Advertising in video-on demand services, intrusive and irritating?

Investigating the effects of in-stream video advertisements on consumers' feelings, cognitions, attitudes and behaviors.

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ABSTRACT

Nowadays, young Dutch people between the ages of 18 to 34 years are increasingly using video on-demand services and they are running away from television. Video on-demand services enable consumers to watch video content online at times that are most convenient for them. Advertisers can reach these consumers by making use of in-stream video advertisements. These advertisements are placed within online video content. In this research, it is investigated to what extent these in-stream video advertisements are perceived as intrusive and irritating. Furthermore, it is examined how the intrusiveness of in-stream video advertisements affects consumers' behaviour via cognitions and attitudes. Therefore, the hierarchy-of-effects model has been used as a fundamental base. An online experiment was conducted in which a *2* (*placement:* pre-roll versus mid-roll) by *2* (*length:* long versus short) between-subjects design was used. Participants were recruited online by using e-mail and social media. This research showed that in-stream video advertisements are perceived as intrusive and irritating. Moreover, it appeared that consumers' attitude towards the advertisement influenced their brand attitude and their brand attitude, in turn, significantly influenced their purchase intention. Companies should stay away from using mid-roll in-stream video advertisements and they must create appealing advertisements in order to get positive brand evaluations.

KEYWORDS: Video on-demand, in-stream video advertisements, intrusiveness, irritation, cognitions, attitudes, behaviour

Preface

Writing this thesis was the final task before graduating from my master's. I have enjoyed writing this thesis on video on-demand advertising and I would like to thank my supervisor Sanne Opree. In being an expert in the field of advertising research, Sanne gave me clear and helpful advice. She triggered my interest into advertising even more. Without her support I would not have been able to complete this thesis. Furthermore, I would like to thank my family, boyfriend and friends for their support. Especially for recruiting participants and spreading my research online since they helped me in getting enough validated participants.

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1. Introduction

Last summer PriceWaterhouseCoopers (PWC) indicated that young people are 'running away from television' (Dongen, 2015). According to Tom de Groeve, researcher at PWC, young people watch online programmes whenever they want on their laptops, tablets and mobile phones. Furthermore, they use Netflix and PopcornTime to watch online series and YouTube for videos or gaming (Dongen, 2015). These services are called video on-demand (VoD) which consumers are increasingly using nowadays (Li & Lo, 2015). Video on-demand services enable consumers to watch movies, television series and programs by streaming the video content they want to see at times that are most convenient for them ("Wat is video on-demand?", n.d.). Whereas in 2011 consumers watched streamed content for about 2,9 hours a week, this amount doubled to 6 hours per week in 2015 (Ericsson, 2015).

Almost a third of the Dutch population is using video on-demand services (Blauw, 2014). Nevertheless, there is a generation gap in such a way that video on-demand services appeal especially to young people between the ages of 18 to 34 (Dongen, 2015; Spot.nl, 2015). Older consumers prefer to watch content via television whereas younger consumers prefer to use their laptop, smartphones and tablets (Ericsson, 2015). Since video on-demand services appeal especially to young people between the ages of 18 to 34 that are difficult to reach by traditional television, advertisers have the advantage to reach this specific group (Logan, 2013). Hence, the market for online video advertising is growing rapidly (Vermanen, 2015). Video advertisements enable marketers to explain a certain product or service more extensively. Expenditures regarding online video advertising were estimated at 20,9 million euros in 2014 in the Netherlands, which is a 70 percent increase compared to 2013 (Spot marketing TV, 2015). In addition, it is estimated that 74 percent of all internet traffic in 2017 will be video (Cisco, 2015). Consequently, consumers of video on-demand services are increasingly exposed to online video advertisements (Li & Lo, 2015).

A frequently used type of advertisements in video on-demand services are in-stream video advertisements. In-stream video advertisements can be shown before (pre-roll), during (mid-roll) or after (post-roll) digital video content (Interactive Advertising Bureau and PriceWaterhouseCoopers, 2015). Recent research indicates that in-stream video advertising in video on-demand services has a positive effect on consumers' advertisement memorability (Li & Lo, 2015). This is because online advertising in general (e.g., online advertising on the internet) is perceived as more intrusive which can in turn attract consumers' attention. However, online advertisements that are perceived as more intrusive can also cause irritation and negative attitudes among consumers (Edwards, Li, & Lee, 2002; McCoy, Everard, Polak, & Galletta, 2008). This has to do with the interruptive character of in-stream video advertisements in video on-demand services (Li & Lo, 2015).

When looking at traditional television and radio commercials, consumers learned how to reduce their physical exposure (Speck & Elliott, 1997). They could for instance ignore the commercial or switch to another television channel or radio station when the commercial was aired (Speck & Elliott, 1997). However, this is quite different for in-stream video advertisements in video on-demand

services. Whereas these advertisements are created to attract the attention of consumers they also interrupt their viewing experience (Li & Lo, 2015). This is because consumers have difficulty in ignoring these video advertisements as they cannot fast forward (zip) or eliminate (zap), these advertisements (Logan, 2013).

1.1. Advertisement avoidance behavior online

Nevertheless, when looking at online advertisements on the internet, internet users are able to avoid these type of advertisements in a cognitive, affective and/or behavioral way (Cho & Cheon, 2004). Cognitive advertisement avoidance is based on consumers' evaluative beliefs about an object (Ajzen, 1991). In this case online advertisements. The more unfavorable these beliefs are, the more consumers engage in cognitive advertisement avoidance behavior, in which they try to intentionally ignore the advertisement they are exposed to (Cho & Cheon, 2004; Predergast, Tsgang, & Cheng, 2014).

Moreover, consumers can engage in affective advertisement avoidance in which they possess negative feelings or emotional reactions towards (online) advertisements (Alwitt & Prabhaker, 1994; Cho & Cheon, 2004; Phillips & Noble, 2007). Consumers who really dislike or hate advertisements on the internet, are likely to have a negative attitude towards these advertisements, which could increase over time (Alwitt & Prabhaker, 1994). Hence, their avoidance behavior is based on emotional aspects, meaning that consumers try to avoid the source of displeasure (Cho & Cheon, 2004). Lastly, there is behavioral advertisement avoidance in which consumers not only consciously and actively ignore advertisements and form negative attitudes towards advertisements. They also try to avoid advertisements in a behavioral way by scrolling down the webpage and clicking away from the advertisement page (Baek & Morimoto, 2012; Cho & Cheon, 2004).

1.2. The effects of in-stream video advertisements

As interruptive advertisements can lead to negative attitudes (Ha, 1996; Hong, Thong, & Tam, 2004; Rettie, 2001; Wang & Calder, 2006) it is of much relevance to explore the effects of in-stream video advertisements on consumers' attitudes towards these advertisements and brand attitudes. Next to consumers' cognitions and attitudes, consumers' behavior is important to consider. Accordingly, another important marketing outcome is purchase intention. Purchase intentions are different from brand attitudes as they represent a consumer's motivation to plan to carry out a specific behavior (Eagly & Chaiken, 1993).

The effects of advertisement placement on different advertisement outcomes have been widely studied in the context of television advertisements (Jeong 2011; Moorman, Neijens, & Smit, 2005; Pieters & Bijmolt, 1997; Siddarth & Chattopadhyay, 1998; Tse & Lee 2001). On the one hand, there are studies that examined the differences between commercial blocks placed before or after the television program with commercial blocks placed in the middle of the television program (Jeong,

2011; Moorman et al., 2005; Pieters & Bijmolt 1997; Siddarth & Chattopadhyay, 1998). On the other hand, there are studies that looked at the location of a specific commercial within a commercial pod (Tse & Lee, 2001; Van Meurs, 1998). These studies show that commercials placed in the first commercial block, so before a television program, are more effective than commercials placed in later commercial blocks (Jeong, 2011). In addition, television commercials placed at the beginning of a certain commercial block are more likely to be remembered by consumers than commercials placed at the end of a commercial block (Pieters & Bijmolt, 1997).

However, few studies in the context of in-stream video advertisements looked at the effects of in-stream video advertisements on advertisement outcomes such as consumers' brand attitudes and purchase intentions (Li & Lo, 2015). Whereas Goodrich, Schiller and Galletta (2015) explored the effects of pre-roll in-stream video advertisements displayed on webpages on consumers' cognitions, attitudes and behavior, they only evaluated pre-roll in-stream video advertisements. The effects of mid-roll and post-roll in-stream video advertisements on the previously mentioned factors are not clear. Accordingly, there is need to investigate these effects (Li & Lo, 2015).

Therefore, the goal of this research is to investigate if in-stream video advertisements interrupt consumers' viewing experience and if this influences consumers' feelings of intrusiveness and irritation. Moreover, it is investigated whether the interruption of in-stream video advertisements influences consumers' cognitions, attitudes and behavior. Considering the increasing budgets for online video advertising (Spot marketing TV, 2015), this research will be of much value for marketers as it offers them information about the effectiveness of in-stream video advertisements. Furthermore, this will enable them to make better advertising decisions with regards to this specific form of online video advertising. Therefore, the following research question is addressed:

RQ: 'Does the use of in-stream video advertisements in video on-demand influence the feelings, cognitions, attitudes and behavior of Dutch consumers in the age of 18 to 34?'

1.3. Placement order and length of in-stream video advertisements
As described earlier, in-stream video advertisements can be shown before (pre-roll), in the middle (mid-roll) or at the end (post-roll) of video content. Pre-roll in-stream video advertisements are the most commonly used form (Adobe, 2012). The placement of an in-stream video advertisement is important to consider as it determines whether consumers complete watching the advertisement. A study by Akamai showed that mid-roll in-stream video advertisements have the highest completion rate (97%), followed by pre-roll (74%) and post-roll in-stream video advertisements (45%) (Akamai, 2013; Krishnan & Sitaraman, 2013). This means that mid-roll in-stream video advertisements are most likely to being completely watched. When a mid-roll in-stream video advertisement appears, these viewers are already engaged with the video content they watch and they are absorbed in the series

(Krishnan & Sitaraman, 2013). Hence, they could be slightly more tolerant and patient towards a mid-roll in-stream video advertisement (Krishnan & Sitaraman, 2013) as they are impatiently awaiting to see the rest of the video content.

In addition, using in-stream video advertisements that are shown after video content (e.g., post-roll in-stream video advertisements) are not the best moment when it comes to in-stream video advertisements. This is because viewers are done watching the video content. Therefore, they are less motivated to watch an advertisement afterwards (Krishnan & Sitaraman, 2013), meaning that they are likely to click away the website of the video content and no attention is paid to the post-roll in-stream video advertisement. As pre-roll in-stream video advertisements are the most commonly used form and mid-roll in-stream video advertisements have the highest completion rate, this research will only investigate those two types of in-stream video advertisements.

Moreover, the length of in-stream video advertisements could vary and is important to take into account. Advertising length is defined as a consumer's time of exposure to an advertisement (Schmidt & Eisend, 2015). Whereas television advertisements used a standard length of 30 seconds for quite a long time (Newstead & Romaniuk, 2010), there are now also short-form advertisements (e.g., five seconds) which are aired at television at the end of commercials to avoid skipping (Petrecca, 2006). However, these short-form advertisements cannot easily confer their messages in such a short time. A frequently used alternative is the fifteen-second television advertisement (Greene, Bratka, Drake, & Sanders, 2006; Newstead & Romaniuk, 2010). Previous research about television advertisements showed that fifteen-second advertisements are 80 percent more effective compared to advertisements of 30 seconds in terms of recall and likeability (Newstead & Romaniuk, 2010; Patzer, 1991; Pieters & Bijmolt, 1997; Stanton & Burke, 1998).

When looking at the duration of in-stream video advertisements, the Interactive Advertising Bureau (2015) states that in-stream video advertisements should have a length of six seconds, fifteen seconds or thirty seconds (IAB, 2015). Research shows that longer in-stream video advertisements are likely to increase consumers' brand recognition (Li & Lo, 2015) and advertisement recall (Goodrich et al., 2015). Yet, at the same time online advertisements in general that are too long can increase irritation among consumers (Li et al., 2002). Furthermore, there are contradictory results as a recent study by Goodrich and colleagues (2015) found that consumers perceive shorter pre-roll in-stream video advertisements as more intrusive than longer ones.

Even though there are recent studies that investigated the effects of in-stream video advertisements these studies either focused on consumers' cognitions (Li & Lo, 2015), so not on other important marketing outcomes, or on the effects of pre-roll in-stream video advertisements (Goodrich et al., 2015). Hence, there is a gap in literature as there are no studies that simultaneously compared the effects of in-stream video advertisements that differ in placement (e.g., pre-roll versus mid-roll in-stream video advertisements) and length (e.g., long versus short in-stream video advertisements). This research will tease out the gaps in academic literature by examining different placement orders and

different durations of in-stream video advertisements simultaneously. Therefore, the goal of this research is to investigate the effects of both placement (pre-roll versus mid-roll) and length (long versus short) of in-stream video advertisements, leading to the following sub-questions:

RQ1: 'Does the placement order of in-stream video advertisements (pre-roll versus mid-roll) in video on-demand influence their effect on the feelings, cognitions, attitudes and behavior of Dutch consumers in the age of 18 to 34?'

RQ2: 'Does the length of in-stream video advertisements (long versus short) in video on-demand influence their effect on the feelings, cognitions, attitudes and behavior of Dutch consumers in the age of 18 to 34?'

2. Theoretical framework

This research looks whether the placement (pre-roll versus mid-roll) and length (long versus short) of in-stream video advertisements have an effect on consumers' feelings, cognitions, attitudes and behavior. Accordingly, this research is divided into two sections. The first section focuses on the effects of in-stream video advertisements on consumers' feelings (intrusiveness and irritation). The second section of this research is based on the hierarchy-of-effects model. The hierarchy-of-effects model assumes that consumers go through multiple stages before buying something (Weilbacher, 2001). Moreover, this model states that advertisements have multiple tasks ranging from creating awareness for the brand, to preference for the brand and eventually to the intention of buying the brand. Accordingly, in this section the effects of in-stream video advertisements on consumers' cognitions (memorability), consumers' attitudes (attitude towards the advertisement and brand attitude) and consumers' behavior (purchase intention) are investigated.

The conceptual model is displayed below and it contains the following eight hypotheses and sub-hypotheses (Figure 1). The placement (pre-roll versus mid-roll) and length (long versus short) of in-stream video advertisements are important in the beginning of the model. Furthermore, it is assumed that consumers' level of intrusiveness affects behavior via cognitions and attitudes.
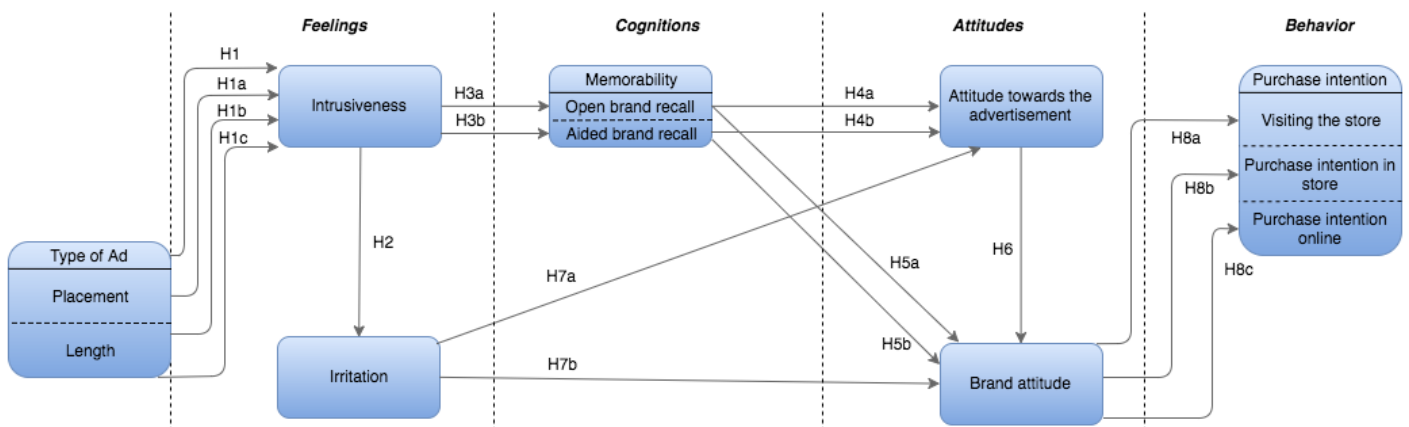
Figure 1: Conceptual model

2.1. Effects on feelings

This sub-section deals with the effects of in-stream video advertisements on consumers' feelings. First, consumers' feelings with regards to their level of intrusiveness are discussed. After that, the influence of intrusiveness on consumers' level of irritation is discussed.

2.1.1. Effects on intrusiveness (H1, H1a, H1b & H1c)

Since the ultimate goal of advertisements is to attract the attention of consumers, advertisements are likely to interrupt consumers' activities (Acquisti & Spiekermann, 2011). Through disrupting the activities of consumers, advertisements limit the actions consumers are able to engage in for achieving

their goals (Edwards et al., 2002). Hence, consumers perceive advertisements as intrusive (Li, Edwards, & Lee, 2002). Intrusiveness is defined as the extent to which an advertisement is able to cause an undesirable interruption (McCoy et al., 2008). When looking at traditional television and radio commercials, consumers tried to physically avoid advertisements as much as they could as they learned how to reduce their exposure to them (Speck & Elliott, 1997). They could for instance leave the room or switch to another television channel or radio station when the commercial was aired (Abernethy, 1991; Speck & Elliott, 1997). Consumers could also participate in other activities or ignore the advertisements at all and instead focus on different tasks (Krugman & Johnson, 1991). The same applies to video cassette recorders, allowing consumers to record a television program and hence, fast forward commercials when watching the recorded program (Pitta, 2008).

Consumers' avoidance behavior for traditional and online advertisements can be explained by the differences between online advertising and traditional advertising. Online advertising differs from advertising in traditional media in such a way that when a television or radio advertisement is used, the advertisement acquirers the program being broadcasted (e.g., a series or song) and uses all bandwidth of the medium to send the message (Drèze & Zufryden, 2000). This means that in general, viewers or listeners are paying attention to the television advertisement and the advertisement is only avoided when they zap away (Tang, Zhang, & Wu, 2015). On the contrary, online advertisements use mostly shared bandwidth and are embedded within the website content (Drèze & Zufryden, 2000). Research indicates that internet users also try to avoid looking at banner advertisements when surfing on the web (Drèze & Hussherr, 2003). Whereas internet users cannot simple leave the computer to avoid advertisements, they can avoid them in a cognitive, affective and/or behavioral way (Cho & Cheon, 2004). For instance, internet users can intentionally ignore the advertisement meaning that they avoid the advertisement in a cognitive manner, or they can avoid advertisements in a behavioral way by scrolling down the webpage and clicking away from the advertisement page (Cho & Cheon, 2004).

When looking at new media, researchers considered online advertising to be less intrusive because of its interactivity (Rust & Varki, 1996). Instead they thought that online advertising would be more entertaining (Coyle & Thorson, 2001) than traditional advertising. They explained this by the concept of virtual reality that can be seen as an environment created by a computer or other media in which internet users feel present (Biocca, 1992). By being transported into this virtual world, users can start to see this virtual world as the real world and online advertising could be rated more positively. However, contrary to these thoughts research indicated that consumers considered online advertisements to be more interrupting and annoying (McCoy, Everald, Polak, & Galletta, 2007). This is because internet users are more goal oriented, compared to users of traditional media (Cho & Cheon, 2004; Korgaonkar & Wolin, 1999). Hence, the interactivity of the internet requires users' involvement, leading to interruption. Interruption can be perceived as an event that leads to a 'cessation and postponement of ongoing activity' (Zijlstra, Roe, Leonora, & Krediet, 1999, p. 169) and hence, disrupting a person's ongoing cognitive focus (Corragio, 1990). Interruptions can be caused by

events, objects and persons and what they have in common is that they are out of a person's control. Interruptions caused by online advertisements can provoke negative consequences as they can stimulate consumers' feelings of intrusiveness (Edwards et al., 2002). Therefore, the following hypothesis is formulated:

H1: In-stream video advertisements are perceived as intrusive by consumers.

Even though in-stream video advertisements are perceived as intrusive by consumers, pre-roll and mid-roll in-stream video advertisements are likely to cause differences in the perceived level of intrusiveness. Whereas pre-roll in-stream video advertisements let consumers wait for the video content they want to watch (Dube-Rioux, Schmitt, & Leclerc, 1988), mid-roll in-stream video advertisements interrupt the viewing experience of consumers as they are shown in the middle of the video content. Viewers that are interrupted by mid-roll in-stream video advertisements are already absorbed in the video they are watching. As a consequence, they can feel more engaged with it than viewers who are at beginning of a video (Krishnan & Sitaraman, 2013). Hence, viewers that are interrupted by a mid-roll in-stream video advertisement could be slightly more tolerant towards the advertisement and more patient than viewers who are interrupted by a pre-roll in-stream advertisement at the beginning of a video (Krishnan & Sitaraman, 2013). This is because the former are eager to proceed watching the video content and it is unlikely that they stop watching the video because of an advertisement that appears in the middle of the video. Nevertheless, research shows that internet advertisements that interrupt a flow, in this case the watching of video content, are perceived as more intrusive (Cho & Cheon, 2004; Li et al., 2002). In addition, advertisements that are placed in the middle of a story, are perceived as more intrusive by readers who are highly transported into the story than readers who are less transported (Wang & Calder, 2006). Therefore, it is proposed that mid-roll in-stream video advertisements, compared to pre-roll in-stream video advertisements, are more likely to increase consumers' feelings of intrusiveness.

H1a: Mid-roll in-stream video advertisements will increase consumers' feelings of intrusiveness more than pre-roll in-stream video advertisements.

When looking at the length of advertisements, research shows that online advertisements that are too long can increase irritation among consumers (Li et al., 2002). However, recent research of Goodrich and colleagues (2015) found that shorter pre-roll in-stream video advertisements were perceived as more intrusive than longer ones. This happened to be the case as longer advertisements are able to transfer information and humor to a greater extent, which reduced their level of intrusiveness (Goodrich et al., 2015). Overall, informative and entertaining advertisements are

perceived as less intrusive (Rejón-Guardia & Martínez-López, 2014). This is due to the fact that consumers always try to find an advertisement that is more informative and in line with the completion of their tasks (Ducoffe, 1996; Xu, Liao, & Li, 2008). Nevertheless, as the waiting time for watching video content increases with longer advertisements, it is proposed that longer in-stream video advertisements will increase consumers' feelings of intrusiveness:

H1b: Longer in-stream video advertisements will increase consumers' feelings of intrusiveness.

Based on the above, it is expected that there is an interaction effect in which longer mid-roll in-stream video advertisements are perceived as the most intrusive by consumers:

H1c: Longer mid-roll in-stream video advertisements will increase consumers' feelings of intrusiveness more than longer pre-roll in-stream video advertisements.

2.1.2. Effects on irritation (H2)

According to Rejón-Guardia and Martínez-López (2014), there is a relationship between the intrusiveness of an advertisement and the level of irritation that an advertisement is likely to evoke. Hence, the intrusiveness caused by an advertisement can create irritation among consumers (Edwards et al., 2002). Irritation can be described as a feeling that is a reaction towards an object (Chakrabarty & Yelkur, 2005). If an advertisement is perceived as irritating, consumers develop reactions towards the advertised brand. Irritation is most likely to occur when consumers perceive the advertisement as containing little informational value and when the advertisement is not equivalent to their activities and tasks (Cho & Cheon, 2004; Edwards et al., 2002). Furthermore, advertisements are more likely to evoke irritation if they are uncontrollable (Mc Farlane, 2002). One of the features of in-stream video advertisements is that consumers have difficulty in ignoring and controlling them as they cannot fast forward or eliminate these advertisements (Logan, 2013). As in-stream video advertisements are not equivalent to the activity of watching video on-demand content, consumers' viewing experience is interrupted by in-stream video advertisements (Li & Lo, 2015). Therefore, the following hypothesis is formulated:

H2: Perceived intrusiveness of in-stream video advertisements increases consumers' feelings of irritation.

2.2. Effects on cognitions

In the following sub-section, the effects of intrusiveness on consumers' cognitions are discussed. Hence, this sub-section is about consumers' brand memory. When it comes to brand memory, on the one hand, there is brand recall, which is also frequently referred to as open brand recall (e.g., Drèze & Hussherr, 2003; Keller, 2003; Pieters & Bijmolt, 1997). On the other hand, there is brand recognition, which is frequently named aided brand recall (e.g., Drèze & Hussherr, 2003; Keller, 2003; Pieters & Bijmolt, 1997). In this research, the terms of open brand recall and aided brand recall are used.

2.2.1. Effects on brand memory (H3a & H3b)

When looking at the effectiveness of advertisements, advertisement memorability is of much value (Li & Lo, 2015). For brands to be captured by consumers and transported into their short-term or long-term memory, consumers must first pay attention to the advertisement (Anderson, 2000). Whereas sometimes consumers face the opportunity to zap advertisements (Edwards et al., 2002), in-stream video advertisements do not provide this opportunity. Just as consumers on the internet have to face online advertisements (Edwards et al., 2002), consumers of video on-demand services are forced to watch in-stream advertisements in order to proceed watching the video content. Hence, consumers' viewing experience is interrupted by the forced exposure to the in-stream video advertisement (Edwards et al., 2002). This forced exposure can trigger a consumer's attention, resulting in an increased memory for the advertisement (Kahneman, 1973). This is because when consumers pay attention to information about brands, their brain is able to encode this information, to store it and to retrieve it in their memory (Li & Lo, 2015).

When looking at memorability, consumers are able to recall or recognize specific information (Slater, 2004). As stated earlier, brand recall is also called open brand recall and brand recognition is mostly referred to as aided brand recall (Drèze & Hussherr, 2003; Keller, 2003; Pieters & Bijmolt, 1997). The recognition of a brand reveals if the information was encoded in an appropriate way (Lang, 2000). Encoding can be defined as the selection and transformation of information into mental representations that are used at a later stage in a consumer's short-term working memory (Lang, 2000). Whereas the working memory is transitory, the information that a consumer has encoded, listed by recognition, can be transported into a consumer's long-term memory (Anderson, 1996). Hence, consumers' short-term brand recognition is of much importance in deciding if and how they convert the brand name into their long-term memory (Li & Lo, 2015).

Earlier research indicates that feelings of intrusiveness caused by online pop-up advertisements increase the level of consumers' brand recall (McCoy et al., 2008). Whereas the intrusiveness of in-stream video advertisements increases consumers' feelings of irritation (Edwards et al., 2002), it is proposed that the intrusiveness is also likely to attract the attention of consumers, resulting in an increased memory for the brand. Hence, consumers who feel intrused because of seeing

an advertisement are also more likely to remember this advertisement. Studies in the context of television commercials show that advertisements placed in the middle of a television program, as opposed to advertisements placed at the beginning or at the end of a television program are more likely to be remembered (Moorman et al., 2005). This is because these advertisements are less expected and hence, they are more likely to attract the attention of consumers as they are paying attention to the television (Moorman et al., 2005). In addition, Li and Lo (2015) found that mid-roll in-stream video advertisements increased consumers' level of brand recognition. As in-stream video advertisements, both pre-roll as well as mid-roll in-stream video advertisements, are not expected by consumers, they are more likely to attract the attention of consumers. The attention, in turn, increases consumers' brand memory. Therefore, the following hypotheses are formulated:

> *H3a*: Perceived intrusiveness of in-stream video advertisements increases consumers' open brand recall: Consumers' that experience higher levels of intrusiveness are more likely to recall the brand than consumers who do not experience higher levels of intrusiveness.

> *H3b*: Perceived intrusiveness of in-stream video advertisements increases consumers' aided brand recall: Consumers' that experience higher levels of intrusiveness are more likely to recognize the brand than consumers who do not experience higher levels of intrusiveness.

2.3. Effects on attitudes

A lot of studies investigated the influence of attitude towards the advertisement on brand attitudes and purchase intentions within the attitude toward the advertisement framework. This research also explores the relationships between these concepts within this framework. First, the effects of consumers' cognitions on their attitude towards the advertisement are discussed. This is followed by the effects of cognitions on brand attitude. Thirdly, the influence of consumers' attitude towards the advertisement on their brand attitude is examined. Finally, the influence of irritation on both consumers' attitude towards the advertisement as well as their brand attitude is examined.

2.3.1. Effects on attitude towards the advertisement (H4a & H4b)

Next to consumers' brand memory, the likeability of advertisements is an important measure for investigating the effectiveness of advertisements (Baltas, 2003). Advertisement likeability is frequently referred to as an attitude towards the advertisement. An attitude towards the advertisement is defined as the image, which could be favorable or unfavorable, that a consumer has about something he or she has been exposed to (Lutz, 1985). When consumers are exposed to in-stream video advertisements, they will form a positive or negative attitude towards the advertisement.

Advertisements that are liked by consumers are more effective than advertisements that are perceived as irritating by consumers (Stapel, 1994) since consumers who really like an advertisement, are more likely to get persuaded (Biel & Bridgwater, 1990). When looking at television commercials, research indicates that the most memorable advertisements were most liked by consumers (Mai & Schoeller, 2009). Hence, it is proposed that in-stream video advertisements that are more recalled and/or recognized by consumers are also more liked:

> *H4a:* Consumers' open brand recall is positively related to their attitude towards the advertisement: Consumers who recalled the in-stream video advertisement, are more likely to have a positive attitude towards the advertisement than consumers who did not recall the in-stream video advertisement.

> *H4b:* Consumers' aided brand recall is positively related to their attitude towards the advertisement: Consumers who recognized the in-stream video advertisement, are more likely to have a positive attitude towards the advertisement than consumers who did not recognize the in-stream video advertisement.

2.3.2. Effects on consumers' brand attitudes (H5a, H5b & H6)

Next to the likeability of an advertisement, it is important for marketers to assure that the brand is liked and preferred by consumers (Hirvonen & Laukkanen, 2014; Landwehr, McGill, & Hermann, 2011). Consumers' brand likeability is about the extent to which a brand appeals to consumers (Nguyen, Melewar, & Chen, 2013) and it is also frequently referred to as brand attitude. By developing advertisements, information about a brand can be communicated towards consumers. By communicating information about the brand marketers try to increase consumers' likeability for the advertisement and brand. This is also the case with in-stream video advertisements.

Prior research indicates that brand attitudes can be influenced by consumers' brand recognitions. This is based on the dual mediation model, a model first proposed by Lutz, MacKenzie and Belch (1983; MacKenzie et al., 1986). The dual mediation model describes a direct positive effect of consumers' attitude towards the advertisement on brand attitudes as well as an indirect effect on brand attitudes via brand recognitions (e.g., Homer, 1990; Miniard, Bhatla, & Rose, 1990). A meta-analysis conducted by Brown and Stayman (1992) also found strong support for this effect, meaning that the authors found a significant positive effect of brand recognitions on brand attitudes. Moreover, Breckler and Wiggins (1991) state that both affective as well as cognitive influences play a role in the determination of brand attitudes. As stated earlier brand recognition is defined as a consumer's aided brand recall and together with a consumer's open brand recall, the cognition of a consumer is formed.

Hence, this research investigates whether consumers' open brand recall as well as their aided brand recall influence their brand attitudes:

> *H5a:* Consumers' open brand recall is positively related to their brand attitude: Consumers who recalled the brand are more likely to have a positive brand attitude than consumers who did not recall the brand.

> *H5b:* Consumers' aided brand recall is positively related to their brand attitude: Consumers who recognized the advertisement are more likely to have a positive brand attitude than consumers who did not recognize the brand.

Consumers' brand attitudes can be influenced by other factors as well. Previous research indicates that an attitude towards the advertisement influences a consumer's brand attitude (Laczniak & Carlson, 1989; MacKenzie & Lutz, 1989; MacKenzie, Lutz, & Belch, 1986). More specifically, research shows that there exists a positive relationship between an attitude towards the advertisement and a brand attitude (MacKenzie et al., 1986), meaning that if consumers like an advertisement of a certain brand, they are also more likely to positively evaluate that brand. The previous described meta-analysis conducted by Brown and Stayman (1992) found support as well for this direct positive effect of attitude towards the advertisement on brand attitude. Therefore, it is proposed that a consumer's attitude towards the in-stream video advertisement positively affects a consumer's brand attitude:

> *H6*: Consumers' attitude towards the (in-stream video) advertisement is positively related to their brand attitude.

2.3.3. Effects of irritation on attitudes (H7a & H7b)

Whereas advertisements can be liked by consumers, they can also be evaluated in a negative way. The reactance theory states that consumers whose primary task is interrupted by an advertisement are more likely to create an attitude that is the opposite to the advertisement's actual intention (Brehm & Brehm, 1981). Advertisements create negative attitudes as these persuasive messages are perceived as threats towards autonomy and freedom of choice by consumers (Brehm & Brehm, 1981). Consumers perceive the threat especially high for uncontrollable advertisements as these give them the idea that they are constrained in their freedom (Brehm & Brehm, 1981). Consumers in turn, can become resistant to the persuading nature of the advertisement and they can become highly motivated to regain their freedom by evaluating the threat negatively and trying to remove it (Brehm & Brehm, 1981).

Whereas the reactance theory can be used to understand failures in persuasive communication, it is quite hard to measure reactance among consumers (Dillard & Shen, 2005). More recently, Dillard and Shen (2005) tried to define and measure reactance in an easier way. They describe reactance as a combination of anger and negative memories and this view is supported by other researchers (Quick, 2012; Rains, 2013). In that way reactance can be seen as a negative emotional state (Eagly & Chaiken, 1993), in which consumers respond to an advertisement with unfavorable cognitions about the advertisement, so by putting forward counter arguments (Dillard & Shen, 2005; Silvia, 2006). As in-stream video advertisements cannot be controlled by consumers (Logan, 2013), they increase the level of intrusiveness (Edwards et al., 2002; Li et al., 2002) and irritation. Hence, it is assumed that consumers feel more threatened when being exposed to these uncontrollable advertisements. They can get angry by the advertisement, put forward counter arguments and finally, they can form a negative attitude, which is the opposite of the advertisement's actual intention.

When consumers use online media, they are highly goal oriented (Cho & Cheon, 2004; Korgaonkar & Wolin, 1999) and as a consequence, they mostly experience a state of flow (Rettie, 2001). When in a state of flow consumers are very negative about advertising (Rettie, 2001). Accordingly, consumers that are highly engaged in goal-oriented behavior are more likely to get irritated by advertisements (Thota & Biswas, 2009). Provoked irritation by advertisements is likely to create negative attitudes among consumers (Li et al., 2002). Research indicates that irritation provoked by advertisements negatively influences consumers' brand attitudes (Thota & Biswas, 2009). A brand attitude is defined as an evaluation of the brand that is relatively enduring and one-way and that is likely to empower behavior (Spears & Singh, 2004). Therefore, it is predicted that the irritation provoked by in-stream video advertisements is likely to decrease consumers' attitude towards the advertisement as well as their brand attitude:

H7a: The irritation caused by in-stream video advertisements decreases consumers' attitude towards the advertisement.

H7b: The irritation caused by in-stream video advertisements decreases consumers' brand attitudes.

2.4. Effects on consumer behavior (H8a, H8b & H8c)

The following sub-section deals with the effects of consumers' brand attitudes on their purchase intention. In this research, the selected brand is the renewable Dutch warehouse 'de Bijenkorf'. Since this selected brand is a big warehouse that sells various products, brands and services, both offline and online, purchase intention is divided in three aspects. First, the influence of consumers' brand attitude on their likeability of visiting the store is discussed. This is followed by a description of the effect of

brand attitude on purchase intention in the store. Lastly, the influence of brand attitude on the level of purchase intention online is discussed.

2.4.1. Effects of brand attitudes on purchase intention (H8a, H8b, H8c)

As described in the theory of planned behavior, intentions encompass consumers' motivations to influence a certain behavior (Ajzen, 1991). They can be seen as indications of how much effort a consumer is likely to exert to perform a certain behavior (Ajzen, 1991). Hence, purchase intention is defined as a consumer's conscious plan to purchase a specific brand (Spears & Singh, 2004). As described in the theory of reasoned action by Fishbein and Ajzen (1975) and in the theory of planned behavior (Ajzen, 1991), attitudes can influence consumers' behavioral intentions. When consumers do not like a brand, they are often not very willing to purchase the brand (Cialdini, 1993; Eagly, Ashmore, Makhijani, & Longo, 1991).

There is a tremendously amount of studies in the field of marketing and consumer research that found a strong theoretical relationship between consumers' brand attitude and purchase intention (e.g., Bagozzi, 1981; Fishbein & Ajzen, 1980; Laroche, Kim, & Zhou, 1996). The meta-analysis by Brown and Stayman (1992), which investigated the hierarchy-of-effects model, showed support for the significant relationship between brand attitudes and increased purchase intention as well. Even in the online context of internet advertising, researchers found significant evidence of this relationship (e.g., Huang, Su, Zhou, & Liu, 2013; Karson & Fisher, 2005).

In being a warehouse, de Bijenkorf tries to offer consumers a great shopping experience (Kruize, 2013; Rijlaarsdam, 2015). The warehouse offers various products, services and brands and as a result, consumers can have multiple reasons to buy something from the store. They can spend the whole day visiting the store ("Het beste warenhuis", 2010) as most consumers perceive this as a real experience (Rijlaarsdam, 2015). Accordingly, when it comes to the purchase intention with regards to de Bijenkorf, the likeability of visiting the store is important as well. It is predicted that consumers who have a positive brand attitude towards de Bijenkorf are more likely to visit the store and to purchase something in the store:

> *H8a*: Consumers' brand attitude of the store de Bijenkorf predicts the likeliness to visit de Bijenkorf positively.

> *H8b:* Consumers' brand attitude of the store de Bijenkorf predicts their intention to buy something in the store positively.

However, due to the rapid growth of the internet consumers are not only shopping in offline stores anymore. An increasing amount of consumers is making use of the web for shopping (Shim,

Quereshi, & Siegel, 2000). Web shopping is defined as the process in which consumers buy products and services by making use of the internet (Shim et al., 2000). Nowadays, more and more retailers provide an online webshop. In that way, purchase intention becomes relevant for the online shopping environment as well. According to Salisbury, Pearson, Pearson and Miller (2001), consumers' online purchase intention can be used to predict consumers' intention of carrying out a specific buying behavior on the internet. This means that online purchase intention is based on a consumer's willingness and intention to perform an online transaction (Pavlou, 2003).

Over the years, many retailers experienced a decrease in in-store sales because of consumers' preference for online shopping (Kruize, 2013; Molenaar, 2013). De Bijenkorf quickly adapted to these changing needs of consumers and launched a webshop in 2009 (Ter Voert, 2015). In the beginning, the webshop offered only female clothing, lingerie, accessories, swim gear and presents, but soon the rest of the store's offline assortment such as men and children clothing, toys and furniture were added (Wardenier, 2009). As de Bijenkorf's strategy changed in which they closed several shops in the Netherlands (i.e., Arnhem, Breda, Den Bosch, Enschede and Groningen) and in which the focus lied on becoming a leading, international webshop, the webshop changed into a well-known, growing and affordable webshop (Bluenotion, 2013). As a result, de Bijenkorf's primary target group is digital and the store tries to offer the best service and shopping experience online by focusing increasingly on e-commerce (Kruize, 2013). Therefore, it is predicted that consumers' brand attitude of the store de Bijenkorf is positively related to their online purchase intention:

> *H8c:* Consumers' brand attitude of the store de Bijenkorf increases their intention to buy something in the webshop of de Bijenkorf.

3. Method

3.1. Research design

In order to answer the research question *'Does the use of in-stream video advertisements in video on-demand influence the feelings, cognitions, attitudes and behavior of consumers in the age of 18 to 34?'* a quantitative method is used. More specifically, an experiment is conducted as this method is very appropriate for studying particular effects of variables that are manipulated (Shadish, Cook, & Campbell, 2002). Furthermore, experiments are well-suited for investigating causal relationships (Shadish et al., 2002), which was the actual intention of this research. More precisely, a true experiment is conducted. In choosing a true experiment the researcher could allocate participants among conditions. In that way the researcher had control over the allocation of participants. Moreover, to test the hypotheses of this research a 2 (*placement*: pre-roll versus mid-roll) by 2 (*length*: long versus short) between-subjects design is used. Online experiments, instead of offline, are chosen as online experiments enable researchers to easily collect and study data from a large amount of participants (Carter & Emerson, 2012).

To cover the exact purpose of this research, participants were told that they would participate in an online experiment about the Dutch television programme Divorce. More precisely, they were told that the purpose of the research was to investigate to what extent people can identify themselves with leading characters and to what extent they are transported into the story. After exposure to the stimulus material, participants were asked to fill in an online questionnaire to measure the effects of the online experiment since questionnaires are well-suited to study people's opinions and feelings (Fink, 2013). *Qualtrics* was used for the creation of the online experiment (Appendix C or D).

3.2. Sampling method

For this research, young people between the ages of 18 to 34 years were selected since they are increasingly watching video on-demand services and are running away from traditional television (Dongen, 2015; Spot.nl, 2014). They are exposed to a growing amount of online video advertisements as advertisers know that they are able to reach this important target group via video on-demand services (Logan, 2013). Participants were recruited online by using social media platforms such as Facebook and LinkedIn and via e-mail. They were send a private message via Facebook or via e-mail in which they were asked if they would want to participate in the research. Hence, convenience sampling was used. Furthermore, participants were asked to share the link of the research with others in their network of the same age. Therefore, snowball sampling was used as well.

Whereas snowball sampling is not the most desired form of sampling since the sample is often not very representative (Fricker, 2008) and since the researcher does not have control over the selection of participants, for this research it was the most appropriate strategy. First of all, research indicates that 97 percent of people between the ages of 20 to 39 years is using social media

(Oosterveer, 2014). Hence, in having a target group of young people in the ages of 18 to 34 years, social media and e-mail were useful in approaching these people. Moreover, people could easily share the research link with their followers. Nevertheless, the researcher was completely aware of the disadvantages of using snowball sampling and tried to address these as well. This was done by approaching people from different ages and backgrounds and these people were asked if they were able to share the research link as well. Accordingly, both higher educated people (i.e., people from Dutch universities and applied sciences) as well as lower educated (i.e., people with no education or without higher education) were approached. In addition, people from different regions across the Netherlands (e.g., Noord Holland, Limburg, and Zeeland) were recruited.

Qualtrics was used to randomly assign participants to one of four different conditions. Furthermore, when opening the online experiment and questionnaire, it was checked whether participants could participate in the research based on the selection criteria. Participants that did not meet the requirements of being Dutch and being aged between 18 to 34 years could not participate in the research. The data collection lasted for approximately 3.5 weeks and started in week 10 (March 13th 2016).

In this research, 155 people participated. Of these participants, 78.2 percent saw the advertisement ($N = 122$). After the stimulus exposure, participants were asked if they had seen an advertisement before or during the fragment of Divorce. Participants that indicated 'yes' could continue with the questionnaire. Participants that did not see the advertisement answered 'no'. Therefore, they were not able to answer questions about the advertisement. These participants were directed to the end of the questionnaire. Accordingly, these participants were not appropriate for further analyses and they were excluded from the dataset. In the end, a total of 122 valid participants could be used for further analyses. The sample size proved to be in line with sample requirements for experiments (Walker, 2014).

As stated earlier, participants were randomly assigned to conditions in a 2 (*placement:* pre-roll versus mid-roll) by 2 (*length:* long versus short) between-subjects design. All four conditions saw the same short video of the series Divorce for approximately three minutes. However, the conditions saw different advertising formats. Accordingly, participants were exposed to a *long pre-roll advertisement* ($n = 32$), a *short pre-roll advertisement* ($n = 30$), a *long mid-roll advertisement* ($n = 26$) and a *short mid-roll advertisement* ($n = 34$). The longer advertisements had a length of fifteen seconds and the shorter advertisements had a length of six seconds. This is in line with the Interactive Advertising Bureau (2015) who recommend a length of six, fifteen or thirty seconds for in-stream video advertisements.

3.3. Procedure and stimulus material

If participants agreed upon participating, they could click on the link. By clicking on the link they were forwarded to the online experiment in *Qualtrics*. When entering the website, they were shown information about their participation. This included a description in which it was explained that the research was for a master thesis student of the Erasmus University Rotterdam and it was emphasized that participants' participation would be completely voluntarily. Furthermore, it was stressed that their anonymity and confidentiality was taken care of at all times. Moreover, it included a description of the research. Here, participants were told that they were going to watch a short fragment of the series Divorce. Moreover, the cover story was explained in which participants were told that the goal of the research was to investigate whether people are transported into a story and to what extent they are able to identify themselves with leading characters of the story.

After reading the terms and conditions, participants entered the online experiment and they were exposed to the short fragment of Divorce. All groups saw the same short video of the series Divorce for approximately three minutes. However, they were exposed to one of four different advertisements (a long pre-roll advertisement, a short pre-roll advertisement, a long mid-roll advertisement and a short mid-roll advertisement). After this exposure all participants were forwarded to the online questionnaire in which questions were asked to measure the manipulation check, the dependent and independent variables, and additional variables.

The television series 'Divorce' was selected as stimulus material. Divorce is a frequently watched Dutch television series that is aired by the commercial broadcaster 'RTL4'. In being a commercial broadcaster, people expect advertising both offline (television commercials) and online (in-stream video advertisements). Accordingly, people could expect an advertisement during the fragment of Divorce as well, adding to the study's perceived credibility as they would not be surprised when seeing an advertisement during the fragment. Furthermore, Divorce is known and watched by a widespread audience that exists of both women and men in the age of 20 till 49 (Van der Hoeven, 2013). The third season of the series had about 2.1 million viewers every week on television (Marketing tribune, 2015) and the final episode of season four, which was broadcasted on 20 March 2016, had 2.4 million viewers on television (Mediacourant, 2016). Moreover, as of January 2016, Stichting Kijkonderzoek started with collecting and analyzing online streams. Kijkonderzoek reported 96.000 viewers of the Divorce's episode that was broadcasted on the 6th of March 2016 (Stichting Kijkonderzoek, 2016).

The series Divorce is about three divorced men named (David, Boudewijn and Joris) who live together in a villa in the Dutch city of Haarlem. The selected fragment of Divorce had a short and easy to follow narrative (Appendix A). The fragment was about the popular dating application 'Tinder'. The fragment started with Boudewijn who is using Tinder. David is curious and Boudewijn explains to him how the application works. David becomes enthusiastic about Tinder and in being divorced, he is looking for a new wife or girlfriend. Therefore, he starts using Tinder as well. However, when using

the application David does not get a lot of response from women. Joris and Boudewijn think that his profile picture is not appropriate. Hence, David tries to create a new profile picture by making a 'selfie', so by taking pictures of himself. However, this does not work out well either. Eventually, he asks Joris to help him and Joris takes pictures of David with a professional camera.

Moreover, an online advertisement of 'de Bijenkorf' was selected as stimulus material. De Bijenkorf is chosen as it is a renowned warehouse in the Netherlands, targeted to both men and women, that sells a diverse set of products and various, international brands. More importantly, the primary target group of this warehouse is digital, meaning that the warehouse is increasingly directed towards e-commerce (Kruize, 2013). De Bijenkorf's commercial called 'Freedom of Fashion' was selected as it is the most recent advertisement of de Bijenkorf (de Bijenkorf, 2016). The commercial was broadcasted on Dutch television for approximately three weeks as of February 22, 2016 (Redactie, 2016). Tilda Swinton, a British actress and model, is the leading character of the commercial and the commercial is about the celebration of your own (fashion) style (Appendix B) (Redactie, 2016). The advertisement provided a logic fit with the popularity of watching the series Divorce online as the advertisement is available on YouTube as well. Moreover, previous commercials of de Bijenkorf have always been available online (i.e., YouTube). Hence, people could expect such a commercial when watching the fragment of Divorce.

As stated earlier, participants were randomly assigned to one of four conditions and hence, they were exposed to one of four different advertisements (i.e., *a long pre-roll advertisement*, a *short pre-roll advertisement*, *a long mid-roll advertisement* and *a short mid-roll advertisement*). All four advertisements were cut from the original advertisement which had a length of 30 seconds. Accordingly, a compilation of the original advertisement has been used, leading to four advertisements that included the same scenes but differed from each other in length. First, the advertisement was downloaded from YouTube and edited. Afterwards, the advertisement was combined with the fragment of Divorce in such a way that people would see the advertisement at the beginning of the fragment (pre-roll) or in the middle of the fragment (mid-roll).

Nevertheless, YouTube could not be used for playing the combined fragments in the online questionnaire. In being a highly commercial video service, YouTube makes money by showing a lot of advertisements such as pre-rolls, mid-rolls and banner advertisements (Trip, 2015). Hence, when playing the fragment of Divorce, with one of four different edits of the 'Freedom of Fashion' commercial, additional advertisements appeared as well. This could treat the validity and reliability of the research as it would be unclear which advertisement would be the focus of research. Another video service that is used extensively is *Vimeo* (Trip, 2015). *Vimeo* is known for its quality service and for showing little to no advertisements when playing videos (Trip, 2015). Therefore, *Vimeo* was used to ensure that no other advertisements except for the 'Freedom of Fashion' commercial were shown during the fragment of Divorce.

3.4. Manipulation check

In order to ensure the successful manipulation of in-stream video advertisements, participants were asked if they saw an advertisement when watching the short video. This question was placed at the beginning of the questionnaire after the cover story questions, in order to filter participants that did not notice the advertisement. Participants who did not see the advertisement were forwarded to the end of the questionnaire as they were not able to answer questions about the advertisement. To ensure the successful manipulation of placement (pre-roll versus mid-roll) and length (long versus short), participants who did see the advertisement were asked some additional questions. They were asked whether they saw an advertisement before the fragment or in between the fragment and they were asked to indicate how long the advertisement was (i.e., 6, 15 or 30 seconds). These latter two questions were placed at the end of the survey. This was done to avoid that participants would guess the exact purpose of the study, namely investigating the effects of in-stream video advertisements instead of the cover story which was told to participants. Of all participants, 98.4 percent was right in telling that they either saw a pre-roll in-stream video advertisement or a mid-roll in-stream video advertisement (n = 120) and 73.8 percent was right in guessing the length of the exposed advertisement (n = 90).

3.5. Measures

The online experiment included validated scales of intrusiveness, irritation, brand memory, attitude towards the advertisement, brand attitude and purchase intention. An overview of all questions can be found in Appendix C and D. Whereas validated scales have been used, for every scale, a factor analysis and reliability analysis were conducted. This was done to examine whether the scales were reliable and if they were usable for this research. However, before conducting a factor analysis several assumptions were taken into account. First of all, the relationship between variables should be linear and it is necessary to check for outliers (Pallant, 2007a). Moreover, a Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity were performed to see whether a factor analysis was appropriate. Here, it is important that the KMO value should be 0.60 or more and the value of Bartlett's test of sphericity should be statistically significant (Kaiser, 1974; Pallant, 2007a).

After these assumptions were met, a principal component analysis (PCA) was performed. Kaiser's criterion (Pallant, 2007a) and Cattell's scree test (Cattell, 1966) were used to explore how many factors or components were created. What should be noticed though is that the words of factors and components are used interchangeable. Kaiser's criterion is also known as the eigenvalue rule which states that factors should have an eigenvalue of 1.0 or more (Pallant, 2007a). Cattell's scree test states that all factors above the elbow, or bend in the scree plot, explain some of the variance in the data set. Additionally, all items must positively correlate with one factor. If the items formed a one dimensional scale, a reliability analysis was conducted. Whereas Cronbach's alpha values of 0.70 are acceptable, Cronbach's alpha values of 0.80 or higher are more preferable (Pallant, 2007b). Hence, to

form a reliable scale Cronbach's alpha must have a value of 0.80 or higher (Pallant, 2007b). If the scale turned out to be reliable, a scale was created. Scales were created by calculating the average mean of all items.

   Intrusiveness was measured by using a seven-item scale (Li et al., 2002). Participants were asked the following question: 'When the ad was shown, I thought it was ..'. The following seven items 'distracting, disturbing, forced, interfering, intrusive, invasive and obtrusive' were shown by using a grid. Participants were asked to interpret these keywords on a seven-point Likert scale (1 = strongly disagree, 7 = strongly agree). The KMO value was 0.83 and Bartlett's test of sphericity was significant ($p < 0.001$). Thus, it was allowed to perform a PCA (Kaiser, 1974). Accordingly, a PCA was conducted and all seven items formed a one dimensional scale. One component was found with an eigenvalue above 1 (eigenvalue of 4.20). Moreover, after this component there was a clear bend in the scree plot. All seven items positively correlated with the component and had a component loading of at least 0.45, whereby the variable 'forced' had the highest correlation (component loading of 0.86). The scale of intrusiveness is reliable (Cronbach's alpha = 0.88) and could not be improved by removing items. Accordingly, the scale appeared to measure 'intrusiveness'. Overall, participants perceived in-stream video advertisements as quite intrusive ($M = 4.30$, $SD = 1.41$).

   Irritation was measured by using a scale consisting of five items (Wells, Leavitt, & McConville, 1971). Participants were asked the following question 'When the ad was shown, I thought it was ..', followed by the five items. The five items were displayed by using a grid and consisted of 'irritating, phony, ridiculous, stupid and terrible'. Participants were asked to interpret these items on a seven-point Likert scale (1 = not that well, 7 = extremely well). The KMO value was 0.85 and Bartlett's test of sphericity showed a significant p-value as well ($p < 0.001$). Accordingly, there was evidence for the factoring of the five items (Kaiser, 1974). A PCA indicated that the five items formed a one dimensional scale as one component was found with an eigenvalue above 1 (eigenvalue of 3.54). Furthermore, in the scree plot a clear bend could be noticed right after the component. All five items had a positive correlation with the component and had a component loading of at least 0.45. Here, the variable 'stupid' had the highest correlation (component loading of 0.91). The scale turned out to be reliable (Cronbach's alpha = 0.89) and could not be improved by removing items. Overall, participants indicated to find in-stream video advertisements moderately irritating ($M = 3.65$, $SD = 1.45$).

   Brand memory was assessed by both *open brand recall* and *aided brand recall* (Slater, 2004). Open brand recall was measured by asking participants the following question: 'Do you recall seeing any store in the fragment?' (Yes/No). If participants answered 'yes' they were forwarded to the question 'Which store did you see in the video clip?'. If participants answered 'no' they were asked the following question: 'Have you seen any of these brands shown here in the advertisement?'. Accordingly, with this latter question aided brand recall was measured in which participants were able to choose among several brands. These brands existed of several warehouses and fashion or sport

brands such as V&D, Hema, Xenos, Blokker, Nike, H&M and C&A. Next to the previously described answer categories, participants could choose the answer option of 'none of these brands'.

Of all participants ($N = 122$), 82 percent indicated that they were able to recall the store that they had seen in the fragment of Divorce ($n = 100$). Almost all of them were right as they pointed out that they saw an advertisement of de Bijenkorf ($n = 97$). So of all participants, 97 percent was able to recall the store de Bijenkorf by themselves. Of all participants that indicated that they could not remember the store ($n = 22$), and for those that came up with the wrong store ($n = 3$), 28 percent ($n = 7$) was able to recognize the store de Bijenkorf when they could choose among a list of stores and brands.

Attitude towards the advertisement is about participants' subjective evaluation of the advertisement and was measured by using a six-item seven-point semantic differential scale (Spears & Singh, 2004). Participants were asked the following: 'Please describe your overall feelings about the advertisement that was shown'. The six items consisted of the following adjectives: Bad/good, unpleasant/pleasant, unlikeable/likeable, boring/interesting, tasteless/tasteful and artless/artful. These items were organized in such a way that the negative ones were placed on the left and the positive ones on the right. The KMO value was 0.81 and Bartlett's test of sphericity was statistically significant. Hence, it was appropriate to do a planned factoring of the six items (Kaiser, 1974). A PCA showed that the six items formed a one dimensional scale as one component was found with an eigenvalue above 1 (eigenvalue of 3.48). Besides, right after this component there was a clear bend in the scree plot. All five items positively correlated with the component and had a component loading of at least 0.45. The variable 'unpleasant/pleasant' had the highest correlation (component loading of 0.87). The scale of attitude towards the advertisement was reliable (Cronbach's alpha = 0.85) and could not be improved. Overall, participants did not have a very positive attitude towards in-stream video advertisements of de Bijenkorf ($M = 3.66$, $SD = 1.00$).

Brand attitude was measured by using a validated five-item seven-point semantic differential scale developed by Spears and Singh (2004). Participants were asked the following: 'Please describe your overall feelings about the brand described in the ad you just saw'. The scale consisted of the following items: Unappealing/appealing, bad/good, unpleasant/pleasant, unfavorable/favorable and unlikeable/likeable. The negative items were placed on the left side of the semantic differential scale and the positive items were placed on the right side. The KMO value was 0.91 and Bartlett's test of sphericity showed a significant p-value ($p < 0.001$). Accordingly, it was appropriate to perform a PCA for the factoring of the five items (Kaiser, 1974). When conducting a PCA, the five items formed a one dimensional scale since one component was found with an eigenvalue above 1 (eigenvalue of 4.36). Next to that, the component was positioned right after the elbow in the scree plot. The items positively correlated with the component and had a component loading of at least 0.45, whereby the variable 'unpleasant/pleasant' had the highest correlation (component loading of 0.95). The scale

turned out to be very reliable (Cronbach's alpha = 0.96). Overall, participants had a very positive attitude towards the brand de Bijenkorf (*M* = 5.04, *SD* = 1.24).

Purchase intention with regards to the brand de Bijenkorf was measured in three different ways; visiting the store, purchase intention in the store and purchase intention online. There has been chosen to measure purchase intention in three ways as de Bijenkorf is a big warehouse that sells a lot of things, ranging from clothes to food and furniture ("Het beste warenhuis", 2010). Moreover, de Bijenkorf is very popular and highly appreciated in the Netherlands. People see it as an experience to visit de Bijenkorf and they can spend the whole day in the store ("Het beste warenhuis", 2010). Finally, de Bijenkorf has a leading, international and affordable webshop which enable consumers to purchase the store's assortment online as well (Blue Notion, 2013).

Visiting the store was measured by using a standard single item of Morrison (1979). Participants were asked the following: 'Please indicate how likely it is that you will visit de Bijenkorf?'. Here, the word 'buying' that Morrison (1979) used was replaced by 'visiting'. Participants were asked to rate their probability of visiting de Bijenkorf on a 7-point Likert scale (1 = very unlikely, 7 = very likely). Overall, participants were quite likely to visit de Bijenkorf (*M* = 4.20, *SD* = 1.81).

Purchase intention in the store was measured by a three-item three-point semantic differential scale in which the question was specifically tailored to the brand de Bijenkorf (MacKenzie et al., 1986). Participants were asked the following question: 'Please indicate how likely it is that you will buy something from de Bijenkorf the next time that you are in this store'. The scale consisted of the following three items: Unlikely/likely, improbable/probable, impossible/possible. The negative items were placed at the left side of the semantic differential scale and the positive items at the right. The KMO value was 0.62 and Bartlett's test of sphericity was significant, meaning that it was allowed to conduct a PCA (Kaiser, 1974). A PCA showed that the three items created a one dimensional scale. One component was found with an eigenvalue above 1 (eigenvalue of 2.16) and after this component, there was a bend in the scree plot. All three items positively correlated with the component and had a component loading of at least 0.45. Here the variable 'improbable/probable' had the highest correlation (component loading of 0.92). The scale of purchase intention in the store was reliable (Cronbach's alpha = 0.81) and could not be improved by removing items. Participants were quite likely to buy something from the brand de Bijenkorf (*M* = 2.20, *SD* = 0.57).

Purchase intention online was measured by adapting the standard single item question of Morrison (1979) that was used to measure the concept of *visiting the store*. Instead of asking participants how likely it would be that they would buy something in the store, they were asked to rate their probability of buying something in the webshop of de Bijenkorf. Hence, participants were asked the following question: 'Please indicate below how likely it is that you will buy something from de Bijenkorf in the online webshop'. Participants were asked to rate their probability of buying something in the webshop of de Bijenkorf on a seven-point Likert scale (1 = very unlikely, 7 = very likely).

Overall, participants were not very likely to buy something in the online webshop of de Bijenkorf (M = 2.79, SD = 1.62).

3.6. Control variables

The online questionnaire included demographic variables such as gender, age and educational level. These variables were measured to examine whether they exerted an influence on the founded relationships and to see if participants were equally allocated over the four different conditions. The participants were all aged between 18 to 34 years and 61.2 percent of participants were 23 years or older. Moreover, 61.5 percent of participants were women (n = 75). Men and women were equally distributed over all four conditions (χ^2(3, N = 122) = 0.361, p = 0.948). Most participants obtained a 'HAVO diploma', this is equivalent to a secondary high school certificate (n = 39), followed by a bachelor's degree (n = 35) and applied sciences certificate (n = 21).

Besides, to control for the effects of familiarity of the brand, participants were asked if they were familiar with the brand de Bijenkorf that was used in the advertisement. All participants were familiar with de Bijenkorf (N = 122) and 91 percent of them had bought something from de Bijenkorf (n = 111). Almost a third of participants indicated that they bought something from de Bijenkorf a year ago (n = 33) or three months ago (n = 32), whereas a great amount indicated as well that they could not remember when it was the last time that they bought something from de Bijenkorf (n = 32).

Furthermore, it was examined whether participants were familiar with the Dutch television programme Divorce and if they have watched the programme. It appeared that quite a lot of the participants were familiar with the Dutch television programme Divorce (n = 99) and 74.7 percent of them indicated to have watched the programme sometimes (n = 74). Of these participants that have watched the programme, 50 percent followed the programme (n = 37) and a small amount watched all four seasons of Divorce (n = 20). Finally, participants were asked to what extent they thought advertisements in video on-demand services are acceptable if these would allow them to watch the video content for free. They were given the following statement: 'Advertisements in video on-demand services are acceptable if they allow me to watch the content for free'. Participants were asked to interpret this statement on a seven-point Likert scale (1 = totally disagree, 7 = totally agree). Overall, participants agreed with the statement, meaning that they thought that advertisements in video on-demand services are acceptable if these advertisements allow them to watch video content for free (M = 5.13, SD = 1.51).

As the cover story of this research was about the series Divorce some additional questions were asked and it was also checked whether these variables exerted an influence on the founded relationships. First of all, participants were asked to what extent they were transported into the story of the series. Moreover, participants were asked to what extent they could identify themselves with the leading character of the series Divorce. In all four seasons of Divorce, the leading characters are

David, Boudewijn and Joris. However, in the selected fragment David is the most important leading character that is focused on. He would like to create a 'Tinder' profile and for that, he is trying to make an appropriate profile picture. The fragment shows how he is trying to accomplish this. Accordingly, questions that asked participants something about the leading character of the series were all specifically tailored towards David's character.

Transportation was measured by using a five-item scale (Appel, Gnambs, Richter, & Green, 2015). Whereas Appel and colleagues (2015) focused on written texts and readings, they stressed that the transportation scale could be easily adapted to audiovisual texts and series. Hence, instead of the term 'reading', the term 'watching' was used in this research. Participants were asked the following: 'Please indicate how the following statements apply to you'. Examples of items are 'I could picture myself in the scene of the events shown in the narrative' and 'I wanted to learn how the narrative ended'. Participants were asked to interpret the five items on a seven-point Likert scale (1 = not at all, 7 = very much).

The KMO value was 0.83 and Bartlett's test of sphericity showed a significant *p*-value ($p <$ 0.001). Hence, there was enough evidence to do a planned factoring of the five items (Kaiser, 1974). A PCA was performed and showed that all items formed a one dimensional scale. One component was found with an eigenvalue above one (eigenvalue of 3.16) and the factor was positioned above the elbow in the scree plot. The five items positively correlated with the component and had a component loading of at least 0.45. The variable 'I was mentally involved in the narrative while watching it' had the highest correlation (component loading of 0.87). The scale of transportation turned out to be reliable (Cronbach's alpha = 0.84). Overall, participants were not very much transported into the story of Divorce (*M* = 3.85, *SD* = 1.26).

Identification was measured by using a 11-item scale of Igartua and Barrios (2012). This scale of Igartua and Barrios (2012) was adapted with regards to the leading character of the series Divorce, David. Participants were asked the following: 'To what extent can you identify yourself with the leading character David of the series Divorce?'. Examples of items are 'I felt emotionally involved with David's feelings' and 'I imagined how I would act if I were David'. Participants were asked to indicate how well they could identify themselves by interpreting the items on a seven-point Likert scale (1 = not at all, 7 = very much). The KMO value was 0.87 and Bartlett's test of sphericity was significant (*p* < 0.001). Thus it was allowed to perform a PCA. When conducting a PCA it became clear that all items formed a one dimensional scale. One component was found with an eigenvalue above one (eigenvalue of 6.26). Moreover, a clear bend in the scree plot could be noticed. All 11 items positively correlated with the component and had a component loading of at least 0.45 whereby the item 'I felt emotionally involved with David's feelings' had the highest correlation (component loading of 0.84). The scale of identification was reliable (Cronbach's alpha = 0.92). Overall, participants could not highly identify themselves with David (*M* = 3.20, *SD* = 1.17).

3.7. Descriptives

To get an insight into the variables of this research, an overview of all variables is offered. This overview is of much value as it allows to quickly compare all variables and see how participants scored on each individual variable. Accordingly, a table which shows important descriptive statistics (i.e., the mean, standard deviation, minimum and maximum and Cronbach's alpha) of all discussed variables is displayed below (Table 1).

Table 1: Descriptives of main and control variables

	Mean	*N*	Standard deviation	Minimum	Maximum	Cronbach's Alpha
Feelings:						
Intrusiveness	4.30	122	1.41	1.00	7.00	0.88
Irritation	3.65	122	1.45	1.00	7.00	0.89
Cognitions:						
Open recall	0.97	100	0.17	0.00	1.00	/
Aided recall	0.28	25	0.46	0.00	1.00	/
Attitudes:						
Attitude towards the advertisement	3.66	122	1.01	1.00	6.33	0.85
Brand attitude	5.04	122	1.24	1.00	7.00	0.96
Behavior:						
Visiting the store	4.20	122	1.81	1.00	7.00	/
Purchase intention in the store	2.21	122	0.57	1.00	3.00	0.92
Purchase intention online	2.79	122	1.62	1.00	7.00	/
Control variables:						
Transportation	3.85	122	1.26	1.20	6.20	0.84
Identification	3.20	122	1.17	1.00	6.00	0.92

Note 1: Cronbachs α < 0,60 = unreliable; Cronbachs α between 0,60 – 0,80 = moderately reliable and Cronbachs α > 0,80 = reliable.

3.8. Correlations

To examine whether the variables of this research correlate with each other, correlations between variables are measured. By measuring the correlations, insight is generated into underlying patterns. First of all, it becomes clear if and how the main variables correlate with each other. Second of all, it

becomes clear if the control variables are playing an import role as well. Whereas in Table 2 all variables and correlations are presented, in this section only the correlations between the main variables of this research are discussed. Correlations were measured using Pearson's product moment correlation coefficient. There is a significant correlation between intrusiveness and irritation ($r = 0.69$, $p < 0.001$). This is a strong positive relationship, meaning that consumers who experience a higher level of intrusiveness experience a higher level of irritation. Moreover, intrusiveness and transportation ($r = 0.20$, $p = 0.027$) and intrusiveness and identification ($r = 0.25$, $p = 0.005$) correlate positively. Both relationships are moderate, positive relationships. Consumers who experience a higher level of intrusiveness, also experience a higher level of transportation and identification.

In addition, there is a significant correlation between irritation and attitude towards the advertisement ($r = -0.38$, $p < 0.001$). This is a moderate negative relationship, meaning that consumers who experience higher levels of irritation, are more likely to have a negative attitude towards the advertisement. Irritation also significantly correlates to identification ($r = 0.23$, $p = 0.011$). This is a moderate, positive relationship. Consumers that experience a higher level of irritation are also more likely to experience a higher level of identification.

Another significant correlation was found between attitude towards the advertisement and brand attitude ($r = 0.21$, $p = 0.021$). This is a weak positive relationship. Consumers who have a more positive attitude towards the advertisement, also have a more positive brand attitude. Attitude towards the advertisement significantly correlates to identification as well ($r = 0.23$, $p = 0.013$). This relationship is moderate and positive in which consumers that have a more positive attitude towards the advertisement, are also more likely to identify themselves with the leading character of the series.

Finally, there is a significant correlation between brand attitude and purchase intention ($r = 0.29$, $p = 0.001$). This is a weak positive relationship. Consumers who have a more positive brand attitude are more likely to purchase something from de Bijenkorf. As stated earlier, there has been checked for some control variables. The control variables consisted of gender, bought something at 'de Bijenkorf', age, transportation and identification. As can be seen in Table 2, some of these control variables correlated significantly with each other or with main variables.

3.9. Analysis

The data collected by the online experiment was analyzed by using SPSS Statistics. This software was used as *Qualtrics* data can be easily uploaded into SPSS. First, a document with the raw data was extracted. This data was cleaned in such a way that missing values were attached and participants that did not see the advertisement were excluded from the dataset ($n = 33$). With the clean dataset PCAs and reliability analyses were conducted to see if reliable and validated scales could be created (see section 3.5). After creating validated and reliable scales, some descriptive analyses were performed, followed by inferential analyses. These inferential analyses included tests such as an independent

samples t-test, a one-sample t-test, Ordinary Least Squares (OLS) regression analyses, a one-way analysis of variance (ANOVA) and binary logistic regression analyses. In order to conduct these analyses, several assumptions should be carefully considered. In the upcoming paragraphs these assumptions are discussed and the specific analyses are explained in more detail.

First of all, an independent samples t-test is conducted to test the differences in means between two groups (Salkind, 2011a). It is important that the participants in both groups are tested once for the same dependent outcome variable. The dependent variable should be measured on a continuous level, whereas the independent variable must be categorical. Moreover, the major assumption underlying an independent samples t-test is called the homogeneity of variance assumption (Salkind, 2011a). This assumption states that the variances in each of the two comparing groups must be equal. Hypotheses 1a, 4a, 4b, 5a and 5b are tested with an independent samples t-test. Hypothesis 1a states that mid-roll in-stream video advertisements will increase consumers' feelings of intrusiveness more than pre-roll in-stream video advertisements. Hypothesis 4a assumes that consumers' open brand recall is positively related to their attitude towards the advertisement, whereas hypothesis 4b assumes that consumers' aided brand recall is positively related to their attitude towards the advertisement. Hypotheses 5a and 5b state that consumers' open brand recall and respectively their aided brand recall are positively related to their brand attitude.

Next to an independent samples t-test, a one sample t-test is used as well. A one sample t-test is most suitable for testing hypotheses concerning the mean (Diamantopoulos & Schlegelmilch, 1997). To be more specific, this test is conducted to examine the differences between the sample mean and a hypothesized value if the population mean is not known (Diamantopoulos & Schlegelmilch, 1997). Furthermore, it is important that the dependent variable is measured on a continuous level and the population should be normally distributed (Salkind, 2011b). Hypothesis 1b, which assumes that longer in-stream video advertisements will increase consumers' feelings of intrusiveness, is tested by using a one sample t-test.

A one-way analysis of variance (ANOVA) is quite similar to a t-test as in both analyses the differences between means are computed (Salkind, 2011c). However, an ANOVA is conducted to compare the differences in means between multiple groups (Salkind, 2011c). The major assumption underlying an ANOVA is similar to the equal variances' assumption of the t-test. Accordingly, when conducting an ANOVA, the variances in the population should be roughly equal as well (Salkind, 2011c). Furthermore, the scores should be independent, meaning that the participants in all groups must be tested once for the dependent variable. Lastly, the dependent variable must be measured on a continuous level. Hypothesis 1c, which states that longer mid-roll in-stream video advertisements will increase consumers' feelings of intrusiveness more than longer pre-roll in-stream video advertisements, is tested by using an ANOVA.

Table 2: Correlations latent variables and control variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Intrusiveness	1													
2. Irritation	0.69***	1												
3. Open brand recall	0.02	-0.12	1											
4. Aided brand recall	0.29	-0.14	/	1										
5. Attitude towards the advertisement	-0.27**	-0.38***	0.09	-0.03	1									
6. Brand attitude	0.10	-0.03	0.04	0.07	0.21*	1								
7. Visiting 'de Bijenkorf'	-0.11	-0.04	-0.07	0.09	0.01	0.32***	1							
8. Purchase intention in the store	-0.03	-0.08	0.03	-0.04	0.05	0.29**	0.48***	1						
9. Purchase intention online	-0.02	0.05	-0.05	-0.03	0.04	0.04	0.44***	0.37***	1					
10. Transportation	0.20*	0.16	0.08	0.13	0.14	0.06	0.09	0.15	0.21*	1				
11. Identification	0.25**	0.23*	-0.04	0.05	0.23*	0.01	0.02	0.17	0.23*	0.74***	1			
12. Bought something at 'de Bijenkorf'	-0.09	0.01	-0.02	-0.14	-0.03	0.14	0.42***	0.17	0.22*	0.17	0.07	1		
13. Gender (male)	-0.08	0.00	-0.06	-0.01	-0.14	-0.24**	-0.21*	-0.08	-0.03	-0.29**	-0.21*	-0.22*	1	
14. Age	0.00	0.01	0.13	0.05	0.05	-0.09	-0.17	-0.14	-0.07	-0.14	-0.14	-0.14	0.11	1

Note 1: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$ (2-tailed)

In this research, an OLS regression analysis is conducted as well. An OLS regression is based on linear relationships, so on correlations (Pallant, 2007a). A linear relationship means that an incline or decrease in the level of intrusiveness causes an equal incline or decrease in the level of irritation. Therefore, it is important that the dependent variable is continuous, whereas the independent variable could be measured both at a continuous or dichotomous level. Other assumptions that require attention are the assumption of outliers, normality residuals and homoscedasticity. First of all, no outliers are allowed in the dataset and the variance must be equal along the regression line. Meaning that the residuals should be normally distributed. This can be easily checked by looking at the histogram in SPSS. Finally, the assumption of homoscedasticity holds that errors should be checked, meaning that the error term must be the same across every point on the slope (Pallant, 2007a).

An OLS regression analysis is used to test hypotheses 2, 6, 7a, 7b, 8a, 8b and 8c. Hypothesis 2 assumes that perceived intrusiveness of in-stream video advertisements increases consumers' feelings of irritation, whereas hypothesis 6 states that consumers' attitude towards the in-stream video advertisement is positively related to their brand attitude. Hypotheses 7a and 7b assume that the irritation caused by in-stream video advertisements decreases consumers' attitude towards the advertisement and their brand attitude. The last three sub-hypotheses are also tested by conducting an OLS regression analysis. Hypothesis 8a assumes that consumers' brand attitude predicts the intention to visit the store positively. Whereas hypothesis 8b states that consumers' brand attitude predicts their intention to buy something in the store positively, hypothesis 8c assumes that consumers' brand attitude increases their intention to buy something in the online webshop.

When the dependent variable is not measured on a continuous level, an OLS regression is not suitable to perform (Pallant, 2007c). Instead, a logistic regression can be performed to predict categorical outcomes with a dichotomous dependent variable (Pallant, 2007c). Accordingly, the dependent variable should be made dichotomous by recoding the answer categories into '0' and '1'. The independent variables are called predictors and these can be either categorical or continuous. Several logistic regression techniques are available to choose from in SPSS to investigate the predictive power of blocks of variables. According to Pallant (2007c), stepwise procedures have been criticized a lot as they can be highly influenced by variation in the data. Therefore, this research uses the Forced Entry method when conducting logistic regressions, which is in line with Pallant (2007c). In this default procedure, all predictors are tested in one block to examine their predictive power. This means that at the same time the effects of other predictors are controlled for.

Before conducting a logistic regression, several assumptions must be met. First of all, there is the issue of sample size (Pallant, 2007c). The sample must be large enough, especially with many predictors. In addition, a multicollinearity check must be performed (Pallant, 2007c). This means that it must be checked whether there are high correlations among the independent predictor variables. Preferably, they should not be strongly related to each other, but they must be strongly related to the dependent variable. Lastly, it is important to check if outliers are present (Pallant, 2007c). A logistic

regression analysis is used to test hypotheses 3a and 3b. Hypothesis 3a states that perceived intrusiveness of in-stream video advertisements increases consumers' open brand recall, and hypothesis 3b assumes that perceived intrusiveness of in-stream video advertisements increases consumers' aided brand recall.

4. Results

In the upcoming section, the eight hypotheses and sub-hypotheses of this research will be tested by using several analyses. For each hypothesis, it is described which analysis is used and if assumptions were met before conducting this analysis. Furthermore, it is described whether the hypotheses are supported or if they are rejected. To give a clear overview of the results of this research, the conceptual model with the eight hypotheses and sub-hypotheses is displayed again at the end of this section. Here it becomes clear at a single glance which hypotheses are supported and rejected and how the level of intrusiveness works throughout the whole model.

4.1. Effects on intrusiveness (H1, H1a, H1b & H1c)

In order to test the first hypothesis of this research, which states that in-stream video advertisements are perceived as intrusive by consumers, a one-sample t-test was conducted. A one-sample t-test is selected as it must be checked whether consumers perceive in-stream video advertisements as more intrusive than the selected test value of four (representing a neutral stance) and it is tested whether participants score significantly higher than four. Accordingly, this one-sample t-test is one-sided, meaning that it is allowed to divide the *p*-value by two. As the dependent variable is continuous, it is allowed to perform a one-sample t-test. Participants perceived in-stream video advertisements as intrusive (*M* = 4.30, *SD* = 1.41); *t* (121) = 2.35; *p* = 0.02, 95% *CI* [0.05, 0.55]. Accordingly, hypothesis 1 is supported.

Subsequently, an independent samples t-test was conducted to test hypothesis 1a, which assumes that mid-roll advertisements are perceived as more intrusive than pre-roll advertisements. An independent samples t-test was chosen as two groups, the pre-roll and mid-roll conditions, must be compared. It is allowed to perform this test as the dependent variable was measured on a continuous level and the assumption of equal variances in the two conditions has not been violated, Levene's *F* = 0.04, *p* = 0.838. There is a significant difference in the feelings of intrusiveness between consumers who have seen a pre-roll in-stream video advertisement and a mid-roll in-stream video advertisement. Consumers who were exposed to mid-roll in-stream video advertisements experience a higher level of intrusiveness (*M* = 4.77, *SD* = 1.29) than consumers who were exposed to pre-roll in-stream video advertisements (*M* = 3.85, *SD* = 1.39); *t* (120) = -3.78, *p* < 0.001, 95% *CI* [-1.40, -0.44]. Accordingly, hypothesis 1a is supported.

In order to examine whether consumers perceive longer in-stream video advertisements as more intrusive, again an independent samples t-test was conducted. An independent samples t-test was selected as the means of two groups, the longer and the shorter conditions, must be compared. Furthermore, it is allowed to perform an independent samples t-test since the assumption of equal variances in the different conditions has not been violated, Levene's *F* = 3.00, *p* = 0.086, and the dependent variable was continuous. An independent samples t-test shows that there is not a significant difference between participants in the longer conditions and participants in the shorter conditions

when it comes to their feelings of intrusiveness. Consumers who were exposed to the longer in-stream video advertisements do not feel a higher level of intrusiveness ($M = 4.10$, $SD = 1.55$) than consumers who were exposed to the shorter in-stream video advertisements ($M = 4.80$, $SD = 1.26$); $t\ (120) = -1.48$, $p < 0.142$, 95% CI [-0.88, 0.13]. Accordingly, hypothesis 1b is not supported.

Nevertheless, what is not known yet is whether there exist differences between the four different conditions. To test hypothesis 1c, which assumes that longer mid-roll in-stream video advertisements will increase consumers' feelings of intrusiveness more than longer pre-roll in-stream video advertisements, a one-way analysis of variance (ANOVA) was conducted. An ANOVA is selected as this analysis is used to compare the mean of multiple groups, namely the pre-roll long condition, pre-roll short condition, mid-roll long condition and mid-roll short condition. Moreover, it is allowed to perform an ANOVA as the assumption of equal variances in the population has not been violated, $F\ (3, 118) = 1.31$, $p = 0.273$, and the dependent variable was continuous. An ANOVA indicates that there is a significant effect of in-stream video advertisements on consumers' level of intrusiveness, $F\ (3, 118) = 5.25$, $p = 0.002$, and more importantly, that there exist significant differences between the four different conditions of in-stream video advertisements. Participants that have seen the short mid-roll in-stream video advertisement experience the highest level of intrusiveness ($M = 4.91$, $SD = 1.18$), followed by participants who have seen the long mid-roll in-stream video advertisement ($M = 4.57$, $SD = 1.42$), the short pre-roll in-stream video advertisement ($M = 3.99$, $SD = 1.17$), and finally, participants that have seen the long pre-roll in-stream video advertisement experience the lowest level of intrusiveness ($M = 3.72$, $SD = 1.57$).

When conducting a post-hoc comparison test using Bonferroni, it was found that some of these differences were significant. The differences between the mid-roll short and pre-roll long condition ($M_{difference} = 1.19$, $p = 0.003$), and between the mid-roll short and pre-roll short condition ($M_{difference} = 0.92$, $p = 0.043$) were significant. Participants that were exposed to a short mid-roll in-stream video advertisement experience a higher level of intrusiveness than participants that have seen a long pre-roll in-stream video advertisement. Moreover, participants that have seen a short mid-roll in-stream video advertisement experience a higher level of intrusiveness than participants that have seen a short pre-roll in-stream video advertisement. However, there was not a significant difference between the mid-roll long and pre-roll long condition ($M_{difference} = 0.86$, $p = 0.102$). Participants that were exposed to a long mid-roll in-stream video advertisement did not experience a higher level of intrusiveness than participants that have seen a long pre-roll in-stream video advertisement. Therefore, hypothesis 1c is not supported.

4.2. Effects on irritation (H2)

To test hypothesis 2, which states that the intrusiveness of in-stream video advertisements increases consumers' feelings of irritation, a stepwise OLS regression analysis was performed. An OLS

regression is most appropriate as this hypothesis asks for an analysis in which the impact of several predictors could be assessed (Pallant, 2007a). Hence, by conducting an OLS regression the level of irritation that consumers experience can be predicted by the level of intrusiveness. Furthermore, this predicted relationship between intrusiveness and irritation was a linear relationship and an OLS regression is based on linear relationships as well. Other assumptions for an OLS regression were met as well. First of all, the dependent variable of irritation was measured on a continuous level, whereas the independent variable of intrusiveness was continuous as well. Secondly, there are no outliers and the residuals were equally distributed along the regression line. Finally, there has been checked for homoscedasticity so that errors are the same along every point of the slope.

A stepwise regression was conducted since this would give the researcher the possibility to check for other independent variables and see if these predict the level of irritation as well. In the first regression model, the independent variable of intrusiveness was analysed. In the additional model, several other independent variables were added. However, before adding these independent variables, the variables of gender and bought something at 'de Bijenkorf' were made dichotomous. The answer categories of gender were recoded into 'no male' (0) and 'male' (1). The answer categories of bought something at 'de Bijenkorf' were recoded into 'no, did not buy something at de Bijenkorf' (0) and 'yes, did buy something at de Bijenkorf' (1). Afterwards, the variables of gender, bought something at 'de Bijenkorf', age, transportation and identification were added. The regression model of the level of irritation that consumers experience as dependent variable and intrusiveness as independent variable is significant, $F(1, 119) = 107.18$, $p < 0.001$. The regression model is thus useful for predicting the level of irritation that consumers experience, and the predictive power is high: 47 percent of the differences in the level of irritation can be explained by the level of intrusiveness ($R^2 = 0.47$). The level of intrusiveness, $b^* = 0.69$, $t = 10.35$, $p < 0.001$, 95% CI [0.57, 0.83], has a significant effect on the level of irritation. For each additional point on the intrusiveness scale, the unstandardized regression coefficient of irritation increases with 0.70.

When controlling for gender, bought something at 'de Bijenkorf', age, transportation and identification, the regression model of the level of irritation as dependent variable and intrusiveness as independent variable remains significant, $F(6, 114) = 18.37$, $p < 0.001$ (Table 3, Model 1). The regression model is thus useful for predicting the level of irritation that consumers experience, and the predictive power is high: 49 percent of the differences in the level of irritation can be explained by the level of intrusiveness, gender, bought something at 'de Bijenkorf', age, transportation and identification ($R^2 = 0.49$). The level of intrusiveness, $b^* = 0.69$, $t = 9.94$, $p < 0.001$, 95% CI [0.56, 0.84], has a significant effect on the level of irritation. For each additional point on the intrusiveness scale, the unstandardized regression coefficient of the level of irritation increases with 0.70. For this effect, it is assumed that the other independent variables remain constant. As can be seen in Table 3 (Model 1), none of the control variables have a significant effect on the level of irritation. Accordingly, hypothesis 2 is supported.

4.3. Effects on cognitions (H3a & H3b)

In order to test hypothesis 3a, which states that the intrusiveness of in-stream video advertisements increases consumers' open brand recall, a direct logistic regression was performed. A direct logistic regression, instead of an OLS regression is performed, since the dependent variable of open brand recall is measured on a categorical level. A logistic regression is suitable for predicting categorical dependent variables. Accordingly, this analysis could predict consumers' open brand recall by the level of intrusiveness they experience. For a logistic regression, several assumptions have to be checked. First of all, there were no outliers present. Secondly, there was the issue of sample size. It is a problem if there is a small sample with a lot of predictors (Pallant, 2007c). Whereas the sample size of this research was large enough, the sample size for these hypotheses was not very large.

Furthermore, the correlations between the independent predictor variables have been examined. The independent variables that were used as predictors included intrusiveness, gender, bought something at 'de Bijenkorf', age, transportation and identification. Overall, they did not highly correlate with each other. However, in Table 2 it can be seen that transportation had a significant, positive correlation with the predictor intrusiveness ($r = 0.20$, $p = 0.027$), as well as identification and intrusiveness ($r = 0.25$, $p = 0.005$). Moreover, none of the six predictors significantly correlated with the dependent variable (Table 2). The small sample size and lack of correlations between the predictors and the dependent variable, especially between intrusiveness and open brand recall, assume that a logistic regression analysis is not allowed to perform. Therefore, the results should be interpreted with cautiousness.

Before conducting a logistic regression, the variable of open brand recall was made dichotomous by recoding the answer categories into 'no, did not recall the brand' (0) and 'yes, did recall the brand' (1). Gender and bought something at 'de Bijenkorf' were recoded into dichotomous variables as well. A direct logistic regression was performed to examine the impact of several predictors on the open brand recall of consumers. The model contained six independent variables (intrusiveness, gender, bought something at 'de Bijenkorf', age, transportation and identification). The full model containing all predictors was not statistically significant, $\chi^2(6, N = 121) = 3.46$, $p = 0.749$ (Table 4). This indicates that the model is not able to distinguish between participants that recalled the brand de Bijenkorf and participants that did not recall the brand de Bijenkorf. The whole model explained between 2.8 percent (Cox and Snell R square) and 4.4 percent (Nagelkerke R squared) of the variance in open brand recall, and correctly classified 79.3 percent of cases. Out of the six independent variables, none variable significantly contributed to the model. Accordingly, hypothesis 3a is not supported.

Hypothesis 3b assumes that the intrusiveness of in-stream video advertisements increases consumers' aided brand recall, in other words it is expected that consumers are more likely to recognize a brand. In order to test this hypothesis, a direct logistic regression was performed. As multiple regression analyses are only suitable for continuous dependent variables and logistic

Table 3: Unstandardized regression coefficients of seven stepwize OLS regression analyses

	Model 1[1]		Model 2[2]		Model 3[3]		Model 4[4]		Model 5[5]		Model 6[6]		Model 7[7]	
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE
Intercept	-0.156	0.620	4.442***	0.738	3.831***	0.472	5.237***	0.684	1.010	1.058	1.173***	0.359	0.370	1.026
Gender	0.280	0.209	-0.503*	0.242	-0.261	0.169	-0.579*	0.245	-0.301	0.324	0.048	0.110	0.181	0.315
Bought something at 'de Bijenkorf'	0.493	0.350	0.393	0.399	-0.242	0.280	0.328	0.406	2.193***	0.528	0.214	0.179	1.137*	0.512
Age	0.013	0.042	-0.040	0.048	0.046	0.034	-0.030	0.049	-0.069	0.063	-0.018	0.021	-0.003	0.061
Transportation	-0.051	0.117	0.051	0.134	-0.027	0.094	0.045	0.137	0.033	0.177	0.007	0.060	0.105	0.172
Identification	0.114	0.124	-0.139	0.144	0.331***	0.100	-0.076	0.145	-0.047	0.186	0.084	0.063	0.273	0.181
Intrusiveness	0.702***	0.071												
Irritation					-0.301***	0.055	-0.011	0.080						
Attitude towards the ad			0.250*	0.119										
Brand attitude									0.343***	0.121	0.124***	0.041	0.004	0.018
N	122		122		122		122		122		122		122	
Adjusted R^2	0.49		0.11		0.17		0.00		0.26		0.14		0.00	

Notes: 1. Model with irritation as dependent variable. *2.* Model with brand attitude as dependent variable. *3.* Model with attitude towards the advertisement as dependent variable. *4.* Model with brand attitude as dependent variable. *5.* Model with visiting the store as dependent variable. *6.* Model with purchase intention in the store as dependent variable. *7.* Model with purchase intention online as dependent variable.
*p < .05. **p < .01. ***p < .001.

regressions for the prediction of categorical dependent variables, a logistic regression was used for the prediction of consumers' aided brand recall by the level of intrusiveness they experience. Before conducting a logistic regression, all assumptions have been checked. First of all, there was the issue of sample size again. As stated earlier the sample of this research was not very large. Therefore, this should be kept in mind when doing this logistic regression. Moreover, no outliers were present and of the six independent predictor variables (intrusiveness, gender, bought something at 'de Bijenkorf', age, transportation and identification), only intrusiveness and transportation ($r = 0.20$, $p = 0.027$) and intrusiveness and identification ($r = 0.25$, $p = 0.005$) did significantly correlate with each other (Table 2). Furthermore, as can be seen in Table 2, none of the six predictors had a significant correlation with the dependent variable.

In addition, the variable of aided brand recall was recoded into a dichotomous variable in which the answer categories ranged from 'no, did not recognize the brand' (0) to 'yes, did recognize the brand' (1). The independent variables of gender and bought something at 'de Bijenkorf' were made dichotomous as well. A direct logistic regression was performed to examine the impact of the six predictors on the aided brand recall of consumers. The model included the independent variables of intrusiveness, gender, bought something at 'de Bijenkorf', age, transportation and identification. The full model with all predictors was not statistically significant, $\chi^2(6, N = 25) = 3.73$, $p = 0.713$ (Table 4). This indicates that the model is not able to distinguish between participants that recognized the brand de Bijenkorf and participants that did not recognize the brand de Bijenkorf. The model as a whole could explain between 13.9 percent (Cox and Snell R square) and 20 percent (Nagelkerke R squared) of the variance in aided brand recall, and correctly classified 72 percent of cases. None of the five independent variables significantly contributed to the model. Therefore, hypothesis 3b is rejected.

Table 4: Logistic regression analyses

Predictor	Model 1[1]			Model 2[2]		
	B	SE	E^b	*B*	SE	E^b
Intrusiveness	0.029	0.168	1.030	0.635	0.457	1.887
Gender	-0.527	0.501	0.590	-0.326	1.247	0.722
Bought something at 'de Bijenkorf'	-0.136	0.855	0.873	-1.533	1.761	0.216
Age	0.173	0.116	1.189	0.064	0.324	1.066
Transportation	-0.081	0.279	0.922	0.444	0.605	1.559
Identification	0.974	0.298	0.977	-0.128	0.572	0.879
Constant	0.974	1.482	2.649	-3.955	3.653	0.19
χ^2		3.46[3]			3.73[4]	
df		1			1	

Notes: *1*. Model with open brand recall as dependent variable. Coded as 1 for 'recall' and 0 for 'not recall'. *2*. Model with aided brand recall as dependent variable. Coded as 1 for 'recognize' and 0 for 'not recognize'. *3*. Model is not significant and none of the variables in this model are significant. *4*. Model is not significant and none of the variables in this model are signifiant. *p < .05. **p < .01. ***p < .001.

4.4. Effects on attitudes (H4a & H4b)

In order to test hypothesis 4a, in which it is assumed that consumers who recalled the brand are more likely to have a positive attitude towards the advertisement than consumers who did not recall the brand, an independent samples t-test was performed. An independent samples t-test is suitable in comparing the differences between the group that recalled the brand de Bijenkorf and the group that did not recall the brand de Bijenkorf. The assumptions have not been met as one group, the group with participants who did not recall the advertisement ($n = 25$), contained fewer than 30 observations. Nevertheless, the major assumption of equal variances in the population has not been violated, Levene's $F = 1.68$, $p = 0.198$. When conducting an independent samples t-test, there is not a significant difference in means in attitudes towards the advertisement of consumers who recalled the brand and who did not recall the brand. Consumers who recalled the brand did not have a more positive attitude towards the advertisement ($M = 3.70$, $SD = 1.05$), than consumers who did not recall the brand ($M = 3.49$, $SD = 0.85$); $t (120) = -0.93$, $p = 0.353$, 95% CI [-0.66, 0.24]. Therefore, hypothesis 4a is not supported.

Hypothesis 4b, which states that consumers who recognized the brand are more likely to have a positive attitude towards the advertisement than consumers who did not recognize the brand, was analyzed by an independent samples t-test as well. An independent samples t-test is appropriate as the differences between two groups are compared, namely the group that recognized the brand de Bijenkorf and the group that did not recognize the brand de Bijenkorf. To put it more precisely, in conducting this analysis, the mean of both groups is compared. However, the assumptions have not been met as both groups, the group with participants who recognized the advertisement ($n = 7$) and the group with participants who did not recognize the advertisement ($n = 18$), contained fewer than 30 observations. Furthermore, the major assumption of equal variances in the population has been violated, Levene's $F = 4.34$, $p = 0.049$. When conducting an independent samples t-test, there is not a significant difference in means in attitudes towards the advertisement of consumers who recognized the brand and who did not recognize the brand. Consumers who recognized the brand did not have a more positive attitude towards the advertisement ($M = 3.45$, $SD = 0.39$), than consumers who did not recognize the brand ($M = 3.51$, $SD = 0.98$); $t (22.88) = 0.21$, $p = 0.838$, 95% CI [-0.51, 0.63]. Accordingly, hypothesis 4b is not supported.

4.5. Effects on consumers' brand attitudes (H5a, H5b & H6)

To test hypothesis 5a, in which it is assumed that consumers who recalled the brand are more likely to have a positive brand attitude than consumers who did not recall the brand, an independent samples t-test was conducted. Again this test is most appropriate since the mean of two groups are compared, namely the group of consumers who did recall the brand and the group of consumers who did not recall the brand. When it comes to the assumption of a convenient sample size, this assumption was

not met as one of the groups, namely participants who did not recall the brand, contained fewer than 30 observations ($n = 25$). However, the assumption of equal variances in the population has not been violated, Levene's $F = 0.08$, $p = 0.774$. An independent samples t-test shows that there is not a significant difference between the brand attitude of consumers who recalled the brand and consumers who did not recall the brand. Consumers who recalled the brand did not have a more positive brand attitude ($M = 5.06$, $SD = 1.26$) than consumers who did not recall the brand ($M = 4.95$, $SD = 1.20$); t (120) = -0.39, $p = 0.701$, 95% CI [-0.66, 0.45]. Accordingly, hypothesis 5a is rejected.

In order to test hypothesis 5b, which assumes that consumers who recognized the brand are more likely to have a positive brand attitude than consumers who did not recall the brand, an independent samples t-test was performed once again. An independent samples t-test was chosen as the differences between two groups are compared, namely the differences between the group who recognized the brand de Bijenkorf and the group who did not recognize the brand de Bijenkorf. Nevertheless, the assumption of a convenient sample size was not met as both the group of participants that recognized the brand ($n = 18$) as well as the group of participants that did not recognize the brand ($n = 7$) contained fewer than 30 observations. Yet, the assumption of equal variances in the population has not been violated, Levene's $F = 0.02$, $p = 0.895$. When performing an independent samples t-test, there is not a significant difference between the brand attitude of consumers who recognized the brand and consumers who did not recognize the brand. Consumers who recognized the brand did not have a more positive brand attitude ($M = 5.09$, $SD = 1.30$), than consumers who did not recognize the brand ($M = 4.90$, $SD = 1.20$); t (23) = -0.34, $p = 0.736$, 95% CI [-1.31, 0.94]. Accordingly, hypothesis 5b is rejected.

Hypothesis 6 assumes that consumers' attitude towards the advertisement is positively related to consumers' brand attitudes. To test this hypothesis a stepwise OLS regression was conducted. This analysis was selected as it must be tested whether consumers' brand attitudes can be predicted by their attitude towards the advertisement. This was a linear relationship, which upon an OLS regression is based as well. The other assumptions for an OLS regression were also checked. First of all, the dependent variable of brand attitude was measured on a continuous level, whereas the independent variable of attitude towards the advertisement was continuous too. Moreover, there were no outliers, the residuals were equally distributed along the regression line and they pointed to homoscedasticity.

In order to control for additional variables, a stepwise regression was performed. First, the independent variable of attitude towards the advertisement was used. In the second regression model, the variables of gender (dichotomous), bought something at 'de Bijenkorf' (dichotomous), age, transportation and identification were included. The regression model of brand attitude as dependent variable and attitude towards the advertisement as independent variable is significant, F (1, 119) = 4.89, $p = 0.029$. The regression model is thus useful for predicting consumers' brand attitude but the predictive power is low: 4 percent of the differences in consumers' brand attitude can be explained by their attitude towards the advertisement ($R^2 = 0.04$). Consumers' attitude towards the advertisement,

$b* = 0.20$, $t = 2.21$, $p = 0.029$, 95% CI [0.03, 0.48], has a significant effect on consumers' brand attitude. For each additional point on consumers' attitude towards the advertisement scale, the unstandardized regression coefficient of consumers' brand attitude increases with 0.25.

When controlling for gender, bought something at 'de Bijenkorf', age, transportation and identification, the regression model of consumers' brand attitude as dependent variable and consumers' attitude towards the advertisement as independent variable remains significant, F (6, 114) = 2.33, $p = 0.037$ (Table 3, Model 2). The regression model is thus useful for predicting consumers' brand attitude, but the predictive power is low: 11 percent of the difference in consumers' brand attitude can be explained by consumers' attitude towards the advertisement, gender, bought something at 'de Bijenkorf', age, transportation and identification ($R^2 = 0.11$). Consumers' attitude towards the advertisement, $b* = 0.20$, $t = 2.11$, $p = 0.037$, 95% CI [0.02, 0.49], has a significant effect on consumers' brand attitude. For each additional point on the attitude towards the advertisement scale, consumers' brand attitude increases with 0.25 as indicated by the unstandardized regression coefficient. For this effect, it is assumed that the other independent variables remain constant. Furthermore, as can be seen in Table 3 (Model 2), only the control variable of gender, $b* = -0.20$, $t = -2.07$, $p = 0.040$, 95% CI [-2.073, 0.040], has a significant effect on consumers' brand attitude. Hence, the unstandardized regression coefficient indicates that men have a 0.50 less positive brand attitude than women. As consumers' attitude towards the advertisement has a significant effect on their brand attitude, it can be concluded that hypothesis 6 is supported.

4.6. The effects of irritation on attitudes (H7a & H7b)
In order to test hypothesis 7a, which assumes that the irritation caused by in-stream video advertisements decreases consumers' attitude towards the advertisement, a stepwise OLS regression analysis was performed. This analysis is selected since an OLS regression could help in predicting consumers' attitude towards the advertisement by using the level of irritation that they experience. Before conducting the OLS regression, it was checked whether all assumptions were met. First of all, the relationship between irritation and attitude towards the advertisement was linear. Secondly, both the dependent variable of attitude towards the advertisement and the independent variable of irritation were measured on a continuous level. Moreover, there were no outliers and the residuals were equally distributed along the regression line. Finally, there was homoscedasticity as errors were the same along every point of the slope.

There is a significant effect of the level of irritation on consumers' attitude towards the advertisement. The regression model of consumers' attitude towards the advertisement as dependent variable and the level of irritation as independent variable is significant, F (1, 119) = 18.23, $p < 0.001$. The regression model is thus useful for predicting consumers' attitude towards the advertisement, and the predictive power is moderate: 13 percent of the differences in consumers' attitude towards the

advertisement can be explained by the level of irritation ($R^2 = 0.13$). The level of irritation, $b^* = -0.37$, $t = -4.27$, $p < 0.001$, 95% CI [-0.37, -0.13], has a significant effect on consumers' attitude towards the advertisement. For each additional point on the irritation scale, the unstandardized regression coefficient of consumers' attitude towards the advertisement decreases with -0.25.

When controlling for gender, bought something at 'de Bijenkorf', age, transportation and identification, the regression model of consumers' attitude towards the advertisement as dependent variable and the level of irritation as independent variable remains significant, $F (6, 114) = 7.84$, $p < 0.001$ (Table 3, Model 3). The regression model is thus useful for predicting consumers' attitude towards the advertisement, and the predictive power is moderate: 17 percent of the differences in consumers' attitude towards the advertisement can be explained by the level of irritation, gender, bought something at 'de Bijenkorf', age, transportation and identification ($R^2 = 0.17$). The level of irritation, $b^* = -0.44$, $t = -5.45$, $p < 0.001$, 95% CI [-0.41, -0.19], has a significant effect on consumers' attitude towards the advertisement. For each additional point on the irritation scale, the unstandardized regression coefficient of consumers' attitude towards the advertisement decreases with -0.30. For this effect, it is assumed that the other independent variables remain constant. Furthermore, identification, $b^* = 0.39$, $t = 3.30$, $p = 0.001$, 95% CI [0.13, 0.53], has a significant effect on attitude towards the advertisement. The rest of the control variables do not have a significant effect on consumers' attitude towards the advertisement (Table 3, Model 3). Accordingly, hypothesis 7a is supported as a significant negative effect of irritation on consumers' attitude towards the advertisement was found.

Hypothesis 7b, which assumes that the irritation caused by in-stream video advertisements decreases consumers' brand attitudes, was tested by a stepwise OLS regression analysis as well. This analysis is selected since an OLS regression could help in predicting the brand attitudes of consumers by using the level of irritation that they experience. Before conducting the OLS regression, it was checked whether all assumptions were met. First of all, the relationship between irritation and brand attitudes was linear. Moreover, both the dependent variable of brand attitude and the independent variable of irritation were measured on a continuous level. In addition, there were no outliers and the residuals were equally distributed along the regression line. Lastly, since the errors were the same along every point of the slope, there was homoscedasticity.

By performing a stepwise regression, additional variables were added to control if they predict brand attitudes as well. In the first model, the independent variable of irritation was included. In the additional model, other independent variables such as gender, bought something at 'de Bijenkorf', age, transportation and identification were added. The regression model of consumers' brand attitude as dependent variable and the level of irritation as independent variable is not significant, $F (1, 119) = 0.08$, $p = 0.783$ (Table 3, Model 4). The regression model is thus not useful for predicting consumers' brand attitude: ($R^2 = 0.00$). The level of irritation, $b^* = -0.03$, $t = -0.28$, $p = 0.783$, 95% CI [-0.18, 0.14], does not have a significant effect on consumers' brand attitude. Hypothesis 7b is rejected.

4.7. Effects of brand attitudes on purchase intention (H8a, H8b & H8c)

The last hypothesis of this research is divided in three parts as consumers' purchase intention was measured in three ways. Hypothesis 8a is about the likeability of visiting the store de Bijenkorf. In this hypothesis, it is assumed that consumers are more likely to visit the store de Bijenkorf when they have a positive brand attitude of the store. To test this hypothesis a stepwise OLS regression was performed. It is appropriate to conduct an OLS regression as both the dependent variable of visiting the store and the independent variable of brand attitude were measured on a continuous level. The relationship between these variables was linear, which is required for an OLS regression analysis. Furthermore, by conducting an OLS regression the likeability of visiting the store could be predicted by consumers' brand attitude. Finally, no outliers were noticed and the residuals were normally distributed. The last assumption about homoscedasticity was met as well.

A stepwise regression was performed since this technique could be used to test other independent variables. In the first regression model, consumers' brand attitude was tested and in the second regression model, the control variables were added. The regression model of the likeability of visiting the store as dependent variable and consumers' brand attitude as independent variable is significant, $F(1, 119) = 13.13$, $p < 0.001$. Accordingly, the regression model can be used to predict the likeability of visiting the store and the predictive power is low: 10 percent of the differences in the likeability of visiting the store can be explained by consumers' brand attitudes ($R^2 = 0.10$). Consumers' brand attitude, $b* = 0.32$, $t = 3.62$, $p < 0.001$, 95% CI [0.21, 0.71], has a significant effect on the likeability of visiting the store. For each additional point on the brand attitude scale, the likeability of visiting the store increases with 0.46.

The regression model of likeability of visiting the store as dependent variable and consumers' brand attitude as independent variable remains significant, when controlling for gender, bought something at 'de Bijenkorf', age, transportation and identification, $F(6, 114) = 6.55$, $p < 0.001$ (Table 3, Model 5). Hence, the regression model can be used for predicting the likeability of visiting the store, but the predictive power is moderate: 26 percent of the differences in the likeability of visiting the store can be explained by consumers' brand attitude, gender, bought something at 'de Bijenkorf', age, transportation and identification ($R^2 = 0.26$). Consumers' brand attitude, $b* = 0.24$, $t = 2.83$, $p = 0.006$, 95% CI [0.10, 0.58], has a significant effect on the likeability of visiting the store. For each additional point on the brand attitude scale, the unstandardized regression coefficient of the likeability of visiting the store increases with 0.34. It is assumed that the other independent variables remain constant for this effect. Only bought something at 'de Bijenkorf', $b* = 0.35$, $t = 4.16$, $p < 0.001$, 95% CI [1.15, 3.24], has a significant effect on the likeability of visiting the store. If consumers bought something at 'de Bijenkorf', the unstandardized regression coefficient shows that the likeability of visiting the store increases with 2.19. The other control variables do not have a significant effect on the likeability of visiting the store (Table 3, Model 5). Hence, hypothesis 8a is supported.

Hypothesis 8b is about the purchase intention in the store, which states that consumers' purchase intention is likely to increase if they have a positive brand attitude. In order to test this hypothesis a stepwise OLS regression was performed. This regression analysis is allowed to conduct as all assumptions have been checked for. First of all, both the dependent and independent variable were measured on a continuous level. Moreover, the relationship between these two variables was a linear one and accordingly, an OLS regression was allowed to predict consumers' purchase intention by their brand attitude. Lastly, there was checked for homoscedasticity, no outliers were visible in the scatter dot and all residuals were distributed in an equal manner.

Next to the variable of brand attitude, other variables were added to control for their effects. Therefore, a stepwise regression was chosen in which the variable of brand attitude was added in the first model, followed by the control variables in the second model. When conducting a stepwise OLS regression, the regression model of purchase intention as dependent variable and consumers' brand attitude as independent variable is significant, $F(1, 119) = 10.77$, $p = 0.001$. The regression model is thus useful for predicting the purchase intention of consumers, but the predictive power is low: 8 percent of the difference in purchase intention can be explained by consumers' brand attitudes ($R^2 = 0.08$). Consumers' brand attitude, $b* = 0.29$, $t = 3.28$, $p = 0.001$, 95% CI [0.05, 0.21], has a significant effect on purchase intention. For each additional point on the brand attitude scale, the unstandardized regression coefficient of purchase intention increases with 0.13.

When controlling for gender, bought something at 'de Bijenkorf', age, transportation and identification, the regression model of purchase intention as dependent variable and consumers' brand attitude as independent variable still remains significant, $F(6, 114) = 3.06$, $p = 0.008$ (Table 3, Model 6). Hence, the regression model can be used to predict consumers' brand attitude, but the predictive power is moderate as 14 percent of the difference in purchase intention can be explained by consumers' brand attitude, gender, bought something at 'de Bijenkorf', age, transportation and identification ($R^2 = 0.14$). Consumers' brand attitude, $b* = 0.27$, $t = 3.01$, $p = 0.003$, 95% CI [0.04, 0.21], has a significant effect on purchase intention. For each additional point on the brand attitude scale, the unstandardized regression coefficient of purchase intention increases with 0.12. For this effect, it is assumed that the other independent variables remain constant. None of the control variables have a significant effect on purchase intention (Table 3, Model 6). Accordingly, hypothesis 8b is supported.

To test the last hypothesis of this research, hypothesis 8c, a stepwise OLS regression analysis was performed again. This hypothesis states that consumers are more likely to purchase something from the webshop of de Bijenkorf if they have a positive brand attitude. An OLS regression is most appropriate to perform as both variables were measured on a continuous level and the relationship between the variables was linear. Therefore, an OLS regression can be used to predict consumers' online purchase intention by their brand attitudes. All other assumptions have been checked as well; no outliers were found, the residuals were equally distributed and they pointed to homoscedasticity. As

with the other hypotheses, control variables were also used. Hence, a stepwise regression was performed in which consumers' brand attitude was used in the first model, followed by the control variables. When conducting a stepwise OLS regression, the regression model of purchase intention online as dependent variable and consumers' brand attitude as independent variable is not significant, $F(1, 119) = 0.09$, $p = 0.762$ (Table 3, Model 7). Hence, the regression model cannot be used for predicting the purchase intention of consumers ($R^2 = 0.00$). Consumers' brand attitude, $b^* = 0.03$, $t = 0.30$, $p = 0.762$, 95% CI [-0.20, 0.27], does not have a significant effect on purchase intention. Therefore, hypothesis 8c is not supported.

To conclude, hypothesis 1, 1a, 2, 6, 7a, 8a and 8b are supported. Whereas no support could be found for hypothesis 1b, 1c, 3a, 3b, 4a, 4b, 5a, 5b, 7b and 8c. In Figure 2, the conceptual model is displayed once again in which the supported hypotheses have a green arrow. The red arrows characterize the rejected hypotheses.
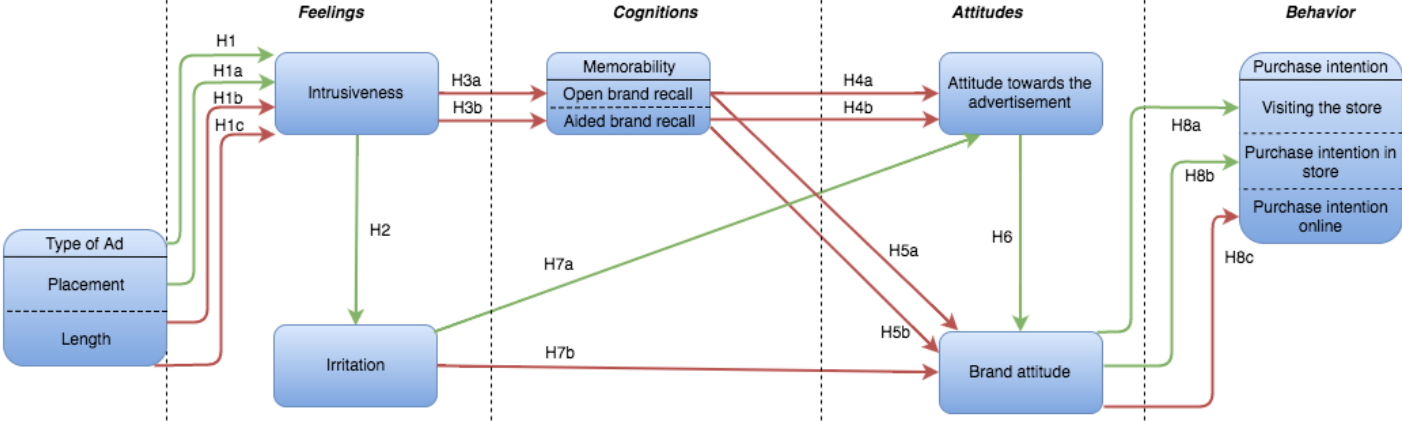

Figure 2: Conceptual model with supported and rejected hypotheses.

5. Conclusion

Nowadays, an increasing amount of consumers is using video on-demand services (Dongen, 2015). Video on-demand services are used by consumers to watch movies, television series and programs by streaming the video content they want to see at times that are most convenient for them ("Wat is video on-demand?", n.d.). As video on-demand services appeal especially to young Dutch people between the ages of 18 to 34 years, which are difficult to target by using traditional television, brands are able to reach them by creating online video advertisements. These advertisements are called in-stream video advertisements. Whereas in 2013 expenditures regarding online video advertising were estimated at 12.3 million euros, in 2014 this amount increased to 20.9 million euros (Spot marketing TV, 2015). The market for online video advertising is growing increasingly (Vermanen, 2015) and in 2017, 74 percent of all internet traffic will consist of video (Cisco, 2015; Van Manen, 2016). Accordingly, consumers of video on-demand services are tremendously exposed to online video advertisements (Li & Lo, 2015).

Considering the increasing budgets for online video advertising (Spot marketing TV, 2015), this quantitative research sought to give a deeper understanding of the effects of in-stream video advertisements on several consumer characteristics such as their feelings, cognitions, attitudes and behavior. To put it more precisely, the goal of this research was to investigate whether in-stream video advertisements interrupt the viewing experience of consumers and if this, in turn, influenced their feelings of intrusiveness and irritation as well. Moreover, it was examined whether the intrusiveness of in-stream video advertisements influenced consumers' cognitions, attitudes and behavior. Accordingly, this research has tried to find an answer to the following research question: *'Does the use of in-stream video advertisements in video on-demand influence the feelings, cognitions, attitudes and behavior of Dutch consumers in the age of 18 to 34?'*. This research question was divided into two sub-questions. Research question one was stated as follows: *'Does the placement order of in-stream video advertisements (pre-roll versus mid-roll) in video on-demand influence their effect on the feelings, cognitions, attitudes and behavior of Dutch consumers in the age of 18 to 34?'* and research question two was about the following: *'Does the length of in-stream video advertisements (long versus short) in video on-demand influence their effect on the feelings, cognitions, attitudes and behavior of Dutch consumers in the age of 18 to 34?'*

5.1. Theoretical implications

In order to come up with an answer to the research questions, an online experiment was conducted in which a 2 (*placement*: pre-roll versus mid-roll) by 2 (*length*: long versus short) between-subjects design was used. By conducting this online experiment, it was tested if in-stream video advertisements are perceived as intrusive by consumers and to what extent there exist differences in different types of in-stream video advertisements; a *long pre-roll*, a *short pre-roll*, a *long mid-roll* and a *short mid-roll*).

Before conducting the experiment, eight hypotheses and several sub-hypotheses were proposed. These hypotheses were grounded in academic literature and helped guiding the experiment. In the upcoming section each rejected and approved hypothesis is discussed in which the focus lies especially on finding alternative explanations for the insignificant findings. The hypotheses are discussed in the sequential order of the conceptual model. Therefore, the effects of in-stream video advertisements on consumers' feelings are discussed first. This is followed by the effects on the cognitions of consumers. Thirdly, the effects on consumers' attitudes are explained and lastly, the effects on consumers' behavior are briefly discussed. At the end of this section the limitations of this research are given. Next to that, some recommendations for future research are lined out and the practical implications for advertisers and practitioners are discussed.

5.1.1. Effects on feelings

Based on the conducted analyses it can be concluded that support was found for hypothesis 1 and that consumers perceive in-stream video advertisements as intrusive. As the internet is a highly interactive medium, internet users are extremely goal oriented compared to users of traditional media (Cho & Cheon, 2004; Korgaonkar & Wolin, 1999). In being goal oriented, internet users consciously use the internet and they become involved in their usage. Consumers who are using video on-demand services are highly goal oriented as they consciously choose to watch a specific programme. Hence, goal oriented consumers who are using the internet are easily interrupted and annoyed by online advertisements (McCoy et al., 2007). This is due to the fact that their ongoing cognitive focus is disrupted (Corragio, 1990). This interruption by online advertisements increases consumers' feeling of intrusiveness (Edwards et al., 2002). Hence, consumers are also easily interrupted by in-stream video advertisements which leads to a higher level of intrusiveness.

Moreover, support was found for hypothesis 1a. Consumers perceive mid-roll in-stream video advertisements as more intrusive than pre-roll in-stream video advertisements. This confirms the findings of previous research. Whereas pre-roll in-stream video advertisements are placed in front of online video content and let consumers wait before they can start watching the video content, mid-roll in-stream video advertisements are placed in between video content. Hence, mid-roll in-stream video advertisements let consumers wait to see the latter part of the video. Since consumers who are in the middle of video content are already absorbed (Krishnan & Sitaraman, 2013) and highly transported into the story (Wang & Calder, 2006), they are unexpectedly interrupted by mid-roll in-stream video advertisements. Accordingly, their state of flow is interrupted by the advertisement and they experience higher levels of intrusiveness (Cho & Cheon, 2004; Li et al., 2002).

It can be concluded, quite unexpectedly though, that longer in-stream video advertisements are not perceived as more intrusive by consumers. No support was found for hypothesis 1b. It was expected that longer in-stream video advertisements would be more intrusive as the waiting time

increases. However, consumers who were exposed to shorter in-stream video advertisements rated these advertisements as more intrusive. Whereas this difference was not significant, it is in line with the findings of Goodrich and colleagues (2015). These authors also found that shorter in-stream video advertisements were perceived as more intrusive by consumers. It can be explained by the fact that longer advertisements have the ability to easily transfer messages and emotions (Petrecca, 2006). In that way, longer advertisements contain more information and humor (Goodrich et al., 2015) and advertisements that contain more information and entertainment are perceived as less intrusive (Rejón-Guardia & Martínez-López, 2014). Hence, it could be the case that consumers perceived the longer advertisements of de Bijenkorf, compared to the shorter advertisements, as less intrusive since the longer ones were more entertaining and informative.

In line with that, hypothesis 1c was also rejected. Whereas it was found in hypothesis 1a that mid-roll in-stream video advertisements, compared to pre-roll in-stream video advertisements, were perceived as the most intrusive, it was expected that out of the four different in-stream video advertisements, consumers would perceive the longer mid-roll in-stream video advertisement as the most intrusive. However, it turned out that a short mid-roll in-stream video advertisement was perceived as the most intrusive. Again, this finding can be explained by the informative and entertaining content of the longer advertisement versions (Goodrich et al., 2015; Petrecca, 2006), which make them less intrusive (Rejón-Guardia & Martínez-López, 2014). In addition, the longer mid-roll in-stream video advertisement could have given consumers time to avoid the advertisement in a behavioral way. This means that they could click away from the research page which contained the fragment of Divorce and the advertisement and look instead, at other webpages for several seconds (Baek & Morimoto, 2012; Cho & Cheon, 2004). Hence, they could have perceived the longer mid-roll in-stream video advertisement as less intrusive since it gave them time to do something else, after which they were able to continue with the fragment of Divorce.

It can be concluded that hypothesis 2 is approved as the intrusiveness of in-stream video advertisements caused irritation among consumers. This finding is in line with previous research in which a significant relationship between the level of intrusiveness and irritation was found as well (Edwards et al., 2002; Rejón-Guardia & Martínez-López, 2014). Advertisements are perceived as irritating if they are uncontrollable (Mc Farlane, 2002), so if consumers do not have the opportunity to ignore or control advertisements. In-stream video advertisements in video on-demand services cannot be controlled or ignored by consumers since consumers do not have the opportunity to fast forward or eliminate these advertisements (Logan, 2013). Accordingly, consumers get irritated by in-stream video advertisements.

5.1.2. Effects on cognitions

No support was found for hypothesis 3a and 3b as the intrusiveness of in-stream video advertisements did not increase consumers' open brand recall and aided brand recall. Thus consumers that experienced higher levels of intrusiveness were not able to recall or recognize the brand de Bijenkorf to a greater extent. The lack of support for both hypotheses can be explained by the fact that almost everybody ($n = 97$), out of 100 participants who indicated that they could recall the brand, could recall the brand de Bijenkorf. Participants that indicated that they could not recall the brand formed a small group ($n = 25$) and only a small amount of them ($n = 7$) could recognize the brand. Accordingly, as almost everybody could recall the brand de Bijenkorf, the sample for the analysis of aided brand recall was not that large, which could lead to insignificant results.

Furthermore, a lack of significance for the relationship between intrusiveness and respectively open brand recall and aided brand recall could be based on consumers' goal oriented behaviour. Consumers use online media, such as video on-demand services, with certain goals in mind (Ha & McCann, 2008). Thus, they consciously choose a specific programme that they want to watch online and as a result they can perceive irrelevant information, such as in-stream video advertisements, as annoying (Li & Lo, 2015). As a consequence, they can try to avoid the incongruent information that is included in the advertisement. Consumers that are using the internet are able to avoid online advertisements in a cognitive manner, affective and behavioural manner (Cho & Cheon, 2004), meaning that they can intentionally ignore the advertisement as they have unfavourable beliefs about advertisements (Cho & Cheon, 2004; Predergast et al., 2014). By consciously avoiding the processing of information (Li & Lo, 2015), and by cognitively, affectively and behaviourally avoiding the advertisement, it is possible that consumers forget the brand that is listed in the advertisement.

5.1.3. Effects on attitudes

Contrary to what was expected, hypothesis 4a was rejected as well, since consumers who recalled the brand did not have a more positive attitude towards the advertisement than consumers who did not recall the brand. In line with that, hypothesis 4b was also not supported as consumers who recognized the brand did not have a more positive attitude towards the advertisement either. As is the case with hypotheses 3a and 3b, these insignificant findings can be explained by the large amount of participants that could recall the brand ($n = 97$) and by the small amount of participants that could recognize the brand ($n = 7$). Accordingly, the variables of open brand recall and aided brand recall are both complex to use as dependent variables in hypotheses 3a and 3b, and as predictors in hypotheses 4a and 4b.

In this research, the hierarchy-of-effects model has been used as a fundamental base for the hypotheses. The hierarchy-of-effects model assumes that an advertisement has several tasks ranging from creating awareness for the brand, to creating interest in the brand, to convincing consumers that the brand is superior to competitors and eventually, to letting consumers buy the brand (Weilbacher,

2001). Accordingly, consumers go through multiple mental stages in which they learn about the brand before buying it. Previous research found that memorable advertisements are more liked by consumers (Mai & Schoeller, 2009) which is the first step of the hierarchy-of-effects model. However, the hierarchy-of-effects model does not provide the most accurate description of the effects of an advertisement as Weilbacher (2001) argues that there is no proof that the consumer measurements, also known as important marketing outcomes (i.e., brand awareness, brand preference and purchase intention), explain how an advertisement really works. In addition, advertisements can be remembered for other reasons as well such as for their high quality. Nevertheless, they can also be remembered for wrong reasons (i.e., for being intrusive and irritating). Hereby, the first step of the model which is reflected in hypothesis 4a and 4b seems to be dismantled. This is quite remarkable since the hierarchy-of-effects model has been used for a long time by practitioners and researchers. Nevertheless, the model has never been truly validated and the insignificant findings of hypotheses 4a and 4b call the model into question (Weilbacher, 2001).

The most important reason for the lack of support for hypothesis 4a and 4b, is the assumption of an advertisement as a stimulus which automatically leads consumers through a mental process after being exposed to this advertisement (Weilbacher, 2001). It is assumed that after being exposed to an advertisement, consumers store this information in their memory, form an attitude and eventually they react towards the brand by purchasing it or not. This is based on the so-called 'magic bullet theory' which was used by researchers in the 1930s through the 1950s (Neuman & Guggenheim, 2011). This theory assumed that every message, like a bullet, was able to reach its targets. So, every message would affect consumers and these effects would be persuasive, immediate and evident (Neuman & Guggenheim, 2011). Nevertheless, this theory about media effects was dismantled by several researchers (i.e., Bineham, 1988; Lubken, 2008; Power, Kubey, & Kiousis, 2002) as it does not characterize the way that media work. Not every advertisement is likely to lead consumers through all these stages and evoke a reaction as consumers are exposed to more information prior to and after the exposure of the advertisement when thinking about or making brand purchases (Weilbacher, 2001). In this research participants were exposed to a short fragment of the series Divorce and right after this fragment they were asked questions related to this fragment. Hence, they had to process multiple information and not only the information from de Bijenkorf's advertisement.

No support was found, however, for hypothesis 5a. Whereas this hypothesis assumed that consumers who recalled the brand would have a more positive brand attitude than consumers who did not recall the brand, no significant difference was found. In line with that, hypothesis 5b was also not supported as consumers who recognized the brand did not have a more positive brand attitude than consumers who did not recognize the brand. As with previous hypotheses, again, these insignificant findings can be related to the huge amount of participants that could recall the brand ($n = 97$) and the small amount of participants that recognized the brand ($n = 7$). Furthermore, Weilbacher (2001) describes the work of Kandel, Schwarts and Jessell (2000) in which it is described that the human

brain is multifaceted and not strictly organized, meaning that information about specific subjects is stored at multiple places within the brain. Accordingly, when people think about a specific brand, they summarize all their stored memories that they gained from marketing information about that brand, combined with the real experience of that brand (if they have an experience with the brand). All this information and all experiences are combined, and together they form a summary of how consumers perceive the brand at a specific moment in time (Weilbacher, 2001). In other words, when explaining how consumers evaluate brands other variables may matter more than only their open brand recall and aided brand recall.

When it comes to the lack of support for hypothesis 5a and 5b, it is quite likely to assume that all participants were exposed to more information about de Bijenkorf in the past. All participants had a very positive brand attitude, which could be because they have been exposed to other marketing information about de Bijenkorf, such as sponsored marketing and other commercials. Furthermore, they could have had their own prior direct experiences with de Bijenkorf. Therefore, when people were asked to give their opinion about de Bijenkorf, all this stored information was synthesized and processed by the brain. This in turn produced a synthesis of how participants thought about and perceived de Bijenkorf. In that way, participants' brand attitude was not only influenced by their recall and recognition. Rather it was formed by multiple information to which participants were exposed to in the past.

In addition, support was found for hypothesis 6. Consumers' attitude towards the advertisement was positively related to their brand attitude. This is in line with previous literature and research, which also found a significant relationship between consumers' attitude towards the advertisement and their brand attitude (Brown & Stayman, 1992; Laczniak & Carlson, 1989; MacKenzie & Lutz, 1989; MacKenzie et al., 1986). Accordingly, by communicating information about the brand in a well-liked advertisement, consumers are more likely to get a positive brand attitude.

This research showed that the provoked irritation by in-stream video advertisements decreased consumers' attitude towards the advertisement, in that way hypothesis 7a was supported. This is in line with previous literature in which it is described that irritation provoked by advertisements is more likely to create negative attitudes among consumers (Li et al., 2002). This finding can be explained by the reactance theory (Brehm & Brehm, 1981). In this theory it assumed that consumers create a negative attitude if they are interrupted by an advertisement as they perceive this interruption as a threat towards their autonomy and freedom, which is especially high for uncontrollable advertisements. Reactance can be seen as a combination of anger and negative cognitions and hence, it is a negative emotional state (Eagly & Chaiken, 1993). When consumers respond to an unfavorable and uncontrollable advertisement, they create unfavorable cognitions about it and as a result, they become angry and they try to come up with counter arguments (Dillard & Shen, 2005; Silvia, 2006). As in-stream video advertisements cannot be controlled by consumers (Logan, 2013), consumers are

restricted in their freedom. Hence, they can feel angry and they can evaluate the advertisement in a negative way.

Nevertheless, no support was found for hypothesis 7b as the irritation caused by the intrusiveness of in-stream video advertisements did not decrease consumers' brand attitude. Whereas Chakrabarty and Yelkur (2005), did not found support for this relationship either, other research showed that irritating advertisements negatively influenced consumers' brand attitudes (Thota & Biswas, 2009). The lack of significance of irritation on brand attitudes can be based on the selection of the store de Bijenkorf. De Bijenkorf is a very well-known and popular store in the Netherlands. It turned out that all participants were familiar with this store and almost all of them, 91 percent, bought something from de Bijenkorf. Therefore, it could be that the familiarity of the brand de Bijenkorf suppressed the effect of irritation on brand attitudes.

Moreover, the lack of support for a significant, negative relationship between the level of irritation and consumers' brand attitude could be explained by the hypothesized J-shaped relationship between attitude towards the advertisement and brand attitudes (Chakrabarty & Yelkur, 2005). In this J-shaped relationship it is assumed that advertisements that are perceived as irritating are more effective than neutral advertisements, but they are less effective than liked advertisements (Chakrabarty & Yelkur, 2005; Moore & Hutchinson, 1983). In that way, the irritation could stimulate consumers' attention to the advertisement and their processing level, without transmitting the negative reactions of irritation to the brand (Aaker & Bruzonne, 1985; Chakrabarty & Yelkur, 2005; Moore & Hutchinson, 1983).

5.1.4. Effects on behaviour

It can be concluded that support was found for hypothesis 8a. Consumers were more likely to visit de Bijenkorf when they had a positive brand attitude of the store. De Bijenkorf is known for being a big warehouse and selling different products, services and brands. In having such a large assortment, they appeal to a huge amount of consumers. Consumers can spend the whole day visiting the store ("Het beste warenhuis", 2010) and for most of them, it is a real experience to visit de Bijenkorf (Rijlaarsdam, 2015). Therefore, they could have been more eager in visiting the store.

In addition, hypothesis 8b was also supported. It turned out that consumers were more likely to purchase something from de Bijenkorf when they had a positive brand attitude. This finding is in line with previous studies and literature in which consumers' attitudes were used as a predictor for purchase intentions (e.g., Bagozzi, 1981; Fishbein & Ajzen, 1980; Huang et al., 2013; Karson & Fisher, 2005; Laroche et al., 1996). This, in turn, is based on the theory of reasoned action (Fishbein & Ajzen, 1975) and the theory of planned behaviour (Ajzen, 1991). According to the theory of planned behaviour, consumers' intentions exist of motivations and these motivations are able to influence their behaviour (Ajzen, 1991). Consumers' attitudes, in turn, can influence their behavioural intentions,

meaning that consumers are more likely to buy something from the brand if they like the brand (Cialdini, 1993; Eagly et al., 1991). Despite the lack of support for the first step of the hierarchy-of-effects model, this finding confirms the second step of the hierarchy-of-effects model. As explained earlier the lack of support for the first step can be related to methodological issues. Accordingly, this research shows that the hierarchy-of-effects model cannot be dismissed in full.

Nevertheless, no support was found for hypothesis 8c as consumers were not more likely to purchase something from the webshop of de Bijenkorf if they had a positive brand attitude. The lack of support for this hypothesis could be explained by multiple things. First of all, it could be that participants in this research preferred to shop in an offline store. As a consequence, it could be that they do not make use of online webshops. As can be seen in Table 2, the mean score for purchase intention online was 2.79 on a seven-point Likert scale. This means that participants are not very likely to buy something in the webshop of de Bijenkorf. Thus, whereas consumers had a very positive brand attitude of de Bijenkorf, it seemed that it only resulted in a higher purchase intention in the store compared to a higher intention to buy something in the webshop. Furthermore, this could be related to the new image of de Bijenkorf as the store has become a high quality and luxurious warehouse. This offers de Bijenkorf a competitive advantage compared to other Dutch warehouses and stores (i.e., Hema, H&M). Yet, people could be quite resistant to purchase these expensive things online and as a result, they want to buy it in the offline shop.

In addition, over the years many retailers started a webshop due to a decrease in sales and the changing buying behaviour of consumers (Kruize, 2013; Molenaar, 2013). Whereas de Bijenkorf's online webshop is frequently used, the internet has another important role as well. The internet gives consumers the opportunity to orientate and acquire information before making the decision to buy something (Molenaar, 2013). A webshop provides such an opportunity as well. Therefore, consumers can make use of de Bijenkorf's webshop for orientation and as a device for comparing prices, whereas they use the offline store to do their actual purchases.

5.2. Limitations

While it has been tried to ensure that all findings are generalizable, this research has some limitations. First of all, the brand de Bijenkorf that has been used was very familiar among participants as all participants (*N* = 122) were familiar with de Bijenkorf. According to Laroche and colleagues (1996), consumers have more confidence in a brand if they are familiar with a brand, which in turn influences their attitudes towards that brand. Therefore, the results should be interpreted with cautiousness as they could be different for other (unknown) brands.

Another limitation has to do with the sampling method of this research. Participants were recruited online on social media by using both convenience sampling and snowball sampling. Thus, they were approached on social media sites and they were asked if they would want to participate and

if they would want to share the link with people in the same age as well. Whereas this sampling strategy can lower search costs, it also causes bias since it increases the likelihood that the sample is not representative, so that it is not a representation of the population (Fricker, 2008). This is due to the fact that the researcher does not have complete control over the selection of participants as everybody receiving the research link is able to participate in the research. When using random sampling, each person has an equal chance of participating in the research. This is not the case with snowball sampling. However, as the target group of this research was approachable on social media (Oosterveer, 2014), this type of sampling has helped to obtain the right participants who are using video on-demand services.

Furthermore, in this online experiment a cover story was used to cover the exact purpose of the research. Participants were told that it would be investigated to what extent they could identify themselves with leading characters of the series Divorce and if they were transported into the story. It seemed that the cover story worked out very well as not all participants saw the in-stream video advertisement. Whereas in total 155 people participated in this research, 122 participants noticed the advertisement and completed the whole questionnaire. Accordingly, 33 participants were not valid for this research and they were excluded from the dataset. There are several reasons why participants did not notice the advertisement. First, it could be that they encountered technical issues while watching the fragment of Divorce and as a result, the advertisement did not appear on their screen. Second, it could be that participants did not pay attention to the whole fragment of Divorce, so they tuned out while watching. Third, it could be that participants are used to in-stream video advertisements and as a result they did not notice the advertisement because they thought it belonged into the fragment. Lastly, it could be the case that participants were so focused on the cover story, that they did not register the advertisement. Thus, meaning that they were too busy in understanding and following the narrative of Divorce as they expected questions about this.

When conducting an online experiment, researchers have to be aware of several issues, which are known to occur in online experiments. In this research, the researcher did not have control over the whole experimental situation as is the case in a laboratory experiment (Reips, 2000). This means that the researcher did not have control over amongst others the selection of participants and the setting in which they completed the questionnaire. Therefore, the researcher could not control if participants were doing other things (i.e., surfing on the internet or using Facebook) while completing the experiment and if they cheated by participating more than once (Reips, 2000). A solution for the later issue is to check the IP-address of participants (Reips, 2000), which is exactly what the researcher has done to see if IP-addresses were used multiple times. This was not the case. However, it remains unknown if participants fully focussed on the experiment.

There are advantages as well for using online experiments. Online experiments, compared to traditional laboratory experiments, have usually a higher external validity (Crano, Brewer, & Lac, 2015). This is because participants are able to participate from a familiar situation at the computer at

home or at work (Reips, 2000). When it comes to laboratory experiments, all participants are tested in a laboratory situation, so not in a natural setting, which is often very different for them than a familiar situation (Reips, 2000). Most often they cannot personally relate to the laboratory setting. In addition, participants in a laboratory setting can try to please the researcher so that he or she gets the right findings and is able to confirm the proposed hypotheses (Crano et al., 2015). Their behaviour, in turn, cannot be easily transferred to people's behaviour in the real world (Martin, 1996) and the findings can be caused by the behaviour of participants. Hence, participants can behave in a different manner while being exposed to another programme, at another time and at another place.

5.3. Future directions

When it comes to further research in the field of video on-demand advertising, several recommendations can be made. Whereas the sample size of this research was in line with the required sample size for conducting an online experiment (Walker, 2014), it turned out that the sample size for hypothesis 3a, 3b, 4a, and 4b was too small. As explained earlier this was because almost everyone could recall the brand and a very small amount of participants recognized the brand. This high level of brand recall can be explained by the familiarity of the brand de Bijenkorf. Future research could use an advertisement of a very unknown brand, or even a brand that does not exist, to see how people react to such an advertisement. Nevertheless, when using familiar brands, the external validity of the research is higher as it is also likely that consumers come across these advertisements in real life settings. This is especially the case with familiar brands such as de Bijenkorf which since de Bijenkorf frequently creates commercials which are uploaded on YouTube and other online video channels. Regardless of focusing on unfamiliar or familiar brands, future research must examine existing brands in order to ensure external validity as studies using fictitious brands have been criticized for their low generalisability (Winer, 1999).

In addition, in this research the concepts of identification with leading characters and the level of transportation were measured as part of the cover story. Further research could explore whether the level of identification and transportation exert an influence on respectively consumers' level of intrusiveness, irritation, memorability, attitudes and behavior. In that way, it can be investigated if consumers who really identify and engage with leading characters and who are highly transported by the story, perceive in-stream video advertisements as less intrusive. It is of much relevance to study this, as it provides marketers with knowledge about which TV series and programmes are best suited for in-stream video advertisements.

Since consumers are able to skip an advertisement after several seconds, especially on YouTube, future research could incorporate these so-called user control options as well. Kusse (2013) is the only study that investigated the effects of user control options on consumers' attitudinal responses in the context of online video advertising. According to Kusse (2013), a skippable pre-roll

in-stream video advertisement is more likely to generate positive attitudes toward the advertised brand than a non-skippable pre-roll in-stream video advertisement. Therefore, future research could investigate whether it makes a difference if consumers are able to skip an advertisement and if this decreases their level of intrusiveness.

This research was conducted on Dutch people between the ages of 18 to 34 years. Future research could examine different age groups to see if the findings are different among other age groups. In the Netherlands, young Dutch people are watching more online video content (Dongen, 2015). Whereas worldwide linear television is still dominating, nowadays, eight out of ten teenagers uses video on-demand services on a daily basis (Ericsson, 2015). Nevertheless, elderly people are starting to use these services as well, as three out of ten persons between the ages of 60 to 69 years is using video on-demand services. It could be that the effects of in-stream video advertisements are different from other age groups since research showed that older people are more likely to remember certain advertisements (Fung & Carstensen, 2003) and to be persuaded by them when they are more relevant to their goals (e.g., Clary, Snyder, Ridge, Miene, & Haugen, 1994). Future research could explore whether these differences occur in the field of video advertising as well.

In addition, future research could examine cross-cultural effects and investigate if differences exist among different cultures. In the Netherlands, people are using video on-demand services increasingly and therefore, the use of video on-demand services is not seen as a very new type of media consumption anymore. This could be different from other markets around the world (i.e., developing countries) as changing, modern media habits are linked to the proliferation of connected televisions (Ericsson, 2015). This means that by the proliferation of connected televisions it becomes possible to easily access video on-demand content (Ericsson, 2015). Hence, global brands would benefit to see how each of their consumer markets are developing with regards to video on-demand services. In that way, both brands as well as consumers can benefit from the culturally specifically tailored in-stream video advertisements.

Finally, this research showed that longer in-stream video advertisements are not perceived as more intrusive than shorter in-stream video advertisements. This is quite a contradictory finding, but advertisements that contain more information and humor are perceived as less intrusive by consumers (Goodrich et al., 2015; Rejón-Guardia & Martínez-López, 2014). However, in this research it has not been measured to what extent participants perceived the advertisements as informative and humorous. Therefore, future research could look at the content (informative versus humorous) of in-stream video advertisements and determine if differences exist in important marketing outcomes.

5.4. Practical implications

Next to theoretical implications, this research holds several important practical implications. As young Dutch people are spending more time online watching video content and less time watching television

(Dongen, 2015), advertisers must find alternative ways of reaching this important target group. In order to effectively reach this young target group, in-stream video advertisements can be used. These advertisements are displayed within online video content and can differ in placement and length. In what follows, recommendations about how to use in-stream video advertisements effectively are given. Practitioners can use these to optimize their usage of in-stream video advertisements. It is important to keep in mind that this research only investigated the effects of pre-roll and mid-roll in-stream video advertisements. Hence, this research's recommendations are based on the comparisons between these two types and no recommendations are offered for post-roll in-stream video advertisements.

Out of the three different types of in-stream video advertisements (i.e., pre-roll, mid-roll and post-roll), pre-roll in-stream video advertisements are known for being the most used form (Adobe, 2012). This research confirms the popularity of pre-roll in-stream video advertisements as pre-roll in-stream video advertisements are perceived as less intrusive than mid-roll in-stream video advertisements. Therefore, practitioners are advised to use pre-roll in-stream video advertisements. Furthermore, whereas no significant finding was found of the length of in-stream video advertisements and their level of intrusiveness, this research showed that practitioners still must have a careful look at the length of in-stream video advertisements. Overall, participants rated shorter versions as more intrusive than longer versions, which could be because longer advertisements contain more information and humor which make them less intrusive (Goodrich et al., 2015; Rejón-Guardia & Martínez-López, 2014). Hence, it is recommended to create an in-stream video advertisement that contains enough information and humor. In addition, the shorter mid-roll in-stream video advertisement was rated as the most intrusive. Again this shows that practitioners must use a pre-roll in-stream video advertisement and for those who prefer to use a mid-roll in-stream video advertisement, a long mid-roll in-stream video advertisement is the best option. Finally, since this research showed that consumers perceive in-stream video advertisements as irritating, practitioners must consciously think of making nice and appealing content when creating in-stream video advertisements.

To conclude, it is no doubt that young Dutch people are 'running away from television' as an increasing amount of young people in the Netherlands is using video on-demand services to watch online video content (Dongen, 2015). Does this mean that the era of watching television is over and with that the end of television commercials? Will consumers be bombarded with video advertisements online? Who knows. It can be argued for sure that advertising in video on-demand services will become increasingly important in the future. However, as they are perceived as intrusive and irritating, it will behoove marketers to create nice and appealing advertisements as these advertisements could lead to a more positive brand evaluation by consumers. Thus, an appealing advertisement that serves consumers, just as the video on-demand service they are using!

6. References

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7. Appendix

Appendix A: Screenshots of the fragment of Divorce

Appendix C: English questionnaire

Dear participant,

Thank you very much for participating in this research. This research is conducted by a master student of the master's programme Media & Business of the Erasmus University Rotterdam. This research is for a master thesis and it consists of an online experiment in which it will be investigated to what extent Dutch youngsters are able to identify themselves with leading characters of a television series. Moreover, it will be studied if participants are able to transport themselves into the story. Therefore, you are going to watch a small fragment of the Dutch television series *Divorce* for approximately 3 minutes. After that you will be asked some questions.

Please be aware that your participation is completely voluntarily, meaning that you can quit at any time during your participation. Furthermore, your personal information will be kept strictly confidential and the findings of this survey will be used solely for research purposes. Hence, your anonymity is guaranteed at any time.

This research will last for approximately 10 minutes. If you have any questions during or after your participation, please feel free to contact the researcher: Stéphanie Maljaars (431915sm@eur.nl).

I understand the above and agree in participating in this research.

Thank you very much again!

Kind regards,
Stéphanie Maljaars

You are going to watch a short fragment (3 minutes) of the Dutch series Divorce. Divorce is a series about three divorced men named Boudewijn, David and Joris. They live together in a house in Haarlem. We would like to ask you to turn on the sound of your computer. After this fragment it will be possible to continue to the next page as an arrow appears. Here questions about the series will be asked. So please, take a seat and have a look at the series.

[FRAGMENT DIVORCE]. 'David maakt een selfie'.

Divorce pre-roll long (code 1) https://vimeo.com/156317989
Divorce pre-roll short (code 2) https://vimeo.com/156318617
Divorce mid-roll long (code 3) https://vimeo.com/156319094
Divorce mid-roll short (code 4) https://vimeo.com/156319684

The following questions are about the series Divorce of which you have seen a short fragment.
1. Before watching the short fragment at the beginning of this study, did you know the series Divorce?
- Yes
- No → direct to question 6

2. Have you watched the series Divorce?
- Yes
- No → direct to question 6

3. Have you followed the series Divorce?
- Yes
- No → direct to question 6

4. How many seasons of Divorce have you seen?
    1
    2
    3
    4

5. How many episodes of the series Divorce have you seen? *Please indicate below how many episodes you have seen. A season consists of 12 episodes.*

- 0 to 2

- 2 to 4
- 4 to 6
- 6 to 8
- 8 to 10
- 10 to 12

The following questions are related to the narrative of the series Divorce, so about the story that was told. We would like to know to what extent you were transported into the story of the series Divorce. Please indicate how the following statements apply to you.

6. I could picture myself in the scene of the events shown in the narrative.

7. I was mentally involved in the narrative while watching it.

8. I wanted to learn how the narrative ended.

9. The narrative affected me emotionally.

10. While watching the narrative I had a vivid image of David.

7-point Likert scale (1 = not at all, 7 = very much)

The following questions are about identification. We would like to know to what extent you identified yourself with specific characters in the series Divorce.
To what extent can you identify yourself with the leading character David of the series Divorce?
David had dark brown, curly hair.

11. I felt emotionally involved with David's feelings.

12. I understood how David acts, thinks and feels.

13. I understood David's feelings or emotions.

14. I imagined how I would act if I were David.

15. I was concerned about what was happening to David.

16. I tried to imagine David's feelings, thoughts and reactions.

17. I tried to see things from David's point of view.

18. I felt as if I were David.

19. I myself experienced David's emotional reactions.

20. I had the impression of living David's story myself.

21. I identified with David.

7-point Likert scale (1 = not at all, 7 = very much)

Manipulation check

22. Have you seen any advertisement during the series?

- Yes
- No → direct towards end of questionnaire

23. Do you know which store you have seen?

- Yes
- No → Direct towards 24b

If participants answered 'yes' they will be forwarded to the question:

Brand memory

24a. Which store did you see in the video clip?

[store]

If participants are right they will be forwarded to question 25. If not they are forwarded to question 24b.

24b. Have you seen any of these brands shown here in the advertisement?

→ V&D, Hema, de Bijenkorf, Xenos, Blokker, H&M, C&A, Marskramer and 'none of these brands'.

If participants named the wrong store, they are told that the advertisement was of the store de Bijenkorf. They will be forwarded to the next question.

Intrusiveness

When the ad was shown, I thought it was..

25. Distracting

26. Disturbing

27. Forced

28. Interfering

29. Intrusive

30. Invasive

31. Obtrusive

7-point Likert scale (1 = strongly agree, 7 = strongly disagree)

Irritation

When the ad was shown, I thought it was..

32. Irritating

33. Phony

34. Ridiculous

35. Stupid

36. Terrible

7-point Likert scale (1 = not that well, 7 = extremely well)

Attitude towards the advertisement

Please describe your overall feelings about the advertisement that was shown:

37. Bad/good

38. Unpleasant/pleasant

39. Unlikeable/likeable

40. Boring/interesting

41. Tasteless/tasteful

42. Artless/artful

7-point semantic differential scale

Brand attitude

Please describe your overall feelings about the brand described in the ad you just saw:

43. Unappealing/appealing

44. Bad/good

45. Unpleasant/pleasant

46. Unfavorable/favorable

47. Unlikeable/likeable

7-point semantic differential scale

Purchase intention

Please indicate how likely it is that you will buy something from de Bijenkorf the next time that you are in this store.

48. Unlikely/likely

49. Improbable/probable

50. Impossible/possible

7-point semantic differential scale

51. Please indicate how likely it is that you will visit 'de Bijenkorf'?

7-point Likert scale (1 = very unlikely to visit, 7 = very likely to visit)

52. Please indicate how likely it is that you will buy something from the webshop of 'de Bijenkorf'?

7-point Likert scale (1 = very unlikely to purchase, 7 = very likely to purchase)

53. The displayed advertisement was shown ..

- .. at the beginning of the series
- .. during the series
- .. at the end of the series

54. The displayed advertisement was shown for approximately ..

- .. 6 seconds
- .. 15 seconds
- .. 30 seconds

Please indicate to what extent you agree or disagree with the following statement.

55. Advertisements in video on-demand services are acceptable if these allow me to watch the video content for free.

7 point Likert scale (1 = definitely disagree, 7 = definitely agree)

The last couple of questions are about the brand 'de Bijenkorf'.

56. Before your participation in this study, did you know 'de Bijenkorf'?

- Yes
- No → direct towards question 59

57. Have you bought anything from 'de Bijenkorf'?

- Yes
- No → direct towards question 59

If yes:

58. When was the last time that you bought something from 'de Bijenkorf'?

- Last week
- Last month
- Three months ago
- A year ago
- I can't remember

We would like to know what you think about the fit of the advertisement and the fragment.

59. How likely do you think it is that David, the leading character, will shop at de Bijenkorf?

(*David tried to make a selfie and had dark brown curly hair.)*

7-point Likert scale (1 = very unlikely, 7 = very likely)

60. How likely is it that you will watch the series Divorce once more?

7-point Likert scale (1 = very unlikely, 7 = very likely)

Finally, we would like to ask you some general questions:

61. What is your gender?

- Female
- Male

62. What is your age?

[AGE]

63. What is your educational level?

[If your education is not in the list below, please choose the education that is most appropriate→ education levels are based on the Dutch education system].

- None
- Basisonderwijs, lagere school
- Lager beroepsonderwijs of gelijkwaardig (lbo, lts, vbo, lto, lhno, leao, vmbo-praktijk)
- Mavo, vmbo-theorie, ivo, mulo, of gelijkwaardig
- Havo, vwo, mms, hbs, atheneum, gymnasium, of gelijkwaardig
- Middelbaar beroepsonderwijs of gelijkwaardig (mbo, mts, politieschool, mds, mba, mhno, inas)
- Hoger beroepsonderwijs of gelijkwaardig (hbo, hts, hds, nlo, politieacademie)
- Kandidaatsexamen, wo-bachelor, mo B, of gelijkwaardig
- Universitaire opleiding, KIM, KMA of gelijkwaardig (master, drs, ir, mr, arts)
- Universitaire opleiding: gepromoveerd of gelijkwaardig (dr, PhD)

64. What do you think was the purpose of this research?

[open answer category].

+ I don't know

Thank you very much for participating in this research! If you are interested in the results, please leave you e-mailadress [e-mailadress]. Please don't forget to save the answers by clicking on the arrow below.

Appendix D: Dutch questionnaire

Beste deelnemer,

Bedankt voor je interesse in dit onderzoek. Dit onderzoek wordt uitgevoerd door een master student van het master programma Media & Business van de Erasmus Universiteit Rotterdam. Het bestaat uit een online experiment waarin onderzocht zal worden in welke mate Nederlandse jongeren tussen de 18 en 34 jaar zichzelf kunnen identificeren met hoofdpersonages van een televisieserie. Bovendien zal onderzocht worden in hoeverre deelnemers zich kunnen inleven in het verhaal. Daarom zal je een kort fragment, van ongeveer 3 minuten, gaan bekijken van de serie *Divorce*. Na afloop zullen hier enkele vragen over worden gesteld.

Wees je ervan bewust dat je deelname vrijwillig is. Dit betekent dat je kunt stoppen op elk moment tijdens het onderzoek. Daarnaast zal er strikt vertrouwelijk worden omgegaan met je persoonlijke gegevens. De uitkomsten van dit onderzoek zullen alleen worden gebruikt voor onderzoeksdoeleinden. Daarom is je anonimiteit ten alle tijden gewaarborgd.

Het onderzoek duurt ongeveer 15 minuten, hierbij zit het fragment inbegrepen. Mocht je vragen hebben gedurende het onderzoek of na afloop van je deelname, neem dan gerust contact op met de onderzoekster: Stéphanie Maljaars (431915sm@eur.nl).

  Ik begrijp bovenstaande en ik verklaar vrijwillig mee te doen aan dit onderzoek.

Nogmaals bedankt!

Stéphanie Maljaars

Zo meteen zal je een kort fragment, van zo'n 3 minuten, gaan bekijken van de Nederlandse serie Divorce. Divorce is een serie die gaat over 3 gescheiden mannen, Boudewijn, David en Joris, die samenwonen in een luxe villa. De serie speelt zich af in Haarlem. Wij willen je vragen om het geluid van je computer aan te zetten en er goed voor te gaan zitten. Na afloop van dit fragment verschijnt er een pijl waarop je kunt klikken om door te gaan naar de volgende pagina. Hier zullen enkele vragen worden gesteld over de serie.

[FRAGMENT DIVORCE]. David maakt een selfie.

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Divorce mid-roll short (code 4) https://vimeo.com/156319684

De volgende vragen gaan over de serie Divorce.
1. Kende je de serie Divorce al voorafgaand aan het bekijken van dit fragment?
   - Ja
   - Nee → doorsturen naar vraag 6

2. Heb je de serie Divorce wel eens gekeken?
   - Ja
   - Nee → doorsturen naar vraag 6

3. Heb je de serie Divorce gevolgd?
   - Ja
   - Nee → doorsturen naar vraag 6

4. Hoeveel seizoenen heb je gezien van de serie Divorce?
   1
   2
   3
   4

5. Hoeveel afleveringen heb je ongeveer gezien van de serie Divorce? *Geef hieronder een schatting van het gekeken aantal afleveringen. Een seizoen bestaat uit 12 afleveringen.*

- 0 tot 2
- 2 tot 4
- 4 tot 6
- 8 tot 10
- 10 tot 12

De volgende vragen gaan over het fragment dat je zojuist gezien hebt. We willen graag weten in hoeverre je werd meegevoerd door het verhaal waarin David een selfie probeert te maken.
Geef hieronder aan in hoeverre de stellingen op jou van toepassing zijn.

6. Ik kon mijzelf inleven in de scene met evenementen die werden geshowd in het verhaal. Ik vond de getoonde scènes realistisch overkomen.

7. Tijdens het kijken was ik mentaal betrokken bij het verhaal.

8. Ik wilde graag weten hoe het verhaal eindigde.

9. Het verhaal heeft mij emotioneel geraakt.

10. Tijdens het kijken had ik een levendig beeld van David. (*David was het personage die een selfie probeerde te maken voor op Tinder. Hij had krullend, donkerblond haar.*

7-punts Likert schaal (1 = helemaal niet, 7 = helemaal wel).

Ook willen we graag weten in hoeverre je jezelf kunt identificeren met David, een personage uit de serie Divorce die een selfie probeerde te maken voor op Tinder. Hij had krullend, donkerblond haar. Geef hieronder aan in hoeverre de stellingen op jou van toepassing zijn.

11. Ik voelde mijzelf emotioneel betrokken met de gevoelens van David.

12. Ik begreep hoe David zich gedraagt, denkt en voelt.

13. Ik begreep de gevoelens of emoties van David.

14. Ik probeerde mijzelf voor te stellen hoe ik mijzelf zou gedragen als ik David was.

15. Ik was bezorgd over wat er gebeurde met David/ over wat er zou gebeuren met David.

16. Ik probeerde de gevoelens, gedachtes en reacties van David in te beelden.

17. Ik probeerde de dingen vanuit het perspectief van David te zien.

18. Het voelde alsof ik David was.

19. Ik heb de emotionele reacties van David zelf ervaren.

20. Ik had de indruk dat ik het verhaal van David zelf beleefde.

21. Ik kon mijzelf identificeren met David.

7-punts Likert schaal (1 = helemaal niet, 7 = helemaal wel)

22. Heb je een advertentie gezien tijdens het fragment van Divorce?

- Ja

- Nee → doorsturen naar einde vragenlijst

Als 'ja' is geantwoord, dan door naar de volgende vraag:

23. Weet je nog welk merk of product je hebt gezien in de advertentie?

- Ja

- Nee → doorsturen naar vraag 24b

Brand memory

24a. Welk merk of product heb je gezien?

[open antwoordcategorie]

Als een fout antwoord wordt gegeven dan doorsturen naar vraag 24b.

24b. Heb je een van onderstaande merken of winkels gezien in de advertentie?

→ V&D, Hema, de Bijenkorf, Xenos, Blokker, H&M, C&A en Marskramer + 'geen een van deze merken'

Als respondenten hier de verkeerde noemen dan zal worden gezegd dat het een advertentie van de Bijenkorf was en mogen ze ook door naar vraag 25.

Intrusiveness

Toen de advertentie werd getoond, vond ik deze ..

25. Afleidend

26. Verstorend

27. Geforceerd/ onnatuurlijk

28. Bemoeizuchtig

29. Opdringerig

30. Binnendringend

31. Opdringerig

7-punts Likert schaal (1 = helemaal oneens, 7 = helemaal eens)

Irritatie

Toen de advertentie werd getoond, vond ik deze..

32. Irritant

33. Onecht

34. Belachelijk

35. Stom

36. Verschrikkelijk

7-punts Likert schaal (1 = niet heel erg, 7 = heel erg)

Attitude toward the advertisement

Beschrijf alsjeblieft je gevoelens ten aanzien van de advertentie die is getoond:

37. Slecht/goed

38. Onaangenaam/aangenaam

39. Niet leuk/leuk

40. Saai/interessant

41. Smaakloos/smaakvol

42. Eenvoudig/kundig

7-punts semantische differentiaal schaal

Brand attitude

Beschrijf alsjeblieft je gevoelens ten aanzien van het merk (de Bijenkorf?) dat je in de advertentie hebt gezien:

43. Onaantrekkelijk/aantrekkelijk

44. Slecht/goed

45. Onaangenaam/aangenaam

46. Ongunstig/gunstig

47. Niet leuk/leuk

7-punts semantische differentiaal schaal

Purchase intention

Geef hieronder aan hoe waarschijnlijk het is dat je iets zult kopen bij de Bijenkorf als je de volgende keer in de winkel bent.

48. Onwaarschijnlijk/waarschijnlijk

49. Onaannemelijk/ aannemelijk

50. Onmogelijk/ mogelijk

7-punts semantische differentiaal schaal

51. Geef hieronder alsjeblieft aan hoe waarschijnlijk het is dat je de Bijenkorf zult bezoeken.

Het is … dat ik de Bijenkorf zal bezoeken.

7-punts Likert schaal (1 = zeer onwaarschijnlijk, 7 = zeer waarschijnlijk)

52. Geef hieronder aan hoe waarschijnlijk het is dat je iets zult kopen bij de online webshop van de Bijenkorf.

Het is … dat ik de iets zal kopen in de online webshop van de Bijenkorf.

7-punts Likert schaal (1 = zeer onwaarschijnlijk, 7 = zeer waarschijnlijk)

53. De advertentie werd getoond ..

- .. aan het begin van de serie
- .. tijdens de serie
- .. aan het eind van de serie

54. De advertentie was ongeveer .. seconden in beeld.

- 6 seconden
- 15 seconden
- 30 seconden

Geef alsjeblieft aan in hoeverre je het eens of oneens bent met de volgende stelling.

55. Advertenties in video on-demand services vind ik acceptabel als deze mij toelaten om video inhoud gratis te bekijken.

Met video on-demand services wordt het online terugkijken van televisie programma's of films bedoeld. Te denken valt aan RTL XL, uitzending gemist, You Tube, Net5 etc.

7-punts Likert schaal (1 = helemaal oneens, 7 = helemaal eens)

De volgende paar vragen gaan over de Bijenkorf.

56. Kende je de Bijenkorf voorafgaand aan dit onderzoek?

- Ja
- Nee → doorsturen naar vraag 59

57. Heb je wel eens iets gekocht van de Bijenkorf?

- Ja
- Nee → doorsturen naar vraag 59

Indien ja geantwoord:

58. Wanneer heb je voor het laatst iets gekocht van de Bijenkorf?

- Afgelopen week
- Afgelopen maand
- 3 maanden geleden

- Een jaar geleden
- Dat kan ik me niet herinneren

59. Hoe groot is de kans dat de hoofdpersoon, David, bij de Bijenkorf zou winkelen?

(*David probeerde een selfie te maken voor op Tinder en had krullend, donkerblond haar*).

7-punts Likert schaal (1 = zeer onwaarschijnlijk, 7 = zeer waarschijnlijk)

60. Hoe groot is de kans dat je de serie Divorce nog eens zult bekijken?

7-punts Likert schaal (1 = zeer onwaarschijnlijk, 7 = zeer waarschijnlijk)

Tenslotte willen we je nog een paar algemene vragen stellen:

61. Wat is je geslacht?

- Vrouw
- Man

62. Wat is je leeftijd?

[dropdown menu]

63. Wat is je hoogst voltooide opleiding?

 [Als je opleiding niet in de lijst staat, kies dan de opleiding die het meest erbij aan sluit.]

- Geen
- Basisonderwijs, lagere school
- Lager beroepsonderwijs of gelijkwaardig (lbo, lts, vbo, lto, lhno, leao, vmbo-praktijk)
- Mavo, vmbo-theorie, ivo, mulo, of gelijkwaardig
- Havo, vwo, mms, hbs, atheneum, gymnasium, of gelijkwaardig
- Middelbaar beroepsonderwijs of gelijkwaardig (mbo, mts, politieschool, mds, mba, mhno, inas)
- Hoger beroepsonderwijs of gelijkwaardig (hbo, hts, hds, nlo, politieacademie)
- Universitaire bachelor, kandidaatsexamen, mo B, of gelijkwaardig
- Universitaire master, KIM, KMA of gelijkwaardig (master, drs, ir, mr, arts)
- Universitaire opleiding: gepromoveerd of gelijkwaardig (dr, PhD)

64. Tot slot, wat denk je dat het doel van dit onderzoek was?

[open antwoord categorie].

+ weet ik niet optie

Heel erg bedankt voor je deelname aan dit onderzoek! Mocht je interesse hebben in de resultaten van dit onderzoek, laat dan je e-mailadres achter: [e-mailadres]. Vergeet alsjeblieft niet om op de pijl rechtsonder te klikken zodat je antwoorden worden opgeslagen.