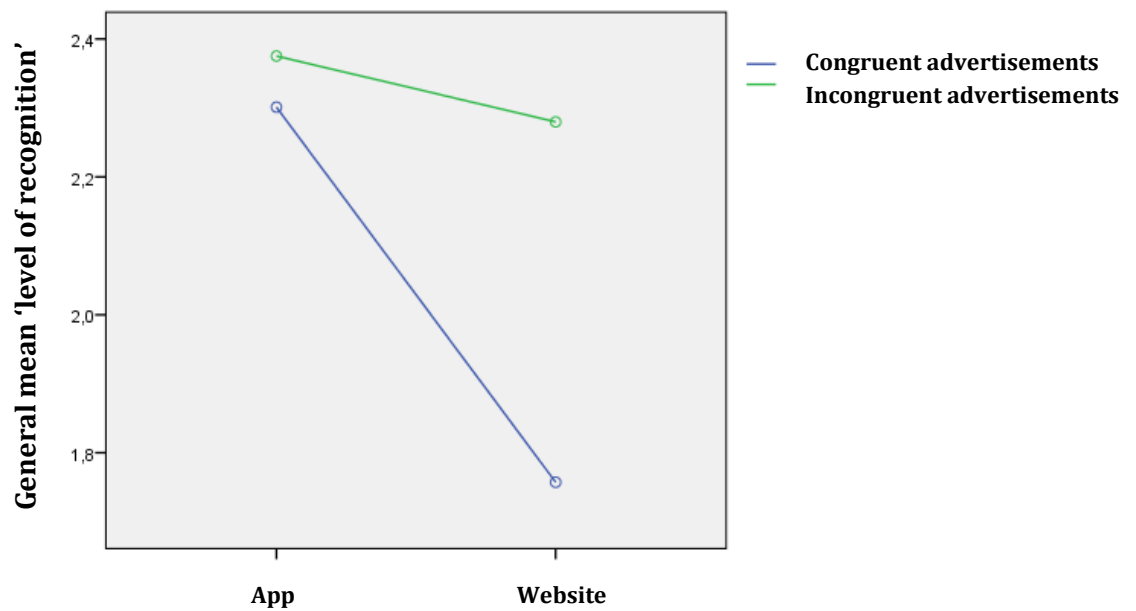
			App condition N = 60	Website condition N = 64
<b>Attitude Medium</b>	F	p-value	Mean (SD)	Mean (SD)
	3.15	0.7	3.41 (0.91)	3.13 (0.88)

## 5.2. Interaction effects

A marginal interaction effect was found between the two independent variables 'level of interactivity' and the 'level of congruency' on recognition ( $F(1,119) = 3.00, p = 0.09$ ). This effect shows that in the website condition incongruent advertisements will be better recognized than the congruent advertisements, while in the app condition no differences were found. Figure 2 shows the differences of this marginal interaction effect.

In addition, it can be concluded that only one (marginal) interaction effect was found. No significant differences were found on recall ( $F(1,119) = 0.53, p = 0.47$ ), attitude toward the brand, ( $F(1, 119) = 0.02, p = 0.88$ ), attitude toward the advertisement, ( $F(1,119) = 0.00, p = 0.95$ ), and attitude toward the medium ( $F(1,119) = 1.34, p = 0.25$ ).

Figure 2



# DISCUSSION

## 6. DISCUSSION

The aim of this study is to determine the influence of the level of congruency and the level of interactivity on consumer response in an online environment. The main research question for this study was: “To what extent do the level of congruency and the level of interactivity of the medium affect consumer’s attitudes and memory?”. The consumer responses were measured by five constructs, recall, recognition, attitude toward the brand, attitude toward the advertisement and attitude toward the medium. Interesting results were found and some were in line with the expectations. This study started with a literature review to get a better insight in the theme of this study. Based on this literature review several hypotheses were established. To test these hypotheses and answering the main research question a 2 (congruent advertisement versus incongruent advertisement) x 2 (interactive medium versus passive medium) experimental design was created. First, the discussion of the results will be presented. After the discussion the limitations in this study will be explained and possibilities for future research are proposed. Last, a short conclusion will be given.

### 6.1. Discussion of the results

Research in the field of online advertising had developed rapidly over the last few years. A lot of studies were conducted related to the level of congruency and also a lot of studies were conducted in regarding the level of interactivity in an online environment. Many studies examined the influence of congruency and incongruency, or investigated the role of interactivity in a medium or an advertisement. No research was performed while combining both in one study in order to examine the influence on consumer’s attitudes and memory. For that reason, it makes this study interesting, innovative and unique. The findings of this study provides many issues to discuss. This study offers also practical guidelines for several stakeholders like; marketers, developers and online visitors to improve recall, recognition, attitude toward the brand, attitude toward the advertisements and attitude toward the medium. In the next paragraph the findings in this study will be discussed and some practical implications were mentioned.

Results show that the level of congruency has influence on the extent of memory. Because, in literature significant results were found regarding the positive influence of incongruency and the positive influence of congruency. In this study no hard expectations were formulated. Keller (2003), for example, found that in the world of sponsoring congruency must exist between an endorser or event and the brand in order to gain positive results in terms of attitudes and behavioural intentions, like donating money for charity. Van Rompay et al. (2010) examined the effect of picture-text congruence in the online environment on consumer responses. Results show that picture-text congruency positively affect product attitude via processing fluency. However, only when the participants have a high need for cognition. In this study the results showed that incongruent advertisements instead of congruent advertisements will be better recalled and recognized. A possible explanation for a high level of recall and recognition, while incongruent advertisements were presented, is that the advertisements in this study could be perceived as unexpected. As mentioned in the study of Heckler and Childers (1992) the effect of using incongruent information to improve memorability is perceived as positive. The study demonstrates that when information is unexpected and incongruent with prior expectations, individuals will engage in more effortful or elaborate processing. Also Manchanda, Dahl and

Frankenberger (2002) argued that in the mind of consumers advertisement content which is unexpected with expectations for social norms will be easily retained in memory.

Practically, it is likely that the positive effect of incongruent advertisements in this study can be assigned to the 'unexpected' effect due to the reason that a healthy platform was used in this study. Thus, individuals do not expect that an unhealthy advertisement was used for commercial activities. In the mind of the consumer it does not fit, and therefore attract the attention. Although, in this study, for marketers it is useful to present incongruent advertisements on online platform. In contrast to other stakeholders this might be less desirable. Imagine that an health organisation builds an application where the blood pressure measurements can be imported and analysed. A lot of formal information will be presented in this medium. In the mind of the developers it is not appropriate to present unhealthy advertisements of Snickers or Magnum for example to their subscribers. Because this could harm the reliability of the app or people will be encouraged to a unhealthy lifestyle which is not the purpose of the app. By making use of these results it is necessary to collect different interest and wishes before mistakes could be made.

In addition, no significant main effect can be found of 'level of congruency' on consumers' attitudes. This was not in line with prior expectations. It was expected that a 'fit' between the advertisements and the purpose of the medium leads to favourable attitudes toward the brand, advertisement and medium. These result are surprising, because normally a 'fit', gains more positive rewards in terms of attitudes. Russell (2002) explored the effect of product placements in congruent and incongruent situations. He stated that congruent placements appear naturel. However, incongruent placements had a negative effect on brand attitudes because they seem out of place. Also Graeff (1996) argued that congruence between self-image and brand positively influences brand evaluations. Although, no research was conducted regarding the level of congruency on consumers' attitudes in an online health environment. It was expected that a fit between the purpose of the medium and the advertisements will positively influences the attitude toward the brand and attitude toward the advertisement.

Referring to the attitude toward the medium. A general conclusion can be drawn regarding the fact that advertising on online mediums leads to negative attitudes. Which means that whether an interactive medium or a passive medium was chosen or a congruent advertisement or an incongruent advertisements was presented, visitors always perceive advertisements as ignoring (McCoy et al. 2007). In this study it was expected that congruency had a positive influence on attitude to the medium. These days the investigated respondents were assigned to many online advertisements. Sometimes involuntary and sometimes voluntary. In this study the advertisements were subtly placed and so it was expected that in the congruent condition the respondents hold significantly more positive attitudes toward the medium instead of in the incongruent condition. However, no significant differences can be found on level of congruency on attitude toward the medium. Which indicates that whether congruent or incongruent advertisements were placed, this will not influence the attitude toward the medium. Overall the participants in this study have positive attitudes toward the HolyHealth medium. A possible explanation for this result could be that the purpose, design and content of HolyHealth is perceived as positive in the mind of the participants. This explanation can also be link to the effect of 'the level of interactivity' on attitude toward the medium. So it can be assumed that, whether marketers place incongruent or congruent advertisements on a healthy platform, it will

not influence the attitude toward the medium. However, as mentioned before, in this study the advertisements were subtly placed instead of very strained, like pop-up advertisements.

Besides the level of congruency, this study also examined the main effect of the level of interactivity on consumers' attitudes and memory. It was expected that in an interactive medium people better recall and recognize brands instead of in passive medium types. Results support these expectations. This result support the expectation that involvement has an important role while discussing interactivity. For example, Liu and Shrum (2000) argued in their study that a higher degree of interactivity stimulate the extent of advertisement effectiveness in terms of favourable attitudes. Based on the results, some practical suggestions about the use of an interactive medium can be mentioned. Although, there is an emerging trend in the number of applications which were developed. Marketers must always asked themselves whether an interactive medium fit with the goals of the marketing communication strategy. Therefore, in some cases it should not be necessary and helpful to design an interactive medium.

In this study only a marginal significant difference was found of the level of interactivity on attitude toward the medium. In other words, the more interactive the medium the more positive the attitude toward the medium. This result confirm the findings of Macias (2003) who argued that interactive communication features improve comprehension of interactive advertising websites. Also Wu (1999) confirmed these findings, because he found that there was a strong correlation between user's attitudes toward the medium and the perceived level of interactivity. Last, Peng et al. (2004) argued in their study that interactivity has been the largest predictor of attitude towards a medium. An explanation for this could be that people hold positive feelings when they could interact with the medium and gain valuable data. In the online health environment this could be a BMI Check or an overview of your running activities for example.

Although, no research was done with regard to the level of congruency in combination with the level of interactivity on memory cues and consumers attitudes. An interaction effect was found between the 'level of congruency' and 'level of interactivity' on recognition. It can be concluded that incongruent advertisements in an interactive medium type positively affect recognition, also referred to brand awareness. A possible explanation for the fact that only an interaction effect was found for the level of recognition is because of the helping cues which were available while measuring recognition. Conversely, the spontaneous recall did not have helped cues, so this could be a possible explanation why it was much harder to recall instead of recognizing brands/advertisements. A possible explanation for this significant interaction effect in general could be that unhealthy advertisements were perceived as unexpected and this effect was strengthened when individuals were highly involved into the medium. Besides, when people are highly involved they often perceive more personal relevance. In this study, individuals had to fill in personal and sensitive information in order to obtain their Body Mass Index rate. An explanation according to this effect could be that when individuals fill in these data it looks like they were doing something good. Therefore, they were more surprised to see unhealthy advertisements. Thus, individuals recognize these advertisements more than they were exposed to congruent advertisements.

While looking at different perspectives of different stakeholders. Marketers, for example, would like to gain positive results with their advertisements. So, for them the ideal situation is to put



incongruent advertisements on an interactive healthy platform. Because in this situation the extent of memory will be much higher. Conversely for developers and founders of a healthy app, for example, it is not desirable to distract the online visitor with unhealthy advertisements. This could negatively influence the reliability of the medium. In addition, the government also could share their opinion because it is socially irresponsible to place unhealthy advertisements on a healthy environment. This could possibly negatively influence behaviour. Last, in line with the aim of the governments, also for individuals it could be better to be exposed to healthy advertisements instead of unhealthy advertisements.

Last, as mentioned before the level of involvement was used in this study as covariate. However it was expected that people who were more concerned about their health hold more positive attitudes toward the advertisements, the brand and the medium. However, no significant differences can be found. An explanation for this result could be that the design and content of the HolyHealth page were very neutral and friendly for individuals who were concerned and who were not concerned about their health. For example, when a specific disease was outlined in the medium people's results could differ.

## 6.2. Limitations and future research

Unfortunately, some limitations regarding this study can be mentioned. Also some research contributions can be done according to future research. Such as the target group which was chosen for this study and the purpose of the medium and the medium types. In this section the limitations and some recommendations are given regarding future research.

First, regarding the protocol. In order to guide people through the medium types, it was needed to develop a detailed protocol which was specifically written for each condition. On the different pages in the website and app the advertisement was purposed in order to make it look like a real setting. However, normally individuals would not be guided through a website, because they were free to visit a medium and also free to leave a medium. So this could give a bias. For future research, it would be interesting to set up an experiment in which individuals feel free to visit a medium. For example a time limit could be added then.

Second, regarding the purpose of the platform. In this study a conscious choice was made to develop a healthy platform. In these days a lot of healthy platforms and especially apps become more popular. At the moment 100.000 apps that foster your health situations are currently active (Sport.nl, 2016). In future research a website or a app with another purpose can be developed.

Third, regarding the medium types. In this study a website and an app were developed in order to manipulate the level of interactivity. In this study a conscious choice was made to develop the application as an interactive medium. Applications have high speed and are very user friendly. Special features, like camera's, address books and GPS can be easily used in an application. Mobile applications are very suitable regarding to customer engagement and mobile applications bring a great experience. The main reason is that individuals have access anytime and anywhere (Frankwachting, 2013).

Fourth, regarding the advertisements. In this study three congruent and three incongruent advertisements were chosen. In appendix 4 the advertisements were showed. A possible reason for finding no significant effect of the level of congruency on attitudes toward the brand and

attitudes toward could be addressed to the fact some elements in the advertisements were not that unhealthy. For example the slogan in the advertisement of Lays; 'Happiness & Smile'. Another assumption regarding the advertisements could be related to the fact that in this study the advertisements were subtly placed, marketers could possibly achieve more positive effects in terms of recall and recognition when pop-ups or more visible advertisements are used.

Fifth, regarding the interactive medium. In this study the app was manipulated as interactive. However, only an BMI Check was implemented in this study. For future research more interactive tools can be implemented to make this variable stronger.

Sixth, regarding the congruence between the ads and the purpose of the medium, Also other atmospheric variables can be examined. For future research could be focused on the colour, pictures or context of the mediums.

Finally, regarding the demographics of the respondents. In this study only high educated young adults were used as participants in this study. All participants have the age between 18 and 32 years. In total 124 respondents participated in this study were the distribution between male and female was almost equal. The average age of the respondents was approximately 22. A conscious choice was made regarding the target group. The reason for this choice was the fact that in 2015 more than 90% of the Dutch population had access to the internet via smartphones, tablets and laptops (Van der Kolk, 2015). The reason that in these days the digital platform cannot be ignored is because it is easy to shop, check your health statement and doing your banking activities online (Kouffeld, 2016), also another target group could be chosen. However, in this study the focus was on students for the reason that they could easily be approached. When focussing on the level of recall and recognition. Craick and McDowd (1987) found that older people perform less on recall than they do on recognition task. Because, recall tasks demand more processing resources instead of recognition task and because older people have less possibilities to process resources, this results in their loss. The older group instead of young adults perform significantly less as well. While taking a look at the level of congruency and the effect on older people (55 – 65 years). It can be mentioned that an ad/context match has a positive effect on the extent of recall (Pelsmacker et al., 2002).

### 6.3. Conclusion

The world of online advertising is very important these days and cannot be ignored by marketers and individuals. In the study of Wang et al. (2002) the offline world was compared with the online world of advertising. In the study of Wang et al. (2002) it was concluded that in the online world marketers have the potential to better support goal-oriented consumers. With several online marketing strategies individuals will be approached where the most important goal was to influence people's attitude and to purchase online. According to this study it can be concluded that for a health related interactive medium types incongruent advertisements will be better recognized and did not negatively affect the attitude toward the medium, attitude toward the brand and attitude toward the advertisement. So practically, choosing an advertisement of Lays in an interactive medium type will positively affect the extent of memory while talking about recognition. However, several stakeholders have their interests. For the developers of the app it could negatively influence the reliability of the content. In addition, the government could perceive this as socially irresponsible.

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## 8. APPENDICES

### Appendix I : Introduction HolyHealth



Bedankt dat je wilt deelnemen aan mijn onderzoek! Ik wil je vragen om onderstaand scenario zorgvuldig te lezen.

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HolyHealth maakt gebruik van een App/Website die bedoeld is om mensen te informeren over zaken met betrekking tot gezondheid. Er worden onder andere gezonde recepten gedeeld, er wordt informatie gegeven over BMI- en de bewegingsnorm en een aantal interessante en leuke feiten zijn opgesomd.




HolyHealth zit nog in haar begin stadium. Hierdoor kan het zijn dat er af en toe gerichte vragen worden gesteld naar specifieke onderdelen. Wij van HolyHealth zijn onder andere geïnteresseerd naar jouw mening over dit platform.

---

Met dit scenario in je hoofd wil ik je vragen om eerst de App/Website van HolyHealth te bekijken op de tablet die je zojuist hebt gekregen en het volgende protocol te volgen.

## Appendix II : Protocol App and Website

### Protocol App

1. Je landt op de welkomspagina van HolyHealth. Ik wil je vragen om de hele intro te lezen.
2. Klik vervolgens op de oranje button om naar de 'Schijf van Vijf' te gaan. Lees alle informatie die over de 'Schijf van Vijf' wordt gegeven.
3. Klik vervolgens onderin de menubalk op .
4. Ik wil je vragen om eerst het nieuwsfeit te lezen met als **onderwerp "Wake up: it's coffee time"** en vervolgens het nieuwsfeit **"Frisdrank of drinkpakjes: waar zit nu meer suiker in?"**.
5. Klik linksboven op terug om het tweede bericht te selecteren en vervolgens te lezen.
6. Klik vervolgens onderin de menubalk op .
7. Ik wil je vragen om één van de vier recepten te lezen. Door op een recept klikken open je het hele recept. Het maakt niet uit welk recept gelezen wordt. Er is geen goede of foute keuze.
8. Klik vervolgens onderin de menubalk op .
9. Scroll naar beneden en klik op 'registreren'. Vul een gebruikersnaam en wachtwoord. Scroll naar beneden en klik vervolgens op verstuur.
10. Je account is nu aangemaakt! Klik op profiel om je verdere gegevens in te voeren. Want je gaat immers je BMI checken.
11. Voer je startgewicht, streefgewicht en lengte in. *E-mailadres mag je open laten.* Mocht je geen streefgewicht voor ogen hebben voer hier dan tevens je startgewicht in. Gegevens worden zorgvuldig behandeld en worden niet verspreid.
12. Klik op opslaan.
13. Scroll nu naar boven en klik rechtsboven op metingen. Klik vervolgens op 'Nieuw meting'.
14. Voer de datum van vandaag in en je gewicht van vandaag. Voeg daarna een nieuwe meting toe met het gewicht en de datum van vorig jaar. Je hebt voert dus twee metingen in. De eerste meting is van vandaag en de tweede meting is exact een jaar geleden. Scroll naar beneden en klik vervolgens op 'opslaan'.
15. Klik nu op 'grafieken' bovenin in het midden van het scherm.

16. Je ziet nu twee grafieken. Lees de onderste grafiek af door te kijken in welke kleurenzona je valt. In totaal zijn er 5 zones die met stippelijntjes worden aangegeven: paars, rood, oranje, groen en blauw. Het kan zijn dat je maar 1 kleur ziet. Dit is afhankelijk van de twee metingen die je zojuist hebt ingevoerd. Onthoud de kleur van de zone waar het bolletje staat van de meting van vandaag.

17. Klik vervolgens op BMI Advies en selecteer het advies van de kleur dat voor jouw situatie geldt.

18. Lees het advies.

19. Klik vervolgens onderin de menubalk op



20. Ik wil je vragen om de hele tekst te lezen

21. Selecteer vervolgens uit de drie leeftijdsgroepen de situatie die voor jou van toepassing is en lees het advies.

22. Klik tot slot rechts onderin op: "Vragenlijst".

Nu word je automatisch doorgeleid naar de vragenlijst. Ik wil je vragen om deze volledig in te vullen. Er zijn geen goede of foute antwoorden.

Ik wil je alvast bedanken voor je deelname!

Groeten,

Annelot Vrerink  
Student Marketing Communication  
Universiteit Twente

----- Einde -----

## Protocol Website

1. Je landt op de welkomspagina van HolyHealth. Ik wil je vragen om de hele intro te lezen.
2. Klik vervolgens op 'Klik hier' om naar de 'Schijf van Vijf' te gaan. Lees alle informatie die over de 'Schijf van Vijf' wordt gegeven.
3. Klik vervolgens op **FEITEN** bovenin de menubalk.
4. Ik wil je vragen om eerst het nieuwsfeit te lezen met als **onderwerp "Wake up: it's coffee time"** en vervolgens het nieuwsfeit **"Frisdrank of drinkpakjes: waar zit nu meer suiker in?"**.
5. Klik vervolgens op **RECEPTEN** bovenin de menubalk. Ik wil je vragen om één van de vier recepten te lezen. Het maakt niet uit welk recept er gelezen wordt. Er is geen goede of foute keuze.
6. Klik vervolgens **BMI CHECK** op bovenin de menubalk.
7. Ik wil je vragen om de hele tekst te lezen.
8. Klik vervolgens **BEWEGING** op bovenin de menubalk.
9. Ik wil je vragen om de hele tekst te lezen.
10. Klik tot slot rechts onderin op: "Vragenlijst".

Nu word je automatisch doorgeleid naar de vragenlijst. Ik wil je vragen om deze volledig in te vullen. Er zijn geen goede of foute antwoorden.

Ik wil je alvast bedanken voor je deelname!

Groeten,

Annelot Vrerink  
Student Marketing Communication  
Universiteit Twente

----- Einde -----

## Appendix III: Questionnaire

### ***Demographics***

Wat is je geslacht?

- ☐ Man (1)
- ☐ Vrouw (2)

Wat is je leeftijd?

.....

Welke opleiding volg je op dit moment?

- ☐ HBO (1)
- ☐ Universiteit (2)

### ***Dependent variables***

Geef aan voor welk(e) merk(en) er werd geadverteerd op de pagina van HolyHealth. (Je kunt meerdere antwoorden invullen in het onderstaande invulveld)

.....

Van deze merken zijn er sommigen wel in beeld geweest, anderen niet. Vink aan welk(e) merk(en) jij denkt dat er voorbij gekomen zijn.

- ☐ Martini (1)
- ☐ Albert Heijn Biologisch (2)
- ☐ Aquafresh (3)
- ☐ Ben and Jerry's (4)
- ☐ Lays (5)
- ☐ Optimel (6)
- ☐ Nivea (7)
- ☐ Greetz (8)
- ☐ Campina (9)

In hoeverre ben je het eens met onderstaande stellingen?

Ik vind HolyHealth betrouwbaar (1)				
Geheel mee oneens <input type="radio"/>	Enigzins mee oneens <input type="radio"/>	Neutraal <input type="radio"/>	Enigzins mee eens <input type="radio"/>	Geheel mee eens <input type="radio"/>
Ik vind HolyHealth geloofwaardig (2)				
Geheel mee oneens <input type="radio"/>	Enigzins mee oneens <input type="radio"/>	Neutraal <input type="radio"/>	Enigzins mee eens <input type="radio"/>	Geheel mee eens <input type="radio"/>
Ik vind HolyHealth professioneel (3)				
Geheel mee oneens <input type="radio"/>	Enigzins mee oneens <input type="radio"/>	Neutraal <input type="radio"/>	Enigzins mee eens <input type="radio"/>	Geheel mee eens <input type="radio"/>

### Congruente conditie

Ik wil je vragen om je mening te geven ten aanzien van een drietal merken door de volgende vragen m.b.t. deze merken te beantwoorden.

Wat vind je van het merk Campina?				
Spreekt mij helemaal niet aan <input type="radio"/>	Spreekt mij deels niet aan <input type="radio"/>	Neutraal <input type="radio"/>	Spreekt mij deels aan <input type="radio"/>	Spreekt mij erg aan <input type="radio"/>
Wat vind je van de advertentie van Campina?				
Spreekt mij helemaal niet aan <input type="radio"/>	Spreekt mij helemaal niet aan <input type="radio"/>	Spreekt mij helemaal niet aan <input type="radio"/>	Spreekt mij helemaal niet aan <input type="radio"/>	Spreekt mij helemaal niet aan <input type="radio"/>
Wat vind je van het merk Albert Heijn Biologisch?				
Spreekt mij helemaal niet aan <input type="radio"/>	Spreekt mij deels niet aan <input type="radio"/>	Neutraal <input type="radio"/>	Spreekt mij deels aan <input type="radio"/>	Spreekt mij erg aan <input type="radio"/>
Wat vind je van de advertentie van Albert Heijn Biologisch?				
Spreekt mij helemaal niet aan <input type="radio"/>	Spreekt mij helemaal niet aan <input type="radio"/>	Spreekt mij helemaal niet aan <input type="radio"/>	Spreekt mij helemaal niet aan <input type="radio"/>	Spreekt mij helemaal niet aan <input type="radio"/>
Wat vind je van het merk Optimel?				
Spreekt mij helemaal niet aan <input type="radio"/>	Spreekt mij deels niet aan <input type="radio"/>	Neutraal <input type="radio"/>	Spreekt mij deels aan <input type="radio"/>	Spreekt mij erg aan <input type="radio"/>
Wat vind je van de advertentie van Optimel?				
Spreekt mij helemaal niet aan <input type="radio"/>	Spreekt mij helemaal niet aan <input type="radio"/>	Spreekt mij helemaal niet aan <input type="radio"/>	Spreekt mij helemaal niet aan <input type="radio"/>	Spreekt mij helemaal niet aan <input type="radio"/>

## Incongruente conditie

Ik wil je vragen om je mening te geven ten aanzien van een drietal merken door de volgende vragen m.b.t. deze merken te beantwoorden.

Wat vind je van het merk Ben and Jerry's?				
Spreekt mij helemaal niet aan <input type="radio"/>	Spreekt mij deels niet aan <input type="radio"/>	Neutraal <input type="radio"/>	Spreekt mij deels aan <input type="radio"/>	Spreekt mij erg aan <input type="radio"/>
Wat vind je van de advertentie van Ben and Jerry's?				
Spreekt mij helemaal niet aan <input type="radio"/>	Spreekt mij helemaal niet aan <input type="radio"/>	Spreekt mij helemaal niet aan <input type="radio"/>	Spreekt mij helemaal niet aan <input type="radio"/>	Spreekt mij helemaal niet aan <input type="radio"/>
Wat vind je van het merk Lays?				
Spreekt mij helemaal niet aan <input type="radio"/>	Spreekt mij deels niet aan <input type="radio"/>	Neutraal <input type="radio"/>	Spreekt mij deels aan <input type="radio"/>	Spreekt mij erg aan <input type="radio"/>
Wat vind je van de advertentie van Lays?				
Spreekt mij helemaal niet aan <input type="radio"/>	Spreekt mij helemaal niet aan <input type="radio"/>	Spreekt mij helemaal niet aan <input type="radio"/>	Spreekt mij helemaal niet aan <input type="radio"/>	Spreekt mij helemaal niet aan <input type="radio"/>
Wat vind je van het merk Martini?				
Spreekt mij helemaal niet aan <input type="radio"/>	Spreekt mij deels niet aan <input type="radio"/>	Neutraal <input type="radio"/>	Spreekt mij deels aan <input type="radio"/>	Spreekt mij erg aan <input type="radio"/>
Wat vind je van de advertentie van Martini?				
Spreekt mij helemaal niet aan <input type="radio"/>	Spreekt mij helemaal niet aan <input type="radio"/>	Spreekt mij helemaal niet aan <input type="radio"/>	Spreekt mij helemaal niet aan <input type="radio"/>	Spreekt mij helemaal niet aan <input type="radio"/>

## Manipulation check

### Congruente conditie

In hoeverre vind je HolyHealth passen bij:					
	Zeer onpassend	Deels onpassend	Neutraal	Deels passend	Zeer passend
Campina	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
AH Biologisch	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Optimel	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Incongruente conditie

In hoeverre vind je HolyHealth passen bij:					
	Zeer onpassend	Deels onpassend	Neutraal	Deels passend	Zeer passend
Ben and Jerry's	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lays	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Martini	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In hoeverre vond je dat er interactie plaats vond tussen jou en het platform van HolyHealth?					
	Geen interactie	Matige interactie	Neutraal	Frequente interactie	Zeer frequente interactie
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In hoeverre ben je het eens met onderstaande stelling:

Ik ben bezig met mijn gezondheid					
	Geheel mee oneens	Enigzins mee oneens	Neutraal	Enigzins mee eens	Geheel mee eens
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Controle vraag

Heb je kennis gemaakt met de App of de Website van HolyHealth?

- ☐ App (1)
- ☐ Website (2)

- Einde vragenlijst -



## Appendix IV: Advertisements

### Congruent condition



## Incongruent condition

