THE EFFECT OF MUSIC IN ADVERTISEMENTS ON CONSUMERS' ATTITUDE: A CROSS-GENERATIONAL STUDY

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Abstract

Marketers leverage the persuasive power of music to shape consumer responses and captivate audiences, much like they rely on music, rather than language, to convey their messages. However, the complex dynamics of advertising music and consumer responses have yet to be understood. This cross-generational study set out to examine the attitudes of Generation X, Y, and Z towards both advertisements (A_{ad}) and their accompanying music (A_{am}), seeking to identify differences and similarities among these cohorts. To achieve the aforementioned objective, an online questionnaire was administered to gather quantitative data from a sample of 330 participants, who indicated their A_{am} and A_{ad} based on three video advertisements.

The collected data underwent a comprehensive statistical examination to evaluate a series of hypotheses. This entailed employing Spearman's Rank Correlation, Kruskal-Wallis, and Mann-Whitney-U tests, alongside a moderated regression analysis. As indicated by the research findings, generational cohorts X, Y, and Z exhibit nuanced outcomes in their A_{ad}, with significant differences observed in their A_{am}. Furthermore, the study revealed a positive correlation between A_{am} and A_{ad}. Notably, age did not appear to moderate this relationship.

The insights obtained emphasize the difficulty of achieving universal appeal of advertising music amongst a diverse audience and thus suggest practitioners to cautiously evaluate their application of advertising music, especially when targeting numerous age groups. This research thus contributes a novel perspective to the discourse on music in advertising and sheds light on a previously unexplored area within the Central European context, paving the way for future studies to delve deeper into the effect of advertising music on attitudinal constructs.

Keywords: Advertising music / Generation X / Generation Y / Generation Z / Attitude towards the ad music / Attitude towards the ad / Cross-generational analysis

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Abbreviations

A_{ad}	Attitude towards the ad
A_{am}	Attitude towards the ad music
A_{b}	Attitude towards the brand
PI	Purchase Intention
RQ	Research Question
IQR	Interquartile Range
DV	Dependent Variable
IV	Independent Variable

1. Introduction

This first chapter introduces the concept of music in advertisements and its implications on consumers' attitude. Subsequently, market segmentation based on generational cohorts is discussed. The gap in the existing research body is outlined in the course of the problem description. The last section comprises the purpose of the present study and simultaneously covers its research questions and objectives.

1.1 Music in advertising and generational cohorts

Poet William Congreve famously wrote that "music has charms to soothe a savage beast, to soften rocks, or bend a knotted oak", thus already implying its shaping traits for mankind in 1697. Music is now an integral part of our daily lives, accompanying us for approximately 40-50% of our wakening hours, whether we actively choose to listen to it or hear it involuntarily (Sloboda, 2005). Marketers strive to make use of the shaping capabilities of music on its listeners, thus a significant portion of the music we are involuntarily exposed to is attributable to advertising (Hargreaves, North and Tarrant, 2006). As brands and bands continue to unite, the exploration of music's role in advertising has gained momentum, with research delving into an array of consumer response variables. For instance, marketers and managers alike mostly rely on attitudinal constructs to determine individuals' reactions to a variety of marketing items, including goods, brands, commercials (Grewal, Mehta and Kardes, 2004; Lee and Labroo, 2004; Pieters, Wedel and Batra, 2010), and most importantly in this context, to the ad music (Allan, 2014; Craton and Lantos, 2011; Mohling, 2015; Raja, Anand and Allan, 2020). Thereby, Craton and Lantos (2011) defined a new attitudinal consumer response, namely attitude towards the advertising music (A_{am}), which Raja, Anand and Kumar (2020) aimed to measure by establishing a multi-item scale. The latter studies, albeit limited in number, built the foundation for scholarly research to dive into the aspects shaping consumer attitude with a focus on advertising music.

Given the critical role of music in advertising, researchers such as Craton and Lantos (2011), Dunbar (1990) and Raja et al. (2020) suggest that advertisers should carefully choose the music used to ensure its alignment with the message and target audience of the commercial. Additionally, a highly saturated market adds to the importance of cautiously analysing target

groups in order to promote products or services effectively (de Run and Ting, 2013). As a result, several approaches on how to segment markets have been developed and applied. One of these approaches focuses on generational cohorts, which fragments markets based on the characteristics of various generations such as X, Y and Z. This segmentation strategy has been gradually recognized (Schewe and Meredith, 2004) and is widely used in social sciences, management, human resources and more marginally in marketing (Chaney, Touzani and Ben Slimane, 2017).

1.2 Research gap

Previously conducted studies looked into the effect of advertising music on consumers' attitude. While several studies focus on different elements of music such as tempo, genre (Mohling, 2015), popularity (Allan, 2004) or loudness (Kellaris and Rice, 1993), others analyse the implications of music for various types of advertisements such as television commercials (Hoeberichts, 2012; Park and Young, 1986) social media advertisements (Lupa-Wójcik, 2022) or broadcast commercials in general (Craton and Lantos, 2012). However, only a handful of studies has looked into particularities of A_{am}, let alone analysed this consumer response variable in conjunction with demographic constructs such as age. In fact, the bulk of research in this area has been on general consumer attitudes towards music in advertisements (Galan, 2009; Mohling, 2015). Therefore, research that has been conducted on how advertising music affects specific target groups differently is considerably limited, if even non-existent.

Since personality and social identity shapes an individual's musical preferences (Rentfrow and Gosling, 2003) and A_{am} is an important component of the attitude towards the ad (A_{ad}) (Craton and Lantos, 2011), it is argued that analysing the differences and similarities of target groups' attitudes in music provides valuable insights for advertisers. The latter is emphasized by Raja et al. (2020), who argue in favour of A_{am}-based segmentation, and Maroely and Munichor (2022) who's findings emphasize the benefits of personalized ad music. Specifically, when considering the generational segmentation and the examination of differences and similarities in these cohorts' A_{am}, no research as of 2023 has ventured into this territory. Yet, generational cohorts have distinct experiences that shape their values and preferences (Parment, 2011), thus they should be treated by advertisers differently (Williams and Page, 2011). Consequently,

different generational cohort's A_{am} and A_{ad} should be investigated considering the importance of music in today's advertising environment.

On another note, the majority of advertising research addressed music in a background role (e.g., Alpert & Alpert, 1989; Fraser, 2014; Hahn & Hwang, 1999; H. H. Park et al., 2015; Redker & Gibson, 2009). Thus, following Craton and Lantos' (2011) call, this study analyses participants' A_{am} and A_{ad} based on video advertisements that utilize music in the foreground in an attempt to close the respective research gap. In terms of geographic location, A_{am} has been studied by Raja et al. (2020) in an Indian context. However, no studies were conducted in Central Europe, which is why this study investigates Generation X, Y, and Z's A_{am} and A_{ad} in German-speaking countries, specifically Austria, Germany, and Switzerland.

1.3 Aims of the research

Combining the segmentation of markets based on generations with the effect of music in video advertisements, this study analyses possible similarities and differences of Generation X, Y and Z. Hence, the aim of this study is to provide insights into the potential influence of music on generations' A_{ad} and A_{am}. The three generations are analysed and compared. This enables insights in their attitudinal patterns of music in video advertising, thus providing a broader understanding of consumer behaviour and an increased precision in the predictability of a campaign's success among different generations. Considering these aspects, the research questions of the present study are concluded as follows:

RQ1*: Do generational cohorts X, Y and Z's attitude towards the advertising music influence their attitude towards the advertisement?*

RQ2*: How does the attitude towards the advertisement differ or resemble when comparing the generational cohorts X, Y and Z?*

RQ3*: How does the attitude towards the advertising music differ or resemble when comparing the generational cohorts X, Y and Z?*

RQ4*: Are the attitude towards the advertisement and the attitude towards the advertising music moderated by age?*

Hence, this resulted in the below structure of the present study, whereby each chapter tackles the following objectives:

The first chapter of the paper provides an overview of music in advertising as a concept and introduces the topic.

The second chapter of the paper synthesises the existing literature body, thus enabling the exploration of the consumer response variables A_{ad} and A_{am}. This is followed by the definition of characteristics and traits of Generation X, Y and Z in the context of consumer segmentation and ends by providing an overview of hypotheses.

Consecutively, Chapter 3 outlines the methodology utilised to achieve the present study's objectives and discusses the data analysis process.

The fourth chapter evaluates primary data obtained and thus aims to determine differences and/or similarities of the respective generations in their A_{am} and A_{ad}. Chapter 4 also strives to evaluate the effects of generational cohorts X, Y and Z's A_{am} on their A_{ad}. Additionally, this chapter explores if age is a moderator in the relationship of A_{am} and A_{ad}. As a result, the study's hypotheses are either accepted or rejected in the course of this chapter.

Chapter 5 allows for the elaboration on this study's research questions by summarizing the findings of the previous chapter and comparing them to the existing research body.

To conclude the present paper, Chapter 6 summarizes key findings, discusses managerial implications, addresses limitations and gives suggestions for future research.

2. Literature Review

The literature review of the present study summarises previously conducted studies in the field of music in advertising. The four sections within this chapter address music in marketing, the consumer response variable attitude as well as customer segmentation. The chapter ends with the development of hypotheses emerging from the analysis of the existing research body.

2.1 Music

Section 2.1 of this paper focusses on music in advertisements. The first part of this section explores the role of music in a marketing context, while the second part discusses the various types of advertising music.

2.1.1 The role of music in advertising

Music is a dominant component in advertisements across various media that have sound capabilities, such as television, radio and various online platforms. This is because advertisers believe that music can provide a significant benefit in terms of capturing the attention of consumers (Allan, 2006), increasing the impact of the message and engaging the listener (Hecker, 1986) or creating positive associations with the product or brand (Gorn, 1982). Hecker (1986) even argues that music may be considered the most stimulating aspect of advertising. Especially when examining advertisements that link brand message and music such as “Start Me Up” by the Rolling Stones for Microsoft (Sutherland and Sylvester, 2000) or “Like a Rock” by Bob Seger for Chevrolet (Clow and Baack, 2015), the importance of the role music plays in advertising becomes evident.

There is a consensus among both industry professionals (Galan, 2009; Taylor, 2012) and academic researchers (Gorn, 1982; Kellaris, 2008; Macinnis and Park, 1991) that music can have a positive impact in advertising. Music is employed for its ability to communicate a message (Scott, 1990) or enhance the overall meaning of a commercial (Hung, 2000). Next to these applications, music is also utilized to make the advertisement more memorable (Yalch and Spangenberg, 1990). Memorizing the ad content might be achieved by creating a music-message fit (Kellaris and Cox, 1993), which is defined as “the perceived appropriateness of the music’s meaning and feelings to the commercial’s message” (Craton and Lantos, 2011, p.398).

The notion of music-message fit enhancing brand recall is supported by extensive research (e.g., Allan, 2006; Kellaris et al., 1993; North, MacKenzie, et al., 2004; Shen & Chen, 2006; Yalch, 1991) whereby researchers argue that music-message fit is the most effective key in avoiding potential challenges associated with the usage of music in advertising (Craton and Lantos, 2011). Besides its memory amplifying properties, music has the potential to create associations to a specific brand, increasing the likelihood of consumers thinking of said brand when hearing a song (Craton and Lantos, 2011). The latter also supports music's ability to shape a brand image by utilizing specific genres reflecting the brand's identity (Onkvisit and Shaw, 1987; Sirgy, 1982). For instance, country music might convey humble messaging, whereas jazz and classical music might evoke a sense of sophistication and utilizing pop music potentially symbolises a trendy and modern brand image, helping the advertiser to differentiate itself (Craton and Lantos, 2011). Next to these cognitive effects, applying music in advertising is often tied to generating affective reactions, such as setting a mood (Bruner, 1990; Simpkins and Smith, 1973), evoking feelings (Bruner, 1990) or memories in the recipient (Dunbar, 1990).

However, despite its acknowledged impact and applications, music is still considered as a complex phenomenon in the field of advertising (Hung, 2000; Kellaris, 2008; Oakes, 2007). For example, the factors that contribute to the impact of music in commercials are still largely unknown (Galan, 2009). Yet, it is argued by Craton & Lantos (2011) that marketers' discussions mainly revolve around the assumption that music increases the effectiveness of an advertisement. They state that as a consequence, businesses risk a substantial part of their marketing budget in the belief that music enhances the viewer's attitude and thus sales.

2.1.2 Types of music in advertising

The type of music used in advertisements is likely a determinant of A_{am} of viewers (Craton and Lantos, 2011, 2012). Thereby, one can tell background music apart from foreground music. The commercial's foreground music plays a crucial role in enhancing the message of the advertisement. Often, this type of advertising music tends to rely on lyrics and acts as an attention-grabbing component, therefore it asks for an attentive listening approach (Young, 2007). On the other hand, background music is less dominant, more incidental, and primarily instrumental. It has a lesser impact on attention and is typically used to support voiceovers or messages (Craton and Lantos, 2011).

Furthermore, the source of the advertising music can vary. More specifically, there are three main types of sources for ad music, namely original compositions, existing tunes or 'needledrop' music, and altered music (Craton and Lantos, 2012). Original compositions are tunes specifically recorded for the commercial, thus are highly personalized, though financially intensive. Needledrop music is pre-made and widely standardized, resembling the musical counterpart of stock photos in terms of its characteristics (Scott, 1990). The last type of musical source is defined as altered music, where existing music is modified to create a sense of distinctiveness and better fit with the commercial (Allan, 2006).

The above elements, among other factors, have been summarised as music stimuli by researchers and are hypothesized to impact the consumer response A_{am} and consequently A_{ad} to some extent (Bruner, 1990; Craton and Lantos, 2011, 2012; Galan, 2009).

2.2 Attitude

This section analyses and summarizes previously conducted research with a focus on the consumer response variable attitude, thereby discussing the concept, formation as well as opposing views of A_{ad}. Consecutively, this section explores A_{am} and thereby summarizes elements influencing the variable.

2.2.1 Attitude as a consumer response variable

Attitudinal research is widely adopted by marketers and managers to gauge preferences and responses of individuals towards various marketing elements, including goods, brands, and commercials (Grewal, Mehta and Kardes, 2004; Lee and Labroo, 2004; Pieters, Wedel and Batra, 2010). Grasping the concept and formation of attitude thus is crucial when striving to change the consumers' evaluation of marketing elements, influencing their preferences and triggering specific behaviours (Argyriou and Melewar, 2011). The importance of attitudinal behaviour in marketing therefore prompted a focus on attitude within the existing research body, with studies dating back as far as 1929 (MacKenzie, Lutz and Belch, 1986). Attitudes are typically conceptualized as predispositions to respond in a favourable or unfavourable manner towards an attitude object (MacKenzie and Lutz, 1989), where attitudinal responses can take cognitive, affective, and/or behavioural forms (Zanna, Kiesler and Pilkonis, 1970). Individuals

are inclined to think, feel and behave on the basis of their attitudes, thus attitudinal patterns are viewed as valuable predictors of behavioural intentions (Mitchell and Olson, 1981).

Numerous differing perspectives on attitude in the marketing literature have emerged (Cohen and Reed, 2006; Schwarz, 2006). The latter can be attributed to two key issues. Firstly, there is a discrepancy regarding whether attitudes are stable, object-related associations that are stored and later recalled from memory (Fazio, 1990), or if they are temporary evaluations of an object formed in the specific situational context at the time of judgment (Feldman and Lynch, 1988; Schwarz and Bohner, 2001). The second key issue is concerned with whether attitude formation is primarily a cognitive process driven by analytical and deliberative evaluation and categorization (Ajzen and Fishbein, 2000; Fishbein and Middlestadt, 1995), or if it is predominantly affective, depending on emotions to direct classification in the assessment procedure (Schwarz, 1997). Therefore, when conducting research around the attitude of consumers within a marketing context, acknowledging this distinction – and thus that attitude formation could potentially be based on the situation (Argyriou and Melewar, 2011), is fundamental.

2.2.2 Attitude towards the advertisement (A_{ad})

The significant practical relevance for advertisers, along with the firmly established theoretical foundation of multi-attribute attitude models (Fishbein and Ajzen, 1975), has led to extensive research focusing on A_{ad} (Biehal, Stephens and Curlo, 1992). The exploration of A_{ad} began with a large-scale study (Zanot, 1984) and persisted over the following decade (Mittal, 1994; O'Donohoe, 1995; Pollay and Mittal, 1993; Shavitt, Lowrey and Haefner, 1998). Researchers were initially interested in the respective consumer response due to the concern that negative attitudes may impede the effectiveness of the advertisement (Beard, 2003; Pollay and Mittal, 1993). Studies continued when marketers and researchers recognized the major value of the recipient's perception of campaigns (Eze and Lee, 2012). At present, the effectiveness of advertising is often assessed by the extent to which it successfully modifies and enhances attitudes among the targeted customers (Craton and Lantos, 2011).

The concept of A_{ad} was defined by MacKenzie et al. (1986, p.130) as a "pre-disposition to respond in a favourable or unfavourable manner to a particular advertising stimulus during a particular exposure occasion", thus the construct of A_{ad} represents the consumers' feelings

towards the advertisement itself. It was found that the attitude of the viewer was a key determinant in the way consumers respond to the advertisement. Additionally, the influence of A_{ad} on attitude towards brand (A_b) and its impact on consumers' purchase intention (PI) have been explored in numerous studies (e.g., Ahmed Sallam & Ali Algammash, 2016; Goldsmith et al., 2000; Gresham & Shimp, 1985), indicating the interrelation among these variables. As of now, the prevailing belief is that A_{ad} influences A_b. When thoughts and/or feelings evoked by the ad are positive (negative), it is likely that the consumer's A_b will also become positive (negative). Numerous studies have also provided evidence on the impact of A_{ad} on PI (Gresham and Shimp, 1985; MacKenzie, Lutz and Belch, 1986; MacKenzie and Lutz, 1989; Shimp, 1981). Next to A_{ad}'s interrelations with other consumer response variables, the determinants of A_{ad} were studied by MacKenzie and Lutz (1989) and Pollay and Mittal (1993) among others. Both studies built structural models exploring the antecedents of the respective consumer response variable, grouping its origins into central and peripheral processing (MacKenzie and Lutz, 1989) or into personal (micro) and societal (macro) factors (Pollay and Mittal, 1993).

2.2.3 Attitude towards the advertising music (A_{am})

The discovery that emotions play a significant role in shaping A_{ad}, coupled with the idea that music has the power to evoke emotions, has sparked a series of research on the effect of music on consumer behaviour, particularly in relation to purchase decisions and other consumer response variables (Craton and Lantos, 2011). This line of investigation has shed light on the influence of music as a powerful tool in influencing consumer perceptions and actions. However, while the concept of A_{ad} and other consumer response variables in this context have been explored on numerous occasions, A_{am} and its relation to A_{ad} were investigated only by a handful of studies (Allan, 2014; Craton, Lantos and Leventhal, 2017; Craton and Lantos, 2011, 2012; Maroely and Munichor, 2022; Park, Park and Jeon, 2015; Raja, Anand and Allan, 2020; Raja, Anand and Kumar, 2020).

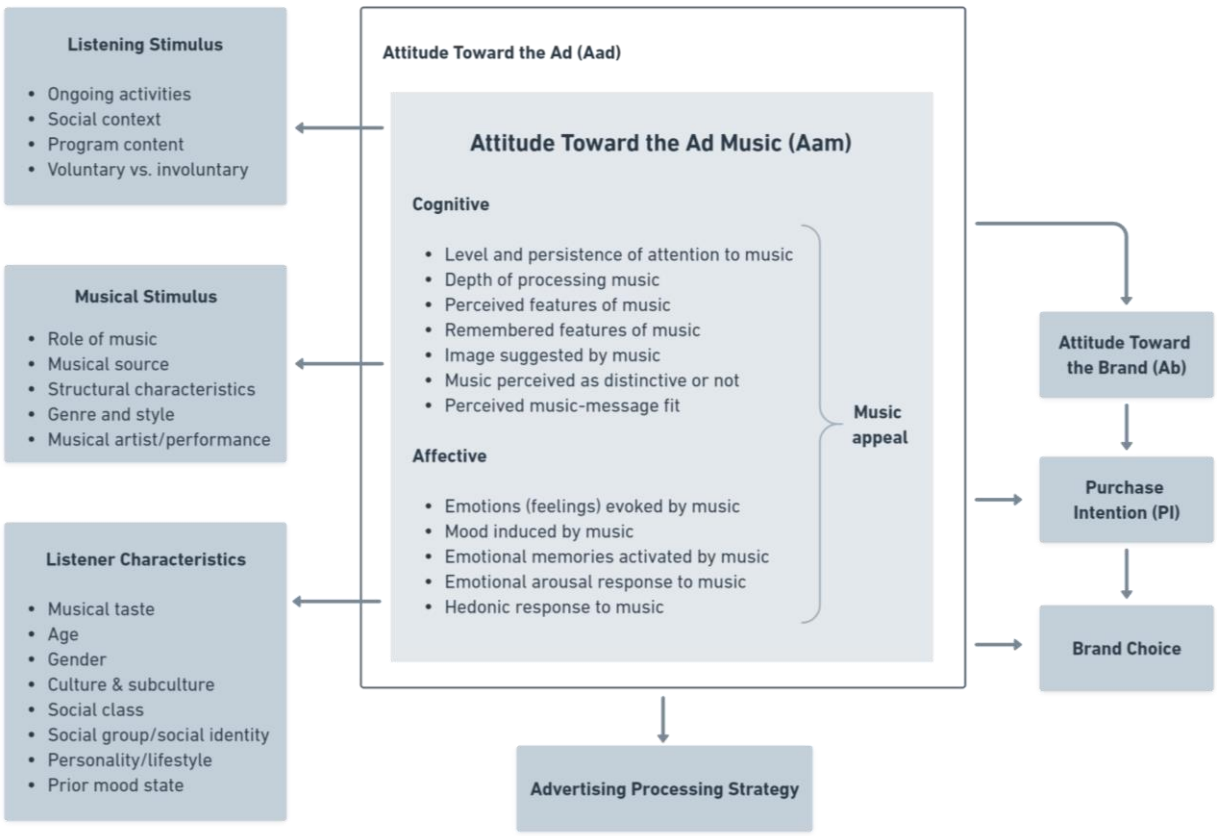
To begin with, Craton and Lantos (2011, p.401) define A_{am} as a "predisposition to respond in a favourable or unfavourable manner to an ad's music during a particular exposure occasion". Later, they further elaborated on the characteristics of the response variable and acknowledged that A_{am} reflects the consumers' perceptions, thoughts, and emotions in response to the music in an advertisement. As a result, it illustrates the consumer's conscious experience of the music (Craton, Lantos and Leventhal, 2017). They first introduced the concept of A_{am} and then

established a model that captures its components, namely cognitive as well as affective elements, which mirrors Lutz' (1985) and Shimp's (1981) assumption of A_{ad} being comprised of these two elements. Additionally, the respective model summarizes the determinants of A_{am}, which consist of the listening situation, the musical stimulus and the listener's characteristics and advertising processing strategy.

2.2.3.1 Determinants of A_{am}

Examining determinants of A_{am}, Craton and Lantos (2012) indicate that four variables shape the viewer's A_{am}. As outlined in Figure 1, the listening stimulus, the musical stimulus, the listener characteristics and the listener's advertising processing strategy are antecedents of A_{am}.

Figure 1: The model of consumer response to advertising music



Source: Adapted from Craton and Lantos (2012)

When it comes to the first determinant, the listening stimulus, ad music is usually experienced within a specific context rather than in isolation. Should the music not suit the listening

situation, A_{am} might be negatively influenced, which is supported by North and Hargreaves' (2004) findings stating that the effects of music depend on the listener's circumstances. Craton and Lantos (2012) hypothesize that ad music can be encountered while individuals are engaged in ongoing activities, in a certain social setting, as a diversion from specific program content during which the ad is aired, and either voluntarily or involuntarily. These different listening settings thus might interact with either cognitive and/or affective components of A_{am}. For instance, the ongoing activity of driving a car most likely influences the level of attention to the ad music (Craton and Lantos, 2012).

Next to the listening stimulus, Craton and Lantos (2012) suggest the musical stimulus as a second determinant of A_{am}. The musical stimulus is defined by the role of music, grouping ad music in either foreground or background music. Additionally, the musical source as well as the music's structure, genre, style and artist influence the viewer's A_{am}. Emphasizing key assumptions by Craton and Lantos (2012) and Yalch (1991) about how the musical stimulus shapes A_{am}, it can be said that the potential of foreground music to yield a negative A_{am} is greater compared to background music. They hypothesize that foreground music significantly impacts A_{ad}.

Existing literature on viewer's responses to music, both in general contexts and in advertising (e.g., Finnäs, 1989; Glevarec et al., 2020; Morris B. Holbrook & Robert M. Schindler, 1989; North & Hargreaves, 2007a, 2007b, 2007c), indicate that specific sociodemographic factors such as age, gender, cultural background, social class and group, along with individual personality traits and mood states, play a role in shaping a listener's reaction to music featured in commercials. This further emphasizes the importance and value of analyzing different generational cohorts' A_{am} for both researchers and marketers. As a final determinant, Craton and Lantos (2012) propose the advertising processing strategy of the viewer to have an effect on their A_{am}. This antecedent refers to how individuals acquire information or meaning from an advertisement. It is known that ad processing strategy influences A_{ad} (Brown and Stayman, 1992; Gardner, 1985; Homer, 1990; Mitchell, 1986; Park and Young, 1986). On the basis of the latter, Craton and Lantos (2012) propose that it also affects A_{am}.

Craton and Lantos (2017; 2011, 2012) established a foundation for future research on the determinants of A_{am} by defining the above variables. While mostly aligned with this approach, Raja, Anand and Allan (2019, 2020) grouped the determinants of A_{am} into three broad

categories, namely congruity, music appeal and utilitarian. Congruity implies the fit of the ad music with the message and/or different elements of the ad (Raja, Anand and Allan, 2020) and thus reflects Craton and Lantos' *perceived music message fit*. Music appeal relates to the viewer's evaluation of the musical stimulus, whereby Raja et al. (2020) use nearly identical elements of Craton and Lantos' cognitive and affective propositions. Their last determinant, namely the response to the utilitarian value of the ad, also draws from Craton and Lantos' model and comprises musical preference, entertainment, brand recognition and identification, value as well as message communication. Future research on A_{am} is required to further solidify and perhaps standardize the notion on how A_{am} takes its shape.

2.2.3.2 Cognitive components of A_{am}

As illustrated by Figure 1, the cognitive component of A_{am} is comprised of seven elements, which all correlate to specific marketing objectives for ad music. Firstly, the *level and persistence of attention to music* is vital for capturing and maintaining consumer attention towards the ad, consequently supporting the advertising objective of capturing the attention of the viewer. The *depth of processing of music*, which is rooted in cognitive psychology, determines to which degree the viewer processes the ad music and thus plays a role in enhancing the memory of the advertising content. While Craton and Lantos (2011, 2012) state that the *perceived features of music available for association* are relevant for establishing brand-music connections, they also hypothesize that this cognitive component is determined by the musical elements the ad viewer notices. These might include structural aspects, emotional expression and musical style. Another cognitive aspect of A_{am} are the *remembered features of music available for association.* These relate to prior connections to familiar music of the viewer and if they evaluate them as positive, negative, or neutral. While the *image suggested by the music* contributes to the creation of a brand image, the *distinctiveness of music* is significant for brand differentiation, as consumers assess its uniqueness and its favorability or unfavourability. The *perceived music-message fit* plays a role in reinforcing the ad message and in achieving congruity between the music used and the communication of the advertiser (Craton and Lantos, 2011, 2012), with high fit leading to a more favorable attitude (e.g., Fraser, 2014; Yang et al., 2021). Evaluating the above, these cognitive components not only determine the A_{am} of the viewer, put also provide a guide for advertisers on how to achieve a favorable A_{am} by following the elements' associated marketing objectives.

2.2.3.3 Affective components of A_{am}

Next to the above cognitive elements of A_{am}, the response variable is comprised of five affective components. The first component, namely the *emotions evoked by music*, relates to the marketing objective of triggering emotions and examines whether or not the music induces them, their intensity, and the consumer's favorable or unfavorable evaluation (Craton and Lantos, 2011, 2012). However, it is crucial to exercise caution because a specific piece of music can elicit varying emotional responses among individuals or even within the same individual at different moments (Sloboda and Juslin, 2001). Connected to the objective of creating a specific mood with an ad, the component of *mood induced by music* of A_{am} focuses on whether the ad music generates a (favorable or unfavorable) mood and its conformity to the consumer's perception of the brand's image and message. While the *emotional memories activated by music* tries to unlock emotion-laden memories of the viewer when listening to the ad music, the *emotional arousal to music* strives to achieve a modification of emotional arousal levels. The latter component investigates whether exposure to the ad music leads to changes in emotional arousal and evaluates the consumer's favorable perception of these changes. Finally, *hedonic response to music* wants to provide a positive hedonic experience. This construct records the customer's subjective evaluation of the ad music as pleasant or unpleasant (Craton and Lantos, 2011, 2012).

As illustrated by Figure 1, affective and cognitive components make up A_{am}. Due to the perspective presented by Craton and Lantos (2011), the basic interpretation of A_{am} can be understood as synonymous with "music appeal." However, viewing A_{am} as a more nuanced concept, one should consider that each of its affective or cognitive components could be favorable or unfavorable, thus creating an either positive or negative A_{am}. This suggests that a multi-item scale as opposed to a single Likert-scale item is applied to measure the consumer response. Raja et al. (2020) introduced a multi-item scale measurement that captures and validates the congruity, utilitarian and music appeal elements of A_{am}. The scale comprises 18 items and ensures that the multifaceted and occasionally conflicting nature of A_{am} can be captured. While the scale constructed by Raja et al. (2020) provides an adequate basis for secondary research on A_{am}, this model measures the overall attitude towards advertising music. Thus, when trying to determine A_{am} resulting from specific advertisements, a new scale needs to be established, which will be discussed further in section 3.2.3.

2.2.3.4 The interplay of A_{am} and A_{ad}

Having established A_{am}'s components and determinants, the next step is to move to the right-hand side of Figure 1 and acknowledge the interconnectedness of A_{am} with other consumer response variables. Craton and Lantos (2017; 2011, 2012) outline A_{am} as a crucial component of A_{ad}, and thus acknowledge the relation between these variables. They found that positive A_{am} is required but not sufficient for a positive A_{ad}. Consequently, a negative A_{am} can lead to a negative A_{ad}. Based on these findings, the following is hypothesised:

H1a. *There is a positive relationship between Generation X's A_{am} and A_{ad}.*

H1b. *There is a positive relationship between Generation Y's A_{am} and A_{ad}.*

H1c. *There is a positive relationship between Generation Z's A_{am} and A_{ad}.*

While other consumer response variables lie beyond the scope of the present study, it is worth mentioning that due to its relation to A_{ad}, A_{am} also is hypothesized to play a role in shaping A_b and PI (see e.g., Gorn, 1982; North, MacKenzie, et al., 2004; H. H. Park et al., 2015).

2.3 Consumer segmentation

The third section of this literature review explores segmentation techniques on the basis of individuals' A_{am} and their affiliation to a specific generation. Thereafter, characteristics of Generation X, Y and Z are analysed. Thus, a persona of each generation is created by briefly assessing each cohort in a consumer-based context.

2.3.1 A_{am} based segmentation

Studies have found positive effects on customers' attention, recall, attitude and product choice when the music that is utilized is liked (Allan, 2006; Baker et al., 2002; Gorn, 1982; Kantono et al., 2016). Adding to this, Anglada-Tort et al. (2022) demonstrated that personal liking of the music featured in video ads positively influenced the individual's brand selection behaviour. However, not surprisingly, the same song might result in utterly distinct attitudes depending on who views the commercial. Given the complexity to reach universal outcomes in broad audiences, one might follow a segmentation approach based on the consumers' A_{am}.

According to Mathew (2016), employing attitudinal segmentation can assist brands in formulating effective marketing strategies to influence consumer behaviour. Attitudinal segmentation approaches have been explored in various contexts, such as targeting based on attitude towards nutrition and foods (Kumar and Anand, 2016) online buying (Mathew, 2016) or travel (Beirão and Cabral, 2008). Most applicable for the present study, however, Raja et al. (2020) examined how A_{am}-based customer segmentation can have positive effects in advertising. Their study aimed to identify segments in the Indian market based on consumers' A_{am}, whereby they identified three segments resulting from an age-based cluster analysis: enthusiasts, mainstreams, and non-enthusiasts. Consumers who are enthusiasts demonstrate a strong preference for and genuine appreciation of the incorporation of music in advertisements. Individuals that were identified as mainstreams exhibit a moderate level of A_{am} and tend to show a favourable response to ad music that aligns with their preferred music genre. In contrast to enthusiasts and mainstreams, the segment of non-enthusiasts does not find ad music fascinating and may not appreciate its use in advertisements. However, if non-enthusiasts come across ad music that aligns with their personal preferences or features their favourite artist(s), they may develop a positive A_{am}. They concluded that a segmentation approach based on A_{am} enhances the effectiveness of advertising strategies. The latter supports Mathew's (2016) finding that attitudinal segmentation facilitates the setup of marketing strategies and further demonstrates the importance of understanding the target audience's A_{am} as an advertiser.

2.3.2 Generational segmentation

Next to segmentation on the basis of the consumer's A_{am}, cohorts can be defined using their affiliation to a specific generation as a segmentation criterion. Existing literature suggests that segmenting markets by generational cohorts, rather than solely by age, is more effective (Schewe, Meredith and Noble, 2000) as it offers both the consistency of segmentation based on age (Steenkamp and Hofstede, 2002) and a deeper understanding of consumer motivations through shared values and beliefs (Melchinger, 2004). Fernández-Durán (2016) argues that the identification process of generational cohorts consists of two stages. During the first stage, events which have been responsible for defining a generation's core values are analysed. These events might be of historic, economic, cultural or political nature. In the course of the second stage, inevitably, a generational cohort's members' birth dates are considered. Generational cohorts can be outlined by the extension of approximately 20 years (Karashchuk et al., 2020)

and exhibit similar beliefs, attitudes and purchasing behaviour due to their shared experiences (de Run and Ting, 2013).

2.3.2.1 Generation X

Generation X is born between 1965 and 1980 (Dimock, 2019). As of 2023, Generation Xers are consequently between 43 and 58 years old. Analyzing Generation X in a consumer-oriented context, research shows that members of this cohort generally tend to disregard advertisements that were specifically aimed at them, thus marketing techniques or any forms of segmentation are often rejected by members of this cohort (Lissitsa and Kol, 2016). Generation X consumers demonstrate a high level of sophistication in their purchasing behavior and tend to have a negative perception of generic promotional efforts (Dunne and Lusch, 2008). This generation still relies on traditional methods of research and decision-making when purchasing goods or services (Heaney, 2007), thus Xers tend to read reviews and visit opinion websites more frequently compared to other generations (Lissitsa and Kol, 2016). They seek detailed information about product features and expect a justification for the necessity of these features (Himmel, 2008). Often, generational cohort X is characterized as disloyal to brands and companies (Williams, 2005).

2.3.2.2 Generation Y

Members of Generation Y were born between 1981 and 1996 (Dimock, 2019), consequently, they are aged between 27 and 42 years old as of 2023. This generational cohort has a substantial effect on the global economy due to its size as a consumer segment (Bucuta, 2015). Analysing Generation Y from a consumer perspective, it is said that this generation is one of the most challenging segments to target in marketing practices (Bucuta, 2015). The latter might be a result of Generation Y's high standards towards products and a hard to build customer loyalty. Individuals belonging to Generation Y have been socialized in a materialistic society (Bakewell, Mitchell and Rothwell, 2006) and exhibit extensive social networks (Parment, 2013). They are therefore driven to partake in consumerism that is status-seeking (Eastman and Liu, 2012). Having simple access to abundant information, generational cohort Y tends to conduct extensive research before making purchase decisions. However, Gen Y consumers demonstrate higher frequency and greater impulsivity in their purchasing behaviour compared to Gen X individuals (Lissitsa and Kol, 2016).

2.3.2.3 Generation Z

The youngest generation analysed in the respective study, namely generational cohort Z, was born between 1997 and 2012 (Dimock, 2019). Consequently, as of 2023, Gen Zers are aged between 11 and 26 years old. As this cohort is growing in purchasing power, literature has emphasized the importance of creating a persona of generation Z members. Seemiller and Grace (2017) state that while Gen Z exhibits certain similarities to Millennials, they represent a distinct generational cohort with its unique set of traits and characteristics. Reflecting on Generation Z's consumer behaviour, Thangavel et al. (2022) conclude that the purchasing behaviour of the respective generation differs from Gen X and Y in a sense that they value consciousness and convenience to a greater extent when shopping for goods or services. Thus, they significantly favour e-retailers. With Generation Z, brand loyalty continues to decrease as modern consumers become increasingly sceptical towards advertisements and the abundance of choices remains in a state of growth (Tugend, 2010). They find it challenging to trust the intentions of brands, and any dissatisfaction is quickly voiced on social media platforms (Taylor, 2018).

2.4 Hypothesis development & overview

Considering the above findings on the characteristics of Generation X, Y and Z, these cohorts distinguish themselves significantly when it comes to the value-shaping period of their lives. Thus, the personas of Gen X, Y and Z will be considered by the respective study when determining the generational cohorts' A_{am} and consequently A_{ad}. The latter approach is taken as age is said to substantially impact the musical preference and taste of individuals (e.g., Glevarec et al., 2020; Hargreaves et al., 2012; Hird & North, 2021; Morris B. Holbrook & Robert M. Schindler, 1989) and as musical taste subsequently influences consumers' A_{am} (Craton and Lantos, 2012).

Considering these insights and the personas of each generational cohort, the following hypotheses are developed for subsequent analysis:

H2. *A_{ad} among Generation X, Y and Z differs significantly.*

H3. *A_{am} among Generation X, Y and Z differs significantly.*

H4. *The relationship of A_{am} and A_{ad} is moderated by age.*

By examining the above hypothesis, this research aims to gain insights into how generational cohorts X, Y and Z may respond differently to the advertising music used and thus how each cohort might differ in their A_{am} and A_{ad}. Additionally, researching the moderating effect of age on the relationship of A_{am} and A_{ad} contributes to the broader comprehension of how the strength or direction of the relationship changes depending on a person's age. The hypotheses drawn from the findings of previously conducted studies are summarized by the below table.

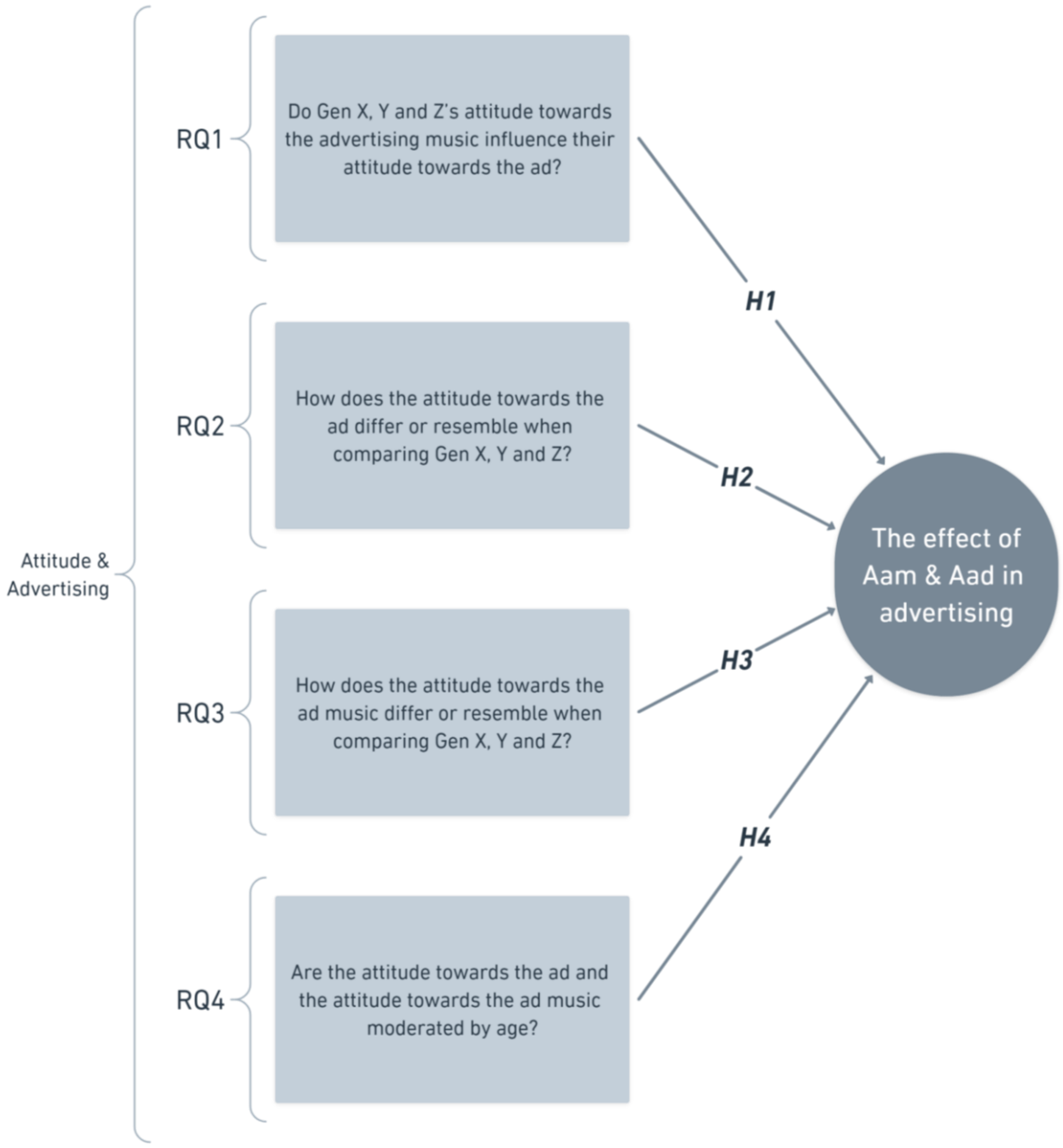
Table 1: Summarized hypotheses

Label	***Assumption to be tested***
H1a	*There is a positive relationship between Generation X's A_{am} and A_{ad}.*
H1b	*There is a positive relationship between Generation Y's A_{am} and A_{ad}.*
H1c	*There is a positive relationship between Generation Z's A_{am} and A_{ad}.*
H2	*A_{ad} among Generation X, Y and Z differs significantly.*
H3	*A_{am} among Generation X, Y and Z differs significantly.*
H4	*The relationship of A_{am} and A_{ad} is moderated by age.*

Source: Author's own table

As demonstrated in Figure 2, the hypotheses are interconnected with the research questions posited in the present study. The process of testing the above assumptions, that is either confirming their validity or rejecting them, thus not only enables a comprehensive understanding of the multifaceted impact that music employed in advertising might have on the attitudes of Generations X, Y, and Z, but also allows to answer the research questions outlined in Chapter 1 of this paper.

Figure 2: Visual summary of research questions and hypotheses



Source: Author's own illustration

3. Methodology

This chapter discusses the methodology of the present study, including the research design and philosophy, the data collection method, the data analysis approach, as well as statistical measures applied.

3.1 Scientific approach

To explore Generation X, Y and Z's A_{am} and A_{ad}, this explanatory study followed a positivist research philosophy. Thereby, it was striving to generate knowledge that is objective, generalizable and can be used to make predictions (Saunders, Lewis and Thornhill, 2019). To achieve the latter, existing research was reviewed to generate a comprehensive overview of music in advertising, the concept of attitude as well as consumer segmentation, whereby generational cohorts X, Y and Z were depicted. This process allowed the development of a theoretical position in the form of hypotheses outlined in section 2.4. These assumptions were rejected or accepted on the basis of primary data collection. Thus, this study followed a deductive approach. Consequently, a quantitative approach was taken to collect measurable data. The primary data was obtained by utilising a single method of data collecting, namely a self-completed online questionnaire. Hence, this study followed a mono method quantitative approach. The choice of an online questionnaire as the primary data collection technique is justified by its effectiveness in terms of cost and time as well as wide audience reach, which is imperative when gathering data from numerous individuals of three different generational cohorts. As the questionnaire provided insights into the research topic at a specific point in time, this study was conducted in a cross-sectional timeframe.

3.2 Data collection

3.2.1 Tools

Further elaborating on the data collection approach taken, the online questionnaire conducted was administered using SurveyHero^{TM}, a survey tool which provides analytical features for the obtained data, allowing the employment of video ads and ensuring high accessibility for participants. Aligning with previous research investigating generational cohorts (e.g., Ting and

de Run, 2012), this study utilizes purposive and snowball sampling methods, thus responses were obtained through collective administration via various social media platforms such as Facebook, WhatsApp, LinkedIn and Instagram, in which the majority of responses was collected using the messenger service WhatsApp.

Additionally, data was gathered via the crowdsourcing platform Prolific™, whereby participants were paid the equivalent of £0.75 upon full completion of the survey. Given that completing the survey took an average of five minutes, this sum equates to an hourly wage of £9, which is consistent with industry standards. Any responses administered through the latter platform were passed through validity and quality checks, which included the examination of completion time. Consequently, responses of participants that submitted the survey three standard deviations below the average completion time were rejected and deleted from the sample as advised by Prolific™. Besides the completion time, participants' demographics as well as tendencies of straight lining were checked to ensure the accuracy of the data collected. Reflecting upon the choice of this specific platform, it can be said that researchers typically regard Prolific™ as a dependable and preferable option in comparison to other platforms such as MTurk™ (Peer et al., 2017). This preference primarily stems from Prolific's™ ethical and transparent practices concerning participant compensation, treatment, rights, and obligations (Palan and Schitter, 2018). Moreover, in a recent study comparing various platforms, Peer et al. (2022) determined that Prolific™ was the only platform that delivered high-quality data across all evaluated criteria, including attention, comprehension, honesty, and reliability.

3.2.2 Sampling

Responses of individuals born between 1965 and 2012 were considered to be applicable for this study. However, only members of the generational cohort Z aged 18 or older were able to participate due to ethical research concerns. The data collected for the present study therefore lacks A_{am} and A_{ad} of 11–17-year-old Gen Zers, narrowing the span of applicable respondents to individuals born between 1965 and 2005. On another note, respondents were requested to specify if they were residents of Austria, Germany or Switzerland to ensure that the sample obtained mimics the Central European, German-speaking population. Consequently, only data deriving from participants who fulfilled these requirements were considered for the present research.

The questions were published in both English and German, whereby cross-translation was used to ensure that the meaning of both versions was congruent and accurate. Additionally, the German as well as English version was pre-tested by three Austrian nationals to ensure there were no language discrepancies or other issues which may hinder the data collection process. A total of 291 participants who fulfilled the aforementioned participation criteria chose to fill out the German version of the questionnaire and 39 individuals participated in the survey using the English language setting.

3.2.3 Survey design

As for the design of the online questionnaire, it can be said that it is composed of three main parts, namely an introduction, a set of demographic questions and a rating section for each video advertisement, which can be viewed in Appendix A and B. In the first part, which is devoted to the introduction of the survey, the aim of the research is discussed, and confidentiality considerations are indicated briefly to comply with ethical research considerations. Moreover, contact details of the researcher are given in case further questions arise among participants. The second part of the online survey comprises a set of selective questions to identify necessary prerequisites of participating in the survey as outlined in section 3.2.2. To build a comprehensive participant profile, respondents were asked to state their age, residency and gender as illustrated by the below table.

Table 2: Items used to obtain demographic data

Construct	***Item***	***Measurement***
Demographic data	Are you a resident of Austria, Germany or Switzerland?	Single choice (Yes, No)
	Please indicate your age.	Numerical input (18-58)
	Please indicate your gender.	Single choice (Female, Male, Other, Prefer not to say)

Source: Author's own table

If participants did not fulfil the necessary requirements, they were shown a screen that thanked them for their participation. However, if a respondent's demographic data was applicable for

the study, a brief instruction was shown, indicating that three ads are to be rated in the following parts of the survey. Simultaneously, respondents were notified that the videos have to be watched with sound on.

The third part of the questionnaire consisted of three subsections, where each section was devoted to one video ad. An analytical section which followed each video was used to observe the generations' A_{am} and A_{ad} by asking a set of questions about the respective ad. Especially when it comes to A_{ad}, a multitude of different authors have measured this variable in a variety of ways (e.g., Edwards, Li and Lee, 2002; Lee and Mason, 1999; De Pelsmacker, Geuens and Anckaert, 2002; as seen in Bruner, 2009). However, in the context of marketing research, a widely recognized source for such scales is the work of Mitchell and Olson (1981b). Their scale is frequently employed to assess the overall evaluative response to advertisements, making it a common choice in the field of marketing (Bruner, 2009). Thus, following Mitchell and Olson's (1981b) lead, A_{ad} was captured using four five-point Likert-type scales which demonstrated an Alpha reliability of .90 in past studies. These scales were marked by bipolar adjectives encompassing "good-bad", "like-dislike", "non-irritating-irritating", and "interesting-uninteresting", which were preceded by the prompt "Please rate the ad.", as illustrated below.

Table 3: Items used to determine Aad

Construct	***Prompt***	***Response options***	***Measurement***	***Adapted from***
Attitude towards the ad (A_{ad})	*Please rate the ad.*	Good / Bad	1 = Bad 5 = Good	Mitchell & Olson (1981), α = .90
		Like / Dislike	1 = Dislike 5 = Like	Mitchell & Olson (1981), α = .90
		Non-irritating / Irritating	1 = Irritating 5 = Non-irritating	Mitchell & Olson (1981), α = .90
		Interesting / Uninteresting	1 = Uninteresting 5 = Interesting	Mitchell & Olson (1981), α = .90

Source: Author's own table

To expand on survey questions, scale items that captured the participants' A_{am} needed to be defined. As briefly discussed in section 2.2.3, Raja et al. (2020) pioneered the construction of

scale items to find A_{am}. However, their multi-item model solely captures the general attitude towards advertising music. Therefore, when examining A_{am} succeeding the exposure to a specific advertisement, it was not possible to locate a pre-tested scale in the existing research body. Thus, following the call of Craton and Lantos (2012) to use their model of A_{am} to find a scale, determinants and components of the consumer response variable were used to establish a new multi-item scale to capture A_{am} of generational cohorts X, Y and Z. Using both cognitive as well as affective determinants of A_{am}, five items were not only adopted by the present study but will build a foundation for future research measuring A_{am} after a specific ad exposure. As illustrated below, a 5-point Likert scale, ranging from "strongly disagree" to "strongly agree," was used to rate each item, which aligns with the practical constraints of the study, including the need for a concise questionnaire to ensure a higher response rate (De Bruijne, 2014).

Table 4: Items used to determine Aam

Construct	***Prompt***	***Item***	***Measurement***	***Created after***
Attitude towards the ad music (A_{am})	*Please rate the music in the ad.*	The music in the ad is interesting.	1 = strongly disagree 5 = strongly agree	Craton and Lantos' (2012) finding that **attracting attention** is a determinant of A_{am}.
		The music fits the message of the ad.	1 = strongly disagree 5 = strongly agree	Craton and Lantos' (2012) finding that **music-message fit** is a determinant of A_{am}.
		The music in the ad evokes memories.	1 = strongly disagree 5 = strongly agree	Craton and Lantos' (2012) finding that **tapping into memories due to familiar music** is a determinant of A_{am}.
		The music in the ad evokes emotions.	1 = strongly disagree 5 = strongly agree	Craton and Lantos' (2012) finding that the ability to **evoke emotions** is a determinant of A_{am}.
		The music in the ad creates a specific atmosphere.	1 = strongly disagree 5 = strongly agree	Craton and Lantos' (2012) finding that the ability to **create a mood** is a determinant of A_{am}.

Source: Author's own table

After the third and last advertisement was rated, participants were notified to have completed the survey and were thanked for their time.

3.2.4 Surveyed advertisements

The three advertisements shown in the online questionnaire included a variety of advertisers, namely IKEA, a multinational furniture retailer, Erste Bank, a bank operating in Europe and lastly, Apple, a multinational technology company. These specific advertisements were chosen for three reasons. Firstly, each advertisement was published within the last 10 months, giving this study a contemporary edge by analysing the output of today's marketing practitioners. Secondly, the sample ads that were shown are short in length, where the longest one had a duration of 50 seconds. This enables a swift completion of the survey, maximizing the possible number of responses. Thirdly, not only the advertising companies were inherently different, but also the music chosen to accompany each ad greatly varied in terms of genre, tempo and mood. While Erste Bank chose to feature The Pointer Sisters' well known and upbeat pop-song "Jump" to accompany their video, Apple used "Dream Big" by Rüü and Oliwa, an electronic, contemporary song with an energetic beat. IKEA opted to include a melodic and tranquil acoustic composition to support the message of their ad. As a fourth reason, one has to mention that the majority of advertising research addressed music in a background role (e.g., Alpert & Alpert, 1989; Fraser, 2014; Hahn & Hwang, 1999; H. H. Park et al., 2015; Redker & Gibson, 2009). Thus, following Craton and Lantos' (2011) call, the advertisements chosen utilize music in the foreground in an attempt to close the respective research gap. As foreground music can assume three roles (Alpert and Alpert, 1991), the ads were selected accordingly.

Elaborating on the above and as outlined in greater detail by Table five, the song used by Erste Bank reflects Type 1 of foreground music as The Pointer Sisters' "Jump" carries the video, where a boy tries to *jump* over his own shadow, a play on a German proverb about facing your own fears. In contrast, Apple's advertisement introduces their new laptop featuring a *bigger* display, which is accentuated, but not overtaken by Rüü and Oliwa's "Dream Big", thus falling into Type 2. Lastly, IKEA's video advertisement shows a young couple viewing their new yet empty flat. As a tranquil piano composition starts to play, they begin to imagine their live together in their now furnished home, representing Type 3.

Table 5: Music used in advertisements

Advertiser	***Song***	***Foreground Type & Description***
Erste Bank	"Jump" by The Pointer Sisters	**Type 1** – Music that carries the ad's message and meaning through lyrics, usually as a jingle. Creates a brand image, mood, or feeling.
Apple	"Dream Big" by Rüü and Oliwa	**Type 2** – Music that integrates lyrics that do not overtly convey the advertisement's message but are the principal vehicle of communication.
IKEA	Acoustic piano composition	**Type 3** – Instrumental music without lyrical content in the foreground, often accompanied by minimal voiceover or verbal messaging.

Source: Adapted from Alpert and Alpert (1991)

3.2.5 Ethical considerations

Ethical concerns were rigorously addressed throughout the entirety of the research process. Participants were informed about data usage of the study through the 'Participant Information' letter. Additionally, a FREC Ethics Form was filled out and turned in before the data collection process to ensure this research complies with ethics considerations.

3.3 Data analysis

To analyse Generation X, Y and Z's A_{am} and A_{ad}, the data obtained through the survey was cleaned and coded using Microsoft Excel as a first step. Thereby, inconsistencies in the data were located and any incomplete responses were removed. A_{ad} was captured using Likert-scales which were marked by bipolar adjectives such as "good-bad". The data tied to these variables was collected in the form of evaluation bars ranging from 1 to 5, where 1 equalled to "bad" and 5 to "good". Consequently, the data was coded as specified in the below table.

Table 6: Likert-scale labels and the corresponding numeric counterparts to find Aad

Likert-scale label	***Numeric value***
bad	1
somewhat bad	2
neutral	*3*
somewhat good	*4*
good	*5*

Source: Author's own table

Given that participants' responses concerning A_{am} were recorded using Likert-scale labels within a multiple-choice grid spanning from "Strongly Agree" to "Strongly Disagree", the data was converted into numerical values as outlined in the subsequent table.

Table 7: Likert-scale labels and the corresponding numeric counterparts to find Aam

Likert-scale label	***Numeric value***
strongly disagree	1
disagree	2
neutral	*3*
agree	*4*
strongly agree	*5*

Source: Author's own table

After the data cleaning process, 330 of 401 total responses remained, with 126 attributed to members of generational cohort X, 101 to generational cohort Y, and 103 to generational cohort Z, thus ensuring a somewhat equal amount of data for all three groups. As a second step, the dataset was imported to IBM SPSS version 28 to test and subsequently to reject or accept the hypotheses as well as to answer the present study's research questions. Here, the entire dataset was tested for normality whereby the results of both the Kolmogorov-Smirnov (KS) and Shapiro-Wilk tests revealed that the data exhibited significant departures from a normal distribution ($p < .05$). Whenever reasonable, the dataset was split using the compare groups mode of IBM's statistics programme to show the results for each generational cohort separately. As an additional measurement to ensure the accuracy of findings, the scales of both A_{am} and

A_{ad} were tested for reliability using Cronbach's Alpha. As a third step, the overall A_{am} and A_{ad} were computed by aggregating the scores of all three advertisements. The latter enabled insights into the scores for each video ad shown in the questionnaire. In this process, it was uncovered which advertisement yielded the highest or lowest A_{am} and A_{ad}. Thereby, the results for both A_{am} and A_{ad} were presented separately and visualized using box plots. Statistical tests to verify or reject the hypotheses of this study were applied during step four, whereby the non-parametric nature of the data obtained was considered. An overview of the tests conducted for each hypothesis can be viewed in the below table.

Table 8: Statistical test used for each hypothesis

Label	***Assumption***	***Test***
H1a	*There is a positive relationship between Gen X's A_{am} and A_{ad}.*	**Spearman's Rank Correlation**
H1b	*There is a positive relationship between Gen Y's A_{am} and A_{ad}.*	
H1c	*There is a positive relationship between Gen Z's A_{am} and A_{ad}.*	
H2	*A_{ad} among Gen X, Y and Z differs significantly.*	**Kruskal-Wallis & Mann-Whitney-U Test**
H3	*A_{am} among Gen X, Y and Z differs significantly.*	
H4	*The relationship of A_{am} and A_{ad} is moderated by age.*	**Moderated Regression Analysis**

Source: Author's own table

As illustrated above, Spearman's Rank correlation emerged as a suitable statistical tool for testing hypotheses *H1a, H1b* and *H1c* due to its robustness in handling non-parametric data and its ability to define the relationship between A_{am} and A_{ad}. Additionally, the latter test operates on the basis of ranks rather than exact values, rendering it particularly suitable for examining relationships between variables measured on an ordinal scale (Saunders, Lewis and Thornhill, 2019), as is the case with the Likert-scale data employed in this study. Next to the above

advantages, Spearman's Rank correlation is well-suited to determine monotonic trends (Spearman, 1987), which aligns with the hypotheses' focus on positive associations, regardless of whether they are strictly linear or not.

Spearman's Rank correlation is a dependable choice for assessing the proposed positive relationships across generational cohorts X, Y and Z. However, when comparing A_{am} and A_{ad} among the generations, a different test has to be applied. More specifically, the Kruskal-Wallis test was chosen for testing the hypotheses *H2* and *H3*. The latter statistical test provided insights into potential variations in A_{am} and A_{ad} among generations without relying on the assumption of normality. Additionally, the Kruskal-Wallis Test is a non-parametric test designed for comparing independent groups on an ordinal or continuous dependent variable (e.g., Ostertagová, Ostertag and Kováč, 2014), thus accommodating the unique characteristics inherent to the study. The respective independent variable (IV) and dependent variable (DV) to conduct the Kruskal-Wallis Test can be found in the below table.

Table 9: Variables for Kruskal-Wallis Test

Assumption	***IV***	***DV***	***Test***
H2. *A_{ad} among Gen X, Y and Z differs significantly.*	**Generation (nominal)**	**A_{am} & A_{ad} (ordinal)**	Kruskal-Wallis Test
H3. *A_{am} among Gen X, Y and Z differs significantly.*			

Source: Author's own table

Additionally, a series of Mann-Whitney-U Tests were run to determine where specifically variances in generational cohorts X, Y and Z are located. Similarly to the Kruskal-Wallis Test, this non-parametric post-hoc test enables the comparison of two independent groups (Mann and Whitney, 1947), thus it can help determine which specific generations differ from each other. However, conducting multiple pairwise comparisons causes an inflation in the Type I error rate (Maxwell, 1980). Thus, as suggested by Maxwell (1980) and Emerson (2020), the Mann-Whitney-U test was controlled using a Bonferroni correction. Thereby, the alpha value of .05 which was deemed appropriate in the Kruskal-Wallis Test was divided by the number of possible pairwise comparisons among Generation X, Y and Z, which sets the alpha to .016

periodic. Consequently, this results in $\alpha \leq .015$ as a threshold of statistical significance for the Mann-Whitney-U Test.

When it comes to the final hypothesis, *H4*, the moderated regression analysis was chosen to reject or verify the assumption that age influences the strength and direction of the relationship between A_{am} and A_{ad}. This analytical approach allows for a deeper understanding about the dynamics of how age may alter individuals' responses to advertising music in relation to their overall A_{ad}. Thus, the results of the latter analysis can provide practical insights for marketing strategies. If age is found to moderate the relationship, it suggests that tailoring advertising music approaches based on age demographics might be beneficial. The variables in question to either reject or verify *H4* are summarized by the below table.

Table 10: Variables for moderated regression analysis

Assumption	***IV***	***DV***	***Moderator***	***Test***
H4. *The relationship of A_{am} and A_{ad} is moderated by age.*	**A_{am} (ordinal)**	**A_{ad} (ordinal)**	**Age (continuous)**	Moderated Regression Analysis

Source: Author's own table

A_{am} served as the independent variable to examine how it influences or predicts A_{ad}, the dependent variable. The latter is aligned with Craton and Lantos' (2017; 2011, 2012) assumption that A_{am} is a crucial component of A_{ad}. Age was chosen as the moderator of the analysis as it allowed for a finer level of granularity compared to the moderator generation. For the moderated regression analysis to yield valid and accurate insights, bootstrapping was applied given that the traditional parametric assumption was not met. Bootstrapping accounts for the inherent non-normality in the variables by resampling the data and analysing it multiple times, which allows for more robust estimates (Haukoos and Lewis, 2005). Additionally, Hayes Process Macro Model 1 was used to ensure the simplicity and comprehensiveness of the output generated by the moderated regression analysis (Hayes, Montoya and Rockwood, 2017).

Furthermore, it's worth noting that each hypothesis was tested individually for all three video ads. If the hypothesis holds true for the majority of the ads, any exceptions are thoroughly examined, considering factors such as the music type, ad nature, and the generational cohort's persona to provide a comprehensive explanation.

4. Empirical findings

This chapter presents the empirical findings and assesses their implications for the hypotheses derived from the literature review. The chapter opens with an assessment of the reliability of the scales employed, followed by general insights about the questionnaire results. The findings of each ad and the specifics of each generational cohort are discussed next. The final section establishes comparisons among Generation X, Y and Z.

4.1 Reliability of scales

To ensure that the measurements accurately represent the underlying constructs, the scales of both A_{ad} and A_{am} were tested for reliability. As outlined in section 3.2.3, A_{ad} was obtained using an adapted version of Mitchell and Olson's (1981b) scale, whereas the construct A_{am} was found by applying a newly established scale. The construct reliability was assessed using Cronbach's Alpha. The results, which are presented in tabular format below, demonstrate the robustness of the scales used to gather responses from participants concerning their A_{ad} and A_{am}.

Table 11: Scale reliability

Construct	***Prompt***	***Item***	***Cronbach's Alpha***
A_{ad}	Please rate the ad.	Good / Bad	.816
		Like / Dislike	
		Non-irritating / Irritating	
		Interesting / Uninteresting	
A_{am}	Please rate the music in the ad.	The music in the ad is interesting.	.793
		The music fits the message of the ad.	
		The music in the ad evokes memories.	
		The music in the ad evokes emotions.	
		The music in the ad creates a specific atmosphere.	

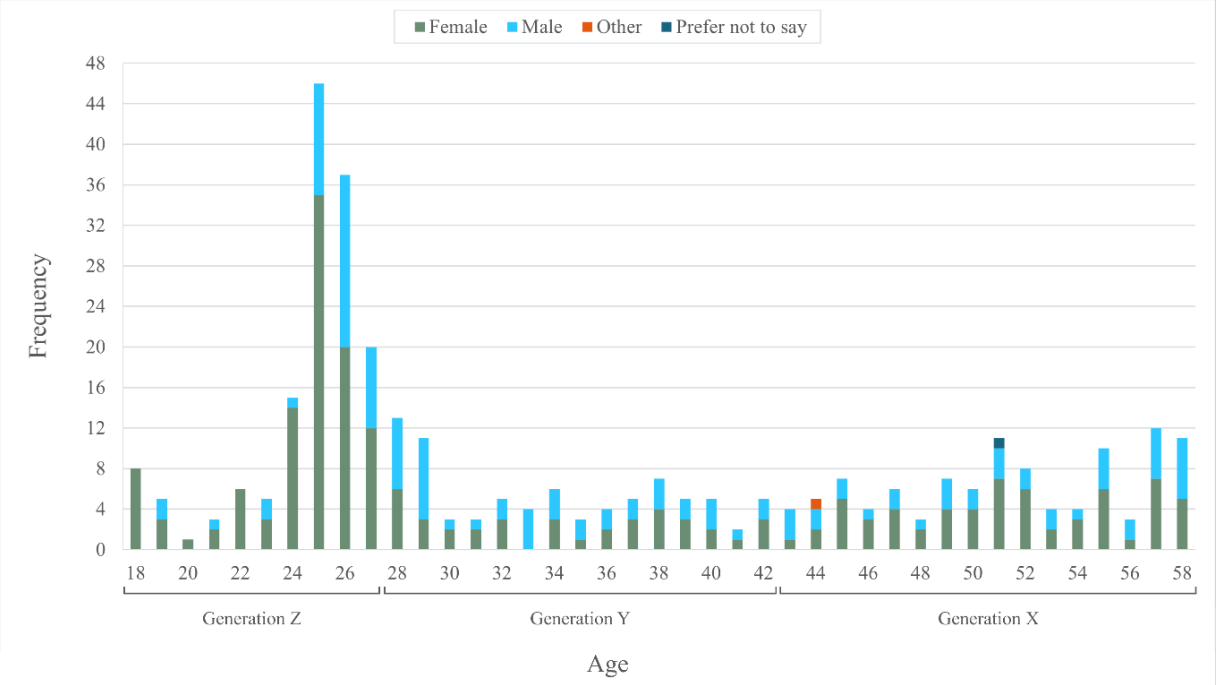
Source: Author's own table

Considering that a construct is reliable if $\alpha \geq .70$ (Hair, Howard and Nitzl, 2019) the results of Cronbach's Alpha revealed that the A_{ad} scale with four items ($\alpha = .816$) and the A_{am} scale with five items ($\alpha = .793$) were found reliable.

4.2 Response rates and demographics

The questionnaire was published on August 28, 2023, and was online for 36 days. In this timespan, 401 individuals took part in the survey, however 71 respondents were later on excluded from the final evaluation of the data due to inconsistencies within or incompleteness of their responses. The below figure outlines the age as well as gender distribution of the sample.

Figure 3: Age and gender frequency



Source: Author's own figure

Further reflecting on the above, 330 responses or 82.3% of the original sample were rated as valid after the data cleaning process. Out of the valid responses, 61.8% were generated by female participants, while 37.6% of the surveyed individuals identified as male. Additionally, one individual chose to identify as 'other,' while another individual opted for 'prefer not to say' when questioned for their gender. While the present study aimed to obtain responses from a broad age range, a larger proportion of responses were collected from individuals aged 25 and 26 as illustrated in Figure 3. As a result, the overall age distribution was rather unequal with a mean of approximately 35 years. Despite the rather unequal overall distribution of age groups, the distribution of generational cohorts X, Y and Z resulted in somewhat equal sized parts. More

specifically, 31.2% of respondents belonged to Generation X, 30.6% were members of Generation Y, and 38.2% constituted Generation Z.

4.3 Advertiser-based analysis

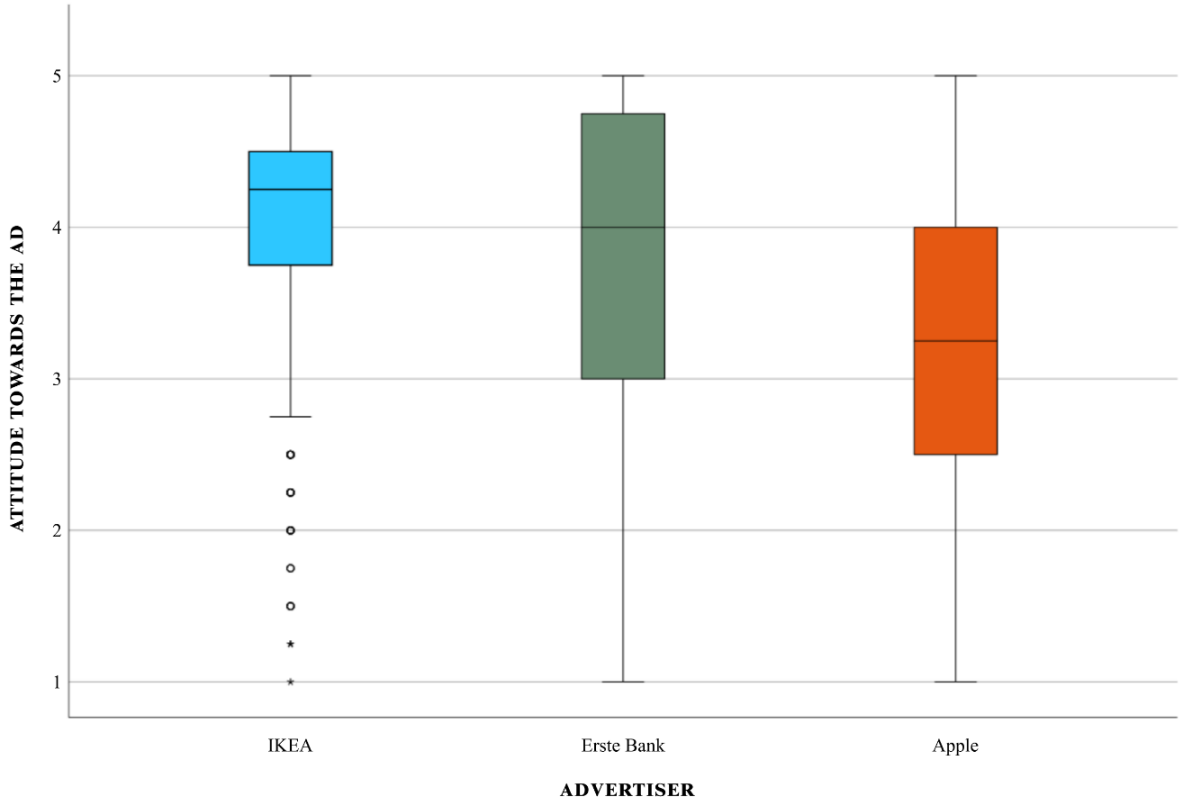
By computing the average A_{ad} and A_{am} for the three advertisements presented, the resulting aggregated A_{ad} and A_{am} scores allow for insights into the individual performance of each advertiser.

4.3.1 Overall A_{ad}

When respondents were asked to state their A_{ad} for the respective ad, an evaluation bar ranging from one to five was provided. This bar thus comprised five steps, whereas one was indicating a very negative attitude and consequently, five was equivalent to a very positive attitude. To get a comprehensive feel for the data but also to reveal broader insights into how participants perceived the advertising content, the overall A_{ad} per advertiser is visually represented by Figure 4, which illustrates the summarized results of 330 valid responses.

The first boxplot depicting IKEA's result shows that the distribution of A_{ad} demonstrates variability, as the presence of mild and extreme outliers suggests that IKEA's ad received diverse reviews, including a few exceptionally negative ones. However, the interquartile range (IQR), spanning from 3.75 to 4.5 indicates that most respondents' attitudes ranged from moderately positive to highly positive. The median score of 4.25 signifies that over half of the participants rated IKEA's ad as 4 or higher, suggesting that a substantial proportion of respondents had a positive A_{ad}. In the case of Erste Bank, the data is less concentrated around the median, with no mild or extreme outliers. The IQR, ranging from 3 to 4.75, suggests that the majority of respondents expressed a moderately positive to a highly positive A_{ad}. The median score of 4 indicates that half of the participants rated Erste Bank's ad as 4 or higher, again reflecting a prevalent positive A_{ad}.

Figure 4: Overall Aad of each advertiser



Source: Author's own figure

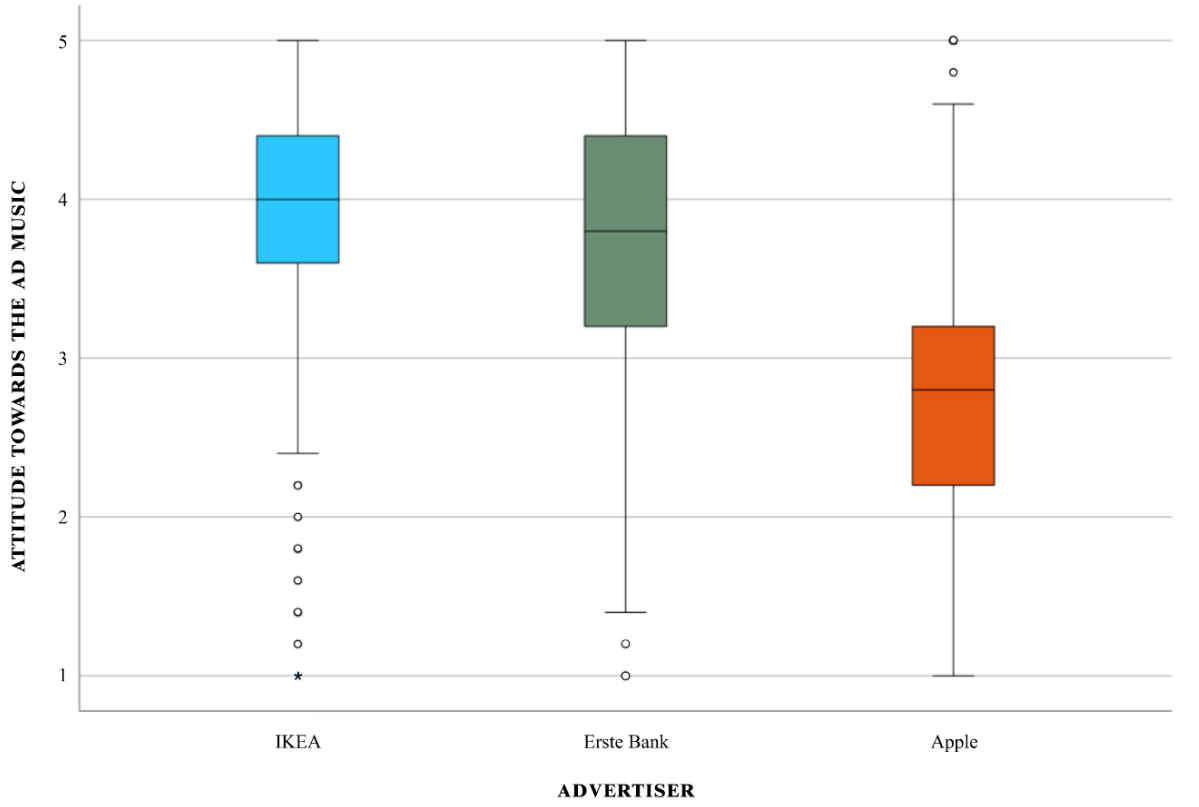
For Apple's advertisement, the box plot demonstrates a tighter clustering of data points compared to Erste Bank, with no instances of mild or extreme outliers. The IQR spans from 2.5 to 4, signifying that the majority of respondents expressed neutral or moderately positive attitudes regarding the ad. Notably, the median score of 3.25 indicates that more than half of the participants assigned ratings of 3 or higher.

Comparatively analysing the three advertisers, the results reveal that while IKEA's ad achieved the highest median, the presence of outliers symbolises diverse reviews. In contrast, while Erste Bank's median is slightly lower than IKEA's, the bank's ad garnered more consistent ratings. When comparing Apple's results to the other advertisers, this study found that the multinational technology company generated a somewhat lower but still generally positive A_{ad} among respondents.

4.3.2 Overall A_{am}

Having analysed the overall A_{ad} for each advertiser, this section examines the respondents' A_{am} to uncover further insights into the obtained data. To find A_{am}, a multiple-choice grid with 5 items was given, with each item being measured on a 5-point Likert-scale ranging from "strongly disagree", coded as 1, to "strongly agree", denoted as 5. Thus, the below figure visualizes the overall A_{am} of all 330 respondents for each advertiser.

Figure 5: Overall Aam of each advertiser



Source: Author's own figure

IKEA's melodic song obtained the highest median of 4 and exhibited the most concentrated distribution of A_{am}. The ad of Erste Bank's using "Jump" from the Pointer Sisters achieved a moderately lower median of 3.8 with a broader IQR, whereas Apple's contemporary and electronic song "Dream Big" by Rüü and Oliwa yielded the lowest median of 2.8, indicating a somewhat negative A_{am} compared to the other advertisers. What stands out in the above box plots is the similarity in patterns when comparing Figure 4 and 5 across the three advertisers, which provides a first indication of a potential correlation between A_{ad} and A_{am}.

4.4 Generation-based analysis

As this study attempts to assess whether generational cohorts X, Y and Z's A_{am} is positively correlated to their A_{ad}, the following part moves on to explore the relationship between the two consumer response variables. The latter process is conducted by evaluating the results of each generation, thus verifying or rejecting hypotheses *H1a*, *H1b* and *H1c*. The potential correlation between A_{am} and A_{ad} was tested separately for each of the three advertisements. Additionally, the aggregated scores, which are the mean values of A_{am} and A_{ad}, were tested for correlation. Using the Spearman's rank correlation test, following the correlation coefficient interpretation guide of Saunders et. al (2019) and denoting results as significant at $\alpha \leq .05$ (Labovitz, 1968), the below results presented in Table 3 were generated.

Table 12: Spearman's Rank Correlation overview

Label	Assumption	Advertiser	r_s coefficient	p-value
GENERATION X				
H1a	*There is a positive relationship between Generation X's A_{am} and A_{ad}.*	IKEA	.524	< .001
		Erste Bank	.745	< .001
		Apple	.667	< .001
		Aggregated	.616	< .001
GENERATION Y				
H1b	*There is a positive relationship between Generation Y's A_{am} and A_{ad}.*	IKEA	.606	< .001
		Erste Bank	.619	< .001
		Apple	.684	< .001
		Aggregated	.598	< .001
GENERATION Z				
H1c	*There is a positive relationship between Generation Z's A_{am} and A_{ad}.*	IKEA	.550	< .001
		Erste Bank	.664	< .001
		Apple	.562	< .001
		Aggregated	.601	< .001

Source: Author's own table

Looking at the above table to analyse the results of Generation X, it is apparent that the Spearman's Rank Correlation analysis shows statistically significant and moderately to strong positive relationships between A_{am} and A_{ad} for all advertisements shown in the questionnaire. Thus, the aggregated score of the consumer response variables shows such a correlation as well.

With the strength of the relationship being denoted with a Spearman correlation coefficient of r_s = .616, generational cohort X shows the highest aggregated score among the three generations, therefore exhibiting the strongest relationship between A_{am} and A_{ad}. What else stands out in the above table are the results of the advertiser Erste Bank, which show the strongest relationship between A_{am} and A_{ad} among all other advertisers and generations. Consequently, considering the accumulated insights of Gen X, hypothesis *H1a* can be verified, proving that there is a significant relationship between A_{am} and A_{ad} for Gen X.

Moving on now to consider the statistical findings of Generation Y, it can be concluded that A_{am} and A_{ad} are also positively correlated for all advertisers. Notably, the strength of these correlations varies, with Apple displaying the strongest relationship for generational cohort Y. The aggregated score shows a moderately strong relationship with a r_s coefficient of .598. Hence, following suit of *H1a*, *H1b* can be verified as well. When examining the outcome of the Spearman's Rank correlation test for Generation Z, it appears that all three advertisements display a moderate to strong positive relationship between A_{am} and A_{ad}. Thereby, r_s scores range from .550 for IKEA to .664 for Erste Bank, which supports the verification of *H1c*.

Viewing the above table as a whole, it suggests that not only does a positive A_{am} yield a more positive overall A_{ad}, but conversely, a negative A_{am} is also associated with a more negative overall A_{ad}. This supports the assumption of Craton and Lantos (2017; 2011, 2012), who emphasize the pivotal role of A_{am} in shaping A_{ad}.

4.5 Cross-generational comparisons

To discern distinctions among Generations X, Y and Z, the Kruskal-Wallis Test was employed to assess the overall statistical significance of these differences. When the initial analysis yielded results indicative of a significant variance, the Mann-Whitney-U Test was applied. Using this process, hypothesis *H2* and *H3* are discussed in the subsequent sections.

4.5.1 A_{ad} among generations

What follows is a review of potential differences in A_{ad} among the generational cohorts X, Y and Z. To lay the foundation for the subsequent analyses, the below table shows mean ranks and the according standard deviations (SD) of Generation X, Y and Z for each item of A_{ad}.

Table 13: Aad items and descriptive statistics

Construct	Item	Generation X		Generation Y		Generation Z	
		Mean	SD	Mean	SD	Mean	SD
A_{ad}	Good / Bad	3.85	.784	3.64	.698	3.86	.667
	Like / Dislike	3.55	.832	3.46	.688	3.69	.670
	Non-irritating / Irritating	3.94	.798	3.86	.788	4.02	.660
	Interesting / Uninteresting	3.45	.866	3.21	.745	3.43	.743

Source: Author's own table

At a first glance, the table suggests that there are only minor differences in how the different Generations rated each item of A_{ad}, as the majority of means point towards moderately positive to positive attitudes. However, the latter has to be examined more closely by conducting further analyses. Considering the sample size of the present study (N = 330), a significance level of $\alpha \leq .05$ is deemed appropriate when applying the Kruskal-Wallis Test to verify or reject hypothesis *H2*. The insights that emerged are outlined in the below table.

Table 14: Results of Kruskal-Wallis comparing Aad among generations

Label	Assumption	Advertiser	Kruskal-Wallis H	p-value
H2	*A_{ad} among Generation X, Y and Z differs significantly.*	IKEA	4.965	.083
		Erste Bank	14.394	< .001
		Apple	4.386	.111
		Aggregated	5.882	.052

Source: Author's own table

In the case of the Erste Bank advertiser, there is a significant difference in A_{ad} among the generational cohorts, indicated by a Kruskal-Wallis H of 14.394 and a p-value of < .001. This result suggests that some generations exhibit varying A_{ad} associated with Erste Bank. In contrast, the ads of the other advertisers, namely IKEA and Apple, did not exhibit statistically significant differences in A_{ad} among the generational cohorts ($p \geq .05$). However, when examining the results of the aggregated A_{ad}, a noteworthy trend emerges with a p-value of .052,

indicating a marginally significant difference in A_{ad} among the generational cohorts. As *H2* can be verified for one advertisement shown in the online questionnaire, the hypothesis is only partially accepted. However, it is worth diving deeper into the above results and conduct Mann-Whitney-U Tests to locate specific differences. As discussed in section 3.3, results are denoted as significant when $\alpha \leq .015$. The below tables compare two Generations respectively.

Table 15: Results of Mann-Whitney-U comparing Aad among Generation X and Y

Groups	Advertiser	Mean Rank Gen X	Mean Rank Gen Y	p-value
Gen X vs. Gen Y	IKEA	100.08	104.97	.552
	Erste Bank	117.41	87.29	< .001
	Apple	104.57	100.39	.612
	Aggregated	110.17	94.68	.061

Source: Author's own table

As displayed above, the differences of Generation X and Y's A_{ad} were statistically insignificant for the ads of IKEA and Apple. Thus, in terms of similarities, the two generations seem to share alike sentiments for the latter advertisers as indicated by the mean ranks. However, referring to the above p-values, one can notice that the data collected substantially varies, which supports hypothesis *H2* being partially accepted. For instance, for the Erste Bank ad, the Mann-Whitney U test yielded a p-value smaller than .001, which is aligned with the insights provided by the Kruskal-Wallis Test. The aggregated result demonstrated a p-value of .061. While the value exceeds the $\alpha \leq .015$ threshold, it is marginally significant. The below table compares Gen X and Z.

Table 16: Results of Mann-Whitney-U comparing Aad among Generation X and Z

Groups	Advertiser	Mean Rank Gen X	Mean Rank Gen Z	p-value
Gen X vs. Gen Z	IKEA	104.94	123.23	.036
	Erste Bank	127.64	104.67	< .001
	Apple	107.94	120.77	.143
	Aggregated	113.56	116.18	.766

Source: Author's own table

What stands out when examining the results of the oldest and youngest generation, is that Generation X had a significantly more positive A_{ad} of Erste Bank as visualized by the mean ranks of Table 16. Thus, the Mann-Whitney-U Test resulted in $p < .001$, which indicates a highly significant difference in A_{ad} between Gen X and Gen Z for this specific advertisement. Turning now to IKEA, the test revealed a p-value of .036. Although this p-value exceeds $\alpha \leq .015$, it is still relatively small. In contrast, the Mann-Whitney-U Test did not detect significant differences in A_{ad} for both Apple's advertisement and the aggregated score, a trend that can also be recorded for the below comparison of Generation Y and Z.

Table 17: Results of Mann-Whitney-U comparing Aad among Generation Y and Z

Groups	Advertiser	Mean Rank Gen Y	Mean Rank Gen Z	p-value
Gen Y vs. Gen Z	IKEA	106.42	120.08	.116
	Erste Bank	107.44	119.26	.176
	Apple	104.32	121.76	.046
	Aggregated	102.82	122.96	.021

Source: Author's own table

While Generation Z generally exhibits a more positive A_{ad} for the videos shown in the questionnaire compared to Generation Y, no significant differences among these cohorts were detected by the Mann-Whitney-U Test.

4.5.2 A_{am} among generations

This section now moves into examining the results of A_{am} for both the Kruskal-Wallis and the Mann-Whitney-U Test to explore any potential trends or patterns. Mimicking the statistical approach to explore A_{ad}, each item of A_{am} was analysed in terms of descriptive statistics to build a foundation for further analyses. As a first look into the particularities of the consumer response variable, the below means suggest that there are minor discrepancies among the generations' A_{am}.

Table 18: Aam items and descriptive statistics

Construct	Item	Generation X		Generation Y		Generation Z	
		Mean	SD	Mean	SD	Mean	SD
A_{am}	The music in the ad is interesting.	3.53	.659	3.30	.609	3.56	.594
	The music fits the message of the ad.	3.86	.555	3.78	.540	4.02	.589
	The music in the ad evokes memories.	2.89	.776	2.64	.785	2.90	.726
	The music in the ad evokes emotions.	3.30	.719	3.21	.741	3.39	.598
	The music in the ad creates a specific atmosphere.	3.70	.713	3.68	.711	3.98	.590

Source: Author's own table

However, to verify or reject hypothesis *H3*, the Kruskal-Wallis Test was applied. The insights generated during the latter process are outlined below.

Table 19: Results of Kruskal-Wallis comparing Aam among generations

Label	Assumption	Advertiser	Kruskal-Wallis H	p-value
H3	*A_{am} among Generation X, Y and Z differs significantly.*	IKEA	20.093	< .001
		Erste Bank	24.599	< .001
		Apple	7.023	.030
		Aggregated	12.937	.002

Source: Author's own table

As demonstrated above, A_{am} among Generation X, Y and Z differs significantly for all three ads shown in the questionnaire as well as for the aggregated value of A_{am} ($p \leq .05$). Thus, the Kruskal-Wallis Test allows for the unambiguous verification of hypothesis *H3*. Now moving into the specific differences among the generational cohorts, the subsequent table depicts findings of the Mann-Whitney-U Test, grouped into Generation X and Y.

Table 20: Results of Mann-Whitney-U comparing Aam among Generation X and Y

Groups	Advertiser	Mean Rank Gen X	Mean Rank Gen Y	p-value
Gen X vs. Gen Y	IKEA	99.25	105.82	.425
	Erste Bank	121.91	82.71	< .001
	Apple	101.56	103.46	.818
	Aggregated	111.27	93.56	.032

Source: Author's own table

When describing the differences and/or similarities in Generation X and Y, one could mention that the cohorts exhibit a similar A_{am} for the ads of IKEA and Apple as indicated by the above mean ranks. However, Erste Bank's video generated significant differences among Gen X and Y's A_{am}. The p-value of the aggregated A_{am} surpasses the $\alpha \leq .015$ threshold, however it remains relatively small. Now moving on to examine the comparison of generational cohorts X and Z, the following results emerged.

Table 21: Results of Mann-Whitney-U comparing Aam among Generation X and Z

Groups	Advertiser	Mean Rank Gen X	Mean Rank Gen Z	p-value
Gen X vs. Gen Z	IKEA	95.50	130.94	< .001
	Erste Bank	131.27	101.70	< .001
	Apple	103.27	124.59	.015
	Aggregated	109.50	119.49	.256

Source: Author's own table

In contrast to Generation X vs. Generation Y, the Mann-Whitney-U Test yielded significant differences in A_{am} among the oldest and youngest generation tested for all ads. Thus, all three advertisers prompted varying sentiments for Generation X and Z. Judging by the mean ranks of the generational cohorts, Gen Z perceived the music in IKEA and Apple's advertisements more positively, while Gen X held a very positive attitude towards Erste Bank's music. What is noteworthy is that the aggregated A_{am} score does not fall into the $\alpha \leq .015$ threshold while still being relatively low.

As a final pairwise comparison, A_{am} among Gen Y and Z is depicted in the below table.

Table 22: Results of Mann-Whitney-U comparing Aam among Generation Y and Z

Groups	Advertiser	Mean Rank Gen Y	Mean Rank Gen Z	p-value
Gen Y vs. Gen Z	IKEA	97.16	127.50	< .001
	Erste Bank	104.38	121.71	.048
	Apple	104.05	121.97	.040
	Aggregated	96.22	128.25	< .001

Source: Author's own table

While A_{am} differs significantly among Gen Y and Z for IKEA and the aggregated score, both Erste Bank and Apple's advertisements did not yield discrepancies within the relevant α threshold. The latter emphasizes the complex dynamics of A_{am} and age, a relationship which will be analysed more closely in the following section.

4.5.3 Age as moderator

As this study aims to evaluate whether age moderates the relationship of A_{am} and A_{ad}, the following section is devoted to testing the latter moderation via a regression analysis. By defining A_{ad} as IV, A_{am} as DV, age as the moderator variable and the number of bootstrap samples as 5000, the following model summary emerged.

Table 23: Model summary of Hayes Process Macro

R	R-sq	MSE	F	df1	df2	p-value
.6696	.4484	.2276	88.3254	3.0000	326.0000	< .001

Source: Author's own table

The above summary provides an assessment of the regression model's fit and performance. It reveals that the model is statistically significant, as evidenced by a high F-statistic ($F = 88.3254$) with $p < .001$. This implies that the model, which incorporates A_{am}, Age, and their interaction, effectively explains variations in A_{ad}. The multiple correlation coefficient (R) of approximately .6696 signifies a strong correlation between observed A_{ad} and predicted A_{ad} values from the model. Moreover, the coefficient of determination (R-squared) stands at .4484. The latter indicates that the model accounts for roughly 44% of the variation in A_{ad}, which suggests a moderate degree of explanatory power. The mean square error (MSE) is .2276, reflecting the

average squared differences between observed and predicted A_{ad} values. Considering the above, the model summary confirms that the test is significant and offers insightful information about the relationship between A_{am}, Age, and A_{ad}. Thus, the below key findings emerged from the moderation analysis.

Table 24: Moderation Analysis Results

Variable	Coefficient	SE	p-value
Constant	*3.669*	.0263	< .001
A_{am}	0.8121	.0510	< .001
Age	0.0023	.0022	.284
A_{am} x Age (Int_1)	0.0010	.0038	.797

Source: Author's own table

The results in the above table confirm a significant main effect of A_{am} on A_{ad}. Specifically, A_{am} demonstrates a positive and statistically significant influence on A_{ad}, indicating that as individuals' A_{am} increase, their A_{ad} also exhibit a corresponding positive shift. This is not only aligned with the verification of *H1a*, *H1b* and *H1c* but also with Craton and Lantos' (2012) model, where A_{am} is crucial component of A_{ad}. In contrast, the analysis did not uncover a significant main effect of Age on A_{ad}, as indicated in the table ($p = .284$). This outcome suggests that, in isolation, age does not have a direct impact on individuals' A_{ad}, which, to some extent, supports the partial rejection of *H2*, where significant differences in the generational cohorts' A_{ad} could only be partially determined. On another note, the table's data support the conclusion that the interaction effect (A_{am} x Age) is not statistically significant ($p = 0.797$). This underscores the non-moderating role of age in the relationship between A_{am} and A_{ad}. Thus, the strength and direction of the relationship between the consumer response variables remain consistent across different age groups, as revealed by the non-significant p-value. As a consequence, *H4* was rejected.

In culmination, the empirical findings have shed light on the dynamics of A_{ad}, A_{am}, generational cohorts and age as a moderator. To transition to the discussion chapter, it is crucial to provide a succinct overview of the outcomes. Therefore, the summary table below clearly denotes whether each hypothesis was accepted or rejected.

Table 25: Summary of hypothesis testing

Label	***Assumption***	***Result***	***Test***
H1a	*There is a positive relationship between Gen X's A_{am} and A_{ad}.*	**accepted**	Spearman's Rank Correlation
H1b	*There is a positive relationship between Gen Y's A_{am} and A_{ad}.*	**accepted**	
H1c	*There is a positive relationship between Gen Z's A_{am} and A_{ad}.*	**accepted**	
H2	*A_{ad} among Gen X, Y and Z differs significantly.*	**partially accepted**	Kruskal-Wallis & Mann-Whitney-U Test
H3	*A_{am} among Gen X, Y and Z differs significantly.*	**accepted**	
H4	*The relationship of A_{am} and A_{ad} is moderated by age.*	**rejected**	Moderated Regression Analysis

Source: Author's own table

5. Discussion

This chapter focuses on the interpretation of the empirical findings outlined in Chapter 4 and discusses how they relate to existing literature. The chapter is split in four sections, each of which addresses one research question.

5.1 Interplay of A_{am} & A_{ad}

The effect of music on A_{ad} has been a relatively understudied area, and the available research has produced inconclusive outcomes (Allan, 2006). The present study examined whether A_{am} and A_{ad} are correlated in a generational context, hence the following question was posed:

RQ1*: Do generational cohorts X, Y and Z's attitude towards the advertising music influence their attitude towards the advertisement?*

Thus, in this section, we delve into the summary and discussion of this study's findings concerning the relationship between A_{am} and A_{ad}. The analysis revealed a statistically significant and a moderate to strong positive relationship between A_{am} and A_{ad} across all advertisements and generations. Thus, with respect to ***RQ1***, indeed, generational cohorts X, Y, and Z's A_{am} influences their A_{ad}.

Diving deeper into the insights generated by conducting Spearman's Rank Correlation Tests, perhaps the most compelling finding is that the strength of A_{am} and A_{ad}'s relationship varies depending on the type of foreground music applied. Referring to section 3.2.4, Erste Bank's ad using "Jump" by The Pointer Sisters corresponds to Type 1, whereas Apple's video accentuated by "Dream Big" by Rüü and Oliwa falls into Type 2 and lastly, Type 3 was covered by IKEA's piano composition. Craton and Lantos (2012) hypothesized that the music's impact will be strongest for Type 1 and weakest for Type 3. The results of the study are in line with the latter assumption, as Erste Bank (Type 1) demonstrates the strongest relationship (.709, $p < .001$), Apple (Type 2) follows (.649, $p < .001$) and IKEA (Type 3) concludes with the weakest relationship (.566, $p < .001$) when taking the full sample into consideration. As a consequence, advertising music that carries the ad's message and meaning through lyrics (Type 1) can affect the A_{ad} of viewers to the greatest extent, whereas instrumental music without lyrical content (Type 3) is least inclined to modify A_{ad}. Concluding the above, this finding presents marketing executives with the possibility to control the effect of music on A_{ad} depending on the type of

foreground music they choose – a valuable managerial implication that will be reemphasized in Chapter 6.

Craton and Lantos (2012, p.26) further elaborated on foreground music Type 1 and proposed that in this case, "the music should be either simple enough to learn or familiar to the consumer" to enhance A_{ad}. Considering this notion, one might argue that Erste Bank's ad music, which is categorized as Type 1, might have obtained the strongest relationship between A_{am} and A_{ad} in Generation X as the members of this cohort are familiar with the song "Jump", which was released in the 80s. What supports this interpretation is the finding that a determinant of A_{am} is the memory activated by the music (Craton and Lantos, 2012; Raja, Anand and Allan, 2019). When looking into which ad music Generation X rated as most memory evoking, one can see that Erste Bank's song stands out with a mean of 3.82, the highest rating among all songs and generations. Likewise, this factor influenced the comparatively weak relationship between A_{am} and A_{ad} in Apple's ad, as it evoked least memories in all generational cohorts. On another note, North et al. (2004) found that musical fit increased purchase intention and A_{ad}. In the present study, the music-message fit of IKEA was rated highest with a mean of 4.22 and lowest for Apple with a mean of 3.50. When conducting a Spearman's Rank Correlation Test for A_{ad} and the overall music-message fit, this sample shows a significant and moderately positive relationship ($\rho = .518$, $p < .001$) between the variables. Thus, the finding that musical fit increases A_{ad} advocated by North, Hargreaves and Hargreaves (2004) is supported by this study.

Concluding the relationship of A_{am} and A_{ad}, it is evident that there exists a significant relationship between the two consumer response variables. As cited by Kellaris and Cox (1993), this finding contradicts Stewart and Furse (1986) and McEwen and Leavitt (1976), who found that music in advertisements had no effect on A_{ad}. Additionally, according to Macklin's (1988) research, children's A_{ad} was unaffected by music. However, the finding that A_{am} and A_{ad} are positively correlated aligns with the results of Brooker and Wheatley (1994), who demonstrated that music had a marginally significant impact on A_{ad}, with foreground music exhibiting a more favourable A_{ad} than background music. Notably though, the latter studies looked into the effect of music as a whole, not into A_{am} as a consumer response variable. As it was not possible to locate studies that specifically correlated A_{am} and A_{ad}, one can emphasize Craton and Lantos' (2012) proposition resulting from their extensive literature review on A_{am} that foreground music will most likely significantly influence A_{ad} in a positive or negative way, which this study can verify.

5.2 Differences & similarities among generations in A_{ad}

Another objective of this study was to explore how Generation X, Y and Z's A_{ad} differs or resembles. Consequently, the below question was posed:

***RQ2**: How does the attitude towards the advertisement differ or resemble when comparing the generational cohorts X, Y and Z?*

To answer the above research question, a series of Kruskal-Wallis and Mann-Whitney-U Tests were conducted. Considering the inconclusive results for generational cohorts' A_{ad}, it is noteworthy that Burke and Edell (1986) discovered that as exposure to an advertisement increased, A_{ad} declined. As mentioned in section 3.2.4, in an effort for this study to offer contemporary findings, only recently published advertisements were presented to respondents. Thus, one could assume that some participants were familiar with the advertisements pre-participation, which, according to Bruke and Edell's (1986) finding possibly explains the presence of outliers as well as variations in the data. Adding to the latter, Craton and Lantos (2011) hypothesized a similar effect for music given Hargreaves' et al. (1984; 2006) insights about the effect of frequent exposure for specific music. Thus, as the music used in an advertisement wears out, it might contribute to a decline in A_{ad}, further contributing to variances in the data for respondents who are familiar with the songs used.

When further elaborating on the differences and similarities in A_{ad} among the generational cohorts, it is notable that prior research revealed disparities in A_{ad} depending on age (Alwitt and Prabhaker, 1994; Shavitt, Lowrey and Haefner, 1998; Smit and Neijens, 2000) and depending on generational cohorts (de Run and Ting, 2013). Thus, following a more nuanced approach to find differences in the collected sample, one could run analyses comparing the oldest and youngest members of the respective generations. In fact, when grouping each of the three generations in young and old members (e.g., 43-49 = young Generation X, 50-58 = old Generation X) and conducting a Kruskal-Wallis Test to find the differences in A_{ad} among these six newly defined cohorts, the result indeed shows significant differences in their overall A_{ad} ($p = .05$). The latter not only further encourages the partial acceptance of *H2* but is aligned with the general consensus within the existing research body.

Concluding the above, differences and similarities among the generational cohorts X, Y and Z in A_{ad} have to be explored further to fully elaborate on ***RQ2***. While some advertisements

showed differences in cohorts, others showed similarities in this sample. The latter emphasized the complexity of the consumer response A_{ad} when tested for specific advertisements and analysed in conjunction with demographic variables such as generational belonging.

5.3 Differences & similarities among generations in A_{am}

The third question in this study sought to determine differences and similarities in A_{am} among generations, which is put into writing by the below research question:

RQ3: *How does the attitude towards the advertising music differ or resemble when comparing the generational cohorts X, Y and Z?*

Summarizing the findings related to the above, the significant differences in A_{am} among Generation X, Y, and Z were found for all advertisements shown, which concludes ***RQ3*** with an unambiguous answer. What is striking is that while all generations showed a varying A_{am}, the differences among generational cohort X and Z were particularly distinct. Reflecting on the latter, one can argue that these discrepancies and similarities between cohorts might be attributable to their generational personas. For instance, Generation X and Z are farthest apart from each other in terms of age, which reflects Craton and Lantos' (2011) assumption that – among other listeners' characteristics – age is a determinant of A_{am}. On another note, Seemiller and Grace (2017) point out that while Generation Z exhibits certain similarities to Generation Y, which might be an underlying reason for their similarities in A_{am}, the youngest cohort Z has unique set of traits and characteristics, consequently reflecting significant differences compared to generational cohort X. Raja, et al. (2020) underline the above by proposing that musical preferences can be influenced by factors such as age, gender, culture, and societal influences. In fact, when applying a Kruskal-Wallis Test to see whether A_{am} differs depending on age, the results show statistically significant differences ($p < .001$) among the participants' for their overall A_{am}.

Diving deeper into the items used to determine A_{am}, what is interesting is that the item that captured the music-message-fit scored the highest ratings among other items for all three generations. Thus, the music-message-fit was a crucial component in the respondent's favourable A_{am} ratings. The latter finding coincides with Craton and Lantos' (2011) discovery that the most successful tactic found to date to avoid unfavourable A_{am} is the thoughtful

evaluation of music-message fit as well as with North et al. (2004) discovery that musical fit creates a better A_{ad} – and as this study found – a better A_{am}.

Furthermore, several considerations can be emphasized when interpreting the results of the Kruskal-Wallis as well as Mann-Whitney-U Tests to find differences in A_{am}. For instance, Sullivan (1990) discovered that radio advertisement recall as well as A_{ad} was improved by a high degree of musical involvement. In the present study, participants were prompted to carefully listen to the music when watching the advertisements. Thus, one could assume that a majority of participants was highly involved in terms of musical processing. Similarly, Craton and Lantos (2012) defined the depth of processing of music as a determinant of A_{am} and Kellaris and Kent (1993) pointed out that increased audience attention enhances the message reception. Consequently, the predominately favourable A_{am} achieved among generations could potentially be influenced by the latter. What is more, negative outliers in A_{am} could be explained by the respondents' listening situation. As Craton and Lantos (2011, p.397) put it, the music utilized by the advertisements could have been "too peppy for workplace concentration" or "too sad for their happy mood".

5.4 Age moderator in A_{am} & A_{ad}

As a final research objective, this study aimed to gain further understanding for the dynamics of the variables A_{ad}, A_{am} and Age. Thus, the following research question emerged:

***RQ4**: Are the attitude towards the advertisement and the attitude towards the advertising music moderated by age?*

It was found that there is a substantial main effect of A_{am} on A_{ad}. This indicates that as individuals' A_{am} increases, their A_{ad} also exhibits a corresponding positive shift. This finding aligns with Craton and Lantos' (2012) model in which A_{am} plays a pivotal role in shaping A_{ad} and supports Raja et al. (2020) assumption that A_{am} may have a significant impact on other attitudinal constructs. However, the analysis does not reveal a noteworthy main effect of Age on A_{ad} ($p = .284$) for the present sample. Similarly, to conclude ***RQ4***, age does not act as a moderator in the relationship between A_{am} and A_{ad} for this sample.

Through extensively reviewing the existing research body on responses to music in advertising, just four studies identified by Allan (2007), used "music appeal" as an independent variable,

which is simply defined as "liking or disliking" the music (Allan, 2007; Allen and Madden, 1985; Gorn, 1982; Kellaris and Cox, 1989; Pitt and Abratt, 1988). These studies looked into the effect of music on A_b (Allen and Madden, 1985) and the influence of music appeal on product preference (Gorn, 1982; Kellaris and Cox, 1989; Pitt and Abratt, 1988). The latter further accentuates the novelty of the present study's use of A_{am} as an independent variable. Notably though, a handful of studies have looked into the shaping effect of sociodemographic factors such as age, social status and lifestyle choices on listeners' reaction to music (Glevarec, Nowak and Mahut, 2020; Morris B. Holbrook and Robert M. Schindler, 1989; North and Hargreaves, 2007c). For instance, Glevarec et al. (2020) explored the dynamics of age groups and musical tastes and observed effects in the distribution of tastes depending on age. As musical taste is a determinant of A_{am} (Craton and Lantos, 2012), one might deduce a moderating effect of age based on Glevarec's finding. While this study did not find age to act as a moderator in the relationship between A_{am} and A_{ad}, significant differences in A_{am} were found based on participants age as outlined section 5.3, supporting the results of Glevarec et al (2020).

Concluding the above, the findings on the variables A_{ad}, A_{am}, and Age underscore the complexity of consumer responses to music. While this study provides valuable insights and a foundation for research to come, it is evident that the implications of demographics such as age on both A_{am} and A_{ad} remain multifaceted and warrant further exploration.

6. Conclusion

This chapter summarizes key findings, outlines managerial implications and discusses limitations. It concludes by providing suggestions for further research.

6.1 Summary of key findings

This study looked into the effects of A_{am} and A_{ad} with a focus on the recipients' age segmented by generational cohorts in a Central European context. By developing a new scale to measure A_{am} on the basis of Craton and Lantos' (2012) research, this study found that A_{am} and A_{ad} are positively correlated for Generation X, Y and Z. This implies that the more positive the music of an advertisement is perceived by an individual, the more favourable their overall attitude towards the ad. On another note, the three surveyed advertisements yielded both differences and similarities among the generational cohorts' A_{ad}. In contrast, significant differences in generational cohort X, Y and Z's A_{am} were found. Consequently, different age groups perceive advertising music differently, a finding that encourages Raja et al. (2019) suggestion of A_{am}-based consumer segmentation as well as Munichor and Maroely's (2022) work on ad music personalization. Finally, while this study did not verify moderating effects of age on the relationship between A_{am} and A_{ad}, significant differences in A_{am} based on age were found. Overall, the novel approach of the present study contributes to the ongoing discourse on responses to music in advertising and sheds light on a previously unexplored area within the Central European context.

6.2 Managerial implications

The findings of this study not only contribute to the academic discourse but also hold valuable implications for marketers striving to achieve favourable responses to their advertising campaigns. For instance, a positive relationship between A_{ad} and A_{am} was identified. This correlation forms a pivotal link, as A_{ad} influences A_b (e.g., Ahmed Sallam and Ali Algammash, 2016; Goldsmith, Lafferty and Newell, 2000) which, in turn, impacts PI (e.g., Gresham and Shimp, 1985; MacKenzie, Lutz and Belch, 1986; Shimp, 1981). Consequently, it is essential for advertisers to be mindful of the effect of A_{am} on the campaign's overall success as the ad music is crucial in shaping consumers' attitude and thus, purchasing behaviour.

Considering the importance of the ad music, this study discovered valuable insights that support the musical selection process of marketing practitioners. Firstly, this study confirmed that foreground music Type 1 has the strongest effect on A_{ad}, followed by Type 2 and lastly, Type 3 with the weakest effect. Thus, the application of music that carries the ad's message is riskiest but potentially leads to high rewards due to its strong impact on A_{ad}. Given this implication, advertisers are presented with a framework to control the effect of music on A_{ad} depending on the type of foreground music they choose. By strategically aligning their musical choices with their campaign objectives and target audience, marketers can not only enhance their ad's effectiveness but also mitigate potential risks as a result from unfavorable A_{ad} and thus, low PI. Moreover, Erste Bank's ad music (Type 1) obtained the strongest relationship between A_{am} and A_{ad} for Generation X, which presumably is a consequence of this group's familiarity with the music. This emphasizes Craton and Lantos' (2011) assumption and suggests that practitioners should choose Type 1 music that is either simple enough to learn or familiar to the consumer to positively effect A_{ad}.

Secondly, advertisers should consider the music's fit with the message of the ad as it was found that music-message fit and A_{ad} are positively correlated and that fit is a crucial component in the development of A_{am}. The latter is aligned with Craton and Lantos' (2011) finding that the most effective strategy to avoid unfavourable A_{am} is high music-message fit.

Thirdly, while fit should act as a decisive factor in the selection process, considering the music's ability to evoke emotions and memories in the recipient is another critical aspect in achieving favourable A_{am}. Conclusively, to boost A_{ad} and therefore campaign success, the findings of this study suggest using Type 1 music that aligns with the ad's message and is familiar to the audience. Additionally, marketing practitioners should ensure that the music evokes memories or has emotional impact on the recipient.

As A_{am} differs significantly for Generation X, Y and Z, advertisers should not only consider the characteristics of the ad music but also those of their target audience to craft effective and memorable musical advertising strategies. The findings of this study suggest that the personalization of ad music to match the preferences and attitudes of specific age groups aids in achieving favourable A_{am} and thus A_{ad}, which corresponds to Raja et al. (2020) proposal of A_{am}-based consumer segmentation. Furthermore, the insight gained from splitting generations into their younger and older segments, revealing significant differences in A_{ad}, underscores the

need for advertisers to tailor their strategies to effectively engage specific age groups or generational cohorts. Lastly, given that age affects musical taste (Glevarec, Nowak and Mahut, 2020), that musical taste is a determinant of A_{am} (Craton and Lantos, 2012) and that A_{am} differs significantly among generational cohorts, managers are advised to look into the musical taste of their target audiences to achieve favourable A_{am} and consequently A_{ad}.

These insights underscore the challenge of attaining universal appeal for ad music across a diverse audience. Consequently, it is recommended that advertisers exercise careful consideration when implementing music in their campaigns to avoid potential pitfalls.

6.3 Research limitations

Considering the aspects that had a limiting impact on the present study, one can acknowledge a relatively small sample size of respondents (N = 330). This imposes that the research findings cannot be fully generalized for the German-speaking Central European population. Additionally, even though somewhat equal numbers of Generation X, Y and Z representatives participated in the survey, a large proportion of responses is attributable to individuals aged 25 and 26. As a consequence, this imbalance in age distribution resulted in Generation Z being represented mainly by older members of the cohort. Adding to the latter, the youngest members of Gen Zers, namely individuals aged between 11 and 17, were excluded from this study due to ethical research concerns.

Further limitations can be identified when analysing the examples of video advertisements chosen for the survey. The study is restricted by the inclusion of only three video advertisements in the questionnaire. A larger and more diverse set of advertisements could have allowed for a more comprehensive analysis of trends and a broader understanding of consumer responses. However, it's essential to note that this limited selection was a deliberate choice made to encourage a higher response rate, as a more extensive questionnaire might have deterred participation. Additionally, the inclusion of recently published advertisements may have influenced participants' familiarity with the content. This could lead to biased responses, as those who were already acquainted with the ads might have pre-existing opinions or attitudes towards them. Further reflecting on limitations posed by the online questionnaire, one must acknowledge that the survey was made available in both English and German. While the majority opted for the German version, some participants chose the English language setting.

However, two of the advertisements featured in the survey were exclusively available in German, necessitating translation of their slogans. This could potentially introduce language-related biases in the responses.

On another note, the risk of straight lining, where participants repetitively answer similar questions without critical thinking (Hume, 2017), was present in the study. This is a particular concern because of the use of the respondent recruiting platform Prolific, which may have attracted participants more inclined to rush through the survey. Nevertheless, each response collected through Prolific (N = 65) underwent thorough scrutiny to identify and rectify any inconsistencies in the data due to straight lining.

The sequence of advertisements in the questionnaire was not randomized, primarily because of limitations in the survey tool's capabilities. This lack of randomization introduces the possibility of learning bias, where participants answer later questions based on their consideration of earlier questions (Choi and Pak, 2005).

With regards to the statistical tests conducted, additional limitations need to be recognised. For instance, the use of Spearman's Rank Correlation introduces limitations. This statistical method is valuable for identifying associations, but it lacks the capacity to establish causality or control for other variables (Spearman, 1987). This means that while it can reveal correlations, it cannot determine the direction of influence or pinpoint underlying causes. On another note, the hypotheses of the present study were accepted or rejected using a significance level of .05, which implies that there is a 5% chance of making a Type 1 error (rejecting a true null hypothesis). To mitigate this risk and reduce the likelihood of Type 1 errors, a smaller significance level could be considered. However, the latter would necessitate a larger sample size to achieve adequate statistical power.

As a final note, this study was conducted within a cross-sectional timeframe, indicating that the data was collected at a specific point in time. While this approach provides valuable insights into the research topic at that moment, it has limitations related to the ability to draw conclusions about changes over time. Ideally, a longitudinal design that tracks participants or variables over an extended period would offer a more robust understanding of how A_{am} and A_{ad} evolve over time.

6.4 Suggestions for further research

In light of the limitations encountered in this study, several recommendations for future research can be proposed. Firstly, expanding the sample size would enhance the generalizability of findings. Addressing the skew in age distribution observed in this study necessitates a more balanced representation of age groups, particularly among Generation Z. Future research should strive to include the full age spectrum of Generation Z, including the youngest members, while maintaining strict adherence to ethical research standards.

In terms of data collection, it is recommended to randomize the sequence of advertisements and to expand the sample of video advertisements shown in the questionnaire. Additionally, the presented advertisements could utilize different types of ad music such as foreground and background music. The latter would enable a comparison between musical types and thus enable further insights on the implications of foreground and background music on A_{ad} and A_{am}. On another note, studies on A_{am} for specific video advertising genres such as social media video ads would yield contemporary and interesting results while simultaneously closing a gap in the existing research body.

Finally, it can be proposed that future research should further identify and analyse potential effects of age on consumers' A_{ad} and A_{am}. While this study found significant differences in A_{am} depending on age, the results for A_{ad} were rather inconclusive. Moreover, it could yield valuable insights to apply other demographic variables such as gender, education level or geographic location as IV to analyse its impact on A_{am}. Lastly, it would be valuable to explore the relationship between individuals' musical preferences and its impact on their A_{am} and A_{ad}. This investigation could shed light on the interplay between personal tastes in music and how they shape consumer responses to advertising, potentially offering insights for more effective and engaging marketing strategies.

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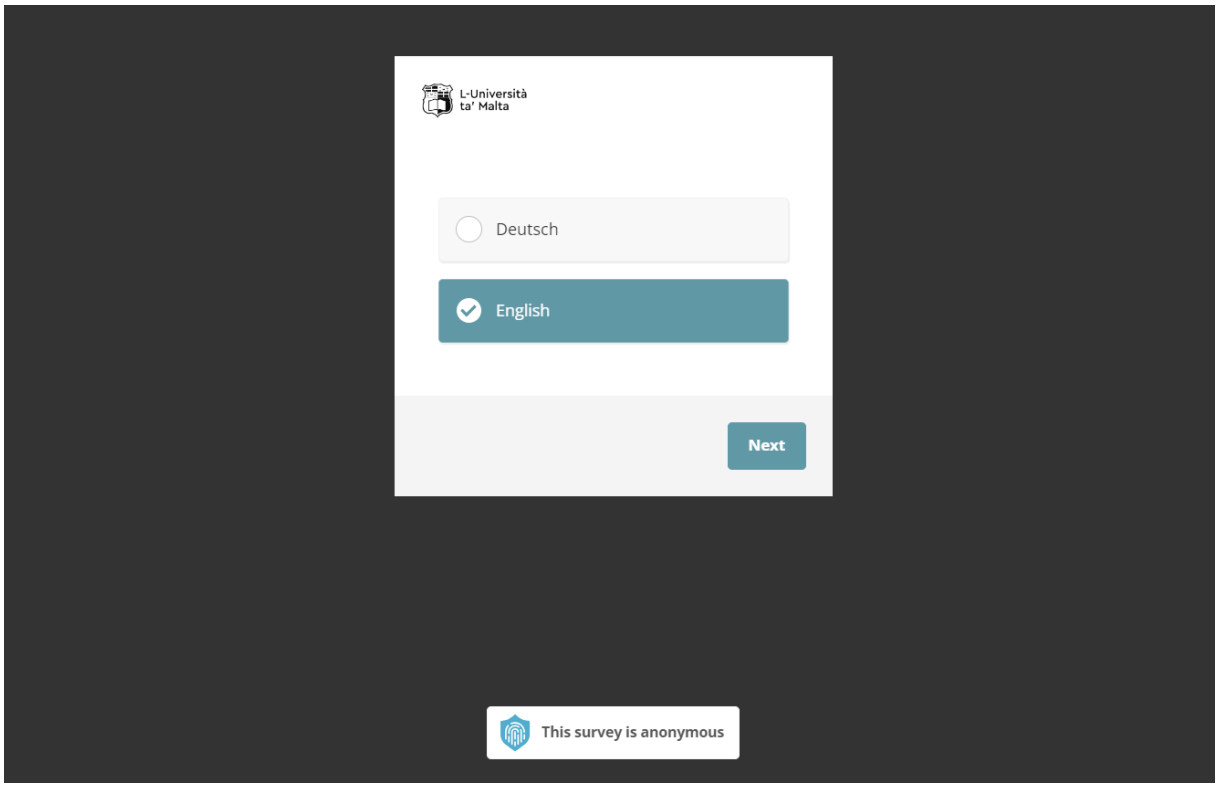
Appendices

Appendix A – English Questionnaire



L-Università ta' Malta

Dear participant,

as part of my Master's degree at University of Malta I am conducting a survey about **music in advertisements.**

You can participate in my survey if...

- you were **born between 1965 and 2005,**
- you are a resident of **Austria, Germany or Switzerland.**

This survey is **anonymous** and will take approximately **5 minutes** to finish.

This project is being supervised by Dr. Daniela Castillo. Participation is entirely voluntary, and participants are able to withdraw from the study at any point. All data collected will be used strictly for the purpose of this study and will only be accessed by the researcher and the supervisor. Once the dissertation is completed, all the data collected will be discarded.

For Prolific users: If you agree to take part in this research study, we will pay you £0,75 (or equivalent) upon full completion of the survey passing validity checks. If you do not complete the entire study, you will not receive any payment. The payment will be paid to you through your Prolific account upon return and approval of the task, in the customary manner.

If you have any questions, please feel free to contact me anytime at *natalie.puszter.22@um.edu.mt.*

Thank you very much for your participation,

Natalie Puszter

L-Università ta' Malta

Are you a resident of Austria, Germany or Switzerland? *

- ◯ Yes
- ◯ No

Back Next

L-Università ta' Malta

Please indicate your age. *

Please choose...

Back Next

L-Università ta' Malta

Please indicate your gender. *

- ◯ Male
- ◯ Female
- ◯ Other
- ◯ Prefer not to say

Back Next

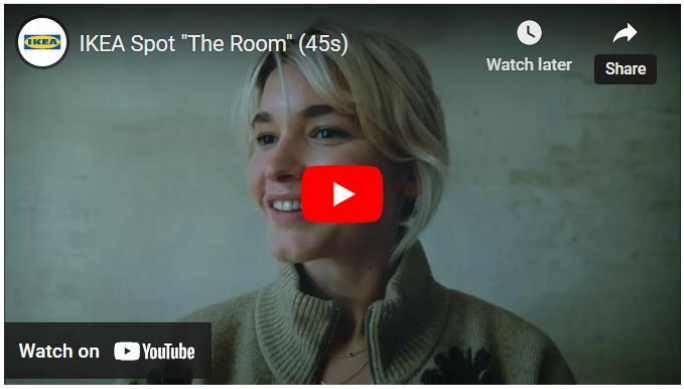
L-Università ta' Malta

In the following part of this questionnaire, you will be asked watch **3 short video advertisements** and rate them.

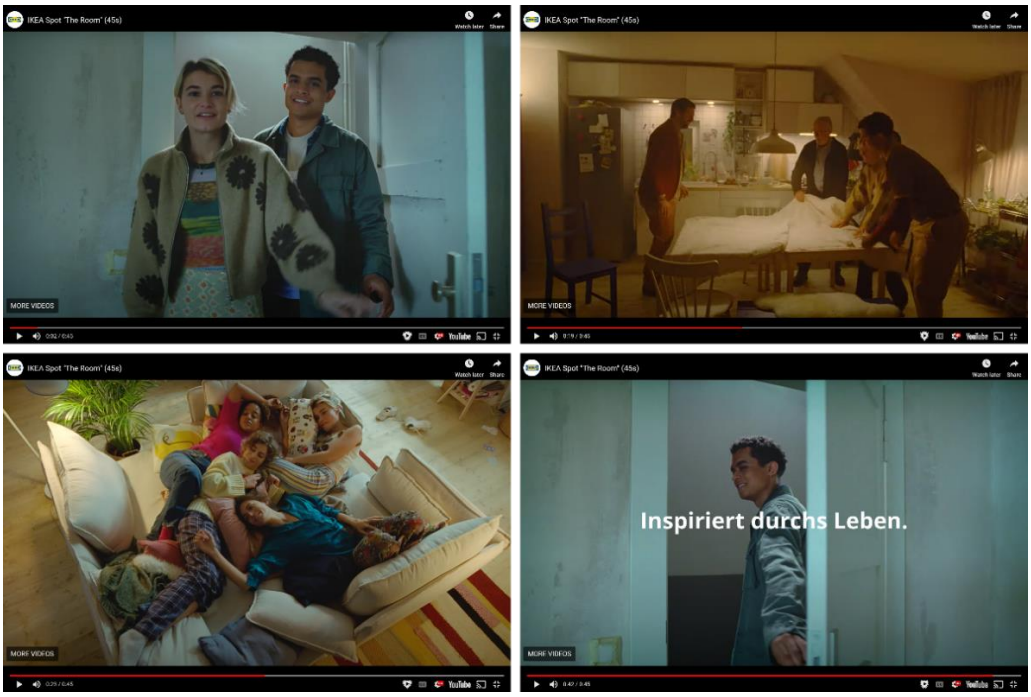
Please make sure to **watch with sound on.**

Back Next

IKEA "The Room"



English slogan translation "Inspired by life. - IKEA"



Please rate the ad. *

Bad — Good

Please rate the ad. *

Dislike very much — Like very much

Please rate the ad. *

Uninteresting — Interesting

Please rate the ad. *

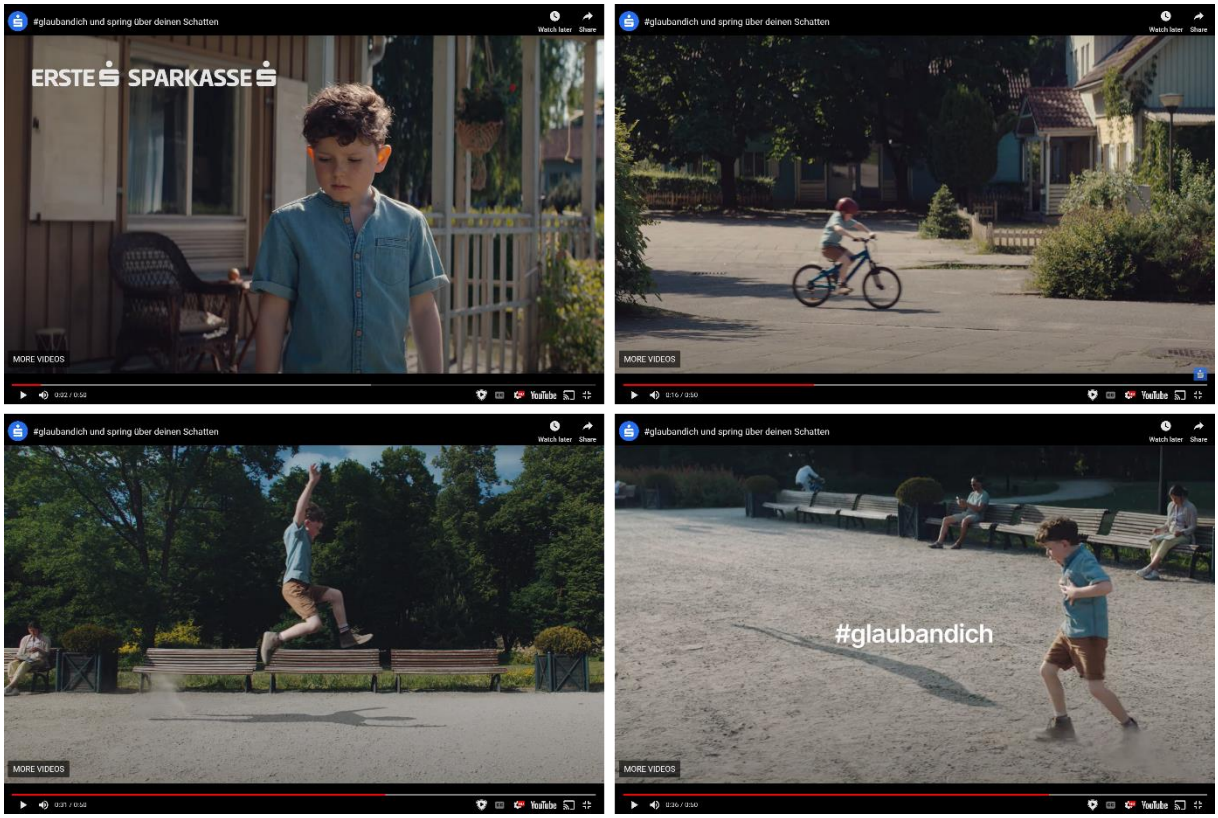
Irritating — Non-irritating

Please rate the music in the ad. *

	strongly disagree	disagree	neutral	agree	strongly agree
The music in the ad is interesting.	○	○	○	○	○
The music fits the message of the ad.	○	○	○	○	○
The music in the ad evokes memories.	○	○	○	○	○
The music in the ad evokes emotions.	○	○	○	○	○
The music in the ad creates a specific atmosphere.	○	○	○	○	○

Erste Bank "Glaub an Dich"

English slogan translation "Believe in yourself. - Erste Bank"



Please rate the ad. *

Bad — Good

Please rate the ad. *

Dislike very much — Like very much

Please rate the ad. *

Uninteresting — Interesting

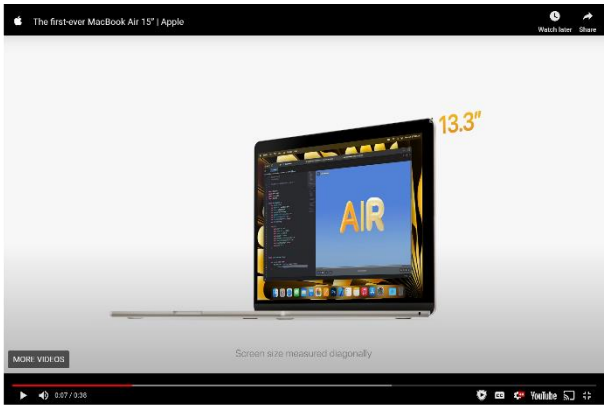
Please rate the ad. *

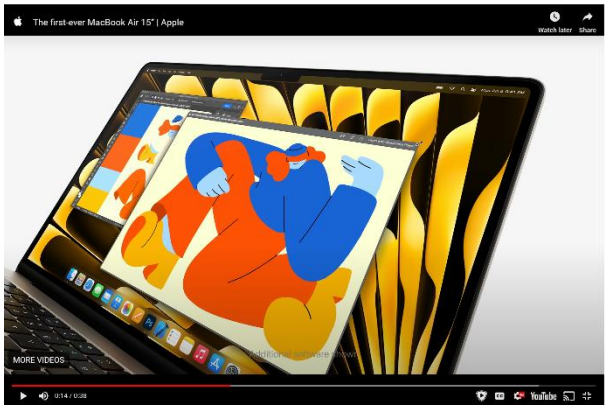
Irritating — Non-irritating

Please rate the music in the ad. *

	strongly disagree	disagree	neutral	agree	strongly agree
The music in the ad is interesting.	○	○	○	○	○
The music fits the message of the ad.	○	○	○	○	○
The music in the ad evokes memories.	○	○	○	○	○
The music in the ad evokes emotions.	○	○	○	○	○
The music in the ad creates a specific atmosphere.	○	○	○	○	○

Apple "MacBook Air"





Please rate the ad. *

Bad — Good

Please rate the ad. *

Dislike very much — Like very much

Please rate the ad. *

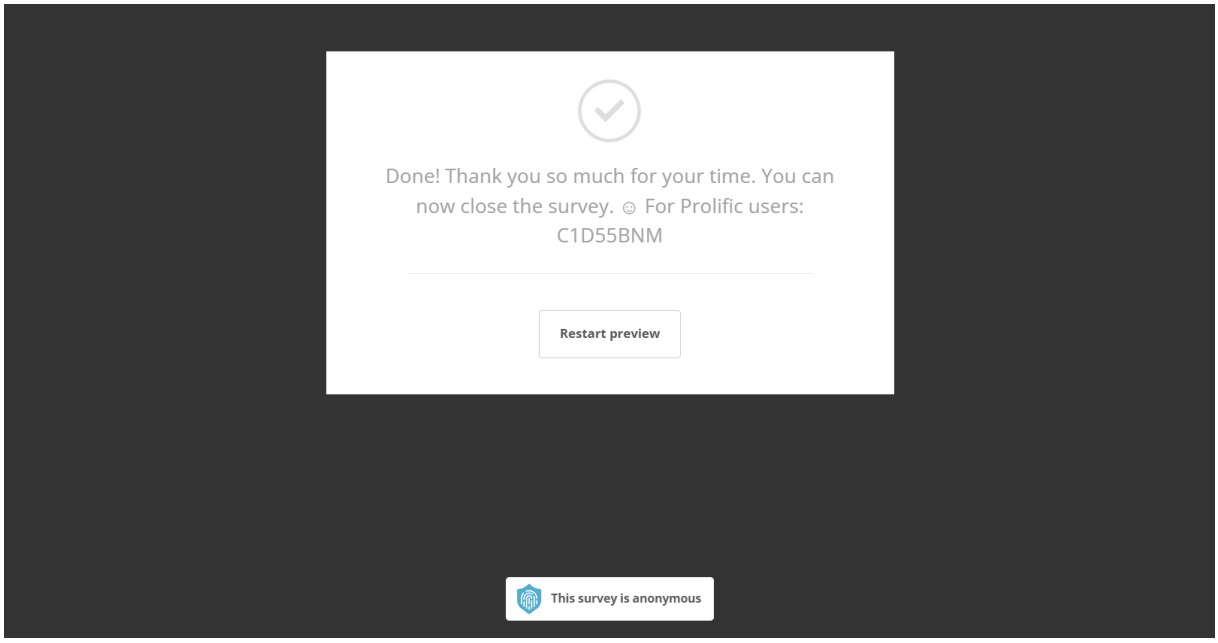
Uninteresting — Interesting

Please rate the ad. *

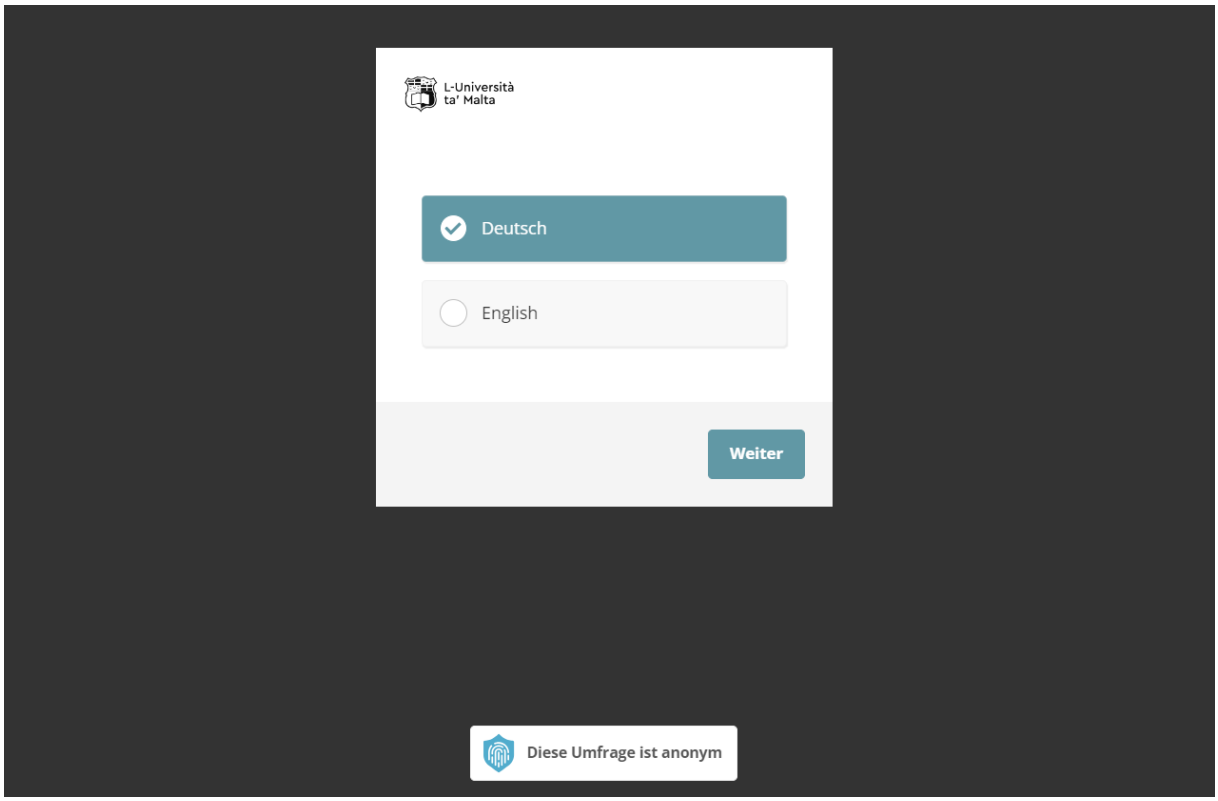
Irritating — Non-irritating

Please rate the music in the ad. *

	strongly disagree	disagree	neutral	agree	strongly agree
The music in the ad is interesting.	○	○	○	○	○
The music fits the message of the ad.	○	○	○	○	○
The music in the ad evokes memories.	○	○	○	○	○
The music in the ad evokes emotions.	○	○	○	○	○
The music in the ad creates a specific atmosphere.	○	○	○	○	○


Done! Thank you so much for your time. You can now close the survey. ☺ For Prolific users: C1D55BNM
Restart preview
This survey is anonymous

Appendix B – German Questionnaire



L-Università ta' Malta

Liebe Teilnehmerin, Lieber Teilnehmer,

im Rahmen meines Masterstudiums an der Universität Malta führe ich eine Umfrage über **Musik in Werbung** durch.

Sie können an meiner Umfrage teilnehmen, wenn...

- Sie **zwischen 1965 und 2005 geboren** sind,
- Sie einen **Wohnsitz in Österreich, Deutschland** oder der **Schweiz** haben.

Diese Umfrage ist **anonym** und dauert etwa **5 Minuten.**

Dieses Projekt wird von Dr. Daniela Castillo betreut. Die Teilnahme ist freiwillig und Teilnehmer:innen können jederzeit aus der Studie aussteigen. Sämtliche erhobene Daten werden ausschließlich für die Zwecke dieser Studie verwendet und sind nur der Forscherin und der Betreuerin zugänglich. Nach Abschluss dieser Masterarbeit werden alle erhobenen Daten verworfen.

Für Prolific Nutzer:innen:

Wenn Sie sich bereit erklären, an dieser Studie teilzunehmen, zahlen wir Ihnen 0,75 £ (oder den entsprechenden Betrag), sobald Sie die Umfrage vollständig ausgefüllt haben und die Validitätsprüfung erfolgreich abgeschlossen wurde. Wenn Sie die Studie nicht vollständig beantworten, erhalten Sie keine Zahlung. Die Zahlung wird Ihnen über Ihr Prolific-Konto nach Vervollständigung der Umfrage und Freigabe der Validitätsprüfung auf die übliche Weise überwiesen.

Sollten Sie Fragen haben, können Sie mich jederzeit unter *natalie.puszter.22@um.edu.mt* kontaktieren.

Herzlichen Dank für Ihre Teilnahme und Zeit,

Natalie Puszter

L-Università ta' Malta

Wohnen Sie in Österreich, Deutschland oder der Schweiz? *

- ◯ Ja
- ◯ Nein

Zurück Weiter

L-Università ta' Malta

Bitte geben Sie Ihr Alter an. *

Bitte wählen... ▾

Zurück Weiter

L-Università ta' Malta

Bitte geben Sie Ihr Geschlecht an. *

- ◯ Männlich
- ◯ Weiblich
- ◯ Divers
- ◯ Ohne Angabe

Zurück Weiter

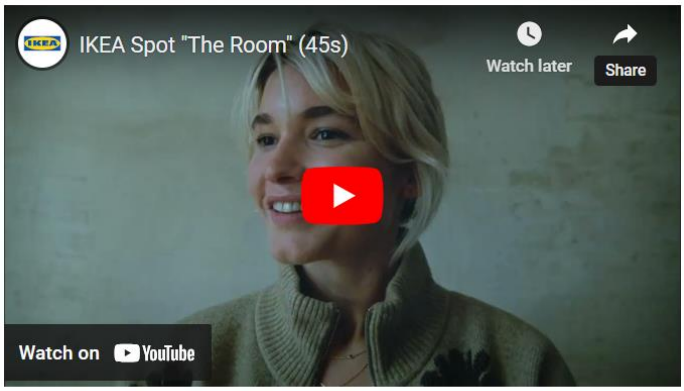
L-Università ta' Malta

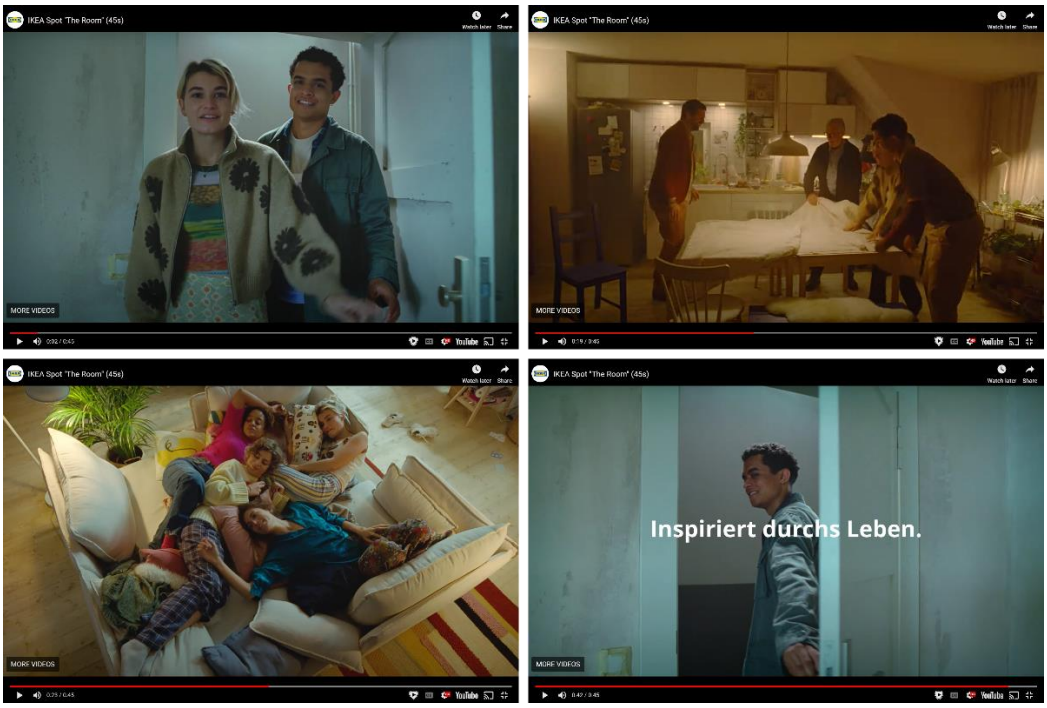
Im folgenden Teil der Umfrage werden Sie gebeten, sich **3 kurze Werbevideos** anzusehen und diese zu bewerten.

Bitte achten Sie darauf, dass Sie die Videos **mit Ton** ansehen.

Zurück Weiter

IKEA "The Room"





Bitte bewerten Sie die Werbung. *

Schlecht — Gut

Bitte bewerten Sie die Werbung. *

Gar nicht mögen — Sehr mögen

Bitte bewerten Sie die Werbung. *

Uninteressant — Interessant

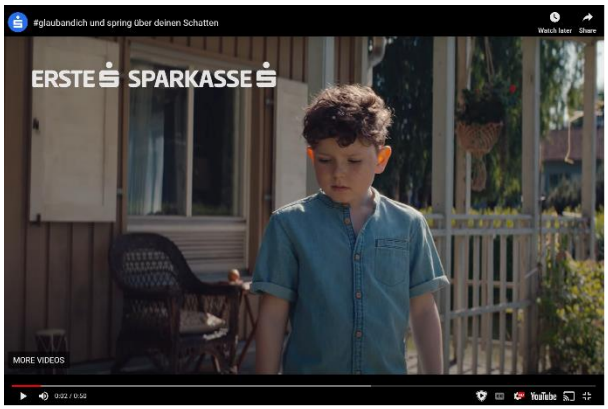
Bitte bewerten Sie die Werbung. *

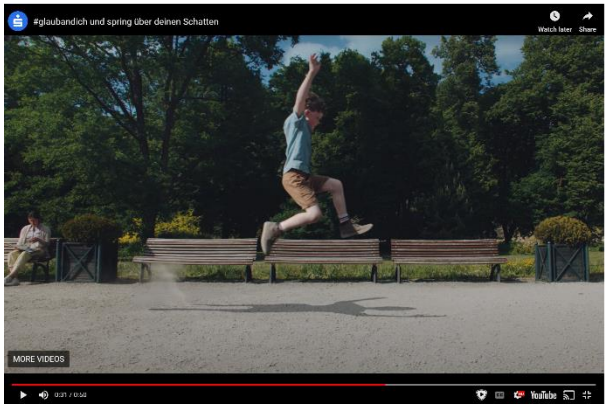
Irritierend — Nicht irritierend

Bitte bewerten Sie die Musik in der Werbung. *

	Stimme gar nicht zu	Stimme nicht zu	Neutral	Stimme zu	Stimme voll und ganz zu
Die Musik in der Werbung ist interessant.	○	○	○	○	○
Die Musik passt zur Botschaft der Werbung.	○	○	○	○	○
Die Musik in der Werbung weckt Erinnerungen.	○	○	○	○	○
Die Musik in der Werbung weckt Emotionen.	○	○	○	○	○
Die Musik in der Werbung schafft eine gewisse Atmosphäre.	○	○	○	○	○

Erste Bank "Glaub an Dich"





Bitte bewerten Sie die Werbung. *

Schlecht — Gut

Bitte bewerten Sie die Werbung. *

Gar nicht mögen — Sehr mögen

Bitte bewerten Sie die Werbung. *

Uninteressant — Interessant

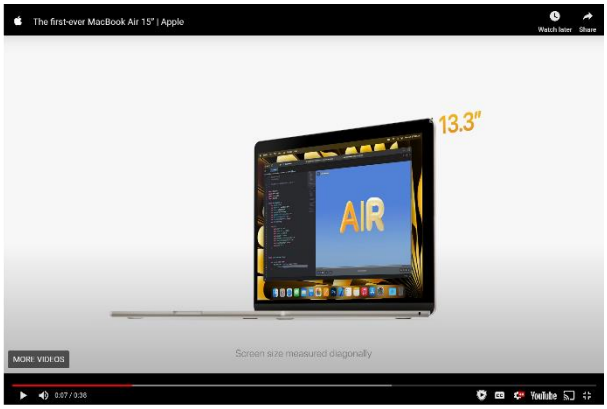
Bitte bewerten Sie die Werbung. *

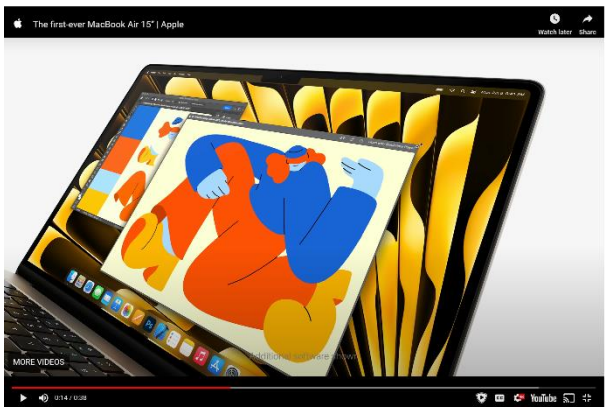
Irritierend — Nicht irritierend

Bitte bewerten Sie die Musik in der Werbung. *

	Stimme gar nicht zu	Stimme nicht zu	Neutral	Stimme zu	Stimme voll und ganz zu
Die Musik in der Werbung ist interessant.	○	○	○	○	○
Die Musik passt zur Botschaft der Werbung.	○	○	○	○	○
Die Musik in der Werbung weckt Erinnerungen.	○	○	○	○	○
Die Musik in der Werbung weckt Emotionen.	○	○	○	○	○
Die Musik in der Werbung schafft eine gewisse Atmosphäre.	○	○	○	○	○

Apple "MacBook Air"





Bitte bewerten Sie die Werbung. *

Schlecht — Gut

Bitte bewerten Sie die Werbung. *

Gar nicht mögen — Sehr mögen

Bitte bewerten Sie die Werbung. *

Uninteressant — Interessant

Bitte bewerten Sie die Werbung. *

Irritierend — Nicht irritierend

Bitte bewerten Sie die Musik in der Werbung. *

	Stimme gar nicht zu	Stimme nicht zu	Neutral	Stimme zu	Stimme voll und ganz zu
Die Musik in der Werbung ist interessant.	○	○	○	○	○
Die Musik passt zur Botschaft der Werbung.	○	○	○	○	○
Die Musik in der Werbung weckt Erinnerungen.	○	○	○	○	○
Die Musik in der Werbung weckt Emotionen.	○	○	○	○	○
Die Musik in der Werbung schafft eine gewisse Atmosphäre.	○	○	○	○	○


Geschafft! Vielen Dank für Ihre Zeit. Sie können die Umfrage jetzt schließen. ☺ Für Nutzer:innen von Prolific: C1D55BNM
Restart preview
Diese Umfrage ist anonym