Food that Tingles Your Brain?

Exploring the Potential of ASMR Fast Food Advertisements by Gaining Insights into their Effects on Consumers' Product and Ad Evaluations as well as on their Evaluation of Voice, Sounds and Visuals

Bachelor Thesis

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Abstract

Only recently, brands in various industries such as the food and beverage industry, furniture and transportation industry have started to recognize that the Internet trend of ASMR videos has marketing potential and based on those have started to create advertisements that include characteristic ASMR stimuli, such as immersive, pronounced sounds, a focus on visual detail and aesthetics as well as a gentle, relaxing voice, which means that they can be referred to as 'ASMR advertisements'. Fast food brands make noticeably much use of ASMR ads, however, no research has been conducted yet on the effectiveness of ASMR fast food advertisements and their effects on consumers. Therefore, this study aimed at taking the first step in exploring the potential of ASMR fast food advertisements compared to regular fast food advertisements among the general public which is constituted by people in fast food brands' target audience. Additionally, audio-visual ASMR content does not always include a voice, however literature suggests that voice aids in the effectiveness of ASMR advertisements, thus this study also investigated to what extent the voice element in an ASMR fast food advertisement can influence the effectiveness of an ASMR fast food advertisement. This study applied a 2 (Type of advertisement: ASMR versus Regular) x 2 (Voice: Yes versus No) independent measures experimental design and as instrument an online questionnaire was used. The final sample consisted of 131 non-vegan/-vegetarian participants who do not watch ASMR videos regularly, making them part of the general public. It was found that the ASMR fast food ads led to more positively perceived visual ad aesthetics and that the ASMR fast food ad with voice lead to a more positive sensory expectation evaluation and to more positively perceived visual ad aesthetics than the regular fast food ads with voice. Also, both the ASMR ad with and without voice led to promising results since the ASMR ad with voice led to a more favourable sensory expectation evaluation than the ASMR ad without voice whereas the ASMR ad without voice led to more positively perceived visual ad aesthetics than the ASMR ad with voice. Moreover, the sounds and voice in the ASMR advertisements were preferred over those in the regular advertisements. Thus, this study yielded valuable first insights for marketers about the use of ASMR advertisements.

Keywords: ASMR, sensory phenomenon, sounds, voice, visuals, consumer responses, cross-modal correspondences, theory of processing fluency of aesthetic pleasure

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Since a few years, a fast spreading Internet trend with a growing community base has been ‘ASMR’ which stands short for the ‘Autonomous Sensory Meridian Response (Polito, 2017). Specifically, ASMR is a sensory bodily response (Fredborg, Clark & Smith, 2018) which people experience in form of “intense, pleasurable tingling sensations in the head and neck regions” (Fredborg, Clark, & Smith, 2017, p. 1) as a reaction to certain tactile or audio-visual stimuli, referred to as ASMR triggers. According to Richard (2014a), these sensations, or tingles, can also be felt down the spine or in the whole body and besides these physical ASMR sensations, ASMR triggers can elicit psychological ASMR sensations such as euphoria and “relaxation, calmness, comfort, peacefulness, restfulness or sleepiness” (para. 2). As Richard (2014a) puts it: If you for example have ever experienced deep relaxation, soothing or comfort and tingles while getting your hair cut, when someone spoke with a gentle voice, when book pages were turned or when you watched someone paint, it is likely that you have experienced ASMR. Generally, triggers of ASMR fulfill specific characteristics which are a gentle voice, pronounced, immersive sounds, light touch, aesthetic visual elements as well as a calm and relaxing environment (Richard, 2014a). Specific triggering visuals can be details, product material and colour. Regarding voice, ASMR videos with and without a person’s voice exist and both kinds enjoy great popularity. However, according to Richard (2014c), ASMR scenarios should include a voice as he describes it as a key component in eliciting ASMR and in creating a valuable ASMR experience. This is in line with regular advertising in which voice is considered a focal point of attention (Dahl, 2010).

Ways in which these triggers are intentionally used range from slow movements and crisp sounds (Barratt & Davis, 2015) by using tapping motions on objects, scratching and crinkling sounds to watching someone prepare and eat food, whispering and soft talking (Polito, 2017), flipping and reading book pages, brushing microphones and hair, massaging and touching someone or making mouth sounds such as lip smacking. A few searches on YouTube for ASMRtists result in many video examples that include these triggers.

Today’s online trend regarding ASMR has started in 2009 (Richard, 2014b) and concerns videos that are created by so-called ASMR artists (ASMRtists) to intentionally trigger ASMR among viewers. Nowadays, thousands of ASMRtists create such ‘ASMR videos’ and at this point in time some of the best-liked artists have almost three million subscribers, such as ‘Gibi ASMR’, or even more such as ‘Zach Choi ASMR’ with 7.5 million viewers. Regarding voice, ASMR videos with and without a person’s voice exist and both kinds enjoy great popularity. Only recently, brands have started to make use of ASMR content with and without voice (Messitte, 2015; El Chaar, 2019) since they have recognised marketing potential in the

ASMR content and its growing community (Richard, 2014c). For example, McDonald's, KFC, Ritz, SodaStream, Dove, IKEA, Toyota and Pepsi have followed the trend. However, research is missing which means that brands make use of ads that include the characteristic ASMR triggers described above, which can be referred to as 'ASMR advertisements', blindly and tap in the dark about their effects on consumers' product and ad evaluations. Brands in the food and beverage industry and especially fast food brands, such as KFC and McDonalds, have started to use ASMR ads and such as for any industry making use of them, for the fast food industry a research gap exists which this study focuses on. It is unclear yet what effects ASMR fast food ads have and whether the advertisement elements voice, sounds and visuals are more effective in regular advertising style or ASMR advertising style.

Literature suggests that audio-visual ASMR fast food advertisements can potentially enhance consumers food and ad evaluation due to their focus on aural stimulation through sounds and voice (Spence, 2020) and also due to their focus on visual detail, colour and overall aesthetics of objects (Barratt, Spence, & Davis, 2017; Spence, 2020; Kovacevich & Huron, 2018). Also, Spence (2020) found that auditory triggers related to ASMR hold great potential in making people's food and drink experiences more memorable, emotion-involving and stimulating, which suggests a potential added value of ASMR fast food ads over regular fast food ads.

Moreover, people who regularly watch and engage with ASMR content are more likely to be influenced by ASMR due to their experience with it than people who do not do so who constitute the general public (Poerio, Blakey, Hostler, & Veltri, 2018; Conti, 2019). Thus, it is valuable for marketers to know whether ASMR fast food ads can be effective among the general public which is the target group of many fast food brands (HeartofCodes, 2018; Dudovskiy, 2016). Hence, the aim of this study is to explore the potential of audio-visual ASMR fast food advertisements compared to regular audio-visual fast food advertisements among the general public to draw conclusions about what kind of fast food ad affects consumers' evaluations of voice, sounds and visuals as well as their ad and product evaluations more favourably, yielding practical implications for marketers. Thus, this study is not interested in to what extent ASMR fast food advertisements can elicit physical and psychological ASMR sensations.

In this study a 2 (type of advertisement: ASMR versus Regular) x 2 (voice: Yes versus No) experimental design is used. All four conditions include visuals and sounds. Voice is included as an extra independent variable to see whether an ASMR fast food ad with voice is more effective than a regular fast food ad with voice and whether the ASMR fast food ad with voice is more effective than the ASMR fast food ad without voice – which is what literature

suggests. Specifically, it is tested to what extent the type of advertisement (Regular/ASMR) and voice (No/Yes) influence consumers' product and ad evaluations. Also, this study investigates the effect of type of advertisement and voice on consumers' evaluations of the advertisement elements voice, sounds and visuals to see whether the kind of voice, sounds and visuals characteristic for ASMR ads are preferred over the voice, sounds and visuals characteristic for regular ads in the context of fast food advertising. Moreover, it is tested to what extent consumers' evaluations of the voice, sounds and visuals mediate the effects of the type of advertisement and voice on consumers' product and ad evaluations. This study tries to answer the following research question:

'To what extent can ASMR advertising be more effective than regular advertising in audio-visual fast food advertisements and to what extent does the voice element influence the effectiveness of an ASMR fast food advertisement?"

This research is divided into several sections. Firstly, chapter two entails the theoretical framework which explains the hypothesized relationships between the independent variables (type of advertisement and voice), assumed mediators (evaluation of voice, evaluation of sounds, evaluation of visuals) and dependent variables (purchase intention (a), product attitude (b), advertisement liking (c), sensory expectation evaluation (d), perceived visual ad aesthetics (e)). Secondly, the research method and design are elaborated on in chapter three, followed by the results in chapter four. In chapter five, the results, theoretical and practical implications, limitations of this study and recommendations for future research are discussed. Lastly, a conclusion is given.

2. Theoretical framework

In the following, relevant information in the context of this study is provided on ASMR and ASMR content.

2.1. Definition of ASMR

'ASMR' stands short for the 'Autonomous Sensory Meridian Response' (Polito, 2017). Expressed scientifically, ASMR is a perceptual, "atypical sensory phenomenon" (Fredborg, Clark & Smith, 2018, para. 1) which is felt as "intense, pleasurable tingling sensations in the head and neck regions" (Fredborg, Clark & Smith, 2017, p. 1) or in the whole body as a response to certain tactile, aural, visual or audio-visual stimuli referred to as triggers (Barratt & Davis, 2015). These tingling feelings on the skin are also referred to as tingles (Messitte, 2015) and can be accompanied by euphoric feelings, explaining why ASMR sensations are also called 'brain orgasms' by media outlets (Beck, 2013). Polito (2017) has conceptualized the acronym ASMR in the following way: 'autonomous' stands for the self-governing nature of the phenomenon which means that people cannot influence when it appears as a response to external stimuli, 'sensory' expresses that ASMR concerns the human senses, 'meridian' refers to a climax and 'response' describes an experience triggered by some kind of stimuli.

Besides the physical 'tingling' ASMR sensation, people who experience ASMR (ASMRers) report that ASMR benefits them psychologically by helping them to relax, fight insomnia, feel calm, comforted, to ease chronic pain and anxiety (e.g. Messitte, 2015; Long, 2017; Lopez, 2018). Many of these alleged beneficial effects of ASMR on health have been proven by science, for example for treating depression, chronic pain and insomnia (Barratt & Davis, 2015), relaxation and calmness (McErlean & Banissy, 2017), excitement as well as for reducing stress and anxiety (Poerio et al., 2018). Furthermore, Richard (2014a) explains that ASMR triggers can be auditory, visual, audio-visual but also tactile, for example when someone's hair or back is touched and states as characteristic triggers light touches, a soft, gentle voice, pronounced sounds such as crinkling of paper and tapping on objects as well as aesthetic visuals and a calm environment. The researcher further differentiates between unintentional and intentional ASMR triggers, with the first referring to triggers that are not used on purpose, for instance at the hairdresser or doctor. However, the focus of this study lies on intentional ASMR, which refers to triggers used to intentionally elicit ASMR sensations in people, as Richard explains, and ASMR videos on YouTube as well as ASMR advertisements

do exactly that. Ads that include characteristic ASMR stimuli, or triggers, as described above and therefore have a distinct ‘ASMR style’ can be referred to as ‘ASMR advertisements’.

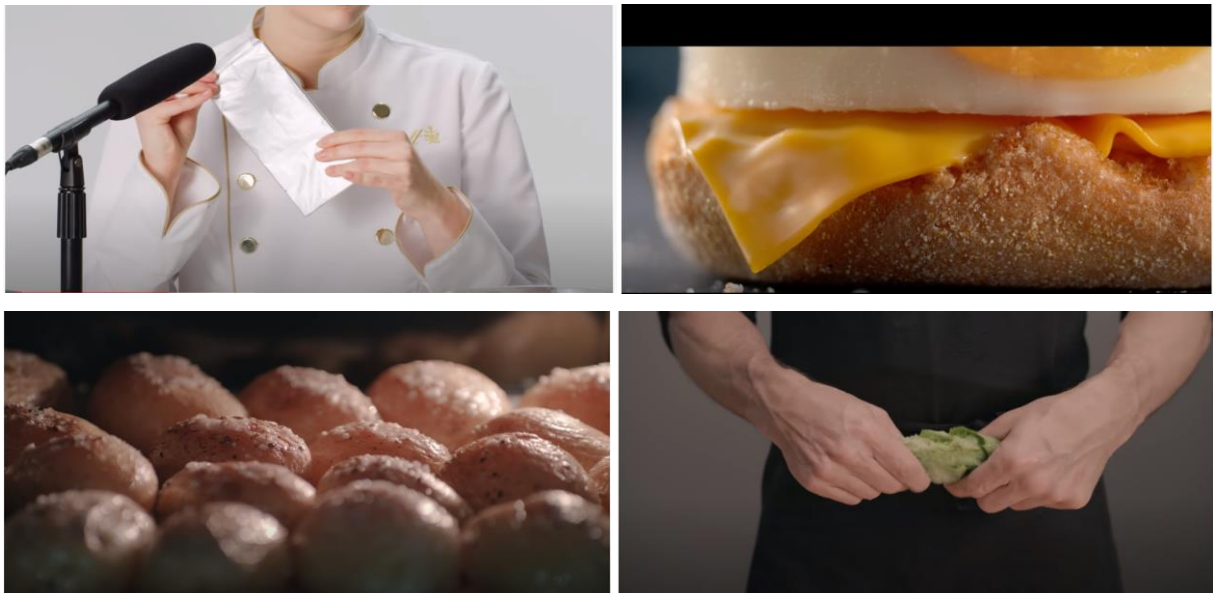
2.2 Research on ASMR and Food

Regarding kinds of ASMR videos, ASMRtists let their creativity flow freely which has led to a variety of video themes and triggers. Looking specifically at stimuli in food ASMR videos, mouth sounds and chewing sounds as well as close-up visuals of the food and person eating it can be identified. However, these stimuli polarize people into either liking or strongly disliking the video, as a study by Barratt and Davis (2015) shows. Their study results showed that participants either felt tingling sensations or misophonia-related sensations, with misophonia standing for the hatred of sound. This kind of response has also been observed by Fredborg, Clark and Smith (2017) since ‘chewing sounds’ was one of the most disliked items. Nevertheless, chewing sounds are not an issue in ASMR fast food ads. The ASMR food videos on YouTube differ from ASMR food ads in the sense that they have different intentions. Specifically, ASMR food ads try to frame the product in an appealing and appetizing manner in a short period of time and to appeal to the ASMR community, eating sounds should be avoided (Bode, 2019). In contrast, food ASMR videos on YouTube are usually more than 10 minutes long and focus on the chewing sounds and close-up eating, which for example ‘SAS-ASMR’ does on YouTube. Brands that have created successful food ASMR ads include essential ASMR stimuli, which are a gentle voice, aesthetic visuals and pronounced, immersive sounds (Richard, 2014a).

Moreover, ASMR in relation to food ads has not been investigated much yet. Russell (2019) looks at food ASMR videos from a cultural perspective, arguing that the trend of eating food online is an outcome of capitalist culture and the attention-seeking need to engage in an online setting. He further explains that through images and videos of food shared in the online environment, people can “climb social hierarchies, display the worldliness and sophistication, […] and connect to competing notions of nationality and heritage” (para. 1). Moreover, a study by McErlean and Banissy (2017) that investigated ASMR triggers identified crisp sounds as one of the top ASMR triggers, with 36% of participants rating them favourably, illustrating the usefulness of studying ASMR fast food advertisements and their effects on consumers product evaluations such as their expectation of sensory product characteristics. Figure 1 shows screenshots of ASMR fast food and food advertisements.

Figure 1

Screenshots of ASMR fast food/ food advertisements



Note. From left to right, screenshot one is from “Lindt Excellence ASMR” by Lindt Chocolate Canada, 2020, YouTube. Screenshot two is from “McDonald's - Egg McMuffin - Un moment de douceur” by TBWA Paris, 2019, YouTube. Screenshot three and four are from “Avez-vous déjà entendu un steak ? Vidéo ASMR | Buffalo Grill” by Buffalo Grill, 2018, YouTube.

2.3 Rise of ASMR Advertising

Over the last few years, the online prevalence of ASMR has been recognized by newspapers such as the New York Times and Washington Post, by the W magazine, online channels such as BuzzFeed as well as by the social media platform Reddit (Lopez, 2918). Also, celebrities in the movie, music and sports industry are exploring ASMR triggers on their own terms (Richard, 2014d). Not long ago, brands have started to make use of ASMR advertisements (El Chaar, 2019). Brands in the food and beverage, transport, electronics, furniture and beauty industry such as McDonald’s, KFC, Ritz, SodaStream, Dove, Apple, IKEA, Toyota and Pepsi have followed the trend already (Richard, 2014c), with fast food brands being among those that create ASMR ads the most. According to Spence (2020), fast food brands’ endeavour to integrate aural and visual ASMR stimuli into their content can be ascribed to the growing popularity of ASMR videos on the Internet. The ASMR community has specific expectations of what real ASMR content is (Bode, 2019), some brands have received negative backlash from the ASMR viewers (ASMRers) who felt that the brands have failed to implement ASMR stimuli

in their ads correctly. In the context of this research this emphasizes that it is crucial for fast food brands to make informed decisions about the use of ASMR ads.

2.4 ASMR Advertising and Multisensory Marketing

As ASMR triggers, sounds and visuals are key elements in ASMR advertising and enable to recognize ASMR content since they fulfill specific characteristics, as elaborated on in section 2.7.1 to 2.7.3. To explore the potential of ASMR advertising it is compared to multisensory marketing. Multisensory marketing engages several senses of consumers and can affect "their perception, judgement and behaviour […]" (Krishna, 2011, p. 332). It has been thoroughly researched in relation to food and has yielded valuable insights into the interplay of music, sounds, visuals, thus into cross-modal correspondences, for example between the taste and smell modalities (Krishna, Morrin, & Sayin, 2014) or between sounds and visuals (Spence, 2012). According to Nijholt, Velasco and Huisman (2016), all human senses can influence the way people experience their food and beverages, stimulated by triggers such as colour and shape of food, background sounds or sounds produced by chewing it. Sensory and multisensory marketing are practiced by marketers to a large extent. Audio-visual ASMR advertising is similar to multisensory marketing because it also addresses multiple senses of the consumer and tries to subconsciously elicit consumer responses. Smith, Fredborg and Kornelsen (2019) assert that the ASMR experience is complex and involves not only our senses but also cognitive abilities related to movement, emotion and attention, which underlines the multi-dimensionality of ASMR content and its potential to offer consumers a richer and more immersive advertisement experience.

2.5 ASMR Advertisements and Visual Ad Aesthetics

The potential of ASMR ads is further suggested by their relation to the processing fluency theory of aesthetic pleasure.

Looking at visual aesthetics, ASMR YouTube videos advertisements seem to relate to the theory of processing fluency, which can be defined as "the ease with which information flows through the cognitive system […]" (Reber, 2012, p. 225). In other words, processing fluency refers to how easily we humans can process information. The processing of information is fluent when the information we process is easy and fast and it is disfluent when it is complex or difficult and slow, as Reber (2012) explains and he further distinguishes between two determinants of processing fluency: Neurological predisposition and prior exposure to a

stimulus. The first means that the human brain can naturally process certain information more easily than other information, for example symmetry compared to asymmetry, round compared to pronged shapes and high- compared to low- figure ground contrast and the second determinant implies that we can process a stimulus more easily if we have been exposed to it before and that we can identify it faster if it is repeated, which Schwarz (2004) also claims. The kind of information accounted for in the theory of processing fluency is mainly visual in nature which is not surprising considering that visual elements are described as most important for aesthetic responses (Bloch, as cited in Mahlke, 2008).

Regarding the effects of processing fluency in the marketing context, Reber, Winkielman and Schwarz (1998) found out that stimuli were judged as more appealing when the figure-ground contrast was high and that the longer stimuli were shown, the more participants liked and the less they disliked them. The researchers concluded that processing fluency increases liking, that longer exposure to stimuli increases processing fluency as well as that processing fluency increases perceived prettiness and decreases perceived ugliness. This finding is important for the comparison of regular fast food and ASMR fast food ads, regarding that in ASMR stimuli are shown longer to the audience, which could, following the logic of the study findings, lead to higher product liking and higher perceived visual ad aesthetics compared to regular fast food ads. Winkielman and Cacioppo (2001) also found that processing fluency leads to positive affective judgements as signified by higher brain activity in a specific brain region as a response to pictures fluent to process.

A specific kind of processing fluency is the processing fluency of aesthetic pleasure referring to the aesthetic evaluation of a stimuli based on how fluent it can be processed (Reber, Schwarz and Winkielman, 2004). The researchers Reber, Schwarz and Winkielman (2004) also propose that “the more fluently the perceiver can process an object the more positive is his or her aesthetic response” (p. 377). According to them, stimuli features that enable high processing fluency and thus affect aesthetic judgements are “figural goodness, figure-ground contrast, stimulus repetition and symmetry […] and [o]ther variables that influence processing fluency, like visual or semantic priming, similarly increase judgements of aesthetic pleasure.” (p. 364).

ASMR videos and ads relate to these theories due to their nature. ASMR can be described as intrinsically aesthetic, in fact, aesthetic is an essential part of the ASMR experience. For instance, a study conducted by Barratt, Spence and Davis (2017) shows that the symmetry, material and focus on small physical details by the ASMRtists with certain trigger objects are ‘very important’ to some participants as well as an “effortless, automatic flow of movement” (p. 9) created through expert use of triggers by the ASMRtists. In the context of

food ASMR, Francis (2019) describes the pervasive presentation of food in the media as an aestheticization of food and states that this is practiced evidently in ASMR food videos. As examples, he mentions “a video tutorial of a BBQ in which hands are shown pulling apart meat like Viennese Actionism […] [and] a highly technical lab prep for tagliatelle […]” (p. 62).

Thus, these theories and study findings show that ASMR content can be associated with the processing fluency theory of aesthetic pleasure and that food ASMR videos can be seen as aesthetic in nature. Also, based on research findings that longer exposure to stimuli increases processing fluency which increases liking and perceived prettiness, this study assumes that aesthetic visuals in ASMR fast food ads can enhance the processing fluency of the ads and can thus more positively affect the perception of visual ad aesthetics. This leads to the following exploratory research hypothesis:

H1: The ASMR fast food advertisements lead to more positively perceived visual ad aesthetics (e) than the regular fast food advertisements.

2.6 Cross-Modal Correspondences between Vision and Audition

Moreover, visual aesthetics are reinforced by perceptions from other sensory domains such as sounds (Hekkert, 2015). Specifically, cross-modal correspondences between the visual and sound sphere exist, meaning that vision and audition can interact and if the information perceived in both domains complements each other this can result in an harmonious perception of a given stimuli (Kanaya, Kariya, & Fujisaki, 2016). Referring back to Hekkert (2015), he describes such perceived harmony as characteristic for an aesthetic experience. Hence, it is inferred that besides visuals, the voice and sounds in the fast food advertisements can potentially influence the perception of the advertisements’ visual aesthetics. Considering that ASMR content is aesthetic in nature, it is suggested that the voice and sounds in ASMR advertisements are more effective in contributing to a visually aesthetic experience than they are in regular advertisements, which is considered in the hypotheses below.

2.7 The Advertising Elements Voice, Sounds and Visuals

The voice of the speaker, sounds, visuals and the environment are four essential ASMR stimuli, thus essential characteristics of ASMR content and this study focuses on voice, sounds and visuals due to the study context. To understand why environment was excluded, see Appendix A. ASMR fast food ads have to include the characteristics of these four essential characteristics

to be legitimately labelled as ASMR content. Further hypotheses be tested in the experiment of this study are posed in the following.

2.7.1 Voice

In many ASMR videos, the speaker's voice is one of the most important elements to trigger physical and psychological ASMR sensations in viewers. Andersen (2015) goes as far as asserting that the voice constitutes the "focus of attention" (p. 689) which would be supported by the facts that firstly, some ASMR videos only contain audio and show no visual triggers and secondly that ASMRtists have started to use higher-quality microphones as well as binaural microphone set-ups which consists of two microphones and creates a 3-D sound environment to make the listeners feel like they are in the same room with the artist, providing an immersive and more profound experience of the voice and other sound triggers. In a study on ASMR trigger preferences conducted by Barratt, Spence and Davis (2017), 58 % of the participants reported to perceive binaurally recorded audio as more effective than normally recorded audio and 84% stated that they watch binaural ASMR regularly. At the same time, the video quality can remain poor (Gentle Whispering ASMR, as cited in Andersen, 2015).

Moreover, researchers have emphasized that whispers are well-liked triggers (Poerio et al., 2018; Richard, 2014a; Andersen, 2015) and are used in many ASMR videos, for example in those from ASMRtists such as 'GentleWhispering' and 'ASMRGlow' practice. Furthermore, in regular sensory advertising, the voice has been shown to impact consumers' product evaluations and can be used to emphasize sensory product characteristics (Krishna, 2011). In ASMR advertisements, it can be observed that the voice is particularly used to underline a product's attributes, immerse the viewer into the advertisement, so to speak, and to ingrain the product and associated sensations into the mind of the viewer, which has been intentionally applied for example in the KFC chicken wings commercial (KFC UK and Ireland, 2018). In a study on ASMR conducted by Kovacevich and Huron (2018), participants evaluated the quality of the voice as the most ASMR triggering category and commonly preferred a soft-spoken or whispered voice. Other researchers such as Richard (2014a) also state that the voice in videos does not necessarily have to whisper, it is rather most important that ASMRtists are speaking gently and with low volume to trigger ASMR sensations, which explains why many ASMRtists on YouTube create 'soft-talking' videos. In fact, ASMR food ads include either whispered voices or gentle, low volume voices, as to be seen in the ASMR Michelob Ultra beer advertisement (Glas, 2019).

Moreover, as indicated before, many non-talking ASMR videos exist which only focus on sounds, created through using every-day objects, as well as on visuals. Brands seem to have

taken notice of these kinds of videos since ASMR ads exist that do not include a voice. Nevertheless, according to Richard (2014c), ASMR scenarios have to include "[a] kind or caring person […] with a gentle voice, gentle touch, gentle sounds, and/or gentle movements." (Art of ASMR – Commercials). However, many ASMR videos on YouTube exist that focus only on sounds and visuals and their creators have large audiences, such as 'Gibi ASMR', 'Gentle Whispering' and 'ASMR Glow'. Moreover, ASMR videos that do not focus on giving personal attention often include triggers that only show the hands of the ASMRtist who is performing certain triggers without talking. Some ASMR advertisements also do not include a voice and only focus on other ASMR-triggering sounds and visuals.

Findings in ASMR research have shown that participants evaluate an ASMR video more positively when the voice pitch is low compared to high, with 56% of the participants agreeing to this versus 12% disagreeing (Barratt, Spence, & Davis, 2017). Low-pitched voices are generally perceived more favourably than high-pitched voices, as Krishna (2011) asserts, and in contrast to regular advertisements, the use of low acoustic pitch can be observed in many ASMR videos on YouTube as well as in ASMR ads and is used in combination with a gentle, soft speaking voice, which popular channels such as 'ASMR Zeitgeist', 'Ephemeral Rift', 'Caroline ASMR', 'Gentle Whispering' and 'ASMR Glow' practice.

These findings are supported by research on the effects of vocal pitch in advertising. A study in multisensory research conducted by Lowe, Ringler and Haws (2018) shows the potential added value of using ASMR fast food ads with voice instead of regular fast food ads with voice, answering the question of how acoustic pitch used in advertising can influence consumers' purchase behaviour and product perception. They found that among hungry consumers, the desire for the advertised food item was higher in a setting with low pitch because participants perceived the product to be bigger and thus more filling. The researchers concluded that slight differences in advertising stimuli can significantly affect consumer behaviour, which was tested in the study by manipulating both the music pitch and vocal pitch of a person. Further, a study conducted by Simner, Cuskley and Kirby (2010) describes voice as potent for cross-modal relationships, specifically between voice and taste and discovered that sweet tastes were perceived as low in voice frequency and as fitting to "smoother, more continuous vowel sounds than the bitter and sour tastes" (p. 563). Relating to that, since the voice in ASMR videos and advertisements is usually low-pitched, smooth and soft sounding (Richard, 2014a), it makes it potentially useful for advertising sugary fast foods, such as desserts from McDonalds or KFC, considering the study findings by Simner et al. (2010). Building further on this specific study, research findings of Poti, Slining and Popkin (2013) suggest that ASMR fast food ads with

voice might also be useful for advertising non-sweet fast food, since fast food contains 'SoFAS' which translates to "solid fat and added sugar" (p. 551), the latter making it taste somewhat sweet in general, even though it is a pizza or hamburger. Moreover, Motoki, Saito, Nouchi, Kawashima and Sugiura (2019) also studied voice in the context of advertisement effectiveness and found an effect of vocal pitch on participants' purchase intention, so they concluded that the correspondence between voice and pitch influences consumers' preferences.

As clarified above, ASMR content does not necessarily need a voice to be labelled as such. Nevertheless, as research shows, voice can potentially add value to an advertisement by influencing consumers' intentions and product perception. Also, research indicates that a voice in ASMR fast food advertisements might be more effective than the voice in regular fast food advertisements in underlining sensory product attributes. Moreover, consumers' evaluation of voice can influence consumers responses and behaviour. However, since only little research has been conducted yet on the use of voice in ASMR advertisements, the following hypotheses tested in this study are exploratory:

H2: The ASMR advertisements lead to higher purchase intention (a), a more positive product attitude (b), higher advertisement liking (c) and a more favourable sensory expectation evaluation (d) than the regular fast food advertisements.

H3: The ASMR fast food advertisement with voice leads to higher purchase intention (a), a more positive product attitude (b), higher advertisement liking (c), a more favourable sensory expectation evaluation (d) and more positively perceived visual ad aesthetics (e) than the regular fast food advertisement with voice (1) and than the ASMR fast food advertisement without voice (2).

H4: The voice in the ASMR fast food advertisement will be evaluated more favourably than the voice in the regular fast food advertisement.

H5: The effects of the regular/ASMR fast food advertisements on purchase intention (a), product attitude (b), advertisement liking (c), sensory expectation evaluation (d) and perceived visual ad aesthetics (e) are mediated by the evaluation of the voice in the advertisements.

H6: The effects of the regular/ASMR fast food advertisements with voice on purchase intention (a), product attitude (b), advertisement liking (c), sensory expectation evaluation (d) and

perceived visual ad aesthetics (e) are mediated by the evaluation of the voice in the advertisements.

2.7.2 Sounds

The sound dimension in ASMR content is considered an integral part of ASMR. For instance, Richard (2014a) describes the nature of sounds in ASMR videos as gentle, soft and low in volume. In line with how he explains the characteristics of ASMR sounds, ASMRers have reported to dislike very loud sounds as well as too fast and too quiet sounds (Kovacevich & Huron, 2018). In the same study, participants commonly indicated interruptions in ASMR videos due to brand advertisements as disturbing because they led to sudden, extreme increase in volume. Thus, food brands that want to advertise on YouTube by partnering with ASMRtists, which is a common marketing strategy of brands, need to consider this to meet the expectations of ASMRers. Moreover, in a study on ASMR trigger preferences, Barratt, Spence and Davis (2017) have found that 56% of participants preferred lower pitched sounds compared to 12% of participants that preferred higher pitched sounds and some studies' results provide evidence that sounds in ASMR videos are more important than visuals, such as a study by Bode (2019) which shows that 72.2% of participants considered sounds more relevant than visuals. This is supported by Kovacevich and Huron (2018) who had some participants that stated to mute the audio to focus on the visuals in an ASMR video, emphasizing the importance of the aural sensory domain in ASMR advertisements.

Many studies have investigated cross-modal correspondences between sound and taste. For example, a study by Woods et al. (2011) found that background noise can be used to enhance the perceived crunchiness of dry food products that are naturally noisy. In the further context of background noise, some researchers say that loud background sounds can be arousing, whereas other researchers say that they make it harder to focus on other sensory characteristics of a product since it may overpower those aural stimuli that inform consumers about the product's texture, flavour or taste (Spence, 2012). Regarding music, it should be avoided in ASMR ads because the ASMR community dislikes it (Barratt, Spence, & Davis, 2017). This is contrary to findings in multisensory research, in which studies show that background music is intentionally used to influence consumers' mood and purchase intentions (Alpert & Alpert, 1990). However, the integration of music requires sensitivity. Zhu and Meyers-Levy (2005) for instance have investigated conditions under which background music in advertisements influences product perceptions and found that participants derived meaning from music only when they were processing information intensively compared to when they

were not, showing that music can affect consumers under conditions demanding to implement in marketing practice. Hence, marketers should be careful with the use of music, however contrary to ASMR food commercials, many regular food commercials include music to promote a certain mood or sentiment (Alpert & Alpert, 1990) which can easily be distracting from the product (Lantos & Craton, 2012).

Sounds have also been studied in relation to the visual modality of human senses. In that context, Roque, Lafraire, Spence and Auvray (2018) studied the influence of certain audio-visual stimuli on perceived freshness and consumer evaluations of beverages. Specifically, the study focused on the effect of audio-visual stimuli which provided information about the likely temperature, colour and amount of carbonation on the perceived freshness of beverages. The findings show that when aural and visual stimuli were combined, it was more likely that participants perceived the beverages as fresh. Combining aural and visual stimuli in a way that they complement each other is characteristic for ASMR content (Richard, 2014a), indicating that the sounds used influence how aesthetic visuals are perceived.

According to Eder and Krishna (2010), the sound that food makes is a key component in affecting taste perceptions since it informs the consumer about product freshness and quality. Taking a look at regular fast food ads, it can be commonly seen that sounds are used to emphasize product characteristics, such as the crunchiness of a burger patty or chicken wing coating or the freshness of salad on a burger to increase product liking. Emphasis on sounds is also used in ASMR videos and ASMR fast food ads, but can be described as more deep-laid and pronounced to let the sounds sink in into the mind of the viewers. This observation is supported by the careful and intentional use of sounds in ASMR videos to stimulate ASMR sensations among the audience (Richard, 2014a). Also, many participants in a study by Barratt, Spence and Davis (2017) indicated in a survey that they would like immersive sounds that make them feel as if they would be there when they close their eyes, which is what sounds in ASMR ads intend to do. Sound triggers are usually performed for at least one minute, according to the same study, which might explain the fact that ASMR ads are significantly longer in duration than regular ads.

More research that supports the potential of sounds characteristic for ASMR content, or ‘ASMR sounds’, in regards to food marketing comes from Spence (2020) who assumes that auditory stimuli eliciting extraordinary emotional responses related to ASMR can potentially transform our food and beverage experiences by making them more “stimulating, more memorable, and more emotionally engaging” (p. 28). Smith, Fredborg and Kornelsen (2019) also acknowledge the potential of ASMR characteristic sounds in ASMR ads by accounting

increased brain activity in the auditory cortex to the acoustics in ASMR videos their participants watched. Based on the research findings in this section, the following exploratory hypotheses are proposed:

H7: The sounds in the ASMR fast food advertisements will be evaluated more favourably than the sounds in the regular fast food advertisements.

H8: The effects of the regular/ASMR advertisements on purchase intention (a), product attitude (b), advertisement liking (c), sensory expectation evaluation (d) and perceived visual ad aesthetics (e) are mediated by the evaluation of the sounds in the advertisements.

2.7.3 Visuals

Visuals are another key component that characterize the ASMR experience. According to Sim (as cited in Baek, Jang, & Chae, 2018), aural triggers accompany visual triggers in ASMR and therefore demand consumers to be more committed to AMR ads with sounds and visuals compared to ads with exclusively visual stimuli. Hong (as cited in Baek, Jang, & Chae, 2018) explains this kind of commitment as "a state of sensorial arousal" (para. 1) which implies that people are completely lost in what they are experiencing, leading to enjoyment and decreased stress levels, even though the stimuli require affective commitment. This notion supports the potential of visuals in combination with sounds in ASMR marketing to create extraordinary, stimulating and emotionally involving advertisements.

An analysis of visual stimuli used by ASMRtists on these triggers reveals that visuals particularly relevant for ASMR videos are the colour, material and details. These visuals need to fulfill specific criteria. For instance, a study conducted by Barratt, Spence and Davis (2017) asked participants from the ASMR community, amongst other things, to give their opinion on the small physical details, symmetry, colour and material a trigger object is made from. The results show that from all these visual aspects, most participants rated the material as 'extremely important', followed by the physical details, symmetry and lastly the colour of the object. Indeed, colour was rated as 'not important at all' by 53.5% of the sample which means that most participants do not consider colours as relevant to experience ASMR sensations. As this study suggests, colours are an important tool for ASMR content creators: ASMRtists often include specific colours in their videos which are in one colour scheme and harmonize with each other, creating an aesthetic atmosphere that fits the mood that a video is supposed to create.

For example, the ASMRtists 'Gentle Whispering ASMR' and 'ASMR Glow' decorate

the background in every video using colours that fit the video theme, such as neutral colours and white for spa treatment or doctor visit role-plays. ‘Gentle Whispering ASMR’ also includes videos on her channel that play with colours as triggers, for example in her “Slow and gentle rainbow glow up” ASMR (Gentle Whispering ASMR, 2020). Thus, regarding colours and their use in ASMR videos, it can be argued that colour should not be neglected since it is an integral element of corporate communication and marketing which has the power to predict consumer behaviour (Aslam, 2006). Especially in the food marketing context, colour is important for communicating product characteristics since as Spence (2015) claims, colour is a relevant sensory cue for the purpose of expectation formation for the flavour and taste of drinks.

Referring back to the study by Barratt, Spence and Davis (2017), one finding was that participants liked to see small physical details of objects, which requires the objects to be close to the camera. The same study also found that slow-paced movements are effective ASMR triggers, which can be observed frequently in ASMR videos to allow people to see objects in detail and to relax. Other research supports these results, such as a study by Kovacevich and Huron (2018) which has identified close proximity and close-up framing as characteristic for ASMR videos. Emphasizing objects’ details has been realized by some beverage and food brands since they have designed their ASMR advertisements in a way that highlights the products’ detail. For example, this has been implemented in the Michelob Ultra pure gold commercial which was created for the Super Bowl in 2019 and has been loved by the ASMR community and the public (Richard, 2019). Close proximity to objects in ASMR to show their details has also been acknowledged by Spence (2020) who refers to close-up shots and “crunching in front of the in-ear microphone” (p. 33).

As Barratt, Spence and Davis (2017) have further found out, materials of objects used to elicit ASMR sensations were perceived as the second most important visual aspect in ASMR videos. The high importance of materials can be confirmed by analysing any ASMR video since it does not matter what scenario or theme is prevalent in it – the material of objects is relevant in any context because it gives viewers an idea of how objects feel if they would touch them and is decisive for the sounds the object can make which can be ASMR triggering. This connection between seeing an object and deducing what is feels and sounds like from what it looks like can be related to cross-modal correspondences which describe the tendency of a sensory feature to be matched with another sensory feature of different sensory nature, such as sight and touch, irrespective of whether the sensory feature is physical or imagined (Spence & Parise, 2012).

Translated to the food marketing context, focus on detail and aesthetics of objects in

audio-visual ASMR content could be beneficial to use in audio-visual fast food advertisements to emphasize and enhance visual product characteristics, which could be, for instance, the freshness of the salad on a burger, the softness of meat, creaminess of a sauce or the crunchy coating of chicken wings. Imram (1999) states that visuals are one of many factors that affect consumers' perception of food products and the extreme visual pronunciation of food characteristics in ASMR ads are assumed to foster more favourable evaluations of visuals and more favourable sensory food expectations, such as for taste and texture, higher purchase intention, advertisement liking, a more positive product attitude as well as more favourably perceived visual ad aesthetics. To test these assumptions, exploratory hypotheses are posed:

H9: The visuals in the ASMR fast food advertisements will be evaluated more favourably than the visuals in the regular fast food advertisements.

H10: The effects of the regular/ASMR fast food advertisements on purchase intention (a), product attitude (b), advertisement liking (c), sensory expectation evaluation (d) and perceived visual ad aesthetics (e) are mediated by the evaluation of the visuals in the advertisements.

2.8 Research Models

Figure 2

Effects of the independent on the dependent variables

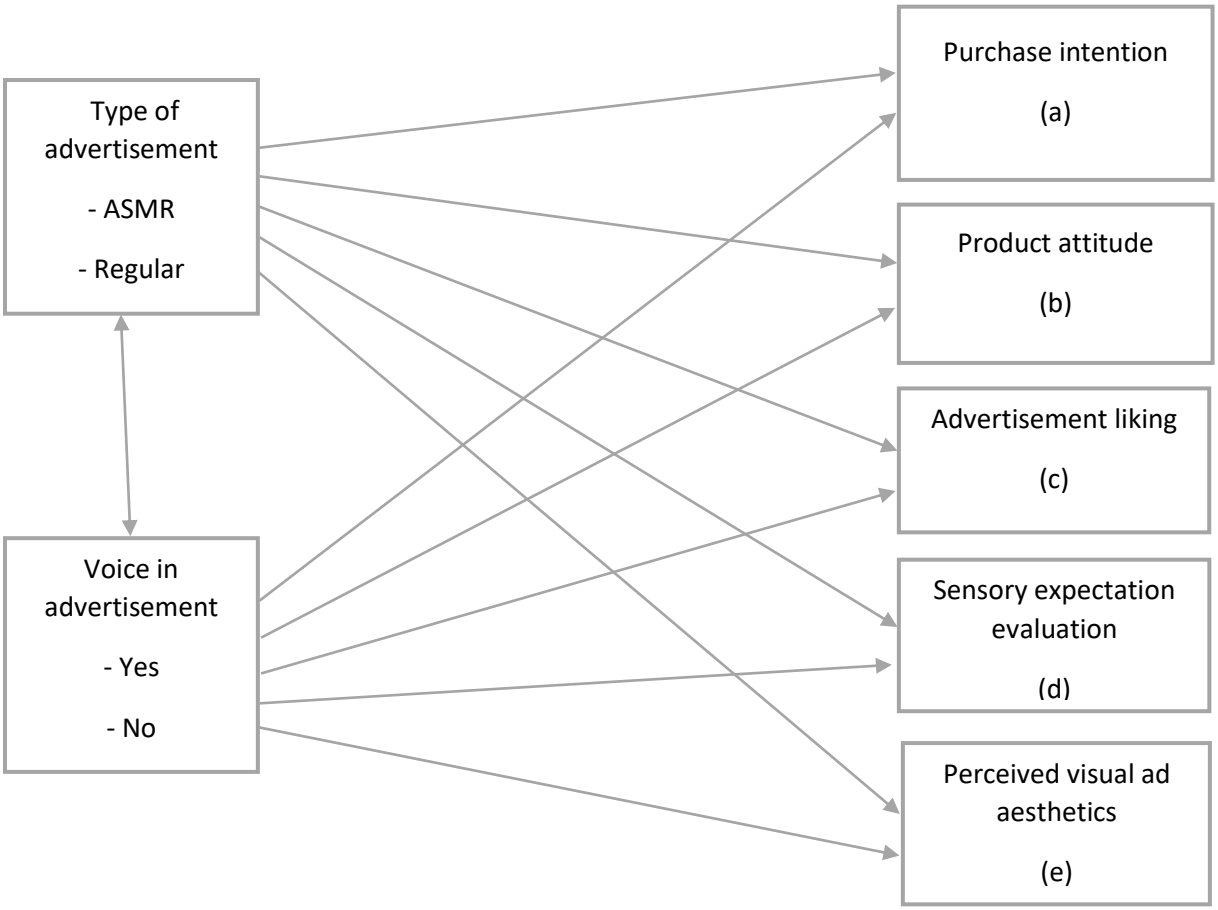


Figure 2. Research model testing the direct and interaction effects of the independent variables (IVs) on the dependent variables (DVs).

Figure 3

Effects of the independent variables on the mediators and the independent variables' indirect effects

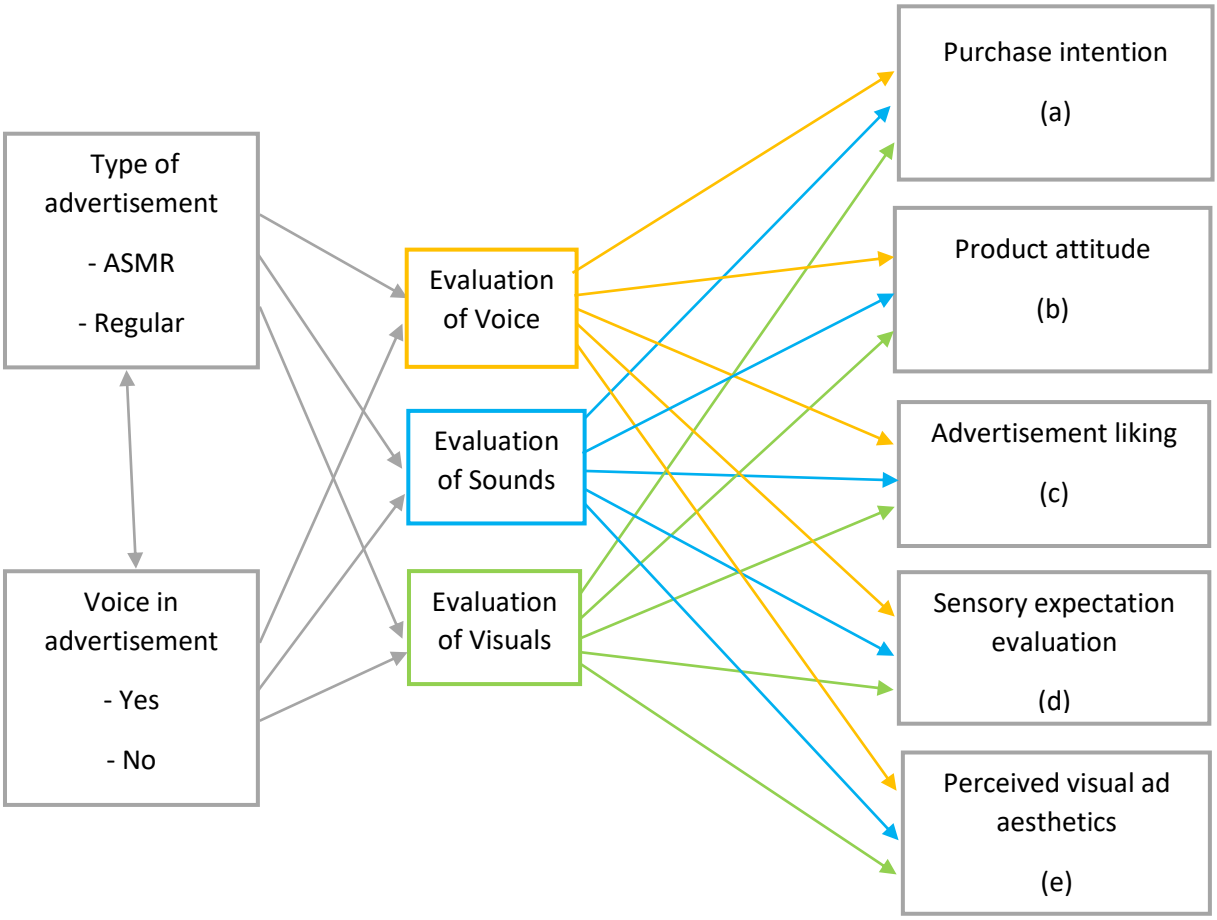


Figure 3. Research model testing the direct and interaction effects of the independent variables on the mediators as well as the indirect effects of the independent on the dependent variables.

3. Methodology

This chapter explains all aspects of the methodology and study design applied in this study.

3.1 Experimental Design

As shown in Table 1, in this study a 2x2 independent measures design was used to explore the effects of the independent variables, or factors, type of advertisement (ASMR vs. Regular) and voice (Yes vs. No). The values Regular and ASMR of the factor type of advertisement were combined with the values No and Yes of the factor voice, resulting in four different conditions.

Table 1

2x2 Independent Measures Experimental Design with 4 conditions

		Type of advertisement	
		ASMR	Regular
Voice	Yes	Condition 1	Condition 2
	No	Condition 3	Condition 4

3.2 Stimuli Materials

The stimuli in this study were four different audio-visual fast food advertisements in two different advertisement types and they included a voice or did not include a voice. Audio-visual means that they all included visuals and sounds. Regarding type of advertisement, two of these audio-visual fast food advertisements were ASMR fast food advertisements which included visuals and sounds that fulfilled the characteristics for visuals and sounds typically used in ASMR fast food advertisements. The other two audio-visual fast food advertisements were regular fast food advertisements, hence included visuals and sounds that fulfilled the characteristics for visuals and sounds used in typical regular fast food advertisements. The first audio-visual fast food ad was an ASMR fast food advertisement, the second was a regular fast food advertisement, the third was an ASMR fast food advertisement and the fourth was a regular fast food advertisement. Referring to voice, the first audio-visual fast food ad and the second audio-visual fast food ad included a voice whereas the third and fourth audio-visual ads did not include a voice. One of the four conditions was randomly assigned to each participant.

The four conditions showed differences that were not accounted for as factors in the experimental design. Firstly, two different fast food products were advertised. Specifically, in

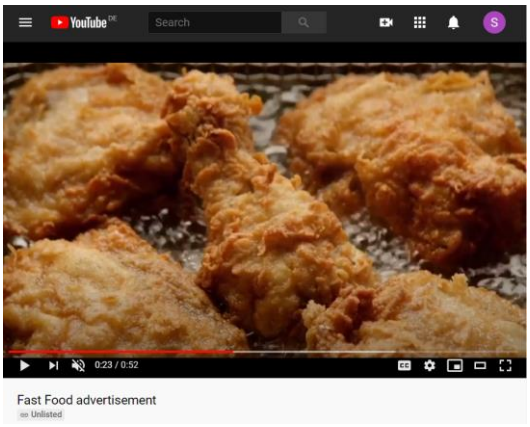
the first and second condition chicken wings were advertised whereas the third and fourth promoted a breakfast burger which was done to ensure that the findings were not bound to a specific fast food product but held true for different fast food products, contributing to the generalizability of the study findings. An unfavourable limitation was that in the fourth condition the advertisement included some other breakfast items besides the breakfast burger which was accepted since this advertisement was the best available option for a regular fast food ad without voice advertising a breakfast burger. Secondly, the regular ads in condition two and four included background music whereas the ASMR ads in the other two conditions did not.

Lastly, the four audio-visual fast food advertisements used were official advertisements of fast food brands. The first audio-visual fast food ad was from KFC, the second from Spur Steak Ranches and the third and fourth fast food ads were from McDonalds. However, all four advertisements were edited by excluding the brand label, spoken and written, to ensure that participants' evaluations of the sounds, visuals and voice as well as their product and ad evaluations were not influenced by potential brand liking. The ads were edited with the video editing program iMovie and before editing, the first ad was 61 seconds long, the second ad was 32 seconds long, the third was 56 seconds long and the fourth was 30 seconds long. After the editing, the advertisements were 53, 25, 56 and 27 seconds long, respectively. To ensure that participants in all conditions had a comparable and fair experience when watching the advertisement in terms of being able to grasp all details, participants that had to watch the second or fourth advertisement were instructed to watch it two times. This way, all participants had an ad watching experience of around 50 seconds.

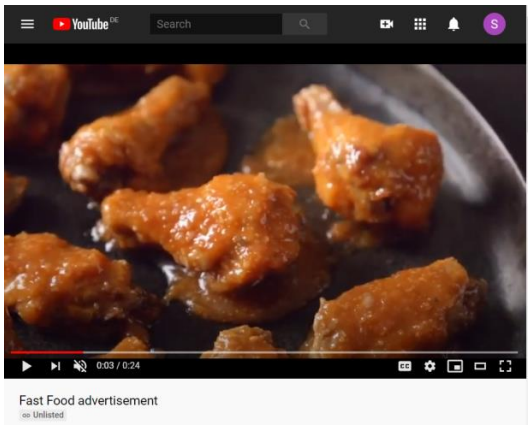
The four fast food advertisements as the stimuli materials can be accessed via YouTube links which are provided in Appendix B. Figure 4 shows screenshots of these stimuli materials. The materials did not have to be adjusted based on results of the pre-test described in section 3.6. Lastly, the videos were uploaded on YouTube as 'unlisted' meaning that only people with the link were able to access them.

Figure 4

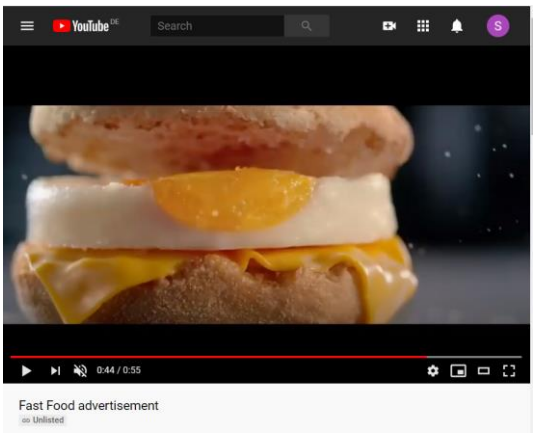
Screenshots of the four audio-visual fast food advertisements



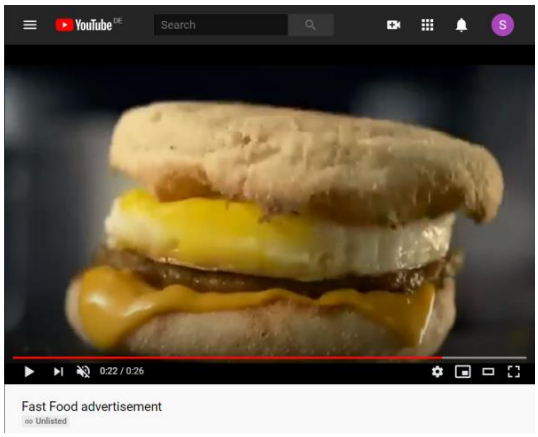
Condition 1: ASMR – with Voice



Condition 2: Regular – with Voice



Condition 3: ASMR – without Voice



Condition 4: Regular – without Voice

3.3. Participants

In the following sections, the sampling of participants and study inclusion criteria, a randomization check, the screening of participants' responses and their sociodemographic characteristics are reported.

3.3.1 Sampling Method and Inclusion Criteria

The sampling method used in this study was purposive sampling since participants had to fulfill two criteria to be eligible for participation as described in the following. Also, participants had to be of legal age, meaning 16 years old or older.

Participants who indicated to regularly watch ASMR videos and therefore had 'ASMR experience' were excluded from the study. The notion that people's reactions to ASMR videos are influenced by how experienced, or familiar, people are with them is supported by several

studies (Conti, 2019; Cash, Heisick, & Papesh, 2018; Poerio et al., 2018; Andersen, 2015). Participants with ASMR experience were excluded to test whether ASMR fast food advertisements are effective among people inexperienced with ASMR who constitute the general public which is the target audience of fast food brands (picesgirl, 2018; Dudovskiy, 2016). Thus, an inclusion check asked the participants how often they watched ASMR videos. If they answered with either 'I never watch ASMR videos', 'I have watched an ASMR video once' or with 'I have watched an ASMR video a few times', they were included in the study because they did not watch ASMR videos regularly, but everyone else was excluded from the study because they indicated to have ASMR experience by answering one of the options 'Less than monthly', 'Monthly (1x-3x)', 'Weekly (1x-6x)' or 'Daily (1x or more)'. Moreover, only non-vegetarian and non-vegan people were eligible for participation. In a second inclusion check participants were asked how often they eat fast food and whether they followed a vegetarian or vegan diet. If they answered with 'Yes', participants were excluded automatically because the fast food ads included meat and other ingredients derived from animals which likely would have influenced their product and ad evaluations negatively.

3.3.2 Randomization Check

A randomization check was conducted to check whether participants significantly differed in the four experimental conditions on any of the sociodemographic characteristics or on ASMR experience. To analyse this, eight Chi-Square tests of independence were performed and the results are reported in Table 2. As the results show, most Chi-Square tests indicated that there were no significant associations between most variables and condition, only one significant association between education and condition was found. However, this significant finding can be considered as lacking practical significance (Cheadle & Turner, 2016). The participants' data was used for further statistical analyses.

Table 2

Results of the Pearson Chi-Square tests of independence

Variable	χ^2	*df*	*p*	Frequency *n* (*N* = 131)
Gender	6.69	3	.083	130
Age	21.24	15	.129	129

Home country	6.92	6	.329	130
Education	18.08	9	.034	131
Occupation	16.46	18	.560	131
Fast food consumption	3.75	9	.927	131
Familiarity with ASMR	9.99	9	.351	131
ASMR experience	3.41	6	.755	131

Note. An Alpha level of .05 was applied. The Chi-Square tests analysed whether participants significantly differed in the four experimental conditions on any of the sociodemographic characteristics or on ASMR experience.

3.3.3 Screening of Responses

The total number of recorded participant answers was 234. This data was screened for participants that had to be excluded for one of the following reasons. Firstly, many participants were excluded because they did not fill out the ASMR perception manipulation check anymore which was placed towards the end of questionnaire. It was essential to know how frequently participants watched ASMR to decide on their inclusion in the final sample. Secondly, some participants were excluded that only filled the questionnaire in partially, leaving out important items that asked for their evaluations of the advertisement elements or only indicating their demographics at the start of the questionnaire. Thirdly, participants that answered to watch ASMR regularly, meaning 'Less than monthly', 'Monthly (1x-3x)', 'Weekly (1x-6x)' or 'Daily (1x-or more)' were eliminated since these answers indicated experience with ASMR. Fourthly, to check whether there were outliers in the data set, an outlier test was conducted. For this purpose, the standardized residuals were saved as variables in the data set as 'ZRE scores'. If these scores did not fall between the values of -3 and 3 but instead below -3 or above 3, this showed that the residuals were not normally distributed and could thus be signified as outliers in the data. Following this logic, two participants' responses had to be excluded. The final sample consisted of 131 participants.

Moreover, the screening of responses revealed that the participants were not divided perfectly equally across conditions, even though this was indicated in the Qualtrics settings before starting data collection. Specifically, condition four was assigned five times more than

condition three and condition one was assigned two times more than condition two. Nevertheless, all questionnaire responses were retained because in total the conditions with the regular ads were only assigned three times more than the conditions with the ASMR ads and this difference was considered acceptable.

3.3.4 Demographics and Inclusion Checks

The final sample of participants (N = 131) displayed specific sociodemographic characteristics, to be seen in detail in Table 3. Regarding gender and age, 80 participants in this study were female and 50 were male with a minimum age of 18 and a maximum age of 66 years. The participants' average age scored M = 27.28 years, SD = 12.07. Moreover, 79 participants live in Germany, 20 in the Netherlands and 31 in other countries than the two which suggest that this study's experiment results can be considered generalizable on a rather international level. In terms of education, most participants mentioned that their highest completed education is the secondary education (n = 65) and many others indicated to hold a University degree (n = 45). Some participants completed college (n = 20) and only one person mentioned primary education as their highest completed level of education. Further, most participants in this study are currently studying (n = 71), followed by being employed full-time (n = 37). Concerning participants' level of familiarity with ASMR, it turned out that 61 of them were familiar with ASMR, but never watched it, whereas 43 participants were not familiar with ASMR and 13 indicated to roughly have heard about it before. Those who said they are watching ASMR were 14 people in total. Lastly, on the question asking for fast food consumption, participants mostly answered to eat fast food monthly (n = 57) or less than monthly (n = 48) and 18 participants noted they would eat fast food weekly. Only eight persons indicated to never eat fast food which was not an exclusion criterion since they indicated to eat animal derived products.

Considering the two inclusion checks, looking at diet it was found that none of the participants had a vegan or vegetarian diet. This means that the automatic dismission of participants who indicated to have a vegan or vegetarian diet was successful. Concerning ASMR experience, most of the participants in the final sample reported to never watch ASMR (n = 59) while many others mentioned to have watched ASMR videos only a few times (n = 41) and 31 participants have watched an ASMR video only once.

Table 3

Socio-demographic sample characteristics

Variable	Frequency (N = 131)		Percent (100 %)	
	Per variable	*n*	Relative	Absolute
Gender	130			
Male		50	38.2	38.5
Female		80	61.1	61.5
Age	129			
16-20		29	22.1	22.5
21-29		74	56.5	57.4
30-39		10	7.6	7.8
40-49		2	1.5	1.6
50-59		6	4.6	4.7
60-69		8	6.1	6.2
Home country	130			
Netherlands		20	15.3	15.4
Germany		79	60.3	60.8
Other		31	23.7	23.8
Education	131			
Complete primary		1	.8	.8
Complete secondary		65	49.6	49.6
College (No University)		20	15.3	15.3
University		45	34.4	34.4
Occupation	131			
Employed (full-time)		37	28.2	28.2
Employed (part-time)		6	4.6	4.6
Unemployed (currently looking for work)		6	4.6	4.6
Student		71	54.2	54.2
Self-employed		5	3.8	3.8
Retired		4	3.1	3.1
Unable to work		2	1.5	1.5
Fast food consumption	131			
Never		8	6.1	6.1
Less than monthly		48	36.6	36.6
Monthly (1x-3x)		57	43.5	43.5
Weekly (1x-6x)		18	13.7	13.7
Daily (1x or more)		0	.0	.0
Familiarity with ASMR	131			
No		43	32.8	32.8
Roughly, I have heard about it before		13	9.9	9.9
Yes, but I never watch ASMR videos		61	46.6	46.6
Yes, I watch ASMR videos		14	10.7	10.7

3.4 Procedure

Before starting this study, the research concept was submitted for ethical approval from the ethics committee of the University of Twente. The online questionnaire as seen in Appendix C was constructed with Qualtrics and was designed in English. Participants were approached by means of Instagram stories, through WhatsApp as well as through the SonaSystem and SurveyCircle platforms. Before starting the study, participants had to agree with an online consent form in which they were informed about the content and aim of the study, their rights as well as about the protection of their personal data. If they disagreed, the online questionnaire was closed automatically. Additionally, participants were provided with the researcher's contact information to be able to reach out in case of questions or concerns. After participants have agreed to participate, they were asked how often they eat fast food and were also asked to indicate as the first inclusion check whether they followed a vegetarian or vegan diet or not. After this, participants were asked about their familiarity with ASMR and in the following had to indicate demographics such as their gender, age, home country, occupation and highest level of completed education. Thereafter, participants were confronted with instructions for watching the fast food ad they were randomly assigned to, followed by the YouTube link to the respective ad.

After watching the ad, participants were asked to indicate their level of agreement/disagreement concerning their evaluations of the voice, visuals and sounds as well as their purchase intention, product attitude, advertisement liking, perceived visual ad aesthetics and sensory expectation evaluation. The question concerning voice evaluation was only shown to participants that were assigned to the two advertisements with voice. Towards the end of the questionnaire, participants were informed about what ASMR is which was followed by the second inclusion check asking the participants how often they watched ASMR videos. After this, participants were confronted with an ASMR perception manipulation check which tested whether participants were able to judge the advertisement correctly either as an ASMR or a regular advertisement. Lastly, participants were faced with a product recall manipulation check which tested to what extent they recalled the type(s) of food being advertised in the advertisement they watched. At the end of the questionnaire, participants were debriefed by thanking them for their participation and providing the researcher's e-mail for potential questions and inquiries about the study.

3.5 Measurement

The instrument used in this experimental study was an online questionnaire in which a 5-point Likert scale was used as an answering scale for most questions where one equals ‘strongly disagree’ and five equals ‘strongly agree’. Thus, the higher the number indicated by the participants was as an answer, the more favourable was their answer. Since the scales used for the inclusion and manipulation checks differed from this scale, they are explained in the following.

Participants’ answered how often they eat fast food on a 5-point scale from ‘Never’ to ‘Daily (1x or more)’ which was adopted from a study by Poerio et al. (2018). Considering the inclusion check for diet (vegan or vegetarian), participants could answer with “Yes” or “No”. Moreover, participants answered how familiar they were with ASMR on a scale logically derived by the researcher with the answer options ‘No’, ‘Roughly, I have heard about it before’, ‘Yes, but I never watch ASMR videos’ and ‘Yes, I watch ASMR videos’. The measurement scales for gender, age, home country and occupation were taken from a study on ASMR by Bode (2019) and the scale for education was applied from Pambo, Okello, Mbeche, Kinyuru and Alemu (2018). As for diet, the scale used to measure participants’ ASMR experience as an inclusion check was from Poerio et al. (2018), however two items were added which are ‘I have watched an ASMR video once’ and ‘I have watched ASMR a few times’. For the ASMR perception manipulation check, a 5-point Likert scale was used for which one was coded as ‘Definitely not’ and five as ‘Definitely’, measuring whether participants were able to identify an advertisement as ASMR based on the description they were given of it. Lastly, for the product recall manipulation check a bipolar scale from ‘chicken wings’ to ‘Breakfast burger OR Breakfast Burger + other food items’ was taken for participants to indicate how well they recalled the main type(s) of advertised product(s), where the value three indicated indifference. Generally, six items were set as the maximum number to avoid fatigue among participants.

In what follows, the measurement of each mediator and dependent variable is explained and the results of a factor and reliability analysis are reported. The factor analysis for which the results are summarised in Appendix D was conducted to investigate how valid the items used in this study were. The total variance explained of the items by the extracted factors scored 70.94% which means that the regression model has a rather high significant explanatory power. For factor extraction the Principal Component Analysis (PCA) method was used, the ‘Eigenvalue greater than one’ (EGV1 rule) was applied and a scree plot was checked. For factor rotation the ‘Varimax’ rotation method was used. Based on Matsunaga (2010), items loading on at least one factor with .50 or a greater value were included in the analysis whereas items

loading below this were considered to be excluded, for which the final decision was made based on the results of the reliability analysis depicted in Table 4 which was performed to determine the internal consistency of the scales. Based on the reliability analysis the variables were constructed by combining the means of the items for each construct.

Evaluation of Voice

To evaluate the voice in the advertisement, participants were asked to indicate their level of agreement or disagreement with four statements on a 5-point scale from 1 = 'strongly disagree' to 5 = 'strongly agree'. The scale was partly constructed based on two existing scales. The first was used by Gélinas-Chebat, Chebat and Vaninsky (1996) in a study on the effects of voice intonation and intensity on the perceived credibility of the speaker as well as on people's attitudes and purchase intention towards the advertised service. For this study, the two items 'pleasant' and 'attractive' of the identification scale were adopted. The second scale comes from Chattopadhyay, Dahl, Ritchie and Shahin (2003) who studied consumers' responses to voice characteristics of speakers in broadcast advertising and who also measured perceived attractiveness and pleasantness of voice. Furthermore, two other items for voice evaluation were added by the researcher which were 'I think that the voice in the advertisement is enjoyable' and 'I think that the voice is appropriate for advertising a product like this'. Regarding the factor analysis, all items successfully loaded above .50 on one factor, however they were more reliable as a scale when the item 'I think that the voice is appropriate for advertising a product like this' was excluded, increasing the Cronbach's alpha of .83 to .86, thus the respective item was deleted.

Evaluation of Sounds

The scale for the evaluation of sounds was taken from the 'Sensory Perception Item set' (SPI) developed by Haase and Wiedmann (2018) to measure consumers' sensory product perceptions. The scale covers the five sense modalities sight, hearing, touch, smell and taste. For this study, the 'acoustic' item set of the scale was adopted which includes the items 'euphonic', 'good-sounding', 'melodic' and 'sonorous'. The item 'sonorous' was replaced with the synonym 'rich' after consulting with an independent researcher since 'sonorous' was considered difficult to understand. Also, the item 'melodic' was replaced with 'immersive' to fit the study considering that the focus lied on sounds emphasizing product characteristics and not on music. To evaluate the sounds in the advertisements, participants were asked to indicate their level of agreement or disagreement with four statements on a 5-point scale from 1 =

'strongly disagree' to 5 = 'strongly agree'. Two examples of the final items used are 'I think that the sounds in the advertisement are good-sounding' and 'I think that the sounds in the advertisement are rich'. Based on the factor analysis, all items could be retained and the reliability analysis confirmed this by yielding a reliable Cronbach's alpha of .78.

Evaluation of Visuals

Referring to advertisement visuals, participants evaluated them with a scale used prior in a study to investigate the effect of visual design in web advertising on men's and women's intention to buy the advertised product (Shaouf, Lü, & Li, 2016). For this study, the items measuring the 'Web Ad Visual Design' (WAVD) construct were used. The items were only slightly rephrased to fit the study context. Hence, examples for the items used are 'Overall, I think that the visual elements of the advertisement (e.g. colours, images, lightning, size, shape etc.) are of high quality' and 'Overall, I think that the visual design elements used make the advertisement look professional and well-designed'. To evaluate the visuals in the advertisement, participants were asked to indicate their level of agreement or disagreement with four statements on a 5-point scale from 1 = 'strongly disagree' to 5 = 'strongly agree'. Moreover, the factor analysis showed that the items for the evaluation of visuals loaded together on one factor with the 'aesthetic' item of the perceived visual ad aesthetics item set, however, since the variables evaluation of voice and perceived visual ad aesthetics are conceptualized very differently, the 'aesthetic' item was retained as an item in the perceived visual ad aesthetics construct and the item set of four items for evaluation of visuals was left intact to maintain conceptual reasonableness. These four items yielded a reliable Cronbach's alpha of .81.

Purchase Intention

For purchase intention the same source as for the evaluation of visuals was used. Shaouf et al. (2016) used the 'Online Purchase Intention' (OPI) construct to investigate the effect of visual design in web advertising on online purchase intention in men and women. The items were taken as they were, only the term 'web advertisement' was replaced by the term 'advertisement' to fir the study purpose. The three final items are 'After viewing the advertisement, I became interested in making a purchase', 'After viewing the advertisement, I am willing to purchase the product being advertised' and lastly 'After viewing the web advertisement, I will probably purchase the product being advertised'. These items were measured on a 5-point Likert scale with values from 1 = 'Strongly disagree' to 5 = 'Strongly agree'. Further, the factor analysis

revealed that the three items loaded above .50 on one factor and the Cronbach's alpha was high with a value of .90.

Product attitude

Product attitude was measured with two 5-point bipolar scales on which participants had to firstly indicate their level of liking or disliking from 1 = 'I don't like it' to 5 = 'I like it' and secondly indicate how negatively or positively they perceived the product from 1 = 'negative' to 5 = 'positive'. These scales were adopted from Griffith and Chen (2004) who studied direct experiences in the virtual realm (VDE's) and their effectiveness on online advertisement messages. Furthermore, the factor analysis showed that the items for product attitude loaded above .50 together with the items for advertisement liking. However, also in this case, since these two variables are conceptualized very differently and since the scales are rooted in literature, the item sets for both variables were not merged but kept separate. The reliability analysis for the product attitude items scored a reliable Cronbach's alpha of .93 which supported the decision to retain these three items as a separate scale.

Advertisement liking

The dependent variable 'advertisement liking' was measured with a scale deployed by Zemack-Rugar, Moore and Fitzsimons (2017) who studied consumers' negative reactions to ads which had an assertive tone to them. Zemack-Rugar et al. (2017) used a bipolar scale, however in this study a 5-point Likert scale from 1 = 'Strongly disagree' to 5 = 'Strongly agree' was used. Thus, for this study the positively phrased items of the bipolar scale were chosen which were the items 'appealing', 'likeable', 'positive', 'good', 'pleasant' and 'like very much'. The final items were sentences such as 'I think that the advertisement is appealing', 'I think that the advertisement is good' and 'I like the advertisement very much'. Moreover, the factor analysis results have already been explained in relation to the variable product attitude and regarding reliability, the advertisement liking scale was very reliable with a Cronbach's alpha of .92.

Sensory Expectation Evaluation

To measure participants' sensory expectation evaluation for the advertised products, this study made use of a scale by Pambo et al. (2018) who used it to study consumers' sensory expectations of buns containing cricket-flour. The six sensory attribute items 'taste', 'smell', 'sweetness', 'colour', 'crumbliness/easy of handling', 'texture/softness' were measured on a 5-point JAR scale from 1 = 'Much too little' to 5 = 'Much too much'. For this scale, the midpoint

indicates that a sensory attribute is perceived as ideal (Moskowitz, as cited in Pambo et al., 2018). To facilitate data analysis, the sensory expectation evaluation variable was recoded to change the original JAR-scale ranging from 1 = 'Much too little' to 5 = 'Much too much', with 3 = 'Just about right' to a scale that considered 1 = 'Much too little/Much too much', 2 = 'Too little/Too much' and 3 = 'Just about right'. Moreover, 'saltiness' was included in the scale since this study investigated savoury fast food. For the purpose of this study the scale items were put into sentences such as 'I think that the product has a nice taste', 'I think that the product has a nice smell' and 'I think that the product has a nice colour'. Furthermore, as Appendix D reveals the items 'colour' and 'texture' each loaded separately on a factor and 'smell' and 'taste' as well as 'crumbliness/ease of handling', 'sweetness' and 'saltiness' loaded together. However, in the reliability analysis the item combinations proposed by the factor analysis scored Cronbach's alphas far below the acceptable value of .65. The Cronbach's alpha of .65 was only reached when all items were analysed together, hence, to ensure the reliability of the scale, all items were retained to construct the sensory expectation evaluation variable.

Perceived Visual Ad Aesthetics

The perceived visual ad aesthetics variable was measured with a scale from Lavie and Tractinsky (2004) who developed it to study how participants perceived visual aesthetics of web sites. Altaboli and Lin (2012) adopted this scale for their study on visual aesthetics of website interfaces. The scale consists of a classical and expressive aesthetics dimension. The fist refers to aesthetics which emphasize a clear design in line with notions of usability. The second dimension measures aesthetics related to how original and creative the design is. For the classical aesthetics construct, the items 'aesthetic design', 'pleasant design', 'clear design', 'clean design' and 'symmetric design' exist and for the expressive aesthetics construct the items are 'creative design', 'fascinating design', 'use of special effects', 'original design' and 'sophisticated design'. The 'symmetric' item was replaced with the synonym 'balanced', based on a synonym search and on consultation with an independent German researcher because 'symmetric' was considered prone to misunderstandings because the ads participants watched were videos and not static websites. All items were put into sentences such as 'I think that the advertisement has a pleasant design' and 'I think that the advertisement has a clean design'. The items were measured on a 5-point Likert scale with values from 1 = 'Strongly disagree' to 5 = 'Strongly agree'.

Furthermore, the factor analysis showed that three items loaded below .50 which were 'I think that the advertisement has a pleasant design' with .48, ' I think that the advertisement

has a balanced design' with .45 as well as 'I think that the advertisement uses special effects' with .41. It also indicated that the expressive and classical ad aesthetic items could be combined as separate variables. Based on the reliability analysis the item 'I think that the advertisement uses special effects' was removed to increase the Cronbach's alpha from .83 to .84, however the Cronbach's alpha would have decreased if the other two items with factor loadings below .50 were removed, thus they were retained. Moreover, the fact that the reliability of the ad aesthetics scale with all its items was higher than the reliabilities of the expressive and classical ad aesthetics items analysed separately was the reason for using the scale with all its items in following analyses. Specifically, the classical and expressive ad aesthetics subscales both scored a Cronbach's Alpha of .78 separately.

Table 4

Results of the Reliability Analysis

Variable	*M*	Variance	*SD*	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	*N* of Items
Purchase intention	8.25	10.21	3.20	.90	.90	3
Product attitude	7.10	4.28	2.07	.93	.93	2
Advertisement liking	21.80	24.89	4.99	.92	.92	6
Sensory expectation evaluation	17.52	5.96	2.44	.65	.64	7
Perceived visual ad aesthetics	31.27	33.08	5.75	.84	.84	9
Evaluation of voice	10.08	6.63	2.58	.86	.86	3
Evaluation of sounds	14.17	7.06	2.66	.78	.78	4
Evaluation of visuals	16.10	6.60	2.57	.81	.81	4

Note. *M* = Mean; *SD* = Standard Deviation. The Mean, Variance and Standard Deviation are descriptive Scale Statistics. The statistics for the final scales are indicated.

3.6 Pre-test

A pre-test was conducted aiming at exposing issues concerning the phrasing of items and instructions, at signifying a potential lack of information as well as at making sure that participants interpreted the items as intended. Moreover, the pre-test was performed to investigate the quality and usefulness of the stimuli material and to make sure that the order of the items did not influence participants' answers. Purposive sampling was used to reach eligible participants via social media and in total eight participants agreed to participate. Each of these participants was assigned to one of the four conditions. Before the start of the pre-test, participants were informed about the pre-test's aim and were asked to fill out the questionnaire attentively and to note any errors and improvements. After completion of the questionnaire, they were asked to give the researcher their feedback based on which a few changes were made to the questionnaire. Firstly, the explanation of ASMR was expanded because some participants reported to have missed a more specific characterization of ASMR. Secondly, the item for the 'ASMR perception manipulation check' was adapted in phrasing based on participants' suggestions to sound more straightforward. Thirdly, the duration of the study was adapted. Before the pre-test, eight to 10 minutes were indicated in the online consent, whereas the pre-test showed that 10 minutes were more realistic. Regarding the stimuli material, it could be approved that participants perceived the advertisement they saw correctly as either an ASMR or regular ad.

3.7 Manipulation Checks

In the following the results for the ASMR perception manipulation check and product recall manipulation check are reported.

3.7.1 ASMR Perception Manipulation Check

To check whether participants perceived the regular advertisements in regular style and the ASMR advertisements in ASMR style, an ASMR perception manipulation check was included in the questionnaire for which participants had to indicate to what extent they perceived the ad they watched as ASMR on a 5-point bipolar scale that ranged from 1 = 'Definitely not' to 5 = 'Definitely'. Therefore, the higher the mean value for the ASMR perception is, the more strongly participants perceived the ad to be in ASMR style. A between-groups UNIANOVA was conducted and as the results displayed in Table 5 show, there was a significant difference in scores for ASMR perception between the ASMR advertisements and the regular

advertisements. Participants perceived the ASMR advertisements (M = 3.20, SD = 1.32) more definitely as ASMR than the regular advertisements (M = 2.30, SD = 1.10) which confirms that participants were able to identify the advertisement they saw correctly as a regular or ASMR advertisement.

Table 5

Tests of Between-Subjects Effects for the ASMR perception manipulation check

Source	Dependent variable	*df*	Error *df*	*F*	*p*	η_p^2
Type of advertisement	ASMR perception	1	129	18.15	.000	.123

Note. An alpha level of .05 was applied.

3.7.2 Product Recall Manipulation Check

The product recall manipulation check tested if participants were able to recall the type of product(s) they saw in the condition they were assigned to, revealing whether they watched the advertisement or not. Participants had to give their answer on a 5-point bipolar scale ranging from 1 = 'chicken wings' to 5 = 'Breakfast Burger OR Breakfast Burger + other food items'. A between-groups UNIANOVA was performed and it would not have been insightful to use type of advertisement as the independent variable, thus 'condition' was used. To see where exactly potential significant differences lied between the four conditions, a Post Hoc test with Bonferroni corrections was conducted. As displayed in Table. 6, the effect of condition on product recall was significant. Thus, there were significant differences in product recall between the four conditions. The descriptive statistics for the conditions are displayed in Table 7. Specifically, there were no significant differences between condition one and two, p = .95, as well as between condition three and four, p = .60. However, there were significant differences between condition one and condition three, p < .001, and between one and four, p < .001, as well as between condition two and condition three, p < .001 and two and four, p < .001. Hence, participants watched the ads since they were able to recall the products correctly. They reported to have seen an ad promoting chicken wings in the first and second condition and a breakfast burger in the third and fourth condition.

Table 6

Tests of Between-Subjects Effects for the Product recall manipulation check

Source	Dependent variable	*df*	Error *df*	*F*	*p*	η_p^2
Condition	Product recall	3	127	78.17	.000	.649

Note. An alpha level of .05 was applied.

Table 7

Descriptive Statistics Product recall check

Condition	*M*	*SD*
1	1.55	1.12
2	1.93	1.22
3	4.73	.80
4	4.32	1.02

Note. *M* = Mean; *SD* = Standard Deviation.

3.8 Data Analysis

To analyse the results of this study, the statistical analysis software SPSS v26 was used. This program allowed to test the direct effect of the independent variables on the dependent variables as well as on the suggested mediators. In order to test the evaluation of voice, sounds and visuals as mediators of the effect of type of advertisement and voice on the dependent variables, the SPSS extension PROCESS was used, which is a commonly used tool to model observed variable and logistic regression path analyses (Hayes, 2020). To determine whether an indirect effect yielded by the analysis with PROCESS is statistically significant, the rationale is that the displayed confidence intervals must not include the value zero.

4. Results

This study tested four conditions to study their effect on the assumed mediators evaluation of voice, evaluation of sounds and evaluation of visuals as well as on the dependent variables purchase intention, product attitude, advertisement liking, sensory expectation evaluation and perceived visual ad aesthetics. Before two multivariate analyses (MANOVAs) were conducted, two assumption checks and Wilks' Lambda tests were conducted for each. The first MANOVA investigated the main and interaction effects of the two independent variables on the five dependent variables, whereas the second MANOVA explored the main effects of the two independent variables on the assumed mediators. Only the main effects were explored due to the result of the Wilks' Lambda test for the interaction effect. Moreover, the effect of the two independent variables on the assumed mediator evaluation of voice was analysed by means of a UNIANOVA and not together in the MANOVA with the other mediators since evaluation of voice only concerned two conditions. The last analysis investigated the indirect effects of the two independent variables type of advertisement and voice on all five dependent variables through the assumed mediators that are evaluation of voice, evaluation of sounds and evaluation of visuals.

4.1 Assumption Checks

Prior to conducting the first MANOVA, Pearson correlations were computed between the dependent variables to check the assumption of their correlation, which revealed that the variables correlated enough to conduct a MANOVA, as Table 8 shows. Secondly, to test the assumption that the covariances matrices of the dependent variables are equal, a Box's M test of equality of covariance was performed. The Box's M value of 88.25 was significant, $p = .001$, which was interpreted as an indication for equal covariance matrices between the groups (Huberty & Petoskey, 2000), meaning that the assumption was fulfilled. Also, Levene's tests of equality of error variances were conducted to test whether the assumption of homogeneity of error variances is satisfied. For most dependent variables these tests revealed significance values above .05 which indicates that their error variances were homogenous. For product attitude, this was not the case with a significance below the critical value, $p = .043$. However, since the largest standard deviations only had small differences to the associated smallest (Howell, as cited in how2stats, 2011), the multiple factor ANOVA for product attitude was considered robust, still.

Table 8

Pearson Correlations, Means and Standard Deviations associated with the DVs

Dependent variable	1.	2.	3.	4.	5.	*M*	*SD*
1. PI	1.0	.66	.58	.32	.48	2.75	1.06
2. PA	.661	1.0	.73	.36	.54	3.55	1.03
3. AL	.58	.73	1.0	.37	.63	3.63	.83
4. SEE	.32	.36	.37	1.0	.32	2.51	.35
5. PVAA	.48	.54	.63	.32	1.0	3.47	.63

Note. PI = Purchase intention; PA = Product attitude; AL = Advertisement liking; SEE = Sensory expectation evaluation; PVAA: Perceived visual ad aesthetics. *N* = 131. The correlations are significant at the .01 level (2-tailed).

Also, before the second MANOVA was performed, Pearson correlations were analysed which are displayed in Table 9 and reveal that the evaluation of sounds and the evaluation of visuals were meaningfully correlated. Considering the equality of covariance matrices, a Box's M test revealed a non-significant Box's M value of 12.93 with a *p* value of .184. Despite this insignificance, the conducted MANOVA was deemed acceptable since Allen and Bennett (2008) argue that a MANOVA is robust against violations of the assumption that the covariance matrices are equal when groups sizes are higher than 30. Additionally, Levene's test of equality of error variances revealed significance values above .05 for the evaluation of sounds and of visuals, with $p = .141$ for sounds and $p = .516$ for visuals, indicating that the assumption was fulfilled.

Table 9

Pearson Correlations, Means and Standard Deviations for Evaluation of Sounds and of Visuals

Mediators	1.	2.	*M*	*SD*
1. Evaluation of Sounds	1.0	.17	3.54	.66
2. Evaluation of Visuals	.17	1.0	4.02	.64

Note. N = 131. The correlations are significant at the .01 level (2-tailed).

Evaluation of sounds and evaluation of visuals are two of the three mediators in this study.

Prior to analysing the UNIANOVA results, the assumption of homogeneity of variances was checked by means of a Levene's test. This test revealed that the assumption was satisfied, $F(1, 58) = 3.02$, $p = .088$.

4.2 Multivariate Analyses of Variance

The first MANOVA investigated the main and interaction effects of type of advertisement and voice on the dependent variables purchase intention, product attitude, advertisement liking, sensory expectation evaluation and perceived visual ad aesthetics. A Wilk's Lambda test was performed before investigating these direct effects to test whether there were differences in means of the independent variables' groups for the combination of all dependent variables. The descriptive statistics for this test are shown in Table 10. Referring to type of advertisement first, it was observed that there was a significant main effect of type of advertisement as well as of voice and also the interaction effect between type of advertisement and voice was significant. The MANOVA results were approved to be investigated.

Table 10

Multivariate Tests for the effects of the IVs on the DVs

Effect		Value	*F*	*df*	Error *df*	*p*	η_p^2
Type of advertisement	Wilk's Lambda	.87	3.73	5	123	.004	.132
Voice	Wilk's Lambda	.90	2.86	5	123	.018	.104
Type of advertisement * Voice	Wilk's Lambda	.89	2.96	5	123	.018	.107

Note. An alpha level of .05 was applied. IVs = Independent variables; DVs = Dependent variables.

The second MANOVA examined the main and interaction effects of the independent variables type of advertisement and voice on the mediators that are evaluation of sounds and of visuals. Prior to looking at these results a Wilk's Lambda test was performed to investigate whether differences in means existed between the independent variables' groups for the two

mediators evaluation of sounds and evaluation of visuals analysed together. The statistics for this test are portrayed in Table 11 and revealed a significant main effect for type of advertisement, for voice and a non-significant interaction effect between type of advertisement and voice. Thus, only the main effects of type of advertisement and voice on the evaluations of sounds and of visuals were analysed.

Table 11

Multivariate Tests for the effects of the IVs on evaluation of sounds and visuals

Effect		Value	*F*	*df*	Error *df*	*p*	η_p^2
Type of advertisement	Wilk's Lambda	.94	4.36	2	126	.015	.065
Voice	Wilk's Lambda	.95	3.55	2	126	.032	.053
Type of advertisement * Voice	Wilk's Lambda	.98	1.24	2	126	.29	.019

Note. An alpha level of .05 was applied. IVs = Independent variables. Evaluation of sounds and evaluation of visuals are two of the three mediators in this study.

4.3 Main Effects of Type of Advertisement and Voice

The first MANOVA was computed to test the main and interaction effects of the type of advertisement (regular/ASMR) and voice (Yes/No) on purchase intention, product attitude, advertisement liking, sensory expectation evaluation and perceived visual ad aesthetics. In this section only the main effects are considered for which the results are shown in Table 12.

Table 12

Tests of Between-Subjects Effects for the main effects of the IVs on the DVs

Source	Dependent variable	*df*	Error *df*	*F*	*p*	η_p^2
Type of advertisement	1. Purchase intention	1	127	1.40	.238	.011
	2. Product attitude	1	127	3.49	.064	.027
	3. Advertisement liking	1	127	.69	.41	.005
	4. Sensory expectation evaluation	1	127	.05	.828	.000
	5. Perceived visual ad aesthetics	1	127	3.77	.055	.029
Voice	1. Purchase intention	1	127	.04	.841	.000
	2. Product attitude	1	127	.08	.784	.001
	3. Advertisement liking	1	127	2.53	.114	.020
	4. Sensory expectation evaluation	1	127	.47	.495	.004
	5. Perceived visual ad aesthetics	1	127	7.41	.007	.055

Note. An alpha level of .05 was applied. IVs = Independent variables; DVs = Dependent variables.

4.3.1 Purchase Intention

There was a non-significant effect of type of advertisement on participants' intention to buy the advertised product(s), $F(1, 127) = 1.40$, $p = .238$. Likewise, the effect of voice on purchase intention was not significant, $F(1, 127) = .04$, $p = .841$.

4.3.2 Product Attitude

For product attitude, there was a marginally significant effect of type of advertisement, $F(1, 127) = 3.49$, $p = .064$, and as Table 13 shows with the regular advertisements marginally leading to a more positive product attitude among participants than the ASMR advertisements. For

voice, the results indicate that there was no difference in product attitude between the participants who watched an advertisement with or without voice, $F(1, 127) = .08$, $p = .784$.

Table 13

Descriptive Statistics for the main effect on Product Attitude

Dependent variable: Product attitude			
Independent variable		*M*	*SD*
Type of advertisement	ASMR	3.37	1.12
	Regular	3.72	.91

Note. *M* = Mean; *SD* = Standard Deviation. 'ASMR' and 'Regular' are the two groups of Type of advertisement.

4.3.3 Advertisement Liking

For advertisement liking the ANOVAs revealed that type of advertisement and voice both did not lead to a significant effect, with $F(1, 127) = .69$, $p = .41$ for type of ad and $F(1, 127) = 2.53$, $p = .114$ for voice.

4.3.4 Sensory Expectation Evaluation

For sensory expectation evaluation the analysis yielded a non-significant effect for type of advertisement, $F(1, 127) = .05$, $p = .828$, as well as for voice, $F(1, 127) = .47$, $p = .495$.

4.3.5 Perceived Visual Ad Aesthetics

The analysis revealed that type of advertisement had a marginally significant effect, $F(1, 127) = 3.77$, $p = .055$, indicating that the mean perceived visual ad aesthetics scores were marginally significantly higher for the ASMR advertisements than for the regular advertisements. For voice, the effect was also significant, $F(1, 127) = 7.41$, $p = .007$. Nevertheless, this difference was not as large as expected and the average answer was 'Undecided', with a higher tendency to 'Agree' in the ASMR conditions. On average, the visual aesthetics of the advertisements without voice were perceived more positively than the visual aesthetics of the advertisements with voice. The descriptive statistics are shown in Table 14.

Table 14

Descriptive Statistics for the main effects on Perceived Visual Ad Aesthetics

Dependent variable: Perceived visual ad aesthetics			
Independent variable		*M*	*SD*
Type of advertisement	ASMR	3.56	.64
	Regular	3.39	.62
Voice	Yes	3.32	.64
	No	3.60	.60

Note. *M* = Mean; *SD* = Standard Deviation. 'ASMR' and 'Regular' are the two groups of Type of advertisement.

Based on the results, H2 must be rejected which assumed that the ASMR advertisements lead to higher purchase intention (a), a more positive product attitude (b), higher advertisement liking (c) and a more favourable sensory expectation evaluation (d) than the regular fast food advertisements. However, H1 was slightly supported since the ASMR fast food advertisements marginally lead to more positively perceived visual ad aesthetics (e) than the regular fast food advertisements.

The second MANOVA examined the main effects of the independent variables type of advertisement and voice on the two mediators that are evaluation of sounds and of visuals. The results are reported in Table 15.

Table 15

Tests of Between-Subjects Effects for the effects of the IVs on evaluation of sounds and visuals

Independent variable	Dependent variable	*df*	Error *df*	*F*	*p*	η_p^2
Type of advertisement	Evaluation of sounds	1	127	8.17	.005	.060
	Evaluation of visuals	1	127	.06	.814	.000
Voice	Evaluation of sounds	1	127	.34	.559	.003
	Evaluation of visuals	1	127	5.10	.016	.045

Note. An alpha level of .05 was applied. IVs = Independent variables. Evaluation of sounds and evaluation of visuals are two of the three mediators in this study and were treated as the dependent variables in this particular analysis.

4.3.6 Evaluation of Sounds

The main effect for type of advertisement on evaluation of sounds was significant, $F(1, 127) = 8.17$, $p = .005$, revealing that participants significantly evaluated the sounds in the ASMR advertisements more positively than the sounds in the regular advertisements. The main effect of voice, however, was not significant, $F(1, 127) = .34$, $p = .559$. The descriptive statistics are in Table 16.

Table 16

Descriptive Statistics for the main effect on Evaluation of Sounds

Mediator: Evaluation of sounds			
Independent variable		*M*	*SD*
Type of advertisement	ASMR	3.71	.67
	Regular	3.38	.62

Note. M = Mean; *SD* = Standard Deviation. 'ASMR' and 'Regular' are the two groups of Type of advertisement.

4.3.7 Evaluation of Visuals

Considering the results for evaluation of visuals it can be stated that the mean scores for evaluation of visuals between the regular and ASMR advertisements did not significantly differ, $F(1, 127) = .06$, $p = .814$. Looking at voice, its effect on participants' evaluation of visuals was significant, $F(1, 127) = 5.10$, $p = .016$. This significant main effect indicates that participants significantly evaluated the visuals more positively for the fast food ads without voice ($M = 4.15$, $SD = .56$) than for those with voice ($M = 3.88$, $SD = .71$).

The findings for evaluation of sounds and of visuals support H7 which stated that the sounds in the ASMR fast food advertisements will be evaluated more favourably than the sounds in the regular fast food advertisements. However, H9 must be rejected because it hypothesized that the visuals in the ASMR fast food advertisements will be evaluated more positively than the visuals in the regular fast food advertisements.

Lastly, a UNIVARIATE analysis was conducted to explore the effect of type of advertisement and voice on the mediator evaluation of voice. In this section, only the main effects are described for which the results are displayed in Table 17.

4.3.8 Evaluation of Voice

For type of advertisement, a significant effect on evaluation of voice was found, $F(1, 58) = 8.64$, $p = .005$, which indicates that participants evaluated the voice in the ASMR fast food advertisement ($M = 3.63$, $SD = .76$) significantly more positively than in the regular fast food advertisement ($M = 2.99$, $SD = .94$). Figure 5 illustrates this significant effect. As for the effect of voice, SPSS did not show results because voice was identified as a constant since it was only evaluated by participants who were assigned a condition with voice. In other words, only the two conditions that included a voice were subject of this analysis and consequently the only value of the independent variable voice that was included in the analysis was 'Yes', excluding 'No'. Based on the finding for type of advertisement H4 can be supported which assumed that the voice in the ASMR fast food advertisement will be evaluated more favourably than the voice in the regular fast food advertisement.

Table 17

Tests of Between-Subjects Effects for the effect of type of advertisement on evaluation of voice

Source	Dependent variable	*df*	Error *df*	*F*	*p*	η_p^2
Type of advertisement	Evaluation of voice	1	58	8.64	.005	.13

Note. An alpha level of .05 was applied. Evaluation of voice is one of the three mediators in this study and was treated as the dependent variable in this particular analysis.

Figure 5

Main effect of type of advertisement on evaluation of voice

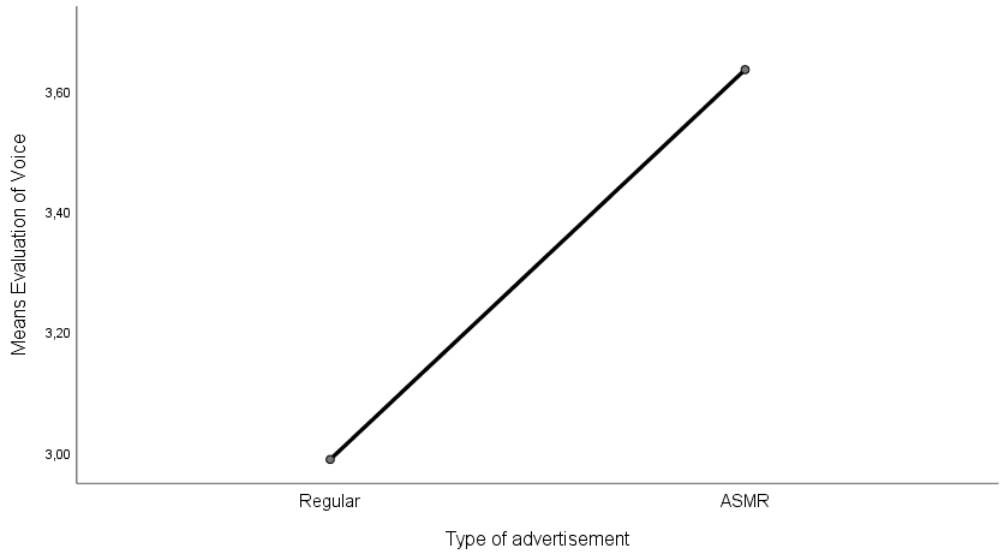


Figure 5. Significant main effect of type of advertisement on evaluation of voice. The voice in the ASMR advertisements was evaluated more favourably than in the regular advertisements.

4.4 Interaction Effects of Type of Advertisement and Voice

As yielded by the first MANOVA, the results for the interaction effects of the two independent variables type of advertisement and voice on the dependent variables purchase intention, product attitude, advertisement liking, sensory expectation evaluation and perceived visual ad aesthetics are reported. These results are displayed in Table 18.

4.4.1 Purchase Intention

The interaction effect between type of advertisement and voice on purchase intention was not significant, $F(1, 127) = .97$, $p = .326$.

4.4.2 Product Attitude

The analysis revealed that there was no interaction effect between type of advertisement and voice on product attitude, $F(1, 127) = .44$, $p = .509$.

4.4.3 Advertisement Liking

The interaction effect for type of advertisement and voice on advertisement liking was likewise not significant, $F(1, 127) = .11$, $p = .742$.

4.4.4 Sensory Expectation Evaluation

The interaction effect of type of advertisement and voice on sensory expectation evaluation was significant, $F(1, 127) = 5.47$, $p = .021$. Figure 6 shows that participants who were exposed to an ASMR advertisement with voice ($M = 2.60$, $SD = .35$) expressed more favourable sensory expectations towards the advertised product than participants who saw a regular advertisement with voice ($M = 2.45$, $SD = .37$). The Figure also displays that participants evaluated their expectations of the product's sensory characteristics more favourably when watching the ASMR ad with voice ($M = 2.60$, $SD = .35$) compared to the ASMR ad without voice ($M = 2.42$, $SD = .40$).

4.4.5 Perceived Visual Ad Aesthetics

The interaction between type of advertisement and voice revealed to be marginally significant, $F(1, 127) = 3.02$, $p = .085$, signifying that participants perceived the visual aesthetics of the ASMR advertisement with voice ($M = 3.51$, $SD = .64$) as marginally more aesthetic than the visual aesthetics of the regular advertisement with voice ($M = 3.12$, $SD = .58$). This interaction can be seen in Figure 7. The interaction plot further shows that there was a small marginally significant preference for the visual aesthetics of the ASMR ad without voice ($M = 3.61$, $SD = .65$) over the visual aesthetics of the ASMR ad with voice ($M = 3.51$, $SD = .64$), contrary to what was expected.

Figure 6

Interaction effect of type of advertisement and voice on sensory expectation evaluation

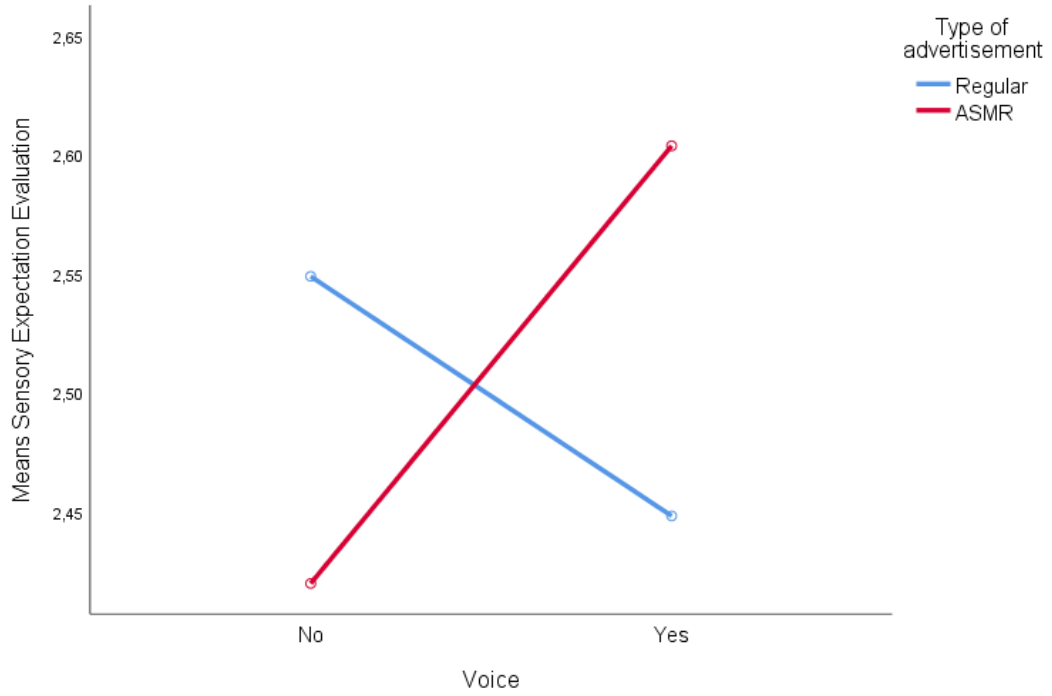


Figure 6. Significant interaction effect between type of advertisement and voice on sensory expectation evaluation.

Figure 7

Interaction effect of type of advertisement and voice on perceived visual ad aesthetics

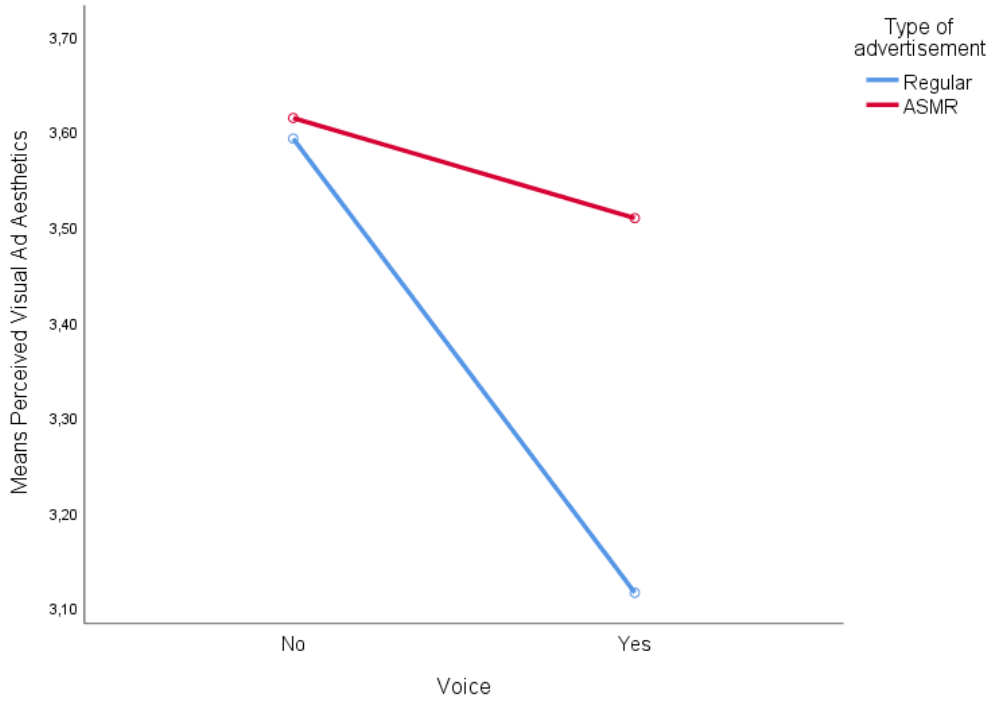


Figure 7. Significant interaction effect between type of advertisement and voice on perceived visual ad aesthetics. The visual aesthetics of the ASMR advertisements were marginally perceived to be more aesthetic than the visual aesthetics of the regular advertisements.

Table 18

Tests of Between-Subjects Effects for the interaction effects of the IVs on the DVs

Interaction effect	Dependent variable	*df*	Error *df*	*F*	*p*	η_p^2
Type of ad * Voice	1. Purchase intention	1	127	.97	.326	.008
	2. Product attitude	1	127	.44	.509	.003
	3. Advertisement liking	1	127	.11	.742	.001
	4. Sensory expectation evaluation	1	127	5.47	.021	.041
	5. Perceived visual ad aesthetics	1	127	3.02	.085	.023

Note. An alpha level of .05 was applied. IVs = Independent variables; DVs = Dependent variables. Type of ad = Type of advertisement.

Based on these results, H3(1) can be partially supported. The ASMR fast food advertisement with voice did not lead to higher purchase intention (a), a more positive product attitude (b) or higher advertisement liking (c) than the regular fast food ad with voice, but it led to a more favourable sensory expectation evaluation (d) and more positively perceived visual ad aesthetics (e) than the regular fast food ad with voice. Also, H3(2), a, b, c and e must be rejected, however H3(2) d was supported, stating that the ASMR fast food ads with voice led to a more positive sensory expectation evaluation than the ASMR fast food ads without voice.

No interaction effect between type of advertisement and voice on evaluation of voice was displayed due to the same reason explained for the main effect of voice, as described in section 4.3.8.

4.5 Indirect Effects through Evaluation of Voice, Sounds and Visuals

Even though the direct effects of the independent variables on some dependent variables were not statistically significant, the indirect effects of the independent variables on the dependent variables through the assumed mediators were still tested with all dependent variables, considering that mediation effects were still possible (Hayes, 2009). Zhao, Lynch and Chen (2010) refer to this as an indirect-only mediation where a mediation effect exists, but no direct effect. Moreover, the evaluation of visuals was not tested as a mediator of the effect of type of advertisement since type of advertisement did not have a significant direct effect on the evaluation of visuals, ruling out potential mediation. Further, the evaluation of sounds was not tested as a mediator of the effect of voice since voice did not have a direct effect on the evaluation of sounds.

Concerning the settings, confidence intervals of 95% were computed and the significance of the indirect effects was tested by means of bootstrapping. The number of bootstrap samples to be displayed for the percentile bootstrap confidence intervals was set to 5000, meaning that for 5000 bootstrapped samples the unstandardized indirect effects were tested (Kahn, 2014).

4.5.1 Purchase Intention

Concerning the evaluation of voice as a suggested mediator of the effects of type of advertisement and voice on purchase intention, the analysis revealed that the indirect effect of type of advertisement was significant. Moreover, the evaluation of sounds mediated the effect of type of advertisement on purchase intention. For voice, it was found that evaluation of visuals mediated its indirect effect on purchase intention. Moreover, the indirect effect of voice through

evaluation of voice was not displayed in the SPSS result matrix since the variable voice was identified as a constant. This means that it was redundant to include the independent variable voice into the analysis together with the evaluation of voice. This was the case for all further mediation analyses with evaluation of voice. Table 19 displays the results found for purchase intention in detail.

Table 19

Indirect effects on Purchase Intention

Dependent variable: Purchase intention				
Independent variable	Mediator	*b*	*SE*	95% CI
Type of advertisement	Evaluation of Voice	.337	.15	[.07, .66]
	Evaluation of Sounds	.184	.09	[.04, .38]
Voice	Evaluation of Visuals	-.184	.09	[-.37, -.03]

Note. *b* = Regression coefficient; *SE* = Standard Error; 95% CI = 95% Confidence Interval.

4.5.2 Product Attitude

The indirect effect of type of advertisement on product attitude through evaluation of voice was significant and likewise the indirect effect of type of advertisement on product attitude through evaluation of sounds was significant. For voice, its indirect effect on product attitude through evaluation of visuals was also significant. In Table 20 these findings are listed.

Table 20

Indirect effects on Product Attitude

Dependent variable: Product attitude				
Independent variable	Mediator	*b*	*SE*	95% CI
Type of advertisement	Evaluation of Voice	. .356	.15	[.092, .70]
	Evaluation of Sounds	.210	.09	[.06, .41]
Voice	Evaluation of Visuals	-.191	.09	[-.38, -.03]

Note. *b* = Regression coefficient; *SE* = Standard Error; 95% CI = 95% Confidence Interval.

4.5.3 Advertisement Liking

It was found that both evaluation of voice and evaluation of sounds mediated the effect of type of advertisement on advertisement liking. For the other independent variable voice, evaluation of visuals was tested as a mediator and for this indirect effect the analysis yielded a significant result. These results are shown in Table 21.

Table 21

Indirect effect on Advertisement Liking

Dependent variable: Advertisement liking				
Independent variable	Mediator	*b*	*SE*	95% CI
Type of advertisement	Evaluation of Voice	.274	.12	[.08, .52]
	Evaluation of Sounds	.173	.07	[.05, .33]
Voice	Evaluation of Visuals	-.172	.08	[-.33, -.03]

Note. *b* = Regression coefficient; *SE* = Standard Error; 95% CI = 95% Confidence Interval.

4.5.4 Sensory Expectation Evaluation

Looking at the indirect effect of type of advertisement on sensory expectation evaluation through evaluation of voice it was found that it was not significant. The evaluation of sounds however mediated the effect of type of advertisement on sensory expectation. For the other independent variable voice, a non- significant indirect effect through evaluation of visuals was found. See Table 22 for an overview of the results.

Table 22

Indirect effects on Sensory Expectation Evaluation

Dependent variable: Sensory expectation evaluation				
Independent variable	Mediator	*b*	*SE*	95% CI
Type of advertisement	Evaluation of Voice	.062	.05	[-.01, .17]
	Evaluation of Sounds	.037	.02	[.01, .08]
Voice	Evaluation of Visuals	-.023	.02	[-.06, .00]

Note. *b* = Regression coefficient; *SE* = Standard Error; 95% CI = 95% Confidence Interval.

4.5.5 Perceived Visual Ad Aesthetics

The mediation analysis revealed that there was no indirect effect of type of advertisement on perceived visual ad aesthetics through the mediator evaluation of voice. Contrary to that, the indirect effect of type of advertisement through evaluation of sounds was significant. Further, a significant indirect effect of voice on perceived visual ad aesthetics through evaluation of visuals was found. The results are displayed in Table 23.

Table 23

Indirect effect on Perceived Visual Ad Aesthetics

Dependent variable: Perceived visual ad aesthetics				
Independent variable	Mediator	*b*	*SE*	95% CI
Type of advertisement	Evaluation of Voice	.149	.08	[-.03, .33]
	Evaluation of Sounds	.138	.05	[.04, .24]
Voice	Evaluation of Visuals	-.128	.06	[-.25, -.03]

Note. *b* = Regression coefficient; *SE* = Standard Error; 95% CI = 95% Confidence Interval.

The results of the mediation analyses imply to reject H6 and H5d and e, however H5a, b and c as well as H8 are supported. Also, H10 must be rejected.

5. Discussion

This study explored the potential of audio-visual ASMR fast food advertisements compared to regular fast food advertisements. Scientific efforts into understanding ASMR ads and their effectiveness are still in their infancy even though nowadays many brands make use of them, for example in the fast food industry to target the general public. However, since no research exists on the use of ASMR fast food advertisements, implying that its effects are unknown, this study aimed at contributing the first steps in addressing the research gap by investigating the research question as to what extent ASMR advertising can be more effective than regular advertising in fast food advertisements among the general public and to what extent the voice element influences the effectiveness of an ASMR fast food advertisement. By means of four conditions the effect of type of advertisement (ASMR/Regular) and voice (Yes/No) on consumers' product and ad evaluations were investigated as well as on their evaluations of voice, sounds and visuals in the advertisements. Also, the evaluation of voice, evaluation of sounds and evaluation of visuals were tested as mediators. In the following, the answered hypotheses are listed in Table 24 and are discussed based on the results of this study, implications for research and marketing are given, study limitations are acknowledged and recommendations for future research are given as well as a conclusion.

5.1 Discussion of Results

In the following, the results of this study are discussed.

5.1.1 Overview of Supported and Rejected Hypotheses

Below, all hypotheses of this study are listed and marked as supported or rejected.

Table 24

Overview of the supported and rejected research hypotheses

Hypotheses		Support
H1	The ASMR fast food advertisements lead to more positively perceived visual ad aesthetics (e) than the regular fast food advertisements.	Yes *
H2	The ASMR advertisements lead to higher purchase intention (a), a more positive product attitude (b), higher advertisement liking (c) and a more	No

	favourable sensory expectation evaluation (d) than the regular fast food advertisements.	
H3 (1a)	The ASMR fast food advertisement with voice leads to higher purchase intention (a) than the regular fast food advertisement with voice (1).	No
H3 (1b)	The ASMR fast food advertisement with voice leads to a more positive product attitude (b) than the regular fast food advertisement with voice (1).	No
H3 (1c)	The ASMR fast food advertisement with voice leads to higher advertisement liking (c) than the regular fast food advertisement with voice (1).	No
H3 (1d)	The ASMR fast food advertisement with voice leads to a more favourable sensory expectation evaluation (d) than the regular fast food advertisement with voice (1).	Yes
H3 (1e)	The ASMR fast food advertisement with voice leads to more positively perceived visual ad aesthetics (e) than the regular fast food advertisement with voice (1).	Yes *
H3 (2a)	The ASMR fast food advertisement with voice leads to higher purchase intention (a) than the ASMR fast food advertisement without voice (2).	No
H3 (2b)	The ASMR fast food advertisement with voice leads to a more positive product attitude (b) than the ASMR fast food advertisement without voice (2).	No
H3 (2c)	The ASMR fast food advertisement with voice leads to higher advertisement liking (c) than the ASMR fast food advertisement without voice (2).	No
H3 (2d)	The ASMR fast food advertisement with voice leads to a more favourable sensory expectation evaluation (d) than the ASMR fast food advertisement without voice (2).	Yes
H3 (2e)	The ASMR fast food advertisement with voice leads to more positively perceived visual ad aesthetics than the ASMR fast food advertisement without voice (2).	No

H4	The voice in the ASMR fast food advertisement will be evaluated more favourably than the voice in the regular fast food advertisement.	Yes
H5 (a)	The effects of the regular/ASMR fast food advertisements on purchase intention (a) are mediated by the evaluation of the voice in the advertisements.	Yes
H5 (b)	The effects of the regular/ASMR fast food advertisements on product attitude (b) are mediated by the evaluation of the voice in the advertisements.	Yes
H5 (c)	The effects of the regular/ASMR fast food advertisements on advertisement liking (c) are mediated by the evaluation of the voice in the advertisements.	Yes
H5 (d)	The effects of the regular/ASMR fast food advertisements on sensory expectation evaluation (d) are mediated by the evaluation of the voice in the advertisements.	No
H5 (e)	The effects of the regular/ASMR fast food advertisements on perceived visual ad aesthetics (e) are mediated by the evaluation of the voice in the advertisements.	No
H6	The effects of the regular/ASMR fast food advertisements with voice on purchase intention (a), product attitude (b), advertisement liking (c), sensory expectation evaluation (d) and perceived visual ad aesthetics (e) are mediated by the evaluation of the voice in the advertisements.	No
H7	The sounds in the ASMR fast food advertisements will be evaluated more favourably than the sounds in the regular fast food advertisements.	Yes
H8	The effects of the regular/ASMR advertisements on purchase intention (a), product attitude (b), advertisement liking (c), sensory expectation evaluation (d) and perceived visual ad aesthetics (e) are mediated by the evaluation of the sounds in the advertisements.	Yes
H9	The visuals in the ASMR fast food advertisements will be evaluated more favourably than the visuals in the regular fast food advertisements.	No

H10	The effects of the regular/ASMR fast food advertisements on purchase intention (a), product attitude (b), advertisement liking (c), sensory expectation evaluation (d) and perceived visual ad aesthetics (e) are mediated by the evaluation of the visuals in the advertisements.	No

Note. * The *p* value was marginally significant.

5.1.2 Discussion of Main Effects

One of the most relevant findings of this study was that participants perceived the visual aesthetics of the ASMR fast food advertisements more positively than those of the regular fast food advertisements. Even though this difference was not as large as expected, the assumption that ASMR stimuli, or triggers, relate to the theory of processing fluency of aesthetic pleasure is strengthened. The latter is a specific kind of the theory of processing fluency stating that the more easily, or fluently, a stimuli is processed, the more favourable is the aesthetic response, as Reber, Schwarz and Winkielman assert (2004). According to the same researchers, stimuli characteristics that allow fluent processing and thus lead to positive aesthetic judgements are amongst others a high figure-ground contrast, repetition of stimuli and a long time period stimuli are visible for. They also found that processing fluency decreases perceived ugliness and increases perceived prettiness (Reber, Winkielman, & Schwarz, 1998). Stimuli in ASMR advertisements fulfill characteristics, such as repetition of and longer display of stimuli, which need to be given for fluent processing that leads to positive aesthetics judgements about visuals which might have led to the result. Also, ASMR videos and ads are intrinsically aesthetic and specifically their visuals have a strong influence on aesthetic evaluation (Barratt, Spence, & Davis, 2017).

Further, the most logical explanation for participants' more positive attitude towards the products in the regular fast food advertisements than for the products in the ASMR advertisements is that they preferred the products seen in the regular advertisements since even though the type of products in both types of advertisements were the same, they were still garnished somewhat differently. For instance, the ASMR chicken wings had a crispy coating whereas the regular chicken wings were covered in sauce.

Moreover, in line with expectations, participants preferred the voice in the ASMR fast food advertisement over the voice in the regular fast food advertisement. As assumed, participants seem to have preferred the slow, gentle and relaxing voice in the ASMR fast food advertisement over the more upbeat natured voice in the regular advertisement because it was

perceived as refreshing or surprising in a pleasant way, considering that all participants in this study were inexperienced with ASMR since they indicated to not watch ASMR videos and consequently watched the advertisement they were assigned to in the study without expecting to hear a voice which is used differently than in regular fast food advertisements and thus strays from what is the usual and known. Thus, the voice in the ASMR ad might have positively 'stood out from the crowd' to the participants which generally is highly favourable in advertising (Michaels, 2013).

As further illustrated in the theoretical background for this study, sounds in ASMR food ads and videos on YouTube are essential and are used highly deliberately. They can be characterized as deep-laid and immersive, making viewers feel as 'if they are there when they close their eyes' (Barratt, Spence, & Davis, 2017) which differentiate them from sounds used in regular fast food advertising. Further, sounds in ASMR ads are pronounced since they are supposed to emphasize sensory product characteristics, such as the crispiness of chicken wings or the juiciness of salad, making ASMR an aurally intense and pleasurable experience (Spence, 2020). Since the sounds in the ASMR advertisements were evaluated more favourably than the sounds in the regular advertisements, the literature is supported. Moreover, the sounds in the ASMR fast food ads were potentially more fluent to process. In accordance with the theory of processing fluency, Hekkert (2015) claims that besides visuals, humans naturally like sounds that are fluent to process. He further asserts that sounds which can be easily processed are 'organized' and therefore aesthetic, suggesting that ASMR fast food ads can include multisensory aesthetics and not only visual aesthetics.

Unfavourably, the manipulations for visuals in the ASMR fast food advertisements were potentially not strong enough, thus not characteristic enough for visuals of ASMR ads, to be evaluated more favourably than the visuals in the regular fast food advertisements since participants did not evaluate the visuals in one of the two types of advertisements more favourably than in the other. Thus, to find differences in evaluation of visuals for ASMR and regular fast food ads future research should take stronger manipulations for the ASMR ads into consideration.

5.1.3 Discussion of Interaction Effects

Using a voice to highlight product characteristics is also practiced in regular fast food advertising (Krishna, 2011), but this study suggests that ASMR fast food advertisements can use a voice more effectively to do so. In this study, participants evaluated their expectations of the advertised products' sensory attributes more positively for the products in the ASMR

advertisement with voice than for the products in the regular advertisements with voice. Approaching an explanation, the slow and gentle voice guided participants through the ad better and emphasized product characteristics this way and also through repeatedly mentioning them. These factors possibly reinforced participants' more positive evaluation of the products' sensory characteristics for the ASMR ad with voice, indicating participants had an aurally stimulating ad watching experience and derived knowledge from the voice about the products' sensory characteristics (Spence, 2020).

The assumption was made that an 'ASMR style' voice in ASMR fast food ads can contribute to highlight and pronounce fast food products' sensory characteristics better than a 'regular style' voice in regular fast food ads. This study supports this since the ASMR fast food ad with voice led to a more favourable sensory expectation evaluation than the regular fast food ad with voice. Potentially, the voice was perceived as fitting to the ASMR ad meaning which would mean that 'voice fit' existed implying that the voice acted as an additional valuable sensory cue besides visuals and sounds, as assumed, that informed participants about the product characteristics, based on a study by North, MacKenzie, Law and Hargreaves, 2004.

Moreover, this study suggests that ASMR fast food ads without voice are more valuable than what is suggested by literature. Relating to that, the visual advertisement aesthetics in the ASMR advertisement without voice were slightly preferred over those in the ASMR advertisement with voice. Thus, the ad was potentially more fluent to process and consequently perceived as more visually aesthetic than the ASMR ad with voice (Reber et al., 1998). This finding opposes what scientists claim which is that a gentle and soft-spoken voice should be included in ASMR videos and ads to yield effects on consumers (Richard, 2014a; Andersen, 2015). Contrary to that, as suggested, participants evaluated their expectations of the sensory characteristics of the advertised product more favourably when watching the ASMR ad with voice compared to watching the ASMR ad without voice. However, no conclusion can be drawn on which type of ASMR fast food advertisement is more effective. Both types of ASMR have shown valuable effects and further research is most definitely needed.

As Kanaya, Kariya and Fujisaki (2016) found, audition and vision can complement each other as a cross-modal relationship exists between the two sensory domains, which can lead to a harmonious perception of a given stimulus that can be described as aesthetic (Hekkert, 2015). Since it was supported that the voice in the ASMR ad can influence consumers' perception of the visual ad aesthetics more positively than the voice in the regular ad, the described effect of the cross-modal relationship between the voice and visuals possibly played a role.

5.1.4 Discussion of Indirect Effects

Velasco, Carvalho, Petit and Nijholt (2016) studied implications for the design of sonic systems that can enrich eating and drinking experiences and state that even before consumption, consumers derive sensory and hedonic product characteristics based on the sounds that foods and drinks make. Considering voice, research on voice fit has shown that a fitting voice can prime listeners' knowledge, leading to an improved ability to recall advertisement information and giving information about the brand, thus enhancing consumer responses such as ad liking and purchase intention of the advertised product (North et al., 2004). This study supports this literature since for purchase intention, product attitude and advertisement liking it was found that the evaluation of voice and the evaluation of sounds both mediated the effect of type of advertisement. Specifically, the effect of the type of advertisement on participants' purchase intention for the advertised product and their advertisement liking fully depended on how they evaluated the voice and sounds in the regular and ASMR advertisements. However, participants' product attitude only partially depended on their evaluation of voice and of sounds since it was also directly dependent on which type of advertisement they saw.

Moreover, the potential of ASMR over regular fast food ads was supported since participants' preference for the visual aesthetics of the ASMR advertisements was dependent on the type of ad they saw but also on their evaluation of sounds which reinforces that besides visuals, sounds in fast food advertisements can influence the perception of advertisements' visual aesthetics (Kanaya, Kariya, & Fujisaki, 2016) and that ASMR ads can include multisensory aesthetics and not only visual aesthetics, as described above. It was also explored in scientific and non-scientific literature that ASMR fast food ads might be advantageous over regular fast food ads in influencing consumers' expectation of products' sensory characteristics because the sounds are more pronounced and immersive which potentially gives viewers a more favourable impression of products' sensory characteristics. The study finding that the effect of type of ad on sensory expectation evaluation, which was more positive for ASMR ads, depended on participants' evaluation of sounds, which was more positive for ASMR ads, supports this.

5.2 Theoretical and Practical Implications

In the following, the theoretical and practical implications of this study are elaborated to inform about the value of this study for researchers and marketers, respectively.

Research on ASMR advertising has only been conducted to a small extent and even more scarcely in relation to food advertising. In fact, to the best of the researcher's knowledge,

this study is the first to investigate the potential of ASMR fast food advertisements.

Consequently, much future research is necessary. The first theoretical implication that arises is the importance of the aural sensory domain in ASMR ads since the voice and sounds were both evaluated more favourably for the ASMR fast food ads than for the regular fast food ads and also the sensory expectation of the products' attributes, which is linked to hearing, was evaluated better for the ASMR fast food ads. Thus, researchers should take this into consideration for future studies on ASMR fast food ads. This implication is additionally important to consider if they test the effects of ASMR ads on consumers' product and ad evaluations, considering that these effects are suggested to depend on the evaluation of voice and sounds. The dominance of aural sensations for food experiences is not a new concept (Spence, 2020), however this study suggests that the use of sounds characteristic for ASMR content can potentially create even more effective aural stimuli which is why more research is needed. Further, the theory of multisensory aesthetics (Hekkert, 2015) and likewise the processing fluency theory of aesthetic pleasure (Reber et al., 2004) were found to relate to ASMR and its effects on participants' sensory expectation evaluation and perceived visual ad aesthetics, which following research on ASMR can build upon. This study also suggests the importance of the fit of voice to an ASMR advertisement which has already been explored as a critical pre-condition for positive consumer responses to regular advertisements (North et al., 2004) and which might have influenced consumers' preference for one or the other – ASMR with or without voice – and will perhaps also do so in future studies.

Besides implications for the research community, practical implications are discussed in the following since this study aimed at exploring the potential of ASMR among the general public to give marketers insights in to what extent ASMR fast food ads are effective. This study contributed the first steps to answering this question. It must be acknowledged though, that only future research can lead to answering the question about the potential of ASMR fast food advertising with more certainty, implying that the more research is conducted, the more practical implications can be given. One relevant implication is that the ASMR fast food ads were effective among the general public. Consequently, people do not need experience with ASMR videos to be able to be positively affected by ASMR fast food advertisements. It is suggested that marketers can reach people with different sociodemographic backgrounds who are part of the target group of fast food brands instead of only focusing on ASMR viewers. Additionally, the results of this study are generalizable for a rather international audience, considering that 60.8% of the participants were from Germany, 15.4% are from the Netherlands and 23.8% from other countries. This is valuable for fast food franchises since they operate

internationally.

Moreover, this study provides marketers with first useful findings for the creation of ASMR fast food advertisements. It is relevant to know that the ASMR ads were more effective than the regular ads in influencing consumers responses to consider adopting ASMR in the marketing mix. For example, findings that can be integrated into fast food advertisements are that sounds and voice in the ASMR fast food ads were preferred over the sounds and voice in the regular ads, that the visual ad aesthetics in the ASMR fast food ads were slightly preferred over the visuals in the regular fast food ads and that in combination with a voice, the ASMR ads also more positively influenced participants' perception of the visual ad aesthetics and their sensory expectation evaluation. Moreover, marketers could try out ASMR ads with and without voice, considering that both types positively influenced consumer responses. Thus, marketers can feel somewhat more confident in experimenting with ASMR ads since the study suggests that these make fast food ads more aesthetic as well as aurally pleasing.

5.3 Limitations

This research on the use of audio-visual ASMR fast food advertisements had its limitations which influenced the results found. To start with, limitations concerning the stimuli material are considered. The two advertisements displaying the breakfast burger differed in the number of products they showed since condition three included only the breakfast burger and condition four additionally included other breakfast items such as muesli and pancakes. Even though the breakfast burger was a prominent item in condition four, it is likely that the other food items influenced participants' evaluations such as their product attitude, advertisement liking, purchase intention and sensory expectation evaluation. In the regular ad promoting chicken wings, two different products were seen for two seconds, which can be argued to have had little influence on participants due to the short display. Since no better regular ad as a counterpart to the ASMR ad showing the breakfast burger was deemed available based on a large-scale Internet search, for future research testing the effect of ASMR fast food advertisements it should be considered to create the advertisements for the purpose of the study to be able to fine-tune the manipulations in the conditions better.

Another limitation resulting from the fact that the stimuli material was not created for the purpose of this study is that the advertisement spots were not of equal length. Specifically, the two ASMR advertisements were approximately double as long as the two regular advertisements. However, this can be attributed to the nature of ASMR content, so to make the ad viewing experience about 50 seconds long for all participants to grasp the details equally

well, participants were asked to watch the regular advertisements two times. The drawback is that it cannot be guaranteed that participants watched them two times which might have influenced the consecutive evaluation of their product and advertisement evaluations.

Further limitations of this study refer to the scales used to measure the variables. For the scale to measure the evaluation of visuals with, the results of this study only give a general idea about advertisement visuals because the scale did not include items asking for the evaluation of specific visual elements such as colour, composition, or form. It could have been insightful to study participants' evaluations of specific visuals used in the regular and ASMR ads which also applies to the sensory expectation evaluation scale since taste, smell, texture etc. were measured together. Thus, this should be taken into consideration in following studies.

Moreover, the low reliability of the sensory expectation evaluation scale was unfavourable, showing a Cronbach's Alpha of .65 which was below the critical value of .70. This low value was not expected because the scale has been used in a study before. It would be sensible to subject the scale to preliminary tests in the future research to eliminate the issue. In terms of measurement, another limitation in this study was that music was not measured at all, only the sounds used to accentuate the products were measured even though the two regular advertisements also included music. To rule out the possibility that participants evaluated the sounds together with the music, using a separate scale for music would have been sensible. Lastly, an additional limitation for measuring the variables was that the perceived visual ad aesthetics scale was constituted of items for expressive as well as classical advertisement aesthetics. The decisive factor for the use of the scale was its high reliability, however the factor analysis indicated that the expressive and classical ad aesthetics could be used as separate variables. In future studies, using the two separate scales could be beneficial to gain a more differentiated insight into consumers' evaluations of advertisement aesthetics.

Another limitation of this study was that participants' 'state of hunger' possibly influenced their purchase intention as well as product and advertisement evaluations. It can be argued that whether participants were hungry or not when watching the fast food advertisements potentially influenced their decision-making for a product. Nederkoorn, Guerrieri, Havermans, Roefs and Jansen (2009) found in a virtual supermarket setting that when participants were hungry when participating in the study compared to sated, this positively influenced their purchase intention as well as product and ad evaluations. Thus, to account for participants' state of hunger as a moderator in further studies might be sensible. As a last limitation it needs to be acknowledged that the pre-test conducted before the main study only included a small number of participants which reduced the probability that all aspects to improve in the questionnaire

were found, meaning that participants in the main study may have encountered issues such as unclear items that could have been identified and resolved before.

5.4 Recommendations for Future Research

As a last step, some general recommendations for future research about ASMR fast food advertisements are given based on the results of this study.

To start with it would be valuable to investigate whether it holds true that ASMR fast food ads without voice lead to more positively perceived advertisement aesthetics and that ASMR fast food ads with voice evoke more positive expectations about the sensory characteristics of fast food products. If these findings would be supported by future research this could allow a more deliberate use of the voice. Moreover, it is sensible to explore the effects of ASMR fast food ads to effects of other types of regular fast food ads, such as those with a storyline involving actors, to see whether characteristic ASMR triggers then also have positive effects on consumer evaluations. The effects of ASMR triggers likely hold true for other kinds of food as well which should be for example tested for ASMR advertisements promoting sweet and savoury snacks.

Further, it can be recommended to test ASMR advertisements for beverages which is in so far relevant that soft drinks often accompany the food in fast food advertisements. Regarding that ASMR itself is a sensory phenomenon, it can also be valuable to explore whether the physical and psychological effects of ASMR can be elicited through (fast) food advertisements among the general public. For instance, knowing if consumers experience tingles as a response to ASMR ads, feel more hungry, enthusiastic or on the contrary calmer, could yield practical implications for marketers. Also, studying the effect of the setting, or environment, in ASMR food advertisements is sensible since it is described as one of the main triggers, thus characteristic ASMR video elements. Taking the method into consideration that was adopted in this study it is important to not only replicate studies similar in nature to this, but to use different “quantitative, qualitative and mixed methods […]” (McKim, 2017). Relating this to the recommendation of studying physical and psychological effects of ASMR to fast food ads, a mixed methods approach could be to firstly conduct experiments with participants in which their physical responses are measured that are indicative of arousal, such as their heart rate and skin conductivity, and to subsequently interview them about their ASMR experience to understand their thoughts or to alternatively ask them to fill out a questionnaire that poses questions about their ad and product evaluations.

5.5 Conclusion

To conclude, this study explored the effectiveness of ASMR in fast food advertisements compared to regular advertisements among the general public and investigated whether the voice element in ASMR fast food advertisements influences the effectiveness of an ASMR fast food advertisement, consequently having an added value over an ASMR fast food ad without voice or not. To do so this study made use of a 2 (type of advertisement: ASMR versus Regular) x 2 (Voice: Yes versus No) experimental design. Specifically, it was studied to what extent the two independent variables 'type of advertisement' and 'voice' influence the dependent variables that are consumers' purchase intention, product attitude, advertisement liking, sensory expectation evaluation and perceived visual ad aesthetics. Moreover, the effects of type of advertisement and voice on consumers' evaluations of the advertisement elements voice, sounds and visuals were examined and it was lastly tested to what extent consumers' evaluations of voice, sounds and visuals mediate the effects of type of advertisement and voice on the dependent variables. The study yielded some affirmative findings for higher effectiveness of ASMR fast food ads over regular fast food ads. In fact, the visual aesthetics of the ASMR fast food ads were more positively perceived than those of the regular fast food ads and that consumers' product attitude was slightly more positive for the regular advertisements. It was also revealed that ASMR ads with voice were more effective than the regular ads with voice in favourably influencing consumers' expectations of the products' sensory characteristics and also more effective in influencing their perception of the visual ad aesthetics. Among the ASMR ads, the ASMR ad without voice led to more positively perceived visual ad aesthetics than the ASMR ad with voice, but the ASMR ad with voice led to a more favourable sensory expectation evaluation which suggests that in the context of fast food advertising an ASMR ad with voice is not always more effective than an ASMR ad without voice and that the latter has more potential than literature has indicated so far. Further, participants preferred the voice in the ASMR advertisement over the voice in the regular advertisement as well as the sounds in the ASMR ads over the sounds in the regular ads. Regarding mediation, the effects of type of advertisement on purchase intention, product attitude and advertisement liking were fully mediated by evaluation of voice and evaluation of sounds. Likewise, the effect of type of advertisement on participants' sensory expectation evaluation was fully mediated by evaluation of sounds, whereas the effect of type of advertisement on perceived visual ad aesthetics was partially mediated by evaluation of sounds.

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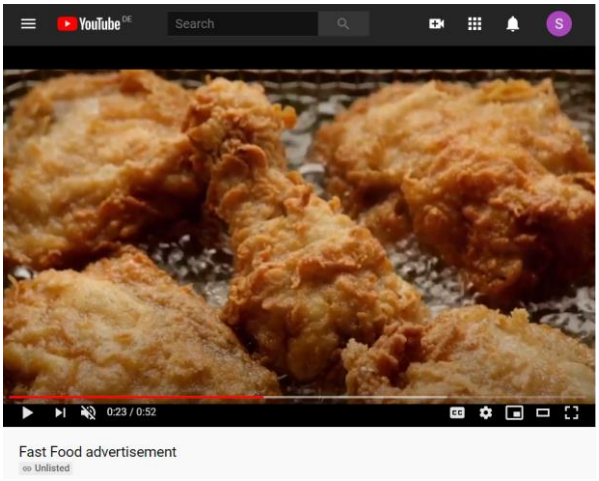
7. Appendix

Appendix A – Information on 'Environment'

Environment

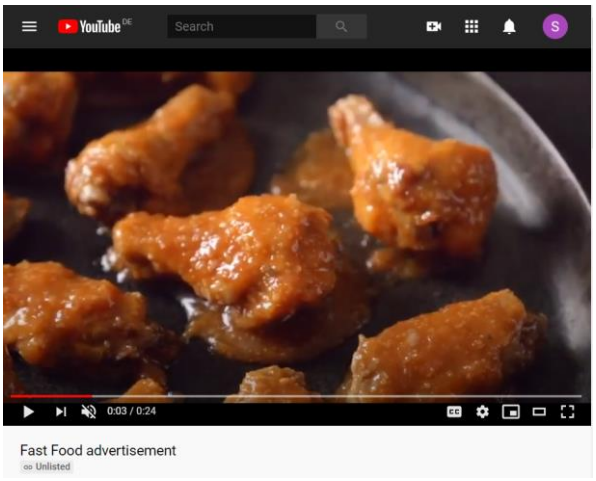
The role of environment is essential for a good ASMR experience in many kinds of ASMR content such as role-plays in form of doctor visits, spa treatments or personal attention video, however in food ASMR videos, it is of minor importance and does not receive much attention, which makes sense considering that the focus lies on the food presented and interacted with to elicit ASMR sensations among the viewers. Most of the time, the environment in which the filming takes place is not shown because ASMRtists film in front of a wall and only shows themselves fully or partly as well as the food. Also, the setting is neutral to not distract from the food presented. Prominent examples for content creators that do this are 'HunniBee ASMR' and 'SAS ASMR'. This practice has been adopted for ASMR advertising, meaning that the advertised product is focused on and nothing or only little of the environment is seen. This observation is not in line with regular fast food advertising. Not all, but many fast food advertisements create a story around the experience of consuming the promoted food which means that the context, or environment, in which the food is embedded plays an essential role in targeting the right audience with the right messages, essentially to "[connect] like-minded individuals all over the world" (Smith & Wintrob, 2013, para. 3). Thus, often many setting-related factors play a role in creating a successful advertisement. In contrast, ASMR-style food commercials focus more intensively on the food itself and play with sounds, visuals and voice to advertise the product and immerse the viewer into an imaginary scenario. Specifically, no storyline is created around the food experience, the focus is more on how the product characteristics can be emphasized as well as on which feelings and sensations the consumption of the product should evoke. This can be observed for ASMR ads in other industries as well, for example for the brands IKEA, Safeguard and Apple (Richard, 2014c). In light of these observations, this study excludes environment as a determinant of ASMR content in the context of fast food advertisements.

Appendix B – Stimuli Material



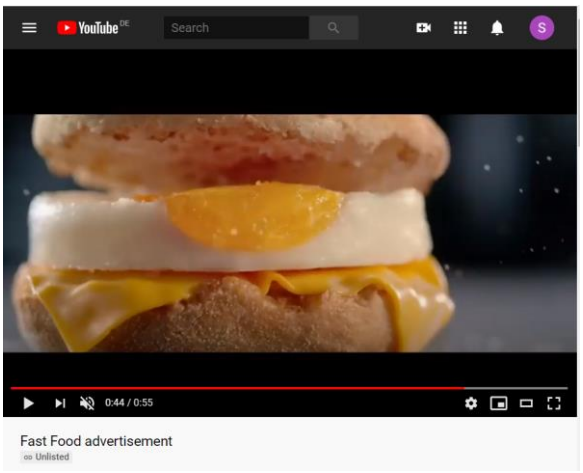
Condition 1: ASMR – with Voice

https://www.youtube.com/watch?v=Qn4GLgnLzBM



Condition 2: Regular – with Voice

https://www.youtube.com/watch?v=-_uqX2GNlIM



Condition 3: ASMR – without Voice

https://www.youtube.com/watch?v=SG2Bj6mWQ_8

Condition 4: Regular – without Voice

https://www.youtube.com/watch?v=psr6Y8ZyHPk

Appendix C – Final Online Questionnaire

Start of Block: Introduction

Consent_check Welcome to the survey!

This research is conducted as part of a bachelor thesis at the University of Twente. In this study we ask you to watch an audio-visual advertisement spot from a fast food brand to hear your opinion on it.

Participating in this study takes about 10 minutes of your time. Please note that your participation in this study is completely voluntary and that you have the right to withdraw from the study at any time. I would also like to emphasize that all of the data provided by you is treated confidentially and anonymously which means that you can't be identified and that solely the researcher and supervisor are allowed to access the data participants provide. Of course, your data will only be used for this research purpose and only as long as necessary to conduct this research. At the end of this study, you are allowed to ask for exclusion and deletion of all your data if you feel like rather not participating after all.

If you have any questions, concerns or requests, feel free to contact the researcher of this study Selina Bachem via s.bachem@student.utwente.nl.

By ticking the "Yes" box below, you:

- Are 16 years or older

- Have read the above-stated information

- Are participating in this study voluntarily

○ Yes (1)

○ No (2)

End of Block: Introduction

Start of Block: Block 20

Start of Block: Check for inclusion in study

How often do you eat fast food products like chicken wings or burgers?

- ○ Never (1)
- ○ Less than monthly (2)
- ○ Monthly (1x - 3x) (3)
- ○ Weekly (1x - 6x) (4)
- ○ Daily (1x or more) (5)

Do you have a vegeterian or vegan diet?

- ○ Yes (1)
- ○ No (2)

Are you familiar with the concept of ASMR?

- ○ No (1)
- ○ Roughly, I have heard about it before. (2)
- ○ Yes, but I never watch ASMR videos. (3)
- ○ Yes, I watch ASMR videos. (4)

End of Block: Check for inclusion in study

Start of Block: Demographics

What is your gender?

- ○ Female (1)
- ○ Male (2)
- ○ Other / won't tell (3)

What is your age?

_____

Where are you from?

- ○ Netherlands (1)
- ○ Germany (2)
- ○ Other (3)

What occupation reflects your current occupation best?

- ○ Employed (full-time) (1)
- ○ Employed (part-time) (2)
- ○ Unemployed (currently looking for work) (3)
- ○ Unemployed (currently not looking for work) (4)
- ○ Student (e.g. at school or university) (5)
- ○ Self-employed (6)
- ○ Retired (7)
- ○ Unable to work (8)

What is the highest level of education you have completed?

- ○ Non-school and incomplete primary (1)
- ○ Complete primary (2)
- ○ Complete secondary (3)
- ○ College (No University) (4)
- ○ University (5)

End of Block: Demographics

Start of Block: Condition 1

The following video you are asked to watch is an advertisement spot from a fast food brand. Please, if possible, before you watch the video put on headphones and make sure to have the volume on a level which allows you to hear everything clearly. Also, please watch the video full-screen and in an environment that is not too disturbing – a quiet space is ideal.

Please watch this short advertisement:

https://youtu.be/Qn4GLgnLzBM

End of Block: Condition 1

Start of Block: Condition 2

The following video you are asked to watch is an advertisement spot from a fast food brand. Please, if possible, before you watch the video put on headphones and make sure to have the volume on a level which allows you to hear everything clearly. Also, please watch the video full-screen and in an environment that is not too disturbing – a quiet space is ideal.

Please watch this short advertisement 2 times:

https://youtu.be/-_uqX2GNlIM

End of Block: Condition 2

Start of Block: Condition 3

The following video you are asked to watch is an advertisement spot from a fast food brand. Please, if possible, before you watch the video put on headphones and make sure to have the volume on a level which allows you to hear everything clearly. Also, please watch the video full-screen and in an environment that is not too disturbing – a quiet space is ideal.

Please watch this short advertisement:

https://youtu.be/SG2Bj6mWQ_8

End of Block: Condition 3

Start of Block: Condition 4

The following video you are asked to watch is an advertisement spot from a fast food brand. Please, if possible, before you watch the video put on headphones and make sure to have the volume on a level which allows you to hear everything clearly. Also, please watch the video full-screen and in an environment that is not too disturbing – a quiet space is ideal.

Please watch this short advertisement 2 times:

https://youtu.be/psr6Y8ZyHPk

End of Block: Condition 4

Start of Block: Block 3

Please indicate your agreement with the following statements concerning the evaluation of voice in the advertisement you watched on a scale from 1 to 5 where 1 equals “strongly disagree” and 5 equals “strongly agree”.

	Strongly disagree (1)	Disagree (2)	Undecided (3)	Agree (4)	Strongly agree (5)
I think that the voice in the advertisement is pleasant. (1)	○	○	○	○	○
I think that the voice in the advertisement is appropriate for advertising a product like this. (2)	○	○	○	○	○
I think that the voice in the advertisement is attractive. (3)	○	○	○	○	○
I think that the voice in the advertisement is enjoyable. (4)	○	○	○	○	○

End of Block: Block 3

Start of Block: Block 4

Please indicate your agreement with the following statements concerning the evaluation of visuals in the advertisement you watched on a scale from 1 to 5 where 1 equals “strongly disagree” and 5 equals “strongly agree”.

	Strongly disagree (1)	Disagree (2)	Undecided (3)	Agree (4)	Strongly agree (5)
Overall, I think that the visual elements of the advertisement (e.g., colours, images, lighting, size, shape etc.) are of high quality. (1)	○	○	○	○	○
Overall, I think that the visual design elements used make the advertisement look professional and well-designed. (2)	○	○	○	○	○
I think that the advertisement contains attractive visual connections. (3)	○	○	○	○	○
In general, I think that the visual elements in the advertisement are pleasing. (4)	○	○	○	○	○

End of Block: Block 4

Start of Block: Block 5

Please indicate your agreement with the following statements concerning your evaluation of sounds in the advertisement you watched on a scale from 1 to 5 where 1 equals “strongly disagree” and 5 equals “strongly agree”.

	Strongly disagree (1)	Disagree (2)	Undecided (3)	Agree (4)	Strongly agree (5)
I think that the sounds in the advertisement are euphonic. (1)	○	○	○	○	○
I think that the sounds in the advertisement are good-sounding. (2)	○	○	○	○	○
I think that the sounds in the advertisement are immersive. (3)	○	○	○	○	○
I think that the sounds in the advertisement are rich. (4)	○	○	○	○	○

End of Block: Block 5

Start of Block: Block 6

On a scale from 1 to 5, how would you rate your attitude towards the advertised product?

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	
I don't like it	○	○	○	○	○	I like it
Negative	○	○	○	○	○	Positive

End of Block: Block 6

Start of Block: Block 7

Please indicate your agreement with the following statements concerning your evaluation of the classical advertisement aesthetics on a scale from 1 to 5 where 1 equals “strongly disagree” and 5 equals “strongly agree”.

	Strongly disagree (1)	Disagree (2)	Undecided (3)	Agree (4)	Strongly agree (5)
I think that the advertisement has an aesthetic design. (1)	○	○	○	○	○
I think that the advertisement has a pleasant design. (2)	○	○	○	○	○
I think that the advertisement has a clear design. (3)	○	○	○	○	○
I think that the advertisement has a clean design. (4)	○	○	○	○	○
I think that the advertisement has a balanced design. (5)	○	○	○	○	○

Please indicate your agreement with the following statements concerning your evaluation of the expressive advertisement aesthetics on a scale from 1 to 5 where 1 equals “strongly disagree” and 5 equals “strongly agree”.

	Strongly disagree (1)	Disagree (2)	Undecided (3)	Agree (4)	Strongly agree (5)
I think that the advertisement has a creative design. (1)	○	○	○	○	○
I think that the advertisement has a fascinating design. (2)	○	○	○	○	○
I think that the advertisement uses special effects. (3)	○	○	○	○	○
I think that the advertisement has an original design. (4)	○	○	○	○	○
I think that the advertisement has a sophisticated design. (5)	○	○	○	○	○

End of Block: Block 7

Start of Block: Block 8

Please evaluate your expected liking of the product's attributes on a scale from 1 to 5 where 1 equals "Much too little" and 5 equals "Much too much".

	Much too little (1)	Too little (2)	Just about right (3)	Too much (4)	Much too much (5)
Smell (1)	○	○	○	○	○
Colour (2)	○	○	○	○	○
Taste (3)	○	○	○	○	○
Texture/softness (4)	○	○	○	○	○
Crumbliness/ease of handling (5)	○	○	○	○	○
Sweetness/sugary (6)	○	○	○	○	○
Saltiness (7)	○	○	○	○	○

End of Block: Block 8

Start of Block: Block 10

Please indicate your agreement with the following statements concerning your purchase intention on a scale from 1 to 5 where 1 equals “strongly disagree” and 5 equals “strongly agree”.

	Strongly disagree (1)	Disagree (2)	Undecided (3)	Agree (4)	Strongly agree (5)
After viewing the advertisement, I became interested in making a purchase for the product being advertised. (1)	○	○	○	○	○
After viewing the advertisement, I am willing to purchase the product being advertised. (2)	○	○	○	○	○
After viewing the advertisement, I will probably purchase the product being advertised. (3)	○	○	○	○	○

Please indicate the degree of your advertisement liking on each of these scales from 1 to 5.

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	
Unpleasant	○	○	○	○	○	Pleasant
Bad	○	○	○	○	○	Good
Not likeable	○	○	○	○	○	Likeable
Negative	○	○	○	○	○	Positive
Do not like at all	○	○	○	○	○	Like very much
Unappealing	○	○	○	○	○	Appealing

End of Block: Block 10

Start of Block: Block 11

What is ASMR?

The autonomous sensory meridian response (ASMR) is described as a sensory phenomenon that elicits pleasurable tingling sensations (tingles) on the scalp, the back of the neck, down the spine or in other areas of the body as a response to certain audio-visual or tactile stimuli (triggers). Some people that experience it also report psychological benefits which include the feeling of euphoria or calmness, relaxation and describe it as helpful at fighting insomnia, anxiety, chronic pain and depression. As a rising Internet trend, ASMR is practised as art by ASMR YouTubers (ASMRtists) who try to elicit ASMR responses among their viewers as well as by marketers trying to achieve the same with advertisements.

Popular triggers of ASMR YouTube videos and advertisements alike include:

- Extreme, longer focus on visual details and aesthetics

- Emphasized, immersive sounds and a calm environment

- No (background) music

- Sometimes a calming voice is included that invites the listener to relax

End of Block: Block 11

Start of Block: Inclusion check

How often do you watch ASMR videos?

- ○ Never (1)
- ○ I have watched an ASMR video once. (2)
- ○ I have watched ASMR videos a few times. (3)
- ○ Less than monthly (4)
- ○ Monthly (1x - 3x) (5)
- ○ Weekly (1x - 6x) (6)
- ○ Daily (1x or more) (7)

End of Block: Inclusion check

Start of Block: ASMR perception manipulation check

On a scale from 1 to 5, please indicate to what extent you consider the advertisement you watched as ASMR.

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	
Definitely not	○	○	○	○	○	Definitely

End of Block: ASMR perception manipulation check

Start of Block: Food recall manipulation check

On a scale from 1 to 5, please indicate to what extent you can recall the **main type of product(s)** that was/were advertised:

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	
Chicken wings	○	○	○	○	○	**Breakfast burger** OR **Breakfast burger + other food items**

End of Block: Food recall manipulation check

Start of Block: Debriefing

This is the end of the study, thank you for participating!

Do you have any questions or want to comment something? If so, please do so here:

_____

Contact info Feel free to contact me via s.bachem@student.utwente.nl regarding this study any time!

PLEASE make sure to click this arrow on the bottom right so that your responses are recorded:

End of Block: Debriefing

Appendix D – Factor Analysis

Factor analysis – Extracted components

		Components										
		1	2	3	4	5	6	7	8	9	10	11
Factors	Items											
Advertisement liking	Unpleasant - Pleasant	.804										
	Bad – Good	.790										
	Not likeable – Likeable	.753										
	Negative – Positive	.744										
	Do not like at all – Like very much	.738										
	Unappealing – Appealing	.706										
Product attitude	I don’t like it – I like it	.597		.446								
	Negative – Positive	.594		.499								
Evaluation of visuals	High quality		.765									
	Professional and well-designed		.764									
	Attractive visual connections		.715									
	Pleasing		.636									
Perceived visual ad aesthetics	Aesthetic		.625									
	Pleasant		.484									.417
Purchase intention	Interested in making a purchase			.819								
	Willing to purchase			.815								
	Will probably purchase			.796								

		1	2	3	4	5	6	7	8	9	10	11
Perceived visual ad aesthetics	Original design				.815							
	Creative design				.776							
	Fascinating design				.657							
	Sophisticated design				.540							
Evaluation of voice	Enjoyable					.878						
	Attractive					.833						
	Pleasant					.800						
	Appropriate					.554						-.499
Evaluation of sounds	Euphonic						.807					
	Good-sounding						.718					
	Rich						.692					
	Immersive						.655					

		1	2	3	4	5	6	7	8	9	10	11
Sensory expectation evaluation	Sweetness/sugary							.792				
	Saltiness							.713				
	Crumbliness/ Ease of handling							.602				
Perceived visual ad aesthetics	Clear								.819			
	Clean								.747			
	Balanced								.453			
Sensory expectation evaluation	Smell									.625		
	Taste									.603		
	Colour										.696	

Perceived visual ad aesthetics	Special effects	.414		-.457	
Sensory expectation evaluation	Texture/softness		.418		.636

Appendix E – Search Matrix, Logbook and Reflection on Internet Search

1) Search matrix

Guiding question for search terms at the start:

*'To what extent can **ASMR** be valuable for the use in audio-visual **fast food advertisements**?'*

Search Matrix

Constructs	Related terms	Broader terms	Narrower terms
ASMR	Autonomous Sensory Meridian response, synesthesia, misophonia, frisson, extraordinary emotional response, ASMR sensitivity, flow state	Tingles, tingling, senses, sensations, shivers, auditory-based content, sleep, unwind, relaxation, trigger, affective response	Aural-visual stimulation, subliminal influence/stimulation, sensual hedonic appeal
Fast food	Junk food, convenience food, take-away food, inexpensive food, quick meal	Lack of nourishment, unhealthy food, aliment, drive-in restaurant, diner	Hamburger, fries, chicken wings, pizza
Advertisements	Advertising, advertise, advert, advertisement, ad, commercial	Marketing, consumers, online advertising, social media advertising, traditional advertising	Subliminal advertising, Food advertisement(s), fast food advertisement(s), ASMR advertisement(s)
Marketing	Market, marketable, retailing, selling, commerce, commercialising, promoting, advertising	Digital marketing, product marketing, PR, sale, buying, promotion, commercialism, consumers, business, profit, returns	Multisensory marketing, aesthetic marketing, sensory marketing, auditory-based marketing, visual-based marketing, ASMR marketing

2) Search Logbook

Date	Source	Search terms and strategies	General and relevant hits	Related terms/authors	Notes
27.02.2020	Google scholar	ASMR AND marketing	1.370 hits, many very relevant hits	/	/
08.03.2020		ASMR OR “autonomous sensory meridian response” AND marketing OR advertising	754 hits, many relevant hits	/	/
08.03.2020		(ASMR AND marketing OR advertise* OR “product marketing”)	1.960 hits – many relevant hits	/	/
08.03.2020		“Autonomous sensory meridian response” AND marketing OR	165 hits – a number of relevant hits, some overlap with search results before	/	/
Date	Source	Search terms and strategies	General and relevant hits	Related terms/authors	Notes
		(ASMR OR "Autonomous sensory meridian response" OR "Aesthetic marketing" OR "ASMR marketing") AND frisson	90 hits – all about ASMR and frisson specifically	/	/
08.03.2020	Scopus	(ASMR OR "Autonomous sensory meridian response") AND marketing	20 – only three relevant results	/	-Too narrow search, broaden search by extending search terms.
08.03.2020		("ASMR" OR "Extraordinary emotional	2.540 – some very relevant results	‘Emotional response’, ‘food’	The search was not too specific and broad enough to

		response" AND food)			receive good results.
08.03.2020		"Autonomous sensory meridian response" AND "food" OR “marketing"	174 – many relevant results on first two pages, after that relevant results here and there on page 6 and further	/	Satisfactory results
09.03.2020		asmr tingles	141 – only a few not very relevant/nor relevant at all	‘ASMR’, ‘tingles’, ‘tingling’	Few results, but very relevant and useful.
09.03.2020		subliminal influence AND marketing AND food	22.500 – most hits topic related, but only a few relevant for this study	/	Too general and broad search terms – improve!
12.03.2020		emotion OR emotional response AND food OR "food advertise*"	2.560.000 hits – quite a lot of noise, but still many useful/relevant	‘Emotional response’, ‘emotion’, ‘food’, ‘food cues’, ‘eating behaviour’	/

Date	Source	Search terms and strategies	General and relevant hits	Related terms/authors	Notes
		Food AND emotion	1.370.000 hits – little noise, but most hits have little relevance to study topic	‘emotion/emotional responses’	Too general – specify
12.03.2020		food experience "positive and negative emotions"	14.500 hits – most hits topic related, but only very few relevant	‘food experience’, ‘food intake’	Specify the search more
14.03.2020		Fast food AND advertising	1.020.000 hits – about 5 useful, most sources about fast food ads and children	‘Fast food advertising’, ‘children’, ‘television’	Too general – specify especially the target group (consumers)

17.03.2020		"role of emotions" AND food choice OR liking	12.100 hits – most hits not relevant	/	
17.03.2020	Google scholar, Scopus	"multisensory marketing" OR "human-food interaction" AND taste	Google scholar: 468 hits – very little noise, some useful articles Scopus: 12 hits – most hits are relevant and useful	Google scholar: C. Velasco mentioned in several articles	Maybe try a broader search on Scopus to get more results
17.03.2020	Google scholar, Scopus	(Voice OR Visuals Or Sounds AND advertising*)	Google scholar: 258.000 hits – many relevant hits on page 1 and further Scopus: 2.833 hits – most hits not relevant and topic-unrelated	Google scholar: 'Voice', 'sounds'	Google scholar: No search results with visuals – try searching for visuals without sounds and voice Scopus: Try different search terms

Date	Source	Search terms and strategies	General and relevant hits	Related terms/authors	Notes
20.03.2020	Google scholar, Scopus	aesthetics AND marketing OR advertising	Google scholar: 583.000 hits – all topic related hits, a few relevant/useful Scopus: 683 hits – only a few relevant hits	J.E. Schroeder appeared two times on the first page	Narrow down the search by searching more specifically
20.03.2020	Google scholar, Scopus	"multisensory marketing" AND purchase intention OR product attitude	Google scholar: 13.100 hits – many relevant hits	/	Google scholar: Make the search even more specific and add 'food' as a search

			Scopus: 1 hit – very relevant		term. Also, do the same with 'fast food'. Scopus: Broaden the search!
20.03.2020	Google scholar, Scopus	ad liking AND food AND consumers	Google scholar: 39.800 hits – 3 relevant hits on first page, even more on the second Scopus: 10 hits – 1 relevant hit	/	Scopus: Broaden the search
20.03.2020	PubMed	Autonomous Sensory Meridian Response OR ASMR	182 hits – first 20 hits all relevant	B.K. Fredborg, J. Kornelsen, S. D. Smith	/
20.03.2020	JSTOR		160 hits – No relevant hits	/	Try different search terms and combinations

3) 10 Sources found through the Internet Search

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4) Materials and Databases

Several search engines and databases (Google scholar, JSTOR, PubMED, Scopus) were used for diversified scientific insights. Also, non-scientific sources (Blogs, websites, articles, YouTube) were used since the research topic is rather new and this helped to grasp the concept of ASMR and to explore ASMR advertising.