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**EXAMINING INTRAMODAL SOUND EXECUTIONS IN  
ADVERTISING: THE EFFECT OF SPEECH AND LYRICS IN  
ADVERTISING ON CONSUMER'S ATTITUDES**

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**by**

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## **Dedication**

This dissertation is dedicated to my partner Allison.

For all the times you asked “how many”,

two PhD’s—we did it!

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First, I would like to give all glory to God, as I can do all things through Christ who strengthens me. In addition, I would like to give special thanks to my family. To my parents Joyce and Wentzel Stewart, thank you for praying for me every day and loving me without condition. To my sisters—Dr. Faith Stewart, Dr. Jada Stewart and Lauren Hampton--you sustained me with your friendship and laughter, and you encouraged me to strive for excellence.

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The University of Texas at Austin, 2015

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Marketers often use inter-modal executions to communicate with consumers about a brand or product (e.g., sight and sound TV commercials or touch, smell and sight magazine advertisements). However, little is known about how messages that uses intra-modal executions, such as audio and audio, affect consumers' processing and evaluation of the message itself. Across two chapters containing 4 studies, findings demonstrate, when consumers' processing involvement is low, there is an effect of intra-modal sound executions on consumers' attention to the music in and advertisement, as well as their subsequent attitudes towards the advertisement. This is explained by dual processing whereby two processing routes of persuasion may be activated. In this study, lyrics appear to increase the salience of the peripheral cue (e.g., music) when involvement (i.e., a proxy for motivation to process) is low. Thus, consumers' attention towards to the music is increased, which appears to affect more positive attitudes towards the message. Further, because attitudes towards the advertisement can mediate evaluations of the brand/product, the intra-modal integration of lyrics can indirectly influence brand attitudes.

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## **CHAPTER I: Introduction**

Music is prominent in the marketplace. The stores and restaurants we visit, and the advertising we watch often contains music. As many have asserted, music is a considerable resource for consideration in marketing practice and research (e.g., Alpert and Alpert 1990; Bruner 1990; Gorn 1982; Gorn et al. 1991; Kellaris and Cox 1989; Kellaris, Cox and Cox 1993; Kellaris and Mantel 1996; Kellaris and Rice 1993; MacInnis and Park 1991; Park and Young 1986; Olsen and Johnson, 2002). Prior theory refers to these valenced simple stimuli (e.g., celebrities, humor, cartoon characters and music) as peripheral cues. A cue (e.g., a peripheral cue) can be described as a signal of or for something not presently visible that tells someone how to respond (Wagner & Petty, 2011). Regarding music as a cue in advertising, divergent views regarding the effects of music in advertising exist. On one hand, many researches argue that attending to the music in an advertisement will distract from the message's arguments and thwart the persuasiveness of the advertisement (Kellaris, Cox & Cox, 1993; MacInnis & Park, 1991; Oakes & North, 2006; Oakes, 2007). Though this assumption may be valid, its negative implications are inextricably tied to the assumption that consumers will be motivated to process the arguments of an advertisement, and may distract their processing of the message. This type of processing is described as deliberate, and occurs through a central route of persuasion (Petty, Cacioppo & Schumann, 1983). However, it is important for advertising researchers not assume that consumers are motivated and able to participate in deliberate processing of advertising and product information (Krugman, 1965; Greenwald & Leavitt, 1984; Speilmann & Richard, 2013). Especially today, as consumers operate in a taxed attention economy where advertising clutter and hyper-

choice (i.e., A condition where the large number of available options forces consumers to make repeated choices that may drain psychological energy and diminish motivation and abilities to make smart decisions; Mick, Broniarczyk & Haidt 2004), of both offerings and communication technology, exist. By considering an alternative explanation for the effect of music in advertising, different insights might emerge regarding strategies geared towards influencing attitudes by enhancing the attention garnered by a simple stimulus such as music. This alternative explanation is based on the assertion that simple stimuli can act as, or be associated with, persuasive cues that may influence attitudes under conditions of low involvement processing. Specifically, Hecker (1984) and Kellaris, Cox and Cox (1991) assert that music's value lies in its ability to draw attention to itself, as this can draw attention to the message and enhance persuasiveness. Thus, enhancing the attention gaining value of these simple cues may positively affect attitudes towards a message in which the music is placed, and subsequently, the advertised brand.

Theories of attention provide support for both of these contrary views regarding music in advertising. Take Pepsi Max for example. They launched a popular TV commercial in 2010 using multiple peripheral cues (music and humor), as well as multiple modalities, sight and sound. Pepsi Max also utilized taste through visual imagery (e.g., sipping a drink) to convey that they were "not friends" with Coke Zero. Interestingly, in addition to being a multi-modal message, the commercial also contains multiple sounds playing at once (i.e., intra-modal sound executions), as speech, sound effects, an instrumental melody and lyrics are playing concurrently. In this sensory rich example, attention may be attracted to the music and thus the visual part of the commercial, however, music may be also drawn to the music and away from the spoken part of the commercial. Similar to the PepsiMax commercial, advertising often uses

licensed music, but little is known about the extent to which the instrumental music, played concurrently with either lyrical language or spoken language, or played simultaneously with both lyrical and spoken language affects processing and attitude formation. Do these language elements, when presented separately, conflict and distract attention from the advertisement message by drawing attention to the music? Alternatively, do these language elements, when presented separately, attract attention to the music and thus the message? Additionally, do these language elements, when presented together, compete with each other and affect attention to the music? I refer to such instances of concurrently presented stimuli in the same modality in a marketing message as intra-modal (e.g., sound) executions, as intra-modal integration refers to the processing of stimuli within the same modality using a single sensory channel (Sephar, Tye-Murray & Sommers, 2008). Thus, intra-modal sound executions in advertising are executions that utilize multiple sounds in a message that are processed using a single channel, unlike than bi-modal (e.g., audio-visual) executions which are processed using two different channels. .

The impetus of this research beyond understanding the impact of intra-modal sound executions in advertising is to examine how consumers attend and process inter and intra-modal events. Theories of attention offer support for both view of music in advertising based on inter and intra-modal attention. Specifically, consumers can processes many sounds in such a way that (1) the ability to attend to all of the sounds in an ad may be limited, thus attention is allocated so that a sound may be processed, while other sounds are ignored, (2) though attention can select a focal object or field, this also results in being distracted from other objects or fields. However, though multiple sounds may distract from each other, they may not distract from attending to a visual object (3)

the sound that stands out among other sounds is most likely to be processed than ignored (4) some sounds can act as cue and influence attitudes towards advertisements. As a result of these major functions of consumers' message processing, important questions might be investigated to extend marketers understanding of consumer psychology, persuasiveness and ad effectiveness. Specifically, will playing a single versus multiple concurrent sounds in a commercial effect what sound elements of a message consumers' process and subsequently their attitudes towards the message? As such, the major research questions of this study are how do lyrics and speech, when presented individually, and together, influence attention to the music, and subsequently message and brand attitudes.

The present research aims to examine how, compared to presenting a message using multi-modal executions (e.g., audio-visual), intra-modal executions (playing multiple sound sources at one time) influence the attention paid to a simple stimulus in a message. Ultimately, intra-modal executions may increase the persuasiveness of marketing messages, as well as offer greater understanding to two divergent views of music in advertising. Specifically, using intra-modal executions to deliver a message can produce varying consequences depending on the relationship between the sounds integrated and the target stimulus.

This research will examine if there are conditions under which intra-modal sound executions could enhance or distract attention from the musical melody in an ad, and subsequently effect attitudes towards the advertisement. For example, in Pepsi Max's case, such attitudes may result from the peripheral route being activated by the music in the advertisement. Yet, the salience of the music may be influenced by the other sounds (e.g., talking, dishes clanging or lyrics playing) present in the message; thereby

influencing the amount of attention given to the music. Specifically, when is the attention of uninvolved processors attracted towards or distracted away from the music by intra-modal executions, and does this affect the positivity of consumers' attitudes towards the message and subsequently the advertised brand?

### **Contribution**

This study contributes to several research lines. First, we add to a growing stream of research on sensory marketing (Krishna, 2012). Several studies indicate the positive consequence of using music (Gorn, 1982; Bruner, 1990; MacInnis & Park, 1991), while others indicate negative inter-sensory—between two senses sound and smell—effects of music (Spangenberg, Grohmann & Sprott, 2005). In contrast, this study demonstrates the importance of examining the effects of music with respect to intra-sensory processing.

Second, the findings of this study offer support for one or two contrasting views that either document positive effects of music in advertising. By affecting lyrics, seeing as lyrics can enhance attention to the music and thus the advertisement, prior research has demonstrated a positive effect on retrieval of product information (Wallace, 1991; Olsen & Johnson, 2002; Peynircioğlu, Rabinovitz & Thompson, 2007); as opposed to studies that document negative effects (Macklin, 1988; Salam & Baddeley, 1989; Jones & Macken, 1993; Buchner, Rothermund, Wentura & Mehl, 2004). Similarly, this research uses lyrics to affect attention to the music, but also uses a voiceover to enhance our understanding of attention intra-modally. Additionally, prior results examine the impact on information retrieval; while the findings in this paper contribute to the existing body of sensor marketing and consumer psychology by examining attitudes. The findings of this work provide evidence that attitudes towards the message are influenced intra-modally. Particularly, the integration of lyrics and speech sounds into a commercial can

influence consumers' attitudes towards the message. Furthermore, because attitudes toward the message can influence other important outcomes, such as assessment of the brand and its key traits, my research suggests that a marketer's may enhance attitudes towards the message using intra-modal sound executions, and the decision regarding what type of execution to use (1) should not be constrained by whether the content is single vs. bi-modal (2) should assess how involved the consumer is and whether the message is likely to be processed through a peripheral (vs. central) route of persuasion and (3) should assess the type of purchase involvement or effort is required for the product.

A third contribution of this work concerns the extension of the elaboration likelihood model to include cue salience. The following literature and experiments support the proposition that intra-modal executions can affect the attention paid to a stimulus that acts as or is associated with a peripheral cue. This enhanced salience of the peripheral cue affects the positivity of subsequent attitudes. The following studies show that enhancing attention to the music in an advertisement—affected by the use of lyrics or the absence of a voiceover in advertising—influences more positive attitudes towards the message. This contribution extends prior work by Park and Young (1986) on the effect of music in marketing messages, where they posit a peripheral cue such as music exerts its greatest influence on brand attitude in a low-involvement advertising setting (Petty, Cacioppo, & Schumann, 1983; Petty & Cacioppo, 1986; Park & Young, 1986; MacInnis & Park, 1991). This research demonstrates that an even greater influence might be achieved by the strategic placement of similar or dissimilar linguistic cues.

Forth, this research furthers our understanding of music in advertising. Contrasting views hold the music can attract attention to itself and either positively or



negatively affects message persuasiveness. This current work provides support, counter-intuitively for what is assumed to be a distracting event; message executions that present both lyrics and a voiceover with a musical instrumental do not appear to have a negative impact on attitudes. However, consistent with the general assertion about music, it can draw attention to itself, and intra-modal executions appear to drive this effect. These executions can draw greater attention to the cue (e.g., music), and do not appear to detract from the message (Wakshlag, Reitz & Zillmann, 1982, Hecker, 1984; MacInnis & Park 1991).

### **Dissertation Organization**

The remainder of this dissertation is organized in the following manner. The current chapter (Chapter I) describes the literature related to work on attitude formation and message processing. It also explains how my research aligns and is supported by this literature.

In Chapter II, two online experiments demonstrate that the intra-modal sound executions of a message (instrumental music vs. music with lyrics vs. music and speaking vs. music and lyrics and speaking) effect attitudes towards the message and ultimately attitude towards the brand, under certain conditions. In Experiment 1, I test this basic theorizing and illustrate how intra-modal executions lead to differences in processing and message attitudes. I further assess the mediating influence of consumer's attention towards music on the relationship between intra-modal sound executions in messages and consumer's attitudes towards the message. Last, I demonstrate the further reaching effect of intra-modal executions on attitudes toward the brand, by way of attitudes toward the advertisement.

Next, Experiment 2, Study A (E2A) adds to my inquiry by replicating the findings for a different type of consumer product (low involvement purchases = dish soap) than that used in Experiment 1 (high involvement purchases = car). Moreover, in chapter 2, E2A, I isolate the sound stimuli that most significantly accounts for the effect seen in Experiment 1. Then I demonstrate that consistent with my theory, involvement with the advertised product—measured consumer’s personal need for the product (e.g., whether they are in the market for the product in the near future)—moderates this effect. Finally, I support the earlier seen mediation in Experiment 1, by demonstrating that consumer’s attitude toward the message mediates the relationship between the implicated intra-modal sound *lyrics* and attitudes towards the brand.

Additionally, in Experiment 2, Study B (E2B), I examine the second part of my theory that asserts: the effect of intra-modal sound executions, on attitudes towards the message occurs, for audio messages similar to audio-visual messages.

Chapter III expands the investigations outlined in Chapter II by showing that the intra-modal sound execution (i.e., lyrics versus speech) implicated in influencing attitudes may vary, depending on certain situational conditions.

Finally, Chapter IV summarizes the findings the 3 experiments, discusses some limitations of the research, and highlights important directions for future study.

## **LITERATURE REVIEW**

### **The importance of sensory inputs in Advertising**

Theory implies that messages that engage more senses are more effective. This is supported by theories of sensory richness, which posit: presenting more cues at one time can enhance message persuasiveness (Pine & Gilmore, 1998; Sundar, 2007). This framework is based on the premise that engaging more senses makes the message stand out, which affects the extent to which people process the message (Kisielius & Sternthal, 1984; 1986). For example, a theory of Availability-Valence assumes that sensory stimuli should affect consumer's experiences and subsequent attitudes based partly on the how much it stands out in memory and the environment (Kisielius & Sternthal, 1984; 1986; Appiah, 2006). Appiah (2006) demonstrated that information that stands out—operationalized by presenting audio-visual (vs. picture-text) testimonial advertisements—affects the extent to which people will process to the message, as well as their subsequent evaluations of the testimonials. In this case, the message with audiovisual content is more salient than the text-picture message. Consequently, salience, along with the favorableness of the stimuli will determine the positivity strength of the attitude (Kelly, 1989). This explanation may prove problematic for intra-modal sound executions, as audio-visual messages activate separate sensory channels, while intra-modal executions activate the same sensory channel, as well as a linear relationship is assumed, and as you increase the richness beyond audio-visual limitations may occur.

The problem being that consumers have a limited capacity to process all the sensory stimuli they encounter at one time, and processing multiple stimuli that require the many of the same sensory channel, as well as too many resources across channels, may cause processing deficiencies (Lang, 2000; Lee & Faber, 2007; Lang, 2006). In

alignment with the theory of limited capacity, contrary perspectives support that these sensory rich messages can diminish message persuasiveness, as consumers' have a limited capacity to process such events (Wakshlag, Reitz & Zillmann, 1982; McInnis & Park, 1991).

In these cases, consumers might become overwhelmed or distracted. Consequently, doubt exists regarding the effect of cue salience, its role in influencing consumers' attitudes towards an advertisement—when affected by intra-modal executions (e.g., presenting speech with music and sound effects)—as insights from inter-modal findings are conflicting.

### **On Salience and Modality in Marketing**

Existing research sheds light on some of the consequences of multi and intra-modal executions in marketing. For example, multi-modal commercials, which have both sound and video, enable advertisers to benefit from the multi-sensory interaction of sight, sound, and motion (Belch & Belch 2001, p. 354). Unlike picture-only messages (e.g., print advertisements), audio-visual messages generate deeper experiences with the content, as more sensory channels are activated (Biocca, 1997). This enhancement of message salience—defined as the state or quality by which a stimulus or object stands out relative to co-encountered stimuli (Guido, 2011, p. 6) has been demonstrated using vividness manipulations (Chaiken & Eagly, 1976; Andreoli & Worchel, 1978). An object may be described as vivid, based on how likely it is to attract and hold attention and to excite elaboration through emotion (Collins, Taylor, Wood & Thompson, 1988). Vivid stimuli can become salient, but salient stimuli are not necessarily vivid. Vivid stimuli are “(a) emotionally interesting, (b) concrete and imagery provoking, and (c) proximate in a sensory, temporal, or spatial way” (Nisbett and Ross 1980 p.45). Salient stimuli have a

state or condition standing out or being important (Guido, 2011). Thus, a stimulus can garner greater attention and effort to process, by becoming salient; while vividness reflect one of many means by which stimulus salience might be affected. In addition, bi-modality is clearly instrumental in affecting message salience.

Interestingly, it is important to note that message salience and cue salience are separate concepts. A message represents a multitude of stimuli, and its' ability to stand out is compared to other messages. A cue has been represented, in past literature, as a single stimulus or rule, and its' ability to stand out is comparable to another stimulus or rule. In situations where consumers' process marketing messages, a limited processing capacity disables them from attending to other messages, as well as every aspect within the message (Keitel, Maess, Schröger & Müller, 2013). These limitations exist inter-modally and intra-modally. For example, audio-visual executions tied more globally to the message as a whole may stand out over other messages, such as text only signs, in a situation (e.g., store). This reflects the enhanced salience of the message over the text signs. Similarly, intra-modal sound executions compete with each other; and in the case of advertising, this competition occurs within a message. When tied a focal part of the auditory message (e.g., target sound), concurrent intra-modal stimuli (e.g., distracter sounds) may draw attention toward or away from the target sound (Spehar, Tye-Murray & Sommers, 2008). As attention is an integral part of processing and persuasion, salience is important in influencing the extent to which a message is processed, as well as which elements of the message are processed (Sears, Peplau and Taylor, 1991, p. 557). Thus, a marketing message with audio-visual content is said to stand out more than one with visual only content, because presenting audio and visual enhances the message salience (Collins & Taylor, Wood & Thompson, 1988).

Similarly, salience may play a role in influencing the extent to which certain elements of a message stand out. In accordance with sensuality in marketing, not only does increasing the salience of a message influence what parts of a message are processed, but also how it is processed and subsequently its persuasiveness (Reyes, Thompson & Bower, 1980; Shedler & Manis, 1986; Collins, Taylor, Wood & Thompson, 1988). Nevertheless many studies have argued enhancing salience of a message undermines it or has no effect (e.g., Frey & Eagly, 1993; Edell & Staelin, 1983; Wright & Rip, 1980).

Specifically, exposure to multiple stimuli through the same channel (e.g., channel) may result in certain stimuli being selected, while other are ignored (Triesman, 1964). This concept is based on the assertion that consumers' selectively attend to sounds. Think of this as if your brain lowers the volume of 3 types of sounds, when it encounters 4 sources of sounds in the same room (gun fire on TV, radio host speaking, a person talking on the phone, and a baby crying), in order to attend to the fourth sound (a baby crying). This explanation of intra-modal processing explains how intra-modal (e.g., playing music with a voiceover) sound executions might influence the persuasiveness of a message. As previously mentioned, under certain conditions, sensory executions may favorably affect the persuasiveness of a marketing message, but they may hinder it as well. The Elaboration Likelihood Model offers insight into how intra-modal executions in a marketing message may affect attitudes by influencing the salience of a peripheral cue; thereby affecting the salience of that cue and the resulting persuasive process and outcome—attitude formation.

## **Elaboration Likelihood Model**

The Elaboration Likelihood Model (ELM) of persuasion argues a "dual process" approach to persuasion. In particular, the ELM is a series of propositions that address the question: what happens when a person is or is not motivated to think about the communication to which one is exposed (see Petty, R. E., Cacioppo, J. T., & Schumann, D., 1983). Other processing approaches such as Chaiken's Heuristic-Systematic Model (HSM) and Pavio's Dual Coding Theory, offer similar propositions, though the ELM proves most adequate for this advertising context; specifically due to its assertions about simple stimuli and peripheral cues, as well as its propositions about music and attention to the message (Petty, Cacioppo & Schumann, 1983; MacInnis & Park, 1986). The ELM suggests that the nature of persuasion varies as a function of the likelihood that consumers' will deliberately think about (e.g., elaborate on) information relevant to the persuasive object (Petty, Cacioppo & Schumann, 1983; Wagner & Petty, 2011). The object of focus in this research is an advertising message (e.g., a commercial) and its brand. Depending on the depth of thinking (e.g., the degree of elaboration), two different kinds of persuasive processes can be activated. One—called the central route—encompasses systematic thinking and the other—called the peripheral route—involves heuristic shortcuts (Petty, Cacioppo & Schumann, D, 1983, Wagner & Petty, 2011). Different factors influence different persuasive outcomes depending on which route is activated.

The central route represents the persuasion processes involved when elaboration is likely. Persuasion achieved through the central route commonly occurs as the result of extensive issue or argument-relevant thinking: deliberate examination and close analysis and consideration of the information, issues and arguments in the message (Petty,

Cacioppo & Schumann, 1983; Petty & Cacioppo, 1986; Petty & Wegener, 2014). The peripheral route represents the persuasion processes involved when elaboration is unlikely. Persuasion through the peripheral route generally results when the receiver employs simple decision rules (e.g., heuristics or peripheral cues) to evaluate the contents of a message (Petty, Cacioppo & Schumann, 1983; Petty & Cacioppo, 1986, Petty & Wegener, 2014). For example, consumers' might be guided by whether a celebrity or model in the advertisement is attractive, or whether there is pleasurable music in the message. Hence, message recipients may rely upon various peripheral cues (e.g., pleasurable music) to guide an attitude and belief, rather than engaging in extensive issue-relevant thinking (Petty & Wegener, 2014).

A number of factors have been found to influence the likelihood of elaboration (and hence which route of persuasion is activated). These factors include how motivated and how able the consumer is to elaborate (Petty, Cacioppo & Schumann, 1983; Petty & Cacioppo, 1986, Petty & Wegener, 2014). A consumers' motivation to engage in elaboration can be influenced by the personal relevance of the topic—the receiver's degree of "involvement" with the topic or target object (Petty, Cacioppo & Schumann, 1983; Petty & Cacioppo, 1986; Petty & Wegener, 2014). Processing motivation can also be influenced by the receiver's need for cognition, an individual difference in personality reflecting the tendency to enjoy and engage in thinking (Petty & Cacioppo, 1986; Petty & Wegener, 2014).

The ELM is informative, as it informs expectations about how multi-modal executions may affect the processing and subsequent attitudes towards associated messages or objects (e.g., brands). Focusing on the implications for attitude, relevant to this study, the Elaboration Likelihood Model suggests that, for the peripheral route of



persuasion, given a person has low involvement with the product or message, persuasiveness of the advertisement will vary depending on properties of the peripheral cue. These cues are generally unrelated to the deliberate assessment of the quality of the message. Thus, background music has been utilized as a peripheral cue in advertising, as it is associated with emotion or liking (Petty & Cacioppo, 1986; Petty & Wegener, 2014). Interestingly, the ELM currently is lacking the necessary specificity to offer explicit expectations about how peripheral cue salience, affected by intra-modal executions, may affect the processing and subsequent attitudes towards associated messages or objects (e.g., brands).

### ***Motivation to Process***

The relationship between involvement and consumers' reactions to persuasive communication has been studied extensively in marketing research (Krugman 1965; Mitchell 1981; Petty, Cacioppo, and Schumann 1983; Greenwald and Leavitt 1984; Park and Mittal 1985; Fortin & Dholakia, 2005; Kim, Haley & Koo, 2009). The level of involvement can be understood by the degree of personal relevance or importance of an object or offering to the consumer (Zaichkowsky, 1985; Zaichkowsky, 1986). These objects or offerings can include, but are not limited to: products, messages, decisions, services and issues. In marketing, Zaichkowsky (1986) outlined multiple types of involvement including: consumers' involvement with the message and consumers' involvement with the product. If consumers' are led to believe the communication can affect them, they may become more involved with the message than those who believe the message cannot affect them (MacInnis & Park, 1991; Kim, Haley & Koo, 2009). Differently, if consumers are in the market or buying process for a particular product, they may become more involved with the product, and possibly the product's

advertisements than those who are not in the buying process for the product (Zaichkowsky, 1985). Both of these instances represent situational involvement, as opposed to enduring or predispositional involvement (Richins, Bloch & McQuarrie, 1992). Involvement can also be enduring or trait based, as consumers may enjoy a category of products (e.g., cars) in general, but outside of any situational buying process (Higi & Feick, 1989).

As a consequence, consumers with high involvement (e.g., finding the message, a product or a category of products personally relevant or important) are expected to devote considerably more physical effort, or attentional capacity to the offering (e.g., product), as well as allocate more effort to process related information, than consumers' with low involvement (Greenwald and Leavitt 1984). Similarly, Petty and his coauthors (1983) linked message involvement to these the two routes of processing (i.e., peripheral or central) in the ELM. They argue that the central route is more likely to be activated when involvement is high; whereas the peripheral route is more likely to be activated when message involvement is low (Petty, Cacioppo & Schumann, 1983); MacInnis & Park, 1991; Te eni-Harari, Lampert & Lehman-Wilzig, 2007). Thus, as previously mentioned, processing under high involvement with the message content (product or message) is consistent with the central route of persuasion, and the propositions of this research are presumed to occur under conditions of low involvement.

### ***The ELM, Music and Peripheral Cue Salience***

Theories of attention and salience can offer the specificity needed to extend the ELM to inform intra-modal executions and music salience in advertising. As previously mentioned, audiences tend have a limited pool of attentional resources, yet they tend to allocate more of these resources to stimuli that stand out, as they either are better able to

capture attention or align with consumers basic goals of survival (Corbettan & Shulman, 2002). Research has demonstrated that vividly presented stimuli are more likely to capture attention than pallid stimuli. This vividness affects the salience of the stimuli through a specific means. Enhancing salience in this way can promote persuasion because it is possible for a stimulus that stands out in a context to attract more attention than co-encountered stimuli (Frey & Eagly, 1993; Nisbett & Ross, 1980). Conversely, attracting this attention towards a stimuli implicitly means distracting attention away from something else (Treisman, 1964). Nevertheless, attracting more attention can further increase the extent to which the message or elements of the message are scrutinized (e.g., Frey & Eagly, 1993; Nisbett & Ross, 1980). Though this theory of salience and its corresponding findings are somewhat controversial, research specific to advertising and multimedia suggest that advertising presented in audio and video modalities may heighten attention to communicator cues—compared to text-based ads (Chaiken & Eagly 1983; Gupta & Lord, 1998; Brasel & Gips, 2014).

Auditory salience has been used to describe an auditory input that stands out over co-existing sounds encountered. For example, the salient shattering of glasses would differ from co-encountered sounds with less salient acoustic attributes such as timbre, intensity, and location. Similarly, music's ability to engage a listener's attention can stem from objective traits, such as location, speed and loudness (Nisbett & Ross, 1980, pp. 45; Kardes, 2001; Watanabe & Shimojo, 2001; Olsen, 2002). Thus, this can be said to enhance salience of the music. In this case, music may attract greater attention to itself (Wakshlag, Reitz & Zillmann, 1982). Prior research in advertising has described this as possibly having a “distraction” effect; however, from a different perspective, this distraction effect supports the proposition that enhancing the salience of music may

enhance attention to the music, though it may or may not distract from the visual processed in a separate channel. Because the music acts as or is associated with a peripheral cue (e.g., meanings, thoughts images and feelings it conveys), when it becomes more salient in the message than other sounds, and conversely, distract away from spoken messages processed in the same channel (Wakshlag, Reitz & Zillmann, 1982). The influence on positivity towards the message and brand can offer insight as to which explanation is supported (Frey & Eagly, 1993; Nisbett & Ross, 1980).

Peripheral cues—compared to central arguments—may be considered less effectual, and cause some readers to believe it is counterintuitive to suggest that intra-modal sound executions may positively influence the persuasiveness of a message. However; enhancing the salience of simple stimuli associated with a peripheral cue in the message may be an effectual advertising strategy. Alternatively, intuition is driven by a view prevalent in marketing literature, which posits that enhancing the salience of a cue in a message, such as music, may diminish the messages persuasiveness (Frey & Eagly, 1993; Nisbett & Ross, 1980). Specifically, the music can attract attention away from the advertisement’s arguments and towards the music itself (Wakshlag, Reitz & Zillmann, 1982). Notably, evidence to support both propositions exists, though the ELM provides support in favor of music’s attention gaining properties enhancing message persuasive (Figure 1).

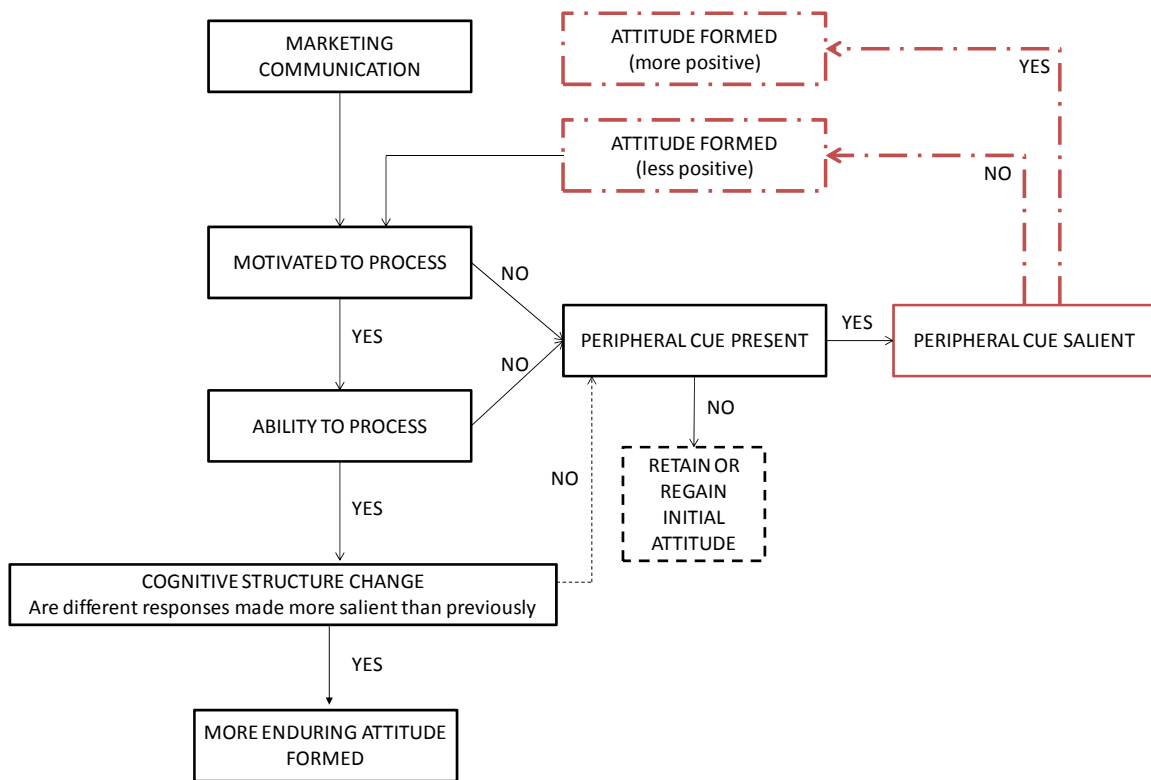


Figure 1. Peripheral cue salience and the ELM

Consequently, theory might benefit from research focused on the nuances of the peripheral route of the ELM. Through a peripheral route of processing, as music becomes more salient, it may assert an even greater influence over attitude formation (Figure 1).

### ***Intra-modal Executions Affecting Music Salience***

Beyond affecting the attention gaining value of music by manipulating its loudness and relevance, past research asserts that the salience of music may also be determined, at least in part, by its contextual significance (Tversky & Gati, 1978). Thus, music may acquire contextual significant (and hence become more salient), in a particular context (e.g., advertising), if it serves as a basis for classification in that particular context. Specifically, Tversky (1977) bases salience of features on intensity and diagnosticity. Intensity increases with size, brightness, and clarity. Diagnosticity is

context-dependent and refers to the importance based on the target features. Adding a similar (vs. dissimilar) sound to a target sound may increase (vs. decrease) the perceived importance and intensity of the target sound (Duncan and Humphreys, 1989). As this literature suggest, similarity of an intra-modal sound to a target cue may influence the salience of the target.

Song lyrics and an instrumental melody are processed independently of each other (Besson, Faita, Peretz, Bonnel & Requin, 1998). However in an intra-modal context, they are similar in classification (Huron, 1986). Thus, when presenting an instrumental melody with lyrics in an advertisement—as opposed to presenting only an instrumental melody—music may become more salient; as two similarly classified cues may enhance the contextual significances of the music in the advertisement (Figure 2). For example, a song with lyrics may differ from co-encountered sounds in an advertisement more than a song without lyrics, as the lyrics act as an enhancer due to its similarity with the instrumental (Tversky, 1977; Sawaki, Geng & Luck, 2012). Additionally, the music is assumed to represent the target sound in the advertisement. Serences and Yantis (2007) have examined the effects of a non-target's ability to capture attention when the non-targets are similar (e.g., share the target's color) or dissimilar. Their results demonstrate that similar non-targets were more likely to capture attention and have higher attentional priority (Serences & Yantis, 2007; Geng & Mangun, 2009).

In addition, research supports that a spoken voiceover and an instrumental melody are processed independently of each other (Besson, Faita, Peretz, Bonnel & Requin, 1998), and, in an intra-modal context, they are dissimilar in classification. Applying the concept of contextual significant through similarity, this research also posits that music will become less salient when presented with a voiceover in an ad, as an instrumental

melody and spoken voiceover are representationally dissimilar (Huron, 1989). Maidhof and Koelsch (2011) provide empirical evidence in support of such propositions. In their investigation of auditory selective attention for speech and music, they found, when presented simultaneously, participants had to focus their attention either on speech, or on music (Maidhof & Koelsch, 2011).

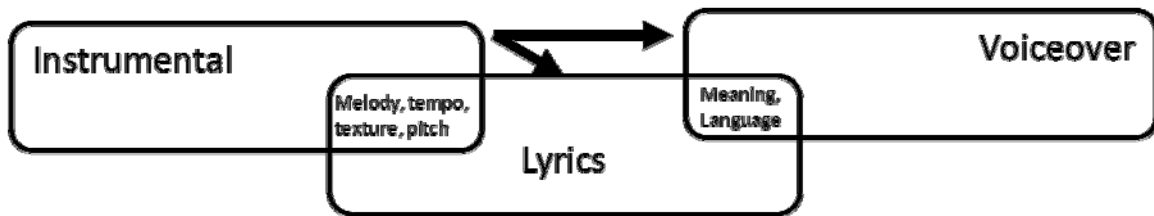


Figure 2: Feature matching for intra-modal sounds

Interestingly, lyrics and a voiceover are similar to each other, and often presented with an instrumental melody all at the same time. Research on bottom-up attention (e.g., attention driven by a stimulus) informs how music salience might be affected by the presence of a similar (e.g., lyrics) and dissimilar (e.g., a voiceover) intra-modal sound. Specifically, Duncan and Humphreys (1989) observed, in a past study, that the similarity between target and distractors dictates the degree of attentional engagement. More attention is required to reject distractors that are more similar to the target (Duncan and Humphreys, 1989; Rausei, Makovski & Jiang, 2007). Thus, not only do distractors similar to the target (e.g., lyrics to music) attract more attention to themselves and thus the target, but also less attention is paid to a dissimilar stimulus and may lead to inattention blindness (Cartwright-Finch & Lavie, 2007; Simons & Chabris, 1999; Rausei, Makovski & Jiang, 2007). This blindness has been demonstrated in multiple studies; more popular is the gorilla study. In this study, subjects are asked to watch a short video of two groups of people (one wearing black and the other wearing white t-

shirts) passing a basketball around. The subjects are told to count the number of passes made by one of the teams. In the video a woman walks through the scene wearing a full gorilla suit. After watching the video the subjects are asked if they noticed anything out of the ordinary take place. In most groups, 50% of the subjects did not report seeing the gorilla. Based on inattention blindness, when an instrumental plays with both lyrics and a voiceover, a similar stimulus (e.g., a melody with the lyrics) may garner more attention, while the consumers may become blind to the dissimilar stimulus (e.g., the voiceover or the music). It is important to note the spatial distance between a target and distractor plays an integral role in salience, however, in an advertising context the distance of elements is confined to a proximate space as they both come from the same source, the communication medium. Thus, the first hypothesis of this research is:

H1: When product involvement is low, intra-modal sound executions affect music salience such that, consumers who hear lyrics with instrumental music will pay more attention to the music than those who do not hear lyrics, and those who hear a voiceover with instrumental music will pay less attention than those who do not.

### **Intra-modal Executions Affecting Attitudes**

Important considerations can be gleaned from applying salience to the ELM, including how people will evaluate the message or brand under the conditions earlier described. According to Petty & Cacioppo (1986) simple cues, such as music, are more important determinants of evaluations when personal relevance is low rather than high. Specifically, various simple cues in a message (i.e., source credibility/likability, mere number of arguments, pleasant music, and visual salience) exert a more powerful influence over judgments when personal relevance is low, rather than high (Petty &



Cacioppo, 1986, pp. 160). Moreover, music is said to evoke feelings of pleasure that initiate attitude formation for an associated object (Petty & Cacioppo, 1986). However, if the same cue, music, was be affected so that it grabbed more or less attention (e.g., delivered with sounds that make it more salient or less salient), it may affect attitudes differently, because the cue affects attention to itself differently. The model that underlies my theorizing is conceptually concordant with this evidence insofar that it contends that people process messages through dual processes, and music affects attitudes through a peripheral route, when involvement is low. Salience extends the ELM's explanation of my theory as attention plays an integral role in consumer processing and evaluation.

H2: When product involvement is low, gaining attention to the music will enhance the salience of the peripheral cue associated with music, thereby affecting attitudes such that, consumers who hear lyrics with instrumental music will report more positive attitudes towards the advertisement than those who do not.

H3: When product involvement is low, distracting attention away from the music will diminish the salience of the peripheral cue associated with music, thereby affecting attitudes such that, consumers who hear a voiceover with instrumental music will report less positive attitudes towards the advertisement than those who do not.

H4: When product involvement is low, intra-modal sound executions influence on attitudes towards an advertisement is mediated by the attention gaining value of the music, such that presenting lyrics will be positively related to greater attention to music, which will be positively related to attitudes towards the advertisement; while that presenting a

voiceover will be negatively related to in less attention to music, which will be related positively related to attitudes towards the advertisement.

### ***Message and Brand Attitudes***

Previous research indicates that attitude towards an advertisement (Aad) strongly affects brand attitudes (Ab), even under conditions of low involvement (Gardner, 1985; Park & Young, 1986; Brechman & Purvis, 2015). In particular, some research finds that Aad affects Ab more strongly than brand-related cognitive responses (MacKenzie & Lutz, 1989; Olsen, Slotegraaf & Chandukala, 2014). The mediating effect of peripheral cues on brand attitude formation was identified in previous research by examining the role of Aad in Ab formation (Lutz, MacKenzie, & Belch 1983; Mitchel, 1986; Park & Young, 1986; MacInnis & Park, 1991; Mitchell & Olson 2000). This component Aad represents an individual's evaluation of an advertisement. Research has shown that visual executions in a commercial are associated with or act as peripheral cues, and they play an important role in forming consumer's Ab (MacInnis & Jaworski, 1989). Consequently, more positive attitudes towards the ad (Aad) might be associated with more positive attitudes towards the brand (Ab) for auditory components as well. Therefore:.

H5: When product involvement is low, intra-modal sound executions will be positively related to attitudes towards the advertisement, which will be positively related to attitudes towards the brand.

### ***Moderators***

Beyond situational product involvement, Zaichkowsky (1986) offers additional involvement conditions for which consumers' processing route may be affected. Specifically, when consumers are made to believe a message or advertisement is relevant to them, they may become more involved with the message and devote greater attention

and processing to it; similar to conditions when consumers reports of being in the market for products in that category measured. MacInnis and Park (1991) demonstrate that telling participants an advertisement is for a product sold locally results in high processing involvement. Thus, involvement associated with the message processing may be may be measured or manipulated. Consequently, even when product involvement is low, message involvement may influence consumers processing route.

H6: For consumers not in the market to buy the target product, when high message involvement is primed, the effect intra-modal sounds executions on attitudes towards the advertisement will attenuate, but when low message involvement is primed, intra-modal sounds executions will influence attitudes towards the advertisement, such that lyrics affect more positive attitudes towards the ad than no lyrics, and a voiceover affects less positive attitudes towards that ad than no voiceover.

Moreover, in affecting attention, arousal is assumed to have an impact (Kahneman, 1973). Past studies provide the foundations that make this examination possible. Smith and Morris (1977) found that arousing (vs. calming) music might hamper processing. Chebat, Chebat and Vaillant (2001) found that slow tempo songs elicited significantly lower levels of arousal than fast tempo songs. MacInnis and Park (1991) argue that when music draws more attention to itself, it hampers message persuasiveness. Therefore, in the case of music in advertising, song tempo may affect greater attention to itself, and subsequently affect message processing and persuasiveness. The following question on the effect of music tempo is further examined:

RQ1: Does song tempo moderate the effect of intra-modal sounds on consumer's attention to the music and attitudes towards the advertisement?

Lastly, this research asserts that audio-visual processing, through similar, is different from audio-audio processing (Mayer & Moreno, 1998). This proposition is supported by the split-attention effect, which is a model of information processing that supports that processing consists of separate visual and auditory channels. Based on the notion that presenting two sounds may force attention to select one, while ignoring another, because attention is limited; however, these limitations should not exist when to processing an image with a sound, since they are processed through different channels, the follow question is offered:

RQ2: Does the presence of a visual moderate the effect of intra-modal sounds on consumer’s attention to the music and attitudes towards the advertisement?

### **Types of Advertising**

Note that I will focus on two multi-modal message executions (i.e., audio versus audio-visual) because they are commonly employed in communicating marketing messages, as indicated by a large percent of ad spending allocated to these types of media—television and radio (Figure 3).

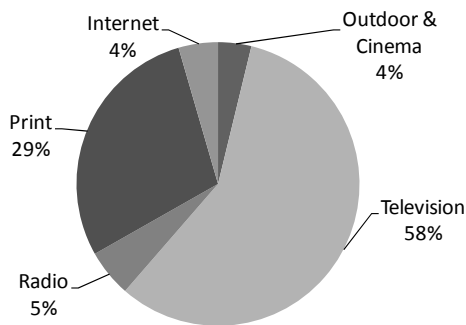


Figure 3: Nielsen (2014) quarterly Global AdView Pulse Report

Hypothesis	Details
H1	$\text{Sounds} \longrightarrow \text{Attention to Music}$ <p>When product involvement is low, intra-modal sound executions affect music salience such that, consumers who hear lyrics with instrumental music will pay more attention to the music than those who do not hear lyrics, and those who hear a voiceover with instrumental music will pay less attention than those who do not.</p>
H2	$\text{Lyrics} \xrightarrow{+} \text{Attitudes towards Advertisement}$ <p>When product involvement is low, gaining attention to the music will enhance the salience of the peripheral cue associated with music thereby affecting attitudes such that, consumers who hear lyrics with instrumental music will report more positive attitudes towards the advertisement than those who do not.</p>
H3	$\text{Voiceover} \xrightarrow{-} \text{Attitudes towards Advertisement}$ <p>When product involvement is low, distracted attention away from the music will diminish the salience of the peripheral cue associated with music thereby affecting attitudes such that, consumers who hear a voiceover with instrumental music will report less positive attitudes towards the advertisement than those who do not.</p>
H4	$\text{Sounds} \xrightarrow{+} \text{Attention to Music} \xrightarrow{+} \text{Aad}$ <p>When product involvement is low, intra-modal sound executions influence on attitudes towards an advertisement is mediated by the attention gaining value of the music, such that presenting lyrics will be positively related to greater attention to music, which will be related to more positive attitudes towards the advertisement; while that presenting a voiceover will be negatively related to in less attention to music, which will be related to less positive attitudes towards the advertisement</p>
H5	$\text{Sounds} \xrightarrow{+} \text{Aad} \xrightarrow{+} \text{Ab}$ <p>When product involvement is low, intra-modal sound executions will be positively related to attitudes towards the advertisement, which will be positively related to attitudes towards the brand.</p>
H6	$\text{M\_Involvement} \xrightarrow{-} \text{Sounds} \xrightarrow{+} \text{Aad}$ <p>For consumers not in the market to buy the target product, when high message involvement is primed, the effect intra-modal sounds executions on attitudes towards the advertisement will attenuate, but when low message involvement is primed, intra-modal sounds executions will influence attitudes towards the advertisement, such that lyrics affect more positive attitudes towards the ad than no lyrics, and a voiceover will affect less positive attitudes towards that ad than no voiceover.</p>

Table 1. Summary of hypotheses

## **CHAPTER II: Experiments 1 and 2**

### **GENERAL METHODOLOGY**

Experimental design was the general methodology utilized in this research. Chapter II consisted of two online experiments, for which participants were exposed to video commercials in Experiment 1 and 2A, and audio commercials in Experiment 2B. After viewing the commercials, participants were then told to evaluate them. For Experiment 1 and 2, using qualtrics, a randomized controlled experimental pre-test-post test between subjects design was conducted. Randomization involved randomly allocating the experimental units across the treatment groups. Qualtrics allowed for this randomization, which reduced selection bias by equalizing individual, situational and environmental factors that have not been explicitly accounted for in the design (West, Biesanz & Pitts, 2000). Chapter III consisted of one lab experiment conducted in a classroom setting. In Experiment 3 students from four classes—each assigned to their own laptop, an individual seat, and a pair of headphones—were given access to a web-link, which administered a similar pre-test-post-test design and procedure used in Experiment 1 and 2. Though the three experiments are related, the methods and results for each experiment were reported independently in Chapters II and III.

The set of studies reported in this chapter examined hypotheses 1-5 and questions 1 and 2 derived and discussed in Chapter I. In Chapter III, Experiment 3 of this dissertation examines hypotheses 2 and 3 for a different type of product, as well as tests hypotheses 6.

## **EXPERIMENT 1**

### **Design**

Experiment 1 tested hypotheses 1-5 and question 1. The study employed a 3 (sounds: music with a voiceover, music with lyrics, music with lyrics and a voiceover) by 2 (song: fast, slow) between subjects design, where participants were randomly assigned to one of the 6 treatment conditions, each presenting the same visual material. Note that the conditions in this research consisted of sound manipulations. Participants were classified post hoc as having high or low product involvement. This focal moderating variable was measured by asking participants “are you in the market to buy a car the next 6 months: yes vs. no”. This measure is a proxy for how relevant, desired and wanted a product was to a consumer (Zaichkowsky, 1985).

### ***Procedure***

Participants were invited by the research panel to click on a qualtrics link, provided by the researcher, and take the 15-minute study. Upon entering the study, participants gave consent to participate, and then reported their demographics, whether they worked in marketing or music, and their general preferences for advertising. Once the initial assessment was completed, participants were instructed they were participating in a 3-part study, and though the parts were similar, they were unrelated. Following the instructions, participants were welcomed to the first part of the study. In this part of the study, participants viewed a 2.5-minute video that contained five-30second commercials. The commercials were presented one after another with a 2-second break in between. Following this presentation, participants were administered a 5-minute distracter task where they reported their need for cognition. After the distracter, participants were administered both an unaided recall and aided recall test, but were not given any

feedback on their performance accuracy after each test. Once participants concluded this test, they were told they were moving on to the 2<sup>nd</sup> phase of the study. This 2-phase design was used to expose participants to the stimulus twice. Once they completed the first phase of the study—not relevant for the research of this dissertation—participants were told that the second phase would begin, and they would evaluate a few of the commercials they viewed earlier. Participants were then randomly presented 3 of 5 earlier shown commercials. These were all automobile commercials. They were then asked to report their beliefs, feelings and thoughts about the ad and brand, following each advertisement. Based on this procedure, participants received two exposures of the target and filler automobile commercials before assessing them. In the third phase of the study, participants were told “now we want to know a little bit about your consumption preferences”. They then responded to a Product Category Involvement inventory, Music Preference Test, and whether they were in the market for an automobile.

### ***Stimuli***

For the target commercial, note that both the speed of the song and the type of sound elements presented in the marketing message were manipulated to correspond with one of the six conditions, and to depict executions advertisers use in actual commercials mass mediated to public audiences. To manipulate the sound and song execution for the target commercial, treatment condition, lyrics, a voiceover or both lyrics and a voiceover were presented along with an instrumental melody. The two-filler commercials for the second exposure consisted of 2 car commercials that contained music, but neither contained a voiceover of lyrics. The two-filler commercials from the first exposure were for a Droid Smartphone and a Nikon camera. Neither of these commercials contained music, but both played only a voiceover.



In addition, two versions of the same song were utilized in the target commercial. The songs were comparable in meaning and lyrics, but they differed in tempo and texture (Anand & Sternthal, 1990). According to Anald and Sternthal (1990), a moderate tempo is between 108 and 120 beats per minute or more. The slow treatment encompassed an acoustic instrumentation by *Iron and Wine* with a tempo of 92 beats per minute (bpm), and the fast treatment consisted of an electronic instrumentation by *Postal Service* with a tempo 162 bpm. Participants saw three commercials (a Kia commercial, a Honda commercial and a Mazda commercial). As seen in Appendix A, one video represented the target commercial and contained the sound manipulation, while the other two were filler commercials (Kim, Lim & Bhargava 1998). Exposure was controlled so that each target ad was 30-seconds long, which standards in the advertising industry deem to be a sufficient exposure time (Steinberg, 2012).

The lyrics of the song in the advertisement state “*They won't see us waving from such great heights, Come down now, they'll say. But everything looks perfect from far away, Come down now, but we'll stay*”. The voiceover in the advertisement states “*the Honda civic just keeps getting better. With more standard features than ever before,*” “*It's the best civic yet*”. Both the lyrics and the voiceover were selected to narrate the action in the advertisement, while communicating redundant messages “floating, elevated and being on top or up high”.

It was expected that participants would evaluate the advertisement and brand more positively when the music becomes more salient in the ad (e.g., participants paid more attention), since in a pretest, both songs were generally preferred (e.g., mean liking above 3.00 on a 5-point likert scale index) by participants, and prior research shows that

having liked music in an ad can affect more positive attitudes than no music at all (Gorn, 1982; Park & Young, 1986).

### *Sample*

The sample for Experiment 1 consisted of 626 members of a US research panel owned and operated by Critical Mix Research Company<sup>1</sup>. Critical Mix Research Company invited 1798 people to take the survey. Based on quota (e.g., general population sampling) or time constraints, participants were systematically cleaned from the study based on variability of response across question and completion time. This resulted in a response rate of 35%. The research company offered participants compensation for their participation valued at \$3.

In order to execute random sampling procedures, Critical Mix invited participants based on a general population-sampling quota (U.S. Census, 2012). However, Birnbaum (2004) noted that there are significant differences in college students tested in a lab and those recruited via the internet, especially between different age groups. In an effort to minimize the differences in results for samples across two online experiments and one lab experiment, participants were selected between the ages 18 and 55. This criterion is based on research in the field of Education about college students by the US News and the National Center for Education Statistics<sup>2</sup>. This report finds that college undergraduates 25 to 55 and over are an increasing presence on U.S. campuses. As Experiment 3 is conducted in a classroom setting at a southwest public university, samples representative of college students were collected for each experiment. Participants were between ages

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<sup>1</sup> Critical Mix Research Company a computer programming company develops cloud-based software tools to administer online surveys and provide real-time reporting of the collected data, and various other related tools for the research and consulting organizations (Bloomberg Business Week).

<sup>2</sup> <http://www.usnews.com/education/best-colleges/the-short-list-college/articles/2014/01/07/10-colleges-with-the-most-students-25-and-over>, AND <http://nces.ed.gov/pubs/web/97578e.asp>

18 and 55 ( $M = 37$ ;  $SD = 10.96$ ). The sample consisted of 53% females; of which, 68% were White/Caucasian; while 11% were Hispanic and 13% Black/African American, with a median household income range between \$40,000-\$49,999.

Additionally, participants were grouped based on their situational product involvement, whereby those who there were in the market to buy a car (e.g., the target stimuli product), in the next 6 months, were assigned to the high involvement group, and those who were not in the market were assigned to the low involvement group. This resulted in a sample of 413 low involvement participants (e.g.,  $n \approx 69$  per group) and 213 high involvement participants.

### ***Dependent and Covariate Measures***

Attention to the music was measured as a proxy for the salience of music. Participants responded to a single item, 5-point likert scale asked “Please indicate the degree to which you focused on the music in the ad (1 = *not at all* to 5 = *completely*). In addition, a 2013 Honda commercial was the selected target ad for this study, thus familiarity was measured as a covariate. Participants were asked how unfamiliar/familiar they were with the advertisement using a 1-item, 7point semantic differential scale (Park & Lessig, 1981). Also, since consumers music tastes are related to their demographics, and this study uses music from the *Alternative Rock* genre—prior research has demonstrated alternative music is a prominent genre of music in automobile commercials (Allan, 2008)—age and gender are measures as covariates (Christenson & Pertson, 1988). Lastly, the ELM asserts that need for cognition (NFC) can have an extraneous effect on both Aad and Ab. Thus, a 13-item, 7-point likert scale (Cacioppo, Petty & Feng, 1984) was administered to measure NFC ( $\alpha = .82$ ). A summary of the measures for Experiment 1, 2 and 3 can be found in Appendix C.

To measure message persuasiveness, a 4-item, 7-point semantic differential scale (bad/good, unlikable/likable, unfavorable/favorable, unappealing/appealing) was used to assess participant's advertisement (Aad) and brand (Ab) attitudes (MacKenzie & Lutz, 1989). Cronbach's alphas were .95 for the 4-item Aad measure and .97 for the 4-item Ab measure.

To operationalize product involvement, a post test question asked whether or not participants were in the market to buy a new car in the next 6 months, yes = 1 and no = 0. Past studies have operationalized product involvement in a variety of ways (Zaichkowsky, 1984). One of the more popular means is to administer as Personal Involvement Inventory; however concerns still exists about the validity of these measures (Richins, Bloch & McQuarrie, 1992). The fundamental concept, being product involvement, is that a situational source has made the product more relevant, and possibly made information about the product more relevant. In such cases, consumers may be more motivated to process information about the products they are in the buying processes for. In some situations, for example, when a purchase is near—like being in the market or shopping for a replacement washing machine—consumers may experience situational involvement with a product (Bloch & McQuarrie, 1992). Based on this general premise, my research does not assess participants' self-reports using the PII, but instead uses an implicit measure of “being in the market for a product in the category” to determine relevance and wanting.

## **Results**

### ***Music Selection Pre-test***

It was expected that when the commercial was delivered with lyrics, regardless of the song speed, it most likely would garner more attention to the music. This hypothesis

is contingent on the valence of the music. Thus, to test the overall valence of the music 34 students from a southwestern university were recruited to take an online questionnaire. Four songs, one of two versions (fast or slow), were randomly presented to participants. After each song participants reported the valence of each song by responding to 2-7pt-likert items that asked “how did the song made you feel”, Displeased-Pleased and Sad-Happy ( $\alpha = .77$ ). The target song for both versions elicited more positive feelings ( $M_{slow} = 4.36$ ,  $SD = 1.27$ ;  $M_{fast} = 4.98$ ,  $SD = 1.70$ ). Consequently delivering the commercial with intra-modal sound executions would affect consumers in such a way that, lyrics would affect greater attention to the positively valenced music, and subsequently more positive attitudes towards the advertisement and brand than delivering the commercial without lyrics. However, delivering the commercial with a voiceover would most likely distract attention from the music; consequently affecting less positive attitudes towards the advertisement and brand than delivering the commercial without a voiceover. See table 1 for the hypothesized relationship between intra-modal sounds on attitudes.

### ***Involvement Measure Reliability***

A test of reliability of *being in the market for the product* as a measure for involvement was conducted. Participants were asked to report their agreement (1 = strongly disagree, 7 = strongly agree) with whether the advertisement was *relevant, meaningful, needed and important*. Independent sample t-tests were conducted to measure the difference in the messages relevance, meaningfulness, need and importance to consumers, and whether they are in the market to buy a car or not. As seen in table 2, there were significantly higher mean responses for participants who were in the market for the product than those who were not.

Variable-Involvement (low vs. high)	<i>M</i>	<i>SD</i>	<i>p</i>
Ad is Relevant	4.27	1.57	< .001
	5.26	1.70	
Ad is Meaningful	3.88	1.68	< .001
	5.07	1.76	
Ad is Valuable	4.39	1.43	< .001
	5.38	1.55	
Ad is Involving	4.29	1.57	< .001
	5.23	1.70	
Ad is Needed	4.11	1.57	< .001
	5.19	1.61	
Ad is Important	4.20	1.55	< .001
	5.33	1.61	

Table 2: T-test tables for of Involvement measure check

### ***Main Experiment***

For the purpose of testing the hypotheses of this research, three two-way ANCOVA's were conducted on participants' focus on the music in the advertisement, their attitudes towards the advertisement (Aad) and their attitudes towards the advertised brand (Ab) to determine whether a statistically significant difference occurred for different intra-modal sound executions and different song tempos, after controlling for age, gender, need for cognition and familiarity with the advertised and brand (see table 3 for a summary of results). A slightly unbalanced (e.g., unequal cell sizes) factorial designs was observed (see Carlson & Timm, 1974; Keselman et al., 1998), thus, weighted means were used (see Wallenstein, Zucker and Fleiss, 1980) and a type I was run and compared to a type III sum of squares model. As no differences in p-value were observed between the two models, the results of the type III model were reported.

*Attention to the Music.* Partially consistent with H1—which states that consumers who hear lyrics with instrumental music will pay more attention to the music than those

who do not—the analysis revealed that intra-modal sound executions of lyrics and speech affect consumers attentional focus on the music in the advertisement  $F(2, 627) = 7.64, p < .001$  ( $\eta^2=.024$ ). Specifically, participants focused significantly more on the music when lyrics were present ( $M = 3.37, SD = 1.19$ ) and when lyrics and a voiceover were present ( $M = 3.27, SD = 1.23$ ), than when a voiceover was present ( $M = 2.95, SD = 1.20$ ). However, the comparison of presenting a voiceover with not is inconclusive. Additionally, as seen in table 3, a main effect of sounds and an interaction between the tempo of the song and the intra-modal sound executions was not observed ( $p > .05$ ), thus in response to RQ1, song tempo does not appear to moderate the effect of intra-modal executions on attention to the music.

Variable - Attention to Music	LOW INVOLVEMENT				HIGH INVOLVEMENT			
	<i>df</i>	<i>F</i>	$\eta$	<i>p</i>	<i>df</i>	<i>F</i>	$\eta$	<i>p</i>
Age <sup>b</sup>	1	4.48	.011	.035	1	0.48	.002	.491
Gender <sup>a</sup>	1	1.26	.003	.263	1	17.98	.081	.000
Ad Familiarity <sup>b</sup>	1	3.64	.009	.057	1	36.72	.153	.000
Need for Cognition <sup>b</sup>	1	14.64	.035	.000	1	19.05	.086	.000
<i>Main Effects</i>								
Sounds	2	9.68	.046	.000	2	0.37	.004	.690
Song	1	0.38	.001	.541	1	0.26	.001	.612
<i>Interaction Effects</i>								
Sounds x Song	2	1.33	.007	.267	2	3.76	.036	.025

**Notes:** <sup>a</sup> Dichotomous; <sup>b</sup> Continuous variable

Table 3: Results of intra-modal sounds on attention to the music

*Ad and Brand Attitude.* In support of H2 but inconsistent with H3, the analysis further revealed that, after controlling for age, need for cognition and familiarity with the Ad, a main effect was not observed on Aad for the song variable ( $p>.05$ ), and no main effects of the variables were observed on Ab, but, in response to RQ2, the sound variable

exhibited a main and an interaction effect with the song variable on Aad ( $p < .05$ ). As anticipated, after controlling for age, need for cognition and familiarity with the Ad, the sound variable exhibited a main effect on Aad,  $F(2, 404) = 3.56, p < .05 (\eta^2 = .017)$ . In particular, consistent with H2—which states consumers who hear lyrics with instrumental music will report more positive attitudes towards the advertisement than those who do not—contrasts revealed that when the commercial was presented with lyrics ( $M = 4.68, SD = 1.95$ ) or both lyrics and a voiceover ( $M = 4.81, SD = 1.99$ ), participants reported more positive attitudes towards the commercial than when the commercial was presented with a voiceover ( $M = 4.44, SD = 1.99$ ). The summary of this analysis is in table 4.

Attitude Towards the Ad	LOW INVOLVEMENT				HIGH INVOLVEMENT			
	<i>df</i>	<i>F</i>	$\eta$	<i>p</i>	<i>df</i>	<i>F</i>	$\eta$	<i>p</i>
Age <sup>b</sup>	1	5.92	.014	.015	1	0.56	.003	.465
Gender <sup>a</sup>	1	1.21	.003	.273	1	0.50	.002	.482
Ad Familiarity <sup>b</sup>	1	194.97	.326	.000	1	193.73	.488	.000
Need for Cognition <sup>b</sup>	1	1.62	.004	.203	1	2.86	.014	.920
Sounds	2	4.62	.017	.029	2	0.59	.017	.558
Song	1	0.08	.000	.801	1	0.18	.000	.676
Sounds x Song	2	6.53	.024	.007	2	0.80	.024	.449

Note: a Dichotomous; b Continuous

Table 4: Results of intra-modal sounds on attitude towards the ad

Interestingly, as seen in Figure 4, there was also a significant interaction effect after controlling for age, need for cognition and familiarity with the ad of *sounds* with *song*,  $F(2, 404) = 5.03, p < .05 (\eta^2 = .024)$ ; though there was no main effect of *song*. Specifically, when the *song* was slow, *sounds* appears to have no effect on Aad, but when the song was fast the commercial presented with lyrics ( $M = 4.79, SD = 2.70$ ) or both lyrics and a voiceover ( $M = 4.93, SD = 2.84$ ), participants viewed that advertisement with more



positive attitudes than when the commercial was presented with a voiceover ( $M = 4.18$ ,  $SD = 2.88$ ). This offers insight to RQ1, however, this might not be attributed to attention to music, as song had no effect. Results for H3—which stated that consumers who hear a voiceover with instrumental music will report less positive attitudes towards the advertisement than those who do not—were inconclusive as to whether lyrics or a voiceover are driving this.

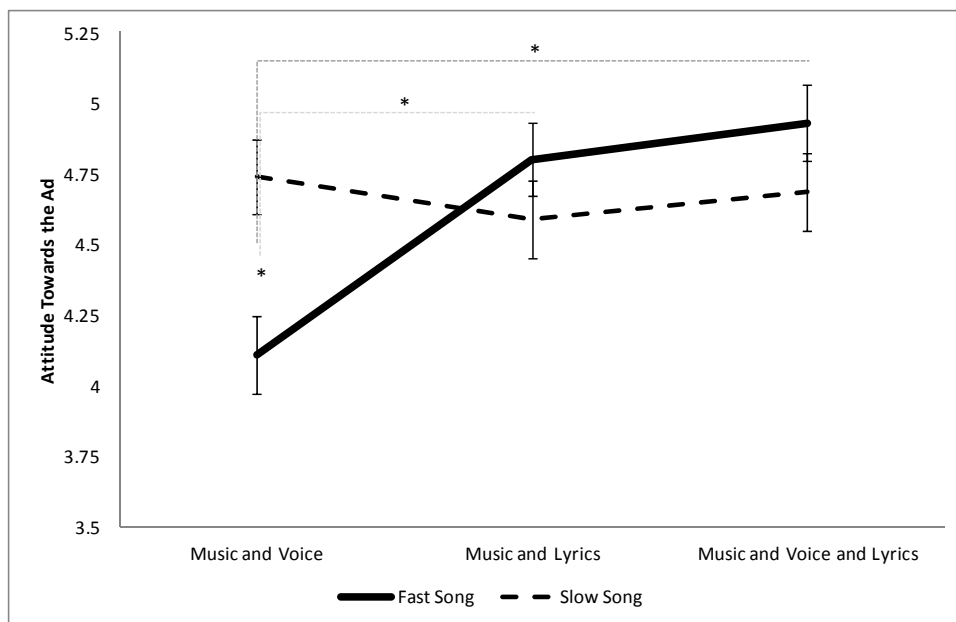
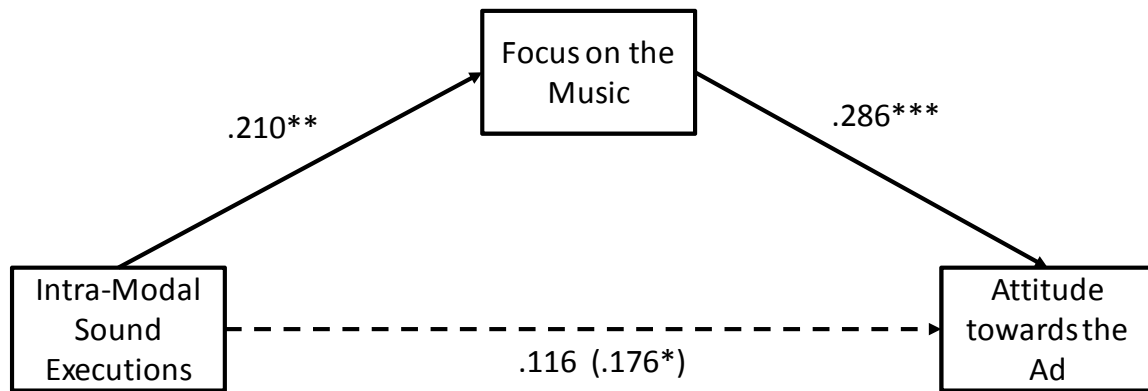


Figure 4: The interaction effect of intra-modal sounds and song tempo

*Attention to Music as a Mediator.* Note that my theorizing and interpretation of the preceding findings rests on the assumption that participant’s assessment of the advertisement was influenced by their attention to the music. To examine this assumption, I conducted mediation analysis using the Preacher and Hayes 5000 Bootstrapping method (see Preacher and Hayes, 2008). Multiple regression analyses were conducted to assess each component of the proposed mediation model. First, it was

found that intra-modal integration of *sounds* was positively associated with attitude towards the advertisement ( $B = .176, t(414) = 2.53, p = .012$ ). It was also found that that intra-modal integration of *sounds* was positively associated with attention to the music ( $B = .210, t(414) = 2.98, p = .003$ ). Lastly, results indicated that the mediator, attention to the music was positively related with attitude towards the message ( $B = .286, t(414) = 6.10, p < .001$ ) after controlling for age and familiarity with the Ad. Because both the a-path and b-path were significant, mediation analyses were tested using the bootstrapping method with bias-corrected confidence estimates (MacKinnon, Lockwood, & Williams, 2004; Preacher & Hayes, 2004). In the present study, the 95% confidence interval of the indirect effects was obtained with 5000 bootstrap resampling (Preacher & Hayes, 2008). Consistent with H4—which states that the attention gaining value of the music influenced by lyrics and speech in the advertisement mediates *sounds* relationship with *Aad*—results of the mediation analysis confirmed the mediating role of attention to the music in the relationship between intra-modal integration of *sounds* and attitude towards the Ad ( $B = .06; CI = .02$  to  $.11$ ), as 0 is not contained within the confidence interval. In addition, results indicated that the direct effect of intra-modal integration of *sounds* on attitude towards the Ad became significant ( $B = .17, t(414) = 1.72, p = .09$ ) when controlling for attention to the music, thus suggesting partial mediation. Figure 5 displays the results. A second mediation was conducted to enhance the validity of the proposed mediator *attention to the music*. Participants were asked, as a manipulation check, how sad/happy the music made them and how unpleasant/pleasant the music was. The measures were averaged into a composite *song feel* ( $\alpha = .88$ ).



Note. \*  $p < .05$  \*\*  $p < .01$ , \*\*\*  $p < .001$

Figure 5: Indirect mediating effect of attention to the music

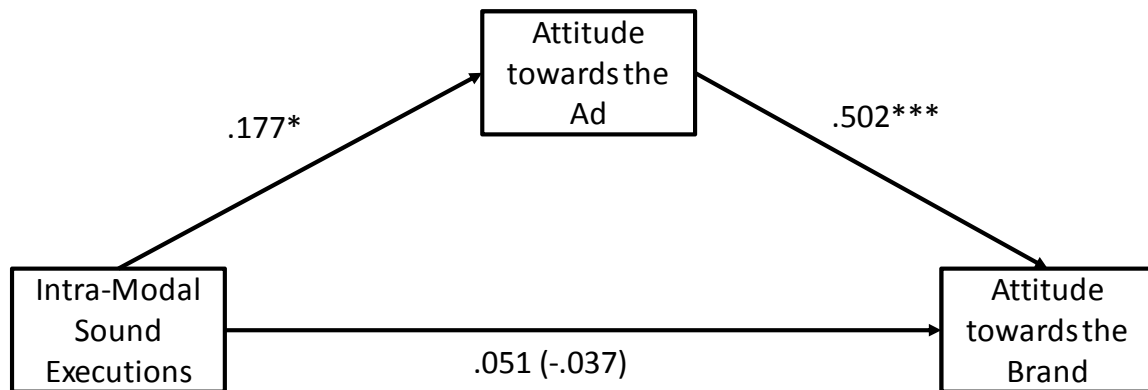
According to past literature, music can evoke emotions; however, inconsistent with my theory, intra-modal sounds should influence the salience of the music and thus attention to the music, not necessarily the feelings evoked by the song. The main distinction between feelings evoked by the song and the associated heuristic with the peripheral cue music is that of attribution to the object. Specifically, the heuristic associated with music is described a belief that music is emotive; and thus when present in an ad, the ad becomes more likable. In contrast, the feelings evoked by music are attributed to the structural and conceptual aspects of the song itself, and not its prominence in the message. Accordingly, when participants are asked how the pleasant the song makes them feel, it should not significantly mediate the relationship between intra-modal executions and attitude towards the ad, as all the participants are exposed to the music, and thus should experience similar levels of pleasure evoked by the song regardless of the intra-modal executions. Note, this is not to assume valence might not moderate the relationship.

To examine this assumption, I conducted mediation analysis using the Preacher and Hayes 5000 Bootstrapping method (see Preacher and Hayes, 2008). First, it was

found that intra-modal integration of *sounds* was positively associated with attitude towards the advertisement ( $B = .176, t(414) = 2.53, p = .012$ ). It was conversely found that that intra-modal integration of *sounds* was not significantly associated with the feelings evoked by the song ( $B = .074, t(414) = .890, p = .373$ ). Lastly, results indicated that the mediator, feelings evoked by the music, was significantly related with attitude towards the message ( $B = .268, t(414) = 6.79, p < .001$ ) after controlling for age and familiarity with the advertisement. Because the a-path was not significant 5000 bootstrap resampling (Preacher & Hayes, 2008) did not confirm the mediating role of music evoked feelings in the relation between intra-modal integration of sounds and attitude towards the Ad ( $B = .02; CI = -.02 \text{ to } .07$ ). A mediation is not supported as 0 is contained within the confidence interval. Appendix C displays the results.

*Attitude towards the Ad and attitude towards the brand.* To examine H5—which states Aad influenced by lyrics and speech in the advertisement mediates sounds relationship with Ab—a mediation analysis was conducted using the Preacher and Hayes 5000 Bootstrapping method (see Preacher and Hayes, 2008). Multiple regression analyses were conducted to assess each component of the proposed mediation model. First, it was found that intra-modal integration of *sounds* was not positively associated with attitude towards the brand ( $B = .052, t(414) = .664, p = .507$ ). However, it was found that that intra-modal integration of *sounds* was positively associated with Aad ( $B = .176, t(414) = 2.53, p = .011$ ). Lastly, results indicated that the mediator Aad was positively related to attitude towards the brand ( $B = .502, t(414) = 10.28, p < .001$ ) after controlling for age and familiarity with the Ad. Because both the a-path and b-path were significant, mediation analyses were tested using the bootstrapping method with bias-corrected confidence estimates (MacKinnon, Lockwood, & Williams, 2004; Preacher &

Hayes, 2004). In the present study, the 95% confidence interval of the indirect effects was obtained with 5000 bootstrap resampling (Preacher & Hayes, 2008). Consistent with H5, results (Figure 6) of the mediation analysis confirmed the mediating role of Aad in the relation between intra-modal integration of sounds and attitude towards the brand Ab ( $B = .09$ ;  $CI = .02$  to  $.17$ ).



Note. \*  $p < .05$  \*\*  $p < .01$ , \*\*\*  $p < .001$

Figure 6: Indirect mediating effect of attitude towards the ad

### Discussion

The preceding findings support the main premises of cue salience in the Elaboration Likelihood Model. They suggest that intra-modal sound executions in advertising (i.e., the delivery modality using multiple sound cues) can influence auditory attention to the music. Past research asserts that peripheral cue's in an advertising affect consumers when they have low personal involvement (e.g., when the product has low relevance) with the message (Petty, Cacioppo & Schumann, 1983). Further analysis was conducted to examine the effect of intra-modal integration when involvement was low. Two, two-way ANCOVA's were conducted on the Aad of participants with either low or high involvement. For high involvement participants, after controlling for age, need for

cognition and familiarity with the Ad, a main effect of intra-modal integration on Aad was not observed. However, for low involvement participants, after controlling for age, need for cognition and familiarity with the Ad, a main effect of intra-modal integration was observed.

Experiment 1 further demonstrates that when the information is processed peripherally—during times of low involvement—using lyrics alone or with a voiceover appears to have a favorable effect on consumer’s attitudes towards the message. The explanation that the lyrics enable music to draw greater attention to itself is supported in this study. Specifically, when involvement is low, lyrics appear to enhance the focus on music, which influence more positive attitudes; however, when involvement is high, the effect is attenuated. This offers support for Hecker’s view the music enhances persuasiveness by drawing attention to itself, as findings show more positive attitudes towards the message in conditions where music draws more attention (e.g., low involvement group with lyrics), but no change in attitudes for conditions where participants are most likely wanting to attend to the message arguments, but might be distracted by music (e.g., the high involvement group). Interestingly, due to constraints of the design, it is not possible to make conclusions about the role of speech at this time. Further considerations are given to the design in Experiment 2.

Additionally, Experiment 1 demonstrated that Aad can mediate the relationship between *sounds* and Ab. Specifically, a direct effect of intra-modal integration of sounds on Ab was not observed. The theory of intra-modal sounds posits that attitudes are influenced through the enhanced salience of a peripheral cue. Thus, the effect may not be strong enough to influence evaluations of an advertised brand directly. Interestingly, the findings demonstrate that instead, sounds influence brand attitudes indirectly by

influencing attitudes towards the ad. This result is important for the theory of intra-modal sounds in advertising, as research asserts the brand attitudes are strong predictors of brand choice (Shimp, 1981; Mackenzie, Lutz & Belch, 1986; Mackenzie & Lutz, 1989). More specifically, brand attitude is a significant predictor of purchase intention and subsequent purchase (Ajzen, 1991; Hwang, Yoon & Park, 2011). Lastly, attention to the music supports the proposition that music salience can be affected by intra-modal sound executions and influence peripheral cue salience, as proposed by theories of similarity and attention. The findings support the mediation of focus on the music, while further findings ruled out another possible mediator, music evoked feelings.

## **EXPERIMENT 2**

### **Study A Design and Procedure**

Experiment 2A replicated the test of hypotheses 2, 3 and 5. Moreover, experiment 2 Study A (E2A) and Study B (E2B) built upon Experiment 1 by examining RQ 2. E2A and E2B were guided by three main objectives: (a) to replicate the findings from Experiment 1, as well as understand the role of each sound cue—lyrics and a voiceover—individually, (b) to replicate the further reaching impact of specific intra-modal sounds in marketing communication on consumers’ brand attitudes for each contributing sound execution, and (c) to demonstrate the effect of intra-modal sound executions—for audio-only messages—on consumer’s attitudes towards the advisement. The first study of Experiment 2 was conducted online, and employed a single factor 4-item (sounds: instrumental music, instrumental music with a voiceover, instrumental music with lyrics, and instrumental music with lyrics and a voiceover) between subjects design.

The single factor design became a 4 x 2 between subjects design following the post hoc coding of participants to one of two groups, based on their situational product involvement. They were grouped based on their responses to the question “are the following items on your grocery list for your next trip to the store: yes vs. no”. This measure is similar to Experiment 1; however, dish soap is a more frequent less time-intensive product than a car, so the time-period was altered from 6 months to the upcoming shopping trip, so that the situation was appropriate for the purchasing of the product.

Participants were randomly assigned to one of the 4 *sounds* treatment conditions. Each condition presented the same visual material with a sound manipulation, similar to Experiment 1. I expected to replicate the effect of sound in the prior study using a



different product type and visual execution. I hypothesized that sounds would have an effect on attitude towards the advertisement (Aad) when consumers' involvement was low. I also asserted that further examination of the variables, lyrics and a voiceover, individually would make clear how each particular intra-modal sound influenced attitudes towards the advertising and brand. See table 1 for the hypothesized relationship between lyrics, speech, involvement and attitudes.

### ***Sample***

The sample for Experiment 2A consists of 262 participants from Amazon's Mechanical Turk online crowd-sourcing panel. The participants were offered compensation for their participation valued at \$0.50 for approximately 15 minutes of work. As in experiment 1, Birnbaum (2004) noted that there are significant differences in college students tested in a lab and those recruited via the internet, especially by age. In an effort to minimize the differences in samples across studies, participants were selected between ages 18 and 55 ( $M = 33$ ;  $SD = 9.05$ ). The sample consisted of 55% females; of which, 75% were White/Caucasian; while 8% were Hispanic, and 13% Black/African American, with a median household income range of \$30,000-\$39,999.

### ***Stimuli***

Participants saw three commercials, which were also created using professional iMovie software. The purpose was to create commercials not previously aired or viewed by participants. One of the three ads represented the target commercial and contained the sound manipulation, while the other two (e.g., a car ad and Smartphone ad) were filler commercials (Kim, Lim & Bhargava 1998). To manipulate the sound execution, either an instrumental of a song, lyrics with the instrumental song, a voiceover with an instrumental song, or both lyrics and a voiceover concurrently with an instrumental song

were played in a commercial. Based on the findings from Experiment 1, a fast song (e.g., 157 bpm) was selected, as an effect of *sounds* was not observed when participants heard a slow song. Additionally, the song—*I want something* by the Torches—was obtained from an independent music website *CDbaby.com*, thus participant's should be less familiar with the song, as it is not mass distributed. The lyrics of the song played stated “*I want something with a feeling, I want something with a feeling, please don't tell me it's a dream. Cause I want something with a feeling*”. The voiceover stated “*Introducing, a product that leaves dishes spotless and hands feeling moisturized. And no it's not a dream*”. Unlike in Experiment 1, the voiceover did not state the brands or product name. This enhanced the control of the manipulation and the match between the lyrics and voiceover. In these commercials (which were created specifically for the present research), text scrolled across the screen (“Tired of dry hands after cleaning the dishes?”; “Ready for something new?”; “Something better?”; “The time has come.”; “Now introducing”). After the text appeared, a still image of the soap was presented. This image was then gradually replaced by a still image of the brand, which was then replaced by a close up of the product. Note, the advertisements were created to progress as a series of still images of the products, adding motion through zooming in and out in fixed second intervals. (Appendix D). Exposure was controlled so that each target ad was 30-seconds.

### ***Dependent and Covariate Measures***

After exposure to each commercial, participants completed several items that probed their attitudes. This measure was used in Experiment 1 (Aad  $\alpha = .95$  and Ab  $\alpha = .95$ ). Familiarity with the brand was measured as a covariate. In addition, since this study uses music from the *Alternative* genre, which prior research has demonstrated is the more prominent genre of music in automobile commercials; age and gender are controlled

(Christenson & Pertson, 1988). Lastly, the ELM has demonstrated that need for cognition (NFC) can have an extraneous effect on both Aad and Ab. Thus, a 13-item, 7-point likert scale (Cacioppo, Petty & Feng, 1984) was administered to measure NFC ( $\alpha = .82$ ).

## **Results**

### ***Music Selection Pretest***

To test the overall valence of the song for Experiment 2, 94 M-turk participants were recruited to take an online questionnaire. Three songs were randomly presented to participants. After each song participants reported the valence of each song by responding to 2-7pt-likert items that asked “how did the song made you feel”, Displeased-Pleased and Sad-Happy ( $\alpha = .77$ ). The target song, “I want something”, elicited positive feelings ( $M = 4.62$ ,  $SD = 1.10$ ). Thus, positive attitudes are presumed to results from the presence of music in the advertisement.

### ***Main Experiment***

A two-way ANCOVA was conducted on participants’ assessments of the advertisement (Aad) to determine if there was a statistically significant effect on intra-modal integration of *sounds*, controlling for age, gender, need for cognition and familiarity with the advertised and brand (see table 5 for a summary of results). In addition, an interaction effect was assessed to determine whether consumers’ situational involvement moderated the relationship between *sounds* and Aad. Importantly, as in Experiment 1, the ANCOVA analysis utilized a weighted mean.

The analysis revealed that, after controlling for familiarity with the advertisement, there was an interaction effect of *sounds* and involvement *sounds* nor *involvement* after controlling familiarity with the Ad, an interaction effect was observed  $F(3, 251) = 3.06$ ,  $p < .05$  ( $\eta^2 = .04$ ), though a main effect on Aad or Ab ( $p > .05$ ) was not observed.

Variable - Attitude Towards the Ad	<i>df</i>	<i>F</i>	$\eta$	<i>p</i>
Age <sup>b</sup>	1	2.09	.008	.150
Gender <sup>a</sup>	1	1.47	.006	.226
Ad Familiarity <sup>b</sup>	1	46.41	.156	.000
Need for Cognition <sup>b</sup>	1	0.87	.003	.352
Sounds	3	0.72	.009	.539
Involvement with target product	1	1.40	.006	.239
Sounds x Involvement	3	3.06	.035	.029

Notes: a Dichotomous; b Continuous variable

Table 5: Results for the effect of sounds and involvement on Aad

Specifically, contrasts revealed (as seen in Figure 7) that when the commercial was presented with lyrics ( $M = 4.89$ ,  $SD = 1.50$ ) or both lyrics and a voiceover ( $M = 4.65$ ,  $SD = 1.54$ ), participants with low involvement reported more positive attitudes towards that advertisement than when the commercial was presented with an instrumental ( $M = 4.31$ ,  $SD = 1.43$ ) or a voiceover ( $M = 4.09$ ,  $SD = 1.66$ ). Conversely, when the commercial was presented with only instrumental music ( $M = 4.42$ ,  $SD = 1.48$ ), lyrics ( $M = 4.54$ ,  $SD = 1.61$ ) or both lyrics and a voiceover ( $M = 4.65$ ,  $SD = 1.59$ ), participants with high involvement reported less positive attitudes towards the advertisement than when the commercial was presented with a voiceover ( $M = 5.16$ ,  $SD = 1.55$ ).

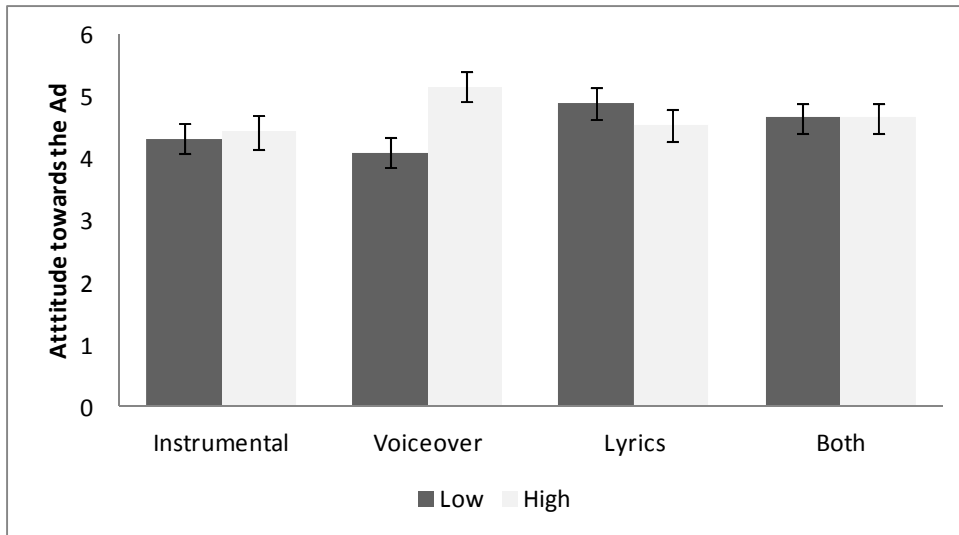


Figure 7: The interaction of sounds and involvement on Aad

***Investigating the independent role of the sound cues***

Further analysis was conducted to examine H2 and H3 independently—that hypothesized a main effect of lyrics and speech on attitudes towards the advertisement. Participants were assigned to one of 2 groups based on their response to the involvement question. The *sound* variable was re-coded to reflect a 2 (lyrics used: yes, no) by 2 (voiceover used: yes, no) between subjects design. Two, two-way ANCOVA’s were conducted on the participants Aad, one for low involvement and one for high involvement. As seen in table 6, consistent with the theoretical propositions of this study, for high involvement participants, after controlling for familiarity with the Ad, a main effect of intra-modal sounds—for the presence of both lyrics  $F(1, 116) = .597, p > .05$  or a voiceover  $F(1, 116) = 2.55, p > .05$ —on Aad was not observed.

Further, consistent with H2, for low involvement participants, after controlling for age, need for cognition and familiarity with the Ad, a main effect of intra-modal integration—for the presence of only lyrics  $F(1, 131) = 5.51, p < .05$  ( $\eta^2=.04$ )—was observed; however, inconsistent with H3, there was no effect of a voiceover  $F(1, 131) =$

2.55,  $p > .05$  ( $\eta^2=.02$ ). There was also no interaction effect between lyrics and a voiceover  $F(1, 131) = 2.55, p > .05$  ( $\eta^2=.02$ ).

Variable- Attitude Towards the Ad	LOW INVOLVEMENT				HIGH INVOLVEMENT			
	<i>df</i>	<i>F</i>	$\eta$	<i>p</i>	<i>df</i>	<i>F</i>	$\eta$	<i>p</i>
Age <sup>b</sup>	1	0.82	.006	.368	1	1.34	.011	.250
Gender <sup>a</sup>	1	0.40	.003	.531	1	1.13	.010	.290
Ad Familiarity <sup>b</sup>	1	22.85	.149	.000	1	22.50	.162	.000
Need for Cognition <sup>b</sup>	1	1.11	.008	.294	1	0.03	.000	.864
<i>Main Effects</i>								
Lyrics	1	5.51	.040	.020	1	0.60	.005	.441
Speech	1	0.86	.007	.354	1	2.55	.022	.113
<i>Interaction Effects</i>								
Lyrics x Speech	1	0.00	.007	.984	1	1.40	.012	.239

Notes: a Dichotomous; b Continuous variable

Table 6: Results for the effect of lyrics and speech on Aad

Specifically, as seen in figure 8, contrasts reveal that when the commercial was presented with lyrics ( $M = 4.86, SD = 1.50$ ) or both lyrics and a voiceover ( $M = 4.64, SD = 1.54$ ), low involvement participants viewed the advertisement with more positive attitudes than when the commercial was presented with an instrumental ( $M = 4.30, SD = 1.43$ ) or a voiceover ( $M = 4.10, SD = 1.66$ ).

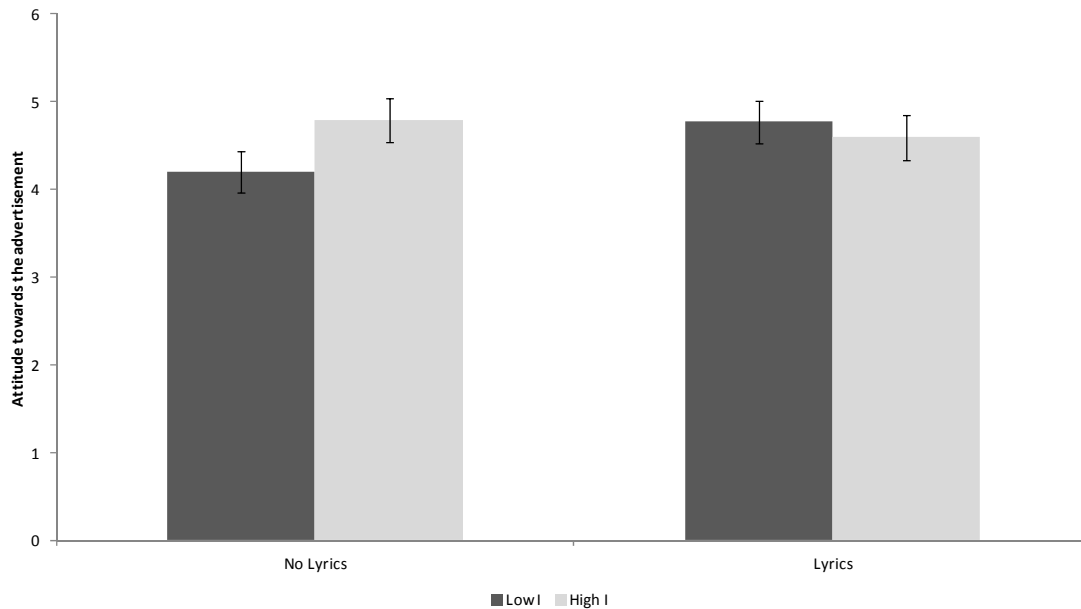
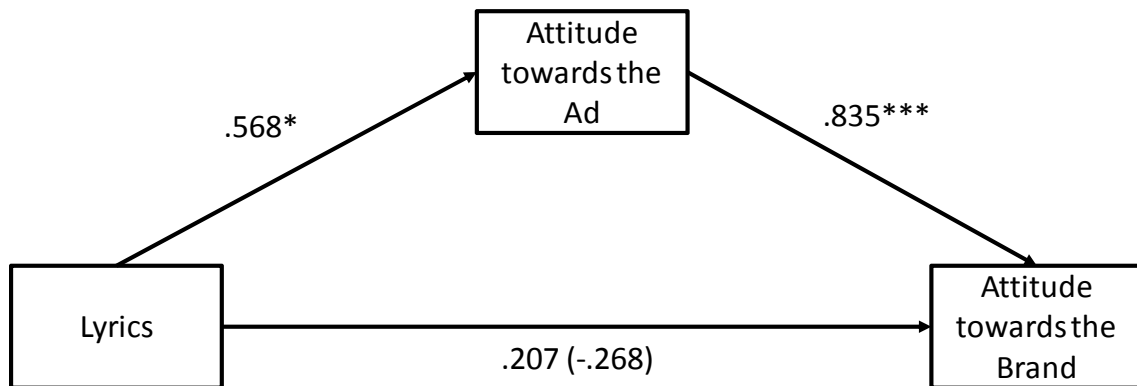


Figure 8: The effect of lyrics on Aad moderated by involvement

***Affecting Brand Attitude through intra-modal integration of lyrics***

Note that the impetus and implications of the preceding findings rest on the assumption that participant’s assessment of the advertising—influenced by the intra-modal integration of sounds in a message—affects consumers’ subsequent evaluation of the brand. To examine this assumption, I conducted mediation analyses using the Preacher and Hayes 5000 Bootstrapping method (see Preacher and Hayes, 2008). As supported by Experiment 1, the process by which lyrics affect attitudes is assumed to be a heuristic one. Thus, I propose that the relationship between *lyrics* on Ab is mediated by Aad only when involvement is low. Additionally, from the earlier stated results of Experiment 2, lyrics, as opposed to a voiceover, are implicated in producing the effect of intra-modal sound executions on Aad, thus the mediation analysis tests the effect of Aad on the relationship between *Lyrics* and Ab. First, mediation was not found when involvement was controlled, nor was it found for participants with high involvement.

However, mediation was observed for participants with low involvement ( $N = 139$ ). Specifically, lyrics were not positively associated with attitude towards the brand ( $B = .207, t(139) = .834, p = .405$ ). However, it was also found that lyrics were positively associated with attitude towards the ad (Aad) ( $B = .568, t(139) = 2.34, p = .021$ ). Lastly, results indicated that the mediator, attitudes towards the advertisement was positively related to attitude towards the brand ( $B = .835, t(139) = 16.19, p < .001$ ). Because both the a-path and b-path were significant, mediation analyses were tested using the bootstrapping method with bias-corrected confidence estimates (MacKinnon, Lockwood, & Williams, 2004; Preacher & Hayes, 2004). In the present study, the 95% confidence interval of the indirect effects was obtained with 5000 bootstrap re-samples (Preacher & Hayes, 2008). Results of the mediation analysis, shown in figure 9, confirmed the mediating role of Aad to in the relation between intra-modal execution of *lyrics* and Ab ( $B = .47; CI = .09 \text{ to } .89$ ).



Note. \*  $p < .05$  \*\*  $p < .01$ , \*\*\*  $p < .001$

Figure 9: Aad as a mediator of the relationship between lyrics and Ab

### Study B: Intra-modal Executions for Uni-Modal Messages

The objective of experiment 2b was to demonstrate the effect of intra (lyrics vs. voiceover vs. both) modal sounds on consumer's attitude towards the advertisement for



non-visual messages. Experiment 2b employed a 2 (lyrics: yes, no) by 2 (voiceover: yes, no) between subjects design. Participants were then divided into a low involvement and a high involvement groups. Situational involvement was measured for E2B as it was measured in E2A. The sample consisted of 48 participants with low involvement and were recruited from the online panel (Mturk), and then randomly assigned to one of 4 conditions 2 (lyrics: yes, no) by 2 (voiceover: yes, no).

### ***Stimuli***

A white box was presented to participants with grey outlining. It had a 12-pt font, gray text header that read “Fairy Dish Soap Commercial” in the top left corner of the box. As in, Experiment 2A, participants were randomly assigned to hear an instrumental, an instrumental with lyrics, an instrumental with a voiceover, or an instrumental, with lyrics and a voiceover. The 2-filler advertisements were similar to experiment 2 and were audio-visual. The presentation order of the stimulus was randomized.

### **Results**

A two-way ANCOVA was conducted on involvement participants’ evaluations of the advertisement (Aad). The objective was to demonstrate the effect of intra-modal sound executions on attitudes towards the advertisement, for non-visual messages, after controlling for age, gender, need for cognition and familiarity with the advertisement and brand (Table 7). In support of my overall theory that intra-modal sound executions affect attitudes through a heuristic process for both single and multi-modal messages, the analysis revealed that there was a main effect of *lyrics* on Aad  $F(1, 40) = 5.93, p < .05$  ( $\eta^2=.129$ ) after controlling for familiarity and age. Specifically, participants who heard lyrics ( $M = 4.62; SD = 1.60$ ) reported more positive attitudes than those who did not hear lyrics ( $M = 3.77; SD = 1.58$ ).

Attitude Towards the Ad (NO VISUAL)				
	<i>df</i>	<i>F</i>	$\eta$	<i>p</i>
Age <sup>b</sup>	1	3.78	.042	.055
Gender <sup>a</sup>	1	0.57	.007	.452
Ad Familiarity <sup>b</sup>	1	6.18	.066	.015
Need for Cognition <sup>b</sup>	1	5.32	.058	.024
Sounds	3	0.22	.007	.884
Involvement with target product	1	3.45	.038	.067
Sounds x Involvement	3	3.80	.116	.013

Notes: a Dichotomous; b Continuous

Attitude Towards the Ad (NO VISUAL)	LOW INVOLVEMENT				HIGH INVOLVEMENT			
	<i>df</i>	<i>F</i>	$\eta$	<i>p</i>	<i>df</i>	<i>F</i>	$\eta$	<i>p</i>
Age <sup>b</sup>	1	5.27	.116	.027	1	0.35	.008	.557
Gender <sup>a</sup>	1	0.03	.001	.866	1	0.91	.021	.345
Ad Familiarity <sup>b</sup>	1	1.40	.034	.244	1	4.41	.093	.042
Need for Cognition <sup>b</sup>	1	6.76	.145	.013	1	0.66	.015	.420
Lyrics	1	5.93	.129	.019	1	1.85	.041	.181
Speech	1	0.58	.014	.451	1	1.14	.026	.292
Lyrics x Speech	1	1.08	.026	.306	1	1.84	.041	.183

Notes: a Dichotomous; b Continuous

Table 7: The effect of intra-modal executions for audio only messages

## Discussion

The findings of Experiment 2a support the contention that intra-modal sound executions influence attitudes when consumers' involvement with the product is low. Specifically, when processing lyrics, consumers' attention to the music appears to increase. Subsequently, the positivity of their attitudes towards the message increases. The role of involvement supports the activation of a peripheral process, and the greater

attention to music supports the claim that intra-modal executions can influence the salience of a peripheral cue in advertisements. Additionally, the similarity of attitudes across conditions for high involvement participants does not support the proposition that music draws attention to itself, and thus away from the message, as attitudes of high involvement participants do not appear to decrease when lyrics are presented. The reporting of more positive attitudes, when lyrics are present, supports the proposition that salience of music is affected in the advertisement, by similar sounds such as lyrics. Critically, presenting lyrics resulted in more positive (less positive) attitudes towards the advertisement, namely for low involvement participants. Hence, when individuals were asked to assess the advertisements favorability, likability and appeal, participants reported more positive favorability, likability and appeal of advertisement with lyrics; for which they were more attentive to the music.

Importantly, analysis revealed that individual's attitudes towards the brand are not directly influenced by the use of lyrics in the advertisement. However, the influence of lyrics on attitude towards the ad led to an influence on attitude towards the brand. Thus when lyrics are present, consumers' responded to the advertisement more positively, and subsequently the advertised brand. As such, the findings of Experiment 2a indicate processing lyrics, with or without a voiceover present, affect how much attention is paid to the music, and can result in more positive attitudes towards the ad and brand, while the findings do not support a distraction effect.

Experiment 2b extends the assertions of my theory to single modal (e.g., audio only) messages. When consumers heard advertisements with lyrics, but did not see any video or image of the product, they reported more positive attitudes towards the advertisement. Interestingly, the effect size of lyrics is much more robust when an image

is not present. Thus, it appears that it not just the imagery provided by seeing a visual that influences attitudes, or a bi-modal vividness effect that may drive intra-modal effects. Lyrics enhance music salience when a visual is not present. As such, the findings of Experiment 2B provide evidence to support the positive effect of music's attention gaining ability, as intra-modal executions can influence consumer's ad processing of both single and multi-modal messages; however, a distraction of attention does not appear to occur, as participants with high involvement do not have less positive attitudes when lyrics are present—a condition which attention to music is theories to attract great attention to itself and either distract or attract attention to the message.

Through audition, the findings of Experiment 1, 2a and 2b extend the Elaboration Likelihood Model by demonstrating that affecting the salience of a peripheral cue can enhance the persuasiveness of a message. Interestingly, a voiceover does not have the opposite effect that lyrics have on attitudes, as hypothesized. One explanation for this might be that the voiceover is not as relevant for a dish-soap commercial as the lyrics, and might be deemed irrelevant by the consumers (Hutchinson & Alba, 1991). Another explanation could depend on the consumers' expectations of the message. Specifically, not only might consumers deem the voiceover irrelevant, but also they may also not expect it to be present, as dish soap needs less explanation than say a Smartphone or computer. Lastly, the voiceover's relevance and expectancy may be altered by the nature of the product advertised. Experiment 3 examines whether speech remains a non-significant variable in affecting consumer's attitudes for a more involved purchase (i.e., a Smartphone versus dish soap).

## Chapter III: The Role of Message Involvement

### EXPERIMENT 3

#### Design and Procedure

Experiment 3 employed a 2 (involvement: low vs. high) by 4 (sounds: instrumental music, instrumental music with a voiceover, instrumental music with lyrics, and instrumental music with lyrics and a voiceover), between subjects design. Experiment 3 examines hypothesis 6. It was expected that when consumer's product involvement is low, an effect of intra-modal sounds on attitudes will not be observed, when message involvement is high. Intra-modal sound executions (using lyrics and speech) will influence consumers' attitudes towards the advertisement differently than when message involvement is primed to be low. Specifically, lyrics or a voiceover may differently affect consumer's processing even when their product involvement is low, as message involvement is argued to be a separate but related concept. Additionally, a possible parameter of intra-modal sound executions may be how involving the product is. Specifically, the amount of risk or effort implicit to the purchase of a product varies. Thus, Experiment 3 tests the effect of intra-modal executions on attitudes for high purchase involvement products.

Participants were randomly assigned to one of the 8 treatment conditions, and each presented the same visual material. The target product selected for Experiment 3 was a Jolla Smartphone. Thus, Experiment 3 builds on experiment 1 and 2 by using a novel commercial visual, as well as a new and largely unfamiliar ( $M = 2.9$ ) brand. Jolla is a foreign brand not currently sold in the U.S., and is proposed to be mostly unfamiliar to participants. Consumers with low product involvement with the product were selected for

this study. They were assigned to these groups by asking, are you in the market to buy a Smartphone in the next month. Those who said “no” were assigned to the low product involvement group. This group was selected for the analysis of Experiment 3. As seen in appendix B, the measures in Experiment 3 (e.g., Aad, familiarity, NFC) were also used in Experiment 1 and 2.

Upon entering the classroom, each student was directed to a laptop, and instructed to put on a pair of headphones. This was necessary to assure that each intra-modal sound condition was uniquely administered, so that participants could not hear what others were heard. Then they were told to select a link that they were directed to on their class instructional page (e.g., Canvas). The link led participants to a consent form that they read carefully. Two people, the research and the class professor, walked around the room to observe people participating carefully. Those participants who chose to participate selected *agree* on the consent form and proceeded to the next part of the questionnaire.

### ***Situational Involvement Prime***

Participants were instructed to read the following page carefully. Through this instruction, the situational message involvement prime was administered. One group of participants randomly received instructions that read “*Fairy, Skoda and Jolla will soon market their products locally. Before the brand's introduction, the companies are interested in college students' reactions to the brand. You are to pay close attention to the brand information contained in the commercials and consider your interest. To create a normal viewing environment you will see the commercials along with a program.*” Another group of participants randomly received instructions that read “*You will see a segment from the Wall Street Journal concerning recent issues with marketing tactics. You will be asked several questions regarding your views on the issues addressed in the*

*video you are about to watch. Although the video contains advertisements, the products advertised are not available locally” (MacInnis & Park, 1991).*

### ***Sample and Stimuli***

One-hundred and forty seven undergraduate students from a southwestern public university were recruited to participate in this study by contacting the professors of 4 classes and setting up a day to administer the experiment in the class. The sample consisted of 54% females ( $M = 20$ ;  $SD = 1.76$ ). The sample was predominately Caucasian 61% followed by participants who were Hispanic 9% and African American 4%. The median degree level of the participants was junior (12% freshman, 38% sophomore, 24% junior and 27% senior).

Participants viewed a 4-minute *Wall Street Journal Segment* (WSJ) on a SXSW story of 2014. Three 30-second commercials were created using professional iMovie software to control timing of the message. One represented the target commercial (e.g., Jolla Smartphones) and contained a sound manipulation, while the other two (e.g., Sunlight Dish soap and Skoda Automobiles) were filler commercials (Kim, Lim & Bhargava 1998). Thus, in all of the experiments, participants received 2 exposures. The commercials were shown prior to the WSJ segment as well as after the segment. To manipulate the sound execution, either an instrumental of a song, lyrics with the instrumental song, a voiceover with and instrumental song, or both lyrics and a voiceover with and instrumental song were played in the target commercial. The song from Experiment 2 was used in the stimuli for Experiment 3. The song—*I want something* by the Torches—was obtained from an independent music website *CDbaby.com* and had not been picked up by a major record label or distributor at the time of this study, thus minimizing participants familiarity with it. The lyrics of the song played stated “I want

something with a feeling, I want something with a feeling, please don't tell me it's a dream. Cause I want something with a feeling". The voiceover stated: "Ready to do more?"; "Ready to go further"; "it's time for something with a feeling"; "and no it's not a dream" (Appendix E).

## Results

A two-way ANCOVA was conducted on participants' assessments of the advertisement (Aad) to determine if there was a statistically significant effect on intra-modal integration of *sounds*, after controlling for Need for Cognition and for familiarity with the brand message (see table 8 for a summary of results). In addition, an interaction effect was assessed to determine whether consumers' situational involvement moderated the relationship between *sounds* and Aad.

Variable - Attitude Towards the Ad	LOW PRODUCT INVOLVEMENT			
	<i>df</i>	<i>F</i>	<i>η</i>	<i>p</i>
Ad Familiarity <sup>b</sup>	1	6.20	.058	.014
Need for Cognition <sup>b</sup>	1	0.02	.000	.883
Sounds	3	0.36	.010	.768
Primed Message Involvement	1	0.49	.005	.485
Sounds x Primed Message Involvement	3	3.03	.083	.033

Notes: a Dichotomous; b Continuous

Table 8: Results of intra-modal sounds and attitude towards the ad

Interestingly, the analysis revealed that, after controlling for familiarity with the Ad, main effects of *sounds* and *primed message involvement* were not observed on Aad ( $p > .05$ ) for consumers with low product involvement (Table 8). However; as anticipated, after controlling for familiarity with the Ad, there was an interaction effect of *sounds* and



primed involvement on Aad,  $F(3, 110) = 3.03, p < .05 (\eta^2=.083)$ . Inconsistent with hypothesis 6 however, contrasts revealed, when low message involvement was primed, participant's attitudes were more positive when they saw a commercial with only a voiceover ( $M = 4.75, SD = .83$ ) then when they saw a commercial with only an instrumental ( $M = 3.82, SD = 1.48$ ), lyrics ( $M = 3.59, SD = 1.90$ ) or both lyrics and a voiceover ( $M = 3.89, SD = 1.42$ ). Conversely, and also inconsistent with H6, when high message involvement was primed, participant's attitudes were less positive when they saw a commercial with a voiceover ( $M_{voiceover} = 4.59, SD = 1.71; M_{voiceover \text{ and lyrics}} = 3.76, SD = 1.21$ ) than when they saw a commercial with only an instrumental ( $M = 4.59, SD = 1.70$ ) or only lyrics ( $M = 4.75, SD = 1.58$ ). The summary of this analysis is in table 8 and depicted in figure 10.

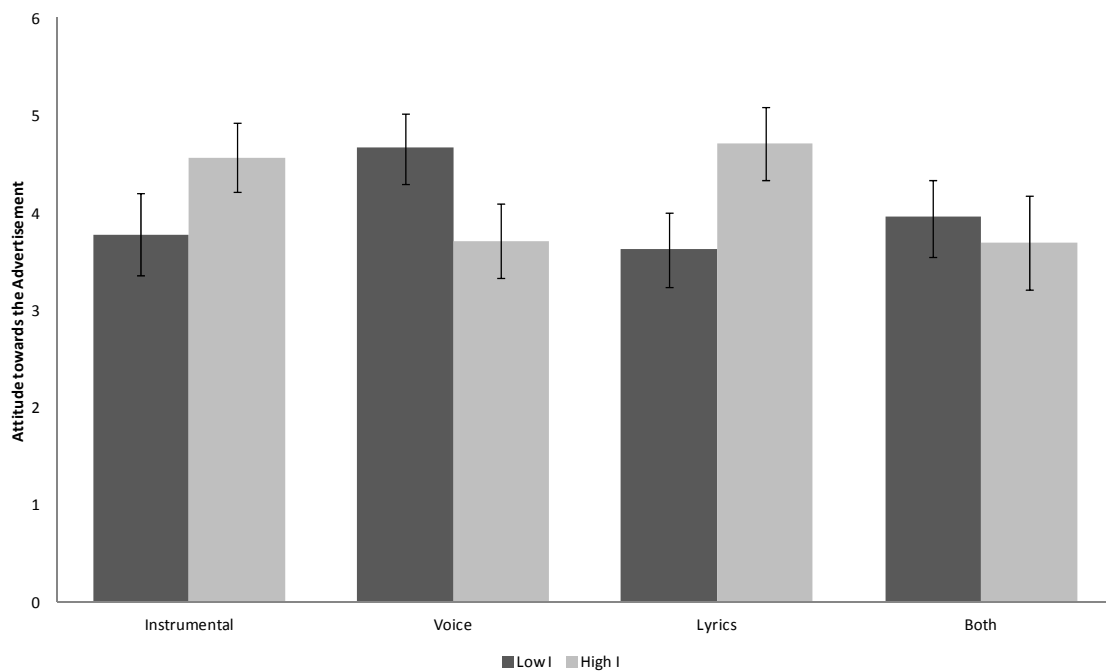


Figure 10: The effect of sounds on Aad moderated by involvement

***Investigating the independent role of the sound cues***

Further analysis was conducted to examine the independent role of lyrics and a voiceover. The *sound* variable was re-coded to reflect a 2 (lyrics used: yes, no) by 2 (voiceover used: yes, no) design. A three-way ANCOVA was conducted on the Aad of participant’s with low product involvement. As seen in table 9, inconsistent with my theory, for low product involved participants, after controlling for familiarity with the advertisement, an interaction effect of speech and message involvement was observed  $F(1, 112) = 7.41, p < .05 (\eta^2=.068)$ . However, a main effect of lyrics  $F(1, 112) = .543, p > .05$  and involvement  $F(1, 112) = .246, p > .05$  was not observed. Also, inconsistent with H2, an interaction effect of lyrics x primed involvement  $F(1, 112) = .803, p > .05$  was not observed. Specifically, participants who were not involved with the product—but were primed with high involvement with the message—had more positive attitudes towards the advertisement when they did not hear a voiceover than those who did (Table 9).

Variable - Attitude Towards the Ad	LOW PRODUCT INVOLVEMENT			
	df	F	$\eta$	<i>p</i>
Ad Familiarity	1	6.57	.046	.011
Need for Cognition	1	0.00	.000	.988
Lyrics	1	0.08	.001	.784
Speech	1	0.18	.001	.674
Primed Message Involvement		0.56	.004	.454
Lyrics x Speech	1	0.79	.006	.376
Lyrics x Primed Message Involvement	1	0.05	.000	.819
Primed Message Involvement x Speech	1	5.25	.037	.023

Notes: a Dichotomous; b Continuous

Table 9: Results of speech and attitude towards the ad

However, participants who were not involved with the product—but were primed to have low message involvement—had more positive attitudes if they heard a voiceover (see Figure 11).

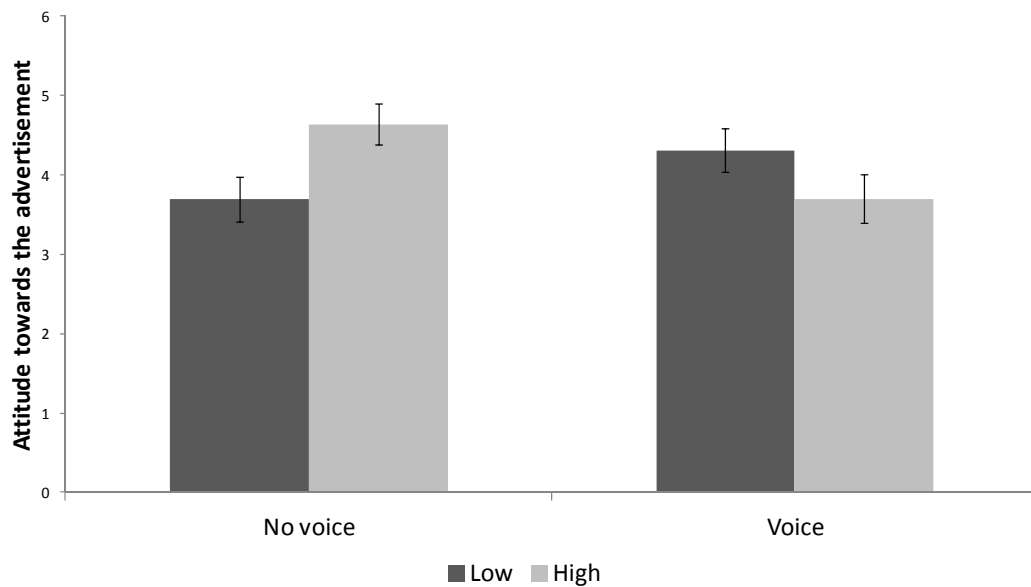


Figure 11: The effect of lyrics on Aad moderated by involvement

## Discussion

The findings of Experiment 3 further our understanding of the results of Experiment 1 and 2, and support the contention that the intra-modal sound executions can affect consumers' evaluations of the message. More specifically, this study indicated that the presence of a voiceover in a commercial influenced consumers' attitude towards the message. Experiment 3 expands upon Experiment 1 and 2 by priming message involvement of consumers' with low product involvement. However; instead of lyrics affecting attitudes as seen in Experiment 1 and 2, the use of a voiceover (e.g., speech) was implicated. Critically, for consumers' who are not in the market for a Smartphone,

when they are primed to have high involvement with the message, they have less positive attitudes towards the commercial when a voiceover is encountered. These findings offer support for relationship between product and message involvement. This research asserts that consumers who are involved with the product may become involved with the product's advertisements naturally, and consumers are not involved with the product may become involved with the product's advertisements by being primed (Zaichkowsky, 1985).

Interestingly, these results also offer parameters for my general theory, as hearing a voiceover resulted in less positive attitudes for participants with low product involvement and high message involvement, than not hearing a voiceover. This may be explained by the diminished salience of the music. In contrast, hearing a voiceover resulted in more positive attitudes for participants with low product involvement and low message involvement than not hearing a voiceover. Taken together, these findings implicate not only attention to the music, but also attention and relevance of to the spoken message in influencing attitude. In other words, when consumers' product involvement is low, lyrics appear to increase the positivity of attitudes towards the ad by enhancing the salience of music in the dish soap ad; however, lyrics are not implicated in Experiment 3. Instead when consumers' product involvement is low, and message involvement is high (e.g., assumed to mimic conditions of Experiment 1 and 2), a voiceover appears to decrease the positivity of attitudes towards the advertisement for a Smartphone. The possible explanation is that a voiceover diminishes the salience of music in the advertisement. Collectively, the findings implicate: (1) the nature of low message and product involvement, and (2) the varying relevance of lyrics and voiceover for involving vs. uninvolved products (Smartphone vs. dish soap). Consumers', whose product and

message involvement are both low, appear to have more positive attitudes towards the ad with a voiceover than the ad without a voiceover. One might conclude that product involvement and advertisement involvement may have a subtractive effect; whereby consumers experience lower involvement than when only their product or only their message involvement is low. In this case, the peripheral route may be activated by a different cue. Further research is required to explain a common, but understudied situation in marketing research when the consumer is not involved with either the product or the advertisement encountered.

In reference to the relevance of each intra-modal sound execution in a message, consumers may categorize certain cues as relevant or irrelevant based on their perceptions of the message and product; while perhaps marketers and advertising agencies may also contemplate the relevancy or “matchup” of the voiceover with the product at the initial inception of copywriting. Relevance is considered to be the degree to which two stimuli match or fit together (Goodstein 1993; Heckler and Childers 1992; Sengupta, Goodstein, and Boninger 1997). In the context of intra-modal sounds, it is the degree to which the sound is perceived to be appropriate for message in which a product is advertised. Though this finding was not detailed in the hypotheses, a fit and appropriateness cue has been operationalized in the literature to manipulate associative strength (e.g., Heckler and Childers 1992; Park, Milberg, and Lawson 1991). In Experiment 3, the product—a Smartphone—is an involved purchase, and hearing (versus not hearing) a voiceover may be congruent (incongruent) with the audiences’ conception of a good message-product fit.

## GENERAL DISCUSSION

Although consumers commonly encounter product information in intra-modal formats (e.g., audio and audio), existing research has offered little insight into how these alternative formats differentially influence consumers' responses to the message, and how the particular dynamics of message processing may affect consumers' attitudes towards the information and brand. The present research sheds light on these questions by drawing on a prominent model of advertising persuasion, which proposes that all advertising can be processed through two routes (e.g., central or peripheral). The route activated depends on how motivated and able the consumer is to process it. Based on the assertions that presenting multiple information sources in one channel (e.g., audio) may not allow for each source to be processed, and that people utilize selective attention to process more salient stimuli, it was reasoned that the positivity of consumers' attitudes toward an advertisement will often be heightened if a peripheral cue of the message (i.e., music) was made more salient to consumers using intra-modal executions. In this case, consumers might focus on the more salient cue. Based on similarity and salience, the three studies reported in this paper not only support this premise by showing lyrics or a voiceover influence attitudes, and they also offer an alternative to the "*more cues present the merrier*" strategy that might affect similar such results (Kalyanaraman & Oliver, 2001).

The results of this inquiry enhance our theoretical understanding in three major ways. First, they elucidate the basic process by which peripheral cue salience is handled in peripheral route processing, and how the dynamics of this process can shape consumers' attitudes. More specifically, my research shows that the variation in intra-modal executions can determine the positivity of the attitudes formed towards the

message across two delivery formats (audio versus audio-visual). This issue is important because the resources that fuel the auditory channel are limited and thus subject to overloading. Additionally, prevailing opinions reflect unfavorable views about peripheral cue strategies, as they might distract attention away from the message arguments or more centrally processed message content. However, attention allocation deficiencies in information processing can be made effectual, as consumers' can selectively attend to certain audio inputs while actively ignoring others. Furthermore, because enhancing the salience of a peripheral cue appears to enhance the positivity of attitudes towards the message, as shown in these studies, consumers should respond more positively to an advertisement if it is processed with salient versus diminished peripheral cues. Note, this holds true unless, as in Experiment 3, the involvement of consumers is very low (both low product and message involvement). In this case, consumers appear to activate a different cue based on the product-message fit; whereby the appropriateness and relevance of the presented sound, to the product in the advertisements, drives evaluation.

In addition to advancing our theoretical knowledge, the present research suggests some important applied implications. It appears that in some instances, consumers will respond in more positive ways to advertisements that have lyrics. This implies that strategically selecting lyric sound executions for messages can enhance consumers' evaluations of the brand. Because in Experiment 3, lyrics were not implicated in influencing consumers' positivity towards the ad when smartphones were the target product, further consideration should be given to sound executions for different product types. One explanation for why different intra-modal sounds were implicated in affecting consumers' attitudes between Experiment 1, 2 and 3 may be connected to the differences between the products in each study. In Experiment 1 the target product is an automobile;

however, the individual roles of the lyrics and the voiceover were inconclusive. In Experiment 2, the product was dish soap, and lyrics exerted a main effect on attitudes; while a voiceover did not. Thus, the theory of intra-modal sound and music salience was contributed to the lyrics being present. In Experiment 3 the product is a smartphone. The implicit difference in these three products is their purchase involvement (Zaichkowsky, 1985). Specifically, dish soap is a more frequent and less expensive purchase than a smartphone, and a smartphone is a more frequent and less expensive purchase than a car. Because of these differences, a car is a more involving purchase than a phone, and a phone is a more involving purchase than dish soap. Based on the effort and involvement that goes into the purchase of a smartphone, a voiceover may be a more relevant or appropriate stimulus than lyrics. Hence, we see that a voiceover drives the effect of intra-modal sounds for these types of product in Experiment 3. Conversely, for advertisements of products that have a less involving purchase process, lyrics may be more relevant than a voiceover, and thus drive the effect of intra-modal sounds.

A second insight that the current research highlights is that, contrary to popular assumptions, the modality that perceives the information (as determined by the data delivery format) need not completely dictate the effect of intra-modal sounds on attitudes. Video content is processed based on its visual perceptual appearance, as well as its interpreted meaning (Appiah, 2006). Consequently, minor alterations to a message's multi-modality should not alter how consumers represent the content audibly, but whether they represent it visually. Thus, as seen in Experiment 2B, lyrics affected attitudes towards the ad for the audio only commercials (Appendix D). Interestingly, the size of the effect for the single-modality commercials was greater. Relatedly, a third insight from the present work is derived from the findings observed in many areas of



inquiry that exhort the benefits of a “*more the merrier*” peripheral cue strategy (e.g., Daughtery, Li & Biocca, 2008). Besides presenting the information in a multi-modal, and sensory heavy manner, the present research suggests that utilizing the intra-modal executions to enhance the salience of a stimulus associated with the evaluative heuristic (e.g., presenting lyrics with music) can also improve attitudes.

A final insight of this research is that product involvement is operationalized in a novel way that is related to advertisement involvement. Specifically, in Experiment 1 and 2, participants are told to watch the commercials they are shown as they will be asked questions about them later. The assumption being, participants will be somewhat involved with the message due to the nature of being a research participant and having to answer questions about it later. However, in Experiment 3, participants are either explicitly told to pay close attention to the ads as the product would be marketed locally, or explicitly told that the ads are just there to make the experience more realistic and the products are not marketed locally. As a result, participants’ responses for the high involvement prime in Experiment 3 are comparable to those in Experiment 1 and 2, as all participants are instructed to take care in watching the advertisements; while those who received the low involvement prime responded differently.

Finally, my research focused on how intra-modal sound executions of speech and lyrics positively influence message persuasiveness by affecting the salience of a stimulus such as music, and thereby affecting the salience of the heuristic associated with the music. Indeed, even in these 3 experiments, cue salience was not directly examined; but rather, it was inferred through variations in attention and attitude positivity. Though, it seems implausible that cue salience would improperly explain the results of this work, as attention to the music was tested as a mediator, and was significant; while another

mediator—feelings evoked by the song—was ruled out as not significant, further examination of the actual concept *saliency* should be examined in future work.

Additionally, my research focused on how peripheral cue saliency for relatively liked music. Yet, it seems possible that disliked music, as music communicated in DTC advertising or product liability commercials, should have a similar influence on attitudes when modulated by intra-modal executions. However, it may have an even greater and negative impact, as negative cues may be weighed more heavily (Fiske 1980; Romeo, 1991). Additionally, music liking or preference as an individual difference may provide greater understanding of intra-modal sound executions across different groups for different types of music.

## **Chapter IV: CONCLUSION**

### **SUMMARY**

Although consumers commonly encounter marketing communications in multiple modalities (e.g., visual and audible), extant research has offered limited insight into how consumers actually process intra-modal executions in marketing communications, and how the particular dynamics of auditory attention to salient cues, relative to elaboration likelihood, through the peripheral route, may affect not only consumers' attitudes towards the message but the marketed brand as well. The present research sheds some light on these issues by drawing on a prominent model of persuasive communication, which proposes that simple stimuli in a message can be associated with peripheral cues (e.g., this is emotional, or this feels good), and can influence un-involved consumers' attitudes through a peripheral route of processing. Based on the idea that presenting consumers with too much data of one sensory channel (e.g., multiple sounds) may overload their resource in this channel, or that music might distract their attention from the message, I reasoned that intra-modal sounds could influence salience of the associated heuristic. This will subsequently influence the attention consumers' give to a peripheral cue (e.g., music) in an advertisement, and the positivity of the attitudes formed. The studies reported in this dissertation not only support this premise, but also cast doubt on the applicability of alternative theories (i.e., affect priming) or mechanisms (i.e., musically evoked feelings) that might explain the findings. Further, and provocatively, these findings also suggest a means for enhancing ad effectiveness through peripheral route processes, which potentially can increase the positivity of consumers' responses that are otherwise obtained. This is contrary to an alternative belief that peripheral cues distract

attention from more important content such as the arguments in the message. This is commonly believed to have negative impact on message effectiveness; since these message arguments activate a central route of processing, which is marked by greater elaboration, which results in stronger enduring attitudes.

In accordance with my general theory, Chapter II demonstrates that intra-modal sounds had an effect on consumer's attitudes whose product involvement was low, but not on those with high involvement. This supports the proposition that peripheral route processing can be manipulated to enhance the positivity of attitudes. The operationalization of product involvement extends prior research on consumer involvement by measuring consumers' need or want for the target product in the near future, rather than asking how relevant, needed and meaningful the product is. Interestingly, this operationalization is validated as those who were in the market to purchase the target product (e.g., possessed a proximal need or want for the product) also reported that the product's message was more relevant, needed and meaningful than those who were not in the market to purchase the target product. Presumably this occurred because, when consumers are less motivated and able to process marketing messages they do not exert as much effort to thinking about the message. If consumers are involved with the product, then it is more likely that the product being advertised is more relevant to the consumers and they will be more motivated to process. Thus, involvement serves as a proxy for the motivation to process.

Simultaneously, Chapter II showed how lyrics enhance the salience of music in an advertisement, which is associated with a judgment heuristic utilized during the formation of evaluations towards an object. This resulted in more positive attitudes towards the ad (Experiments 1 and 2), but for products that involve more time and money

to purchase, not presenting a voiceover, rather than presenting lyrics, can lead people to assess the message less positively [Experiment 3; e.g., individuals who viewed an ad for a Smartphone (versus dish soap)]. Evidence from Experiment 1 also suggests that the feelings evoked by the music do not explain the observed effects. Instead, it appears that attention to the music mediates the effects of lyrics on consumers' attitudes.

Furthermore, Chapter III extended such inquiry by investigating a related issue. It explored whether priming situational message involvement, for consumers not involved with the product, can influence the processing cue used. Specifically, lyrics are proposed to enhance the salience of (i.e., consumers' attention to) the music, while a voiceover is proposed to diminish the salience of the music and thus affect the positivity of the resulting attitude. In Experiment 3, consumers who were not in the market to buy the product did not appear to employ this same heuristic when they were primed to have low involvement with the message. Presumably this occurred because, when consumers have very low involvement, an automatic less motivated heuristic is activated; whereby the appropriateness of the message execution to the product advertised informs evaluations of the message. In this case, the product was a higher involvement (i.e., less frequent and more costly) purchase. Thus, it may be perceived to be more appropriate to use a voiceover than to not. This demonstrates a parameter of peripheral cues salience; while also enhancing our understanding of the spectrum that marks dual information processing theory.

Overall the findings reported in this dissertation suggest that the salience of message content can be influenced by intra-modal executions, because similarity of intra-modal distracters to targets affects attention. These executions can be strategically utilized to influence message persuasiveness. Music can be associated with a peripheral

cue and processed differently based on the other sounds present. This association supports the contention that sounds used in product messages may not be processed in a manner that corresponds with a more the merrier strategy. Instead, consumers' may selectively attend to stimuli made salient (diminished) by similar (dissimilar) or complementing sounds.

### **Limitations**

While the current work provides insight into how intra-modal executions affect consumers' responses, certain limitations of the research are worth highlighting. First, the formats investigated in this dissertation involved only two intra-modalities: sung lyrics and spoken words. Yet, Ali and Peynircioğlu (2006) and their colleagues (Juslin, 2000; Brattico, et al., 2011) contend that spoken lyrics and sung words (e.g., jingles) can also account for these effects. Additionally, sounds such as humming and sound effects also exist in marketing communications. Hence, investigating the use of other intra-modal sounds in product messages would be useful not only to allow for further testing of similarity and salience in the model, but also to provide insight into how content presented in these forms may influence consumer's attitudes.

Furthermore, stimuli and procedure were not without its challenges. Specifically, the number of exposures was kept consistent across the studies (e.g., two); however, research has demonstrated that repetition may play a role in affecting attitudes. Future research should examine intra-modal sound executions for different viewing repetitions. Additionally, three different visual advertisement executions and two separate songs were used across three experiments; however, this is three commercials and two songs out of possibly millions. Thus, the findings should be generalized with caution, as the visual elements of an advertisement and different types of music may individually produce

different outcomes. However, the findings of intra-modal sounds are not expected to attenuate; instead, a nuanced explanation, similar to the findings of Experiment 2 compare to Experiment 3, are expected.

This examination of intra-modal sound executions was focused on auditory processing. The effect of intra-modal sounds was examined for single and bi-modal messages, however; future research can enhance our understanding of peripheral cue salience in the ELM by studying other senses. Hence, investigating intra-modal effects for gustatory or tactile information in consumer contexts, or visual information in product messages that evoke sense imagery, would provide insight into how content presented in these modalities may influence consumer's attitudes. Specifically, how might the color (red vs. blue) influence the attitude towards a message with warm vs. cold environments or products? For example, utilizing the color red, which is associated with warmth or feeling warm, may enhance the effect of the peripheral cue activated by presenting a steaming cup of coffee in an ad on consumers' positivity towards the message. As red and a steaming cup of coffee are similar, the salience of a peripheral cue may be enhanced; while it may be diminished by using the color blue in the advertisement.

Additionally, the studies measurements, though reliable, can be expanded to enhance the effect sized of intra-modal sounds. A very global measure of involvement was measured in this research. Though the measure in the research proved reliable, the use of more detailed measures such as the Personal Involvement Inventory for Advertising (Zaichkowsky, 1994) or the Product Category Involvement scale (Bloch, 1981) is supported. Furthermore, attention to music was measured using self-report items. However, innovations in research allow for neurophysiologic measurement of attention. Future research should implement more implicit measure of attention, as well as examine

attention across all elements of the stimulus in addition to attention to music (e.g., attention to the visual presented, attention to the message spoken, and attention the lyrics sung) to increase our understanding of these findings presented.

In line with the observations uncovered in Chapter III, it would be beneficial to examine other methods of constricting or expanding product categories, and to study how such implicit changes in product purchase involvement differentially affect attitude positivity of product information. For example, in Chapter III, I showed that varying the purchase involvement (Smartphone instead of dish soap) had consequences for elaboration and the peripheral cue activated. However, this research did not examine purchase involvement as a predicting variable. Thus, a worthwhile endeavor would be to compare the effect of intra-modal sounds on consumers' attitudes towards an advertisement moderated by the purchase involvement of the product.

### **Future Research**

Another worthwhile avenue for research would be to investigate why the effect of intra-modal executions was attenuated for slow songs (Experiment 1). One explanation for this might be that the slow version of the song was originally less attention gaining than the fast version. Thus, influencing its attention gaining value may not have a strong enough influence on consumer's processing to affect attitudes (Husain, Thompson & Schellenberg, 2002). Ali et al. (2006) found that lyrics diminished the emotion perceived in non-arousing calm music, but enhanced the emotion perceived in arousing energetic music. This may offer another explanation for why the intra-modal effect was not observed for consumers' who heard slow music. Presumably, the slow music does not activate the associated peripheral cue similar to the fast music. The role of the actual peripheral cue (e.g., emotion) should be examined in further studies with respect to both



fast and slow songs. Moreover, the alternative genre was selected as the classification of music's in this research because of its neutrality and observed prominence in advertising (Allan, 2008). Extending these findings to other music genres may enhance the generalizability of this research and extend our understanding of music genre, fit and consumer identification.

A final aspect of peripheral cue salience that is interesting, but was not addressed in this dissertation, concerns the relationship between feelings and attention. While the peripheral route of processing is prone to process different affective sources of information, the way in which attention is directed to pertinent or intervening information could vary depending on valence or feelings of the peripheral cue activated. It would be useful to explore not only how attention influences the peripheral cue, but also how the simple stimulus (music) influences attention based on the valence (happy vs. sad) of the feelings evoked by the stimulus, as we experience negative or sad emotions more intensely than positive or happy emotions (Nabi, 1999; Baumeister, Bratslavsky, Finkenauer & Vohs, 2001; Petty & Briñol, 2015). Thus, intra-modal executions may have differential effects on consumers' attitudes based on the affective valence of stimuli in the message.

While the current research highlights the consequences of affecting music salience using intra-modal sound executions to influence message and brand evaluations, further research should seek to understand ways intra-modal executions can influence the salience of peripheral cues associated with other simply stimuli outside of music. More specifically, individuals whose peripheral route is activated by the presence of celebrities may be affected by seeing intra-modal visual executions. For example, including other celebrities similar versus dissimilar to the target celebrity (e.g., Brad Pitt with Angelina

Jolie, versus Brad Pitt with Viola Davis, versus Brad Pitt and Adam Lambert). In this case, Brad Pitt (BP) and Angelina Jolie (AJ) are similar in many ways, both actors, both in movies together and both married to each other. Though Brad Pitt (BP) and Viola Davis (VD) are similar in that they are both actors, they are less similar than BP and AJ because they are not in movies together and they are not married to each other. Little to no information connects them at all on a popular internet search site *Google*. Even alternatively and probably less similar are BP and Adam Lambert, as one is an actor and one is not, though they are both males, they have little connections making them not semantically similar in any form. Another example may be to use visual intra-modal executions that spotlight or shadow Brad Pitt in the ad. This might enhance or diminish the salience of the celebrity, as well other cues including: affective gestures (e.g., a smile) or images (e.g., puppies).

## Appendices

Appendix A: Stimuli in Experiment 1



@ 5 seconds



@ 20 seconds



@ 15 seconds



@ 30 seconds

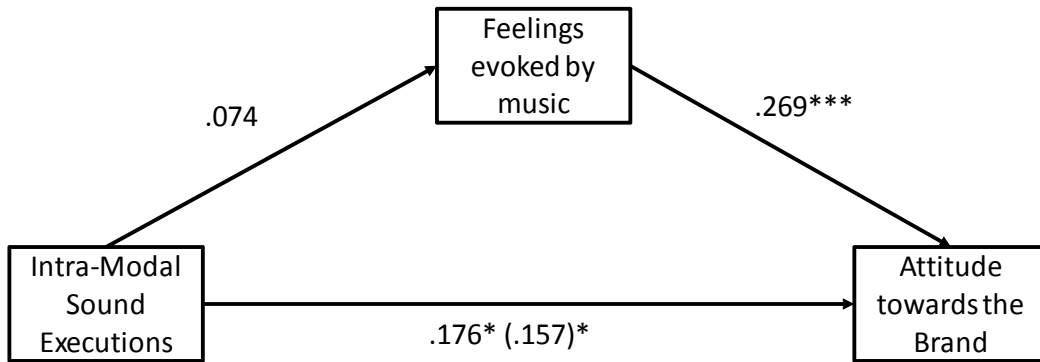
Appendix B: Measurement summary

<b>Item</b>	<b>#-Item</b>	<b>Type</b>	<b><math>\alpha</math></b>
<b>Familiarity with the Ad</b>			
Unfamiliar-Familiar	1	7-pt Semantic Differential	na
<b>Need for Cognition: Please choose the answer to the following statements that best describes you.</b>	18	7-pt Likert	0.82
I would prefer complex to simple problems.			
I like to have the responsibility of handling a situation that requires a lot of thinking.			
Thinking is not my idea of fun.*			
I would rather do something that requires little thought than something that is sure to challenge my thinking abilities.*			
I try to anticipate and avoid situations where there is likely a chance I will have to think in depth about something.*			
I find satisfaction in deliberating hard and for long hours.			
I only think as hard as I have to.*			
I prefer to think about small, daily projects to long-term ones.*			
I like tasks that require little thought once I've learned them.*			
The idea of relying on thought to make my way to the top appeals to me.			
I really enjoy a task that involves coming up with new solutions to problems.			
Learning new ways to think doesn't excite me very much.*			
I prefer my life to be filled with puzzles that I must solve.			
The notion of thinking abstractly is appealing to me.			
I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought.			
I feel relief rather than satisfaction after completing a task that required a lot of mental effort.*			

<b>Item</b>	<b>#-Item</b>	<b>Type</b>	<b><math>\alpha</math></b>
It's enough for me that something gets the job done; I don't care how or why it works.* I usually end up deliberating about issues even when they do not affect me personally. <b>Attention to the Music: Please indicate the degree to which you focused on the music in the ad</b>	1	5-pt Likert	na
Not at all-Completely			
<b>Attitude towards the Ad: Please describe your overall feelings about the commercial you were just presented</b>	7	7-pt Semantic Differential	> .90
Bad-Good			
Unlikable-Likable			
Unfavorable-Favorable			
Unappealing-Appealing			
<b>Attitude towards the Brand: Please describe your overall feelings about the BRAND in the commercial you were just presented</b>	7	7-pt Semantic Differential	> .90
Bad-Good			
Unlikable-Likable			
Unfavorable-Favorable			
Unappealing-Appealing			
<b>Involvement Adapted from the (PIIA): Please describe your overall feelings about product message you were just presented+A52</b>	4	7-pt Semantic Differential	na
Irrelevant-Relevant			
Not Needed-Needed			
Not important-Important			

Note \* represented items that must be reverse coded

Appendix C: Alternative mediation of music evoked affect



Note. \*  $p < .05$  \*\*  $p < .01$ , \*\*\*  $p < .001$

Appendix D: Stimuli in Experiment 2

**TIRED OF DRY  
HANDS AFTER  
CLEANING THE  
DISHES?**

---






**READY FOR  
SOMETHING  
NEW?**

---

Helps Lock In Skin's  
Natural Moisture\*  
& Leaves Dishes Sparkling

[LEARN MORE >](#)



Power Clean

The image shows a blue bottle of Fairy Power Clean dish soap with a red cap. To the right, a hand is being washed under a stream of water, with a green ring of light around the wrist. The background is a bright blue gradient.

**WELL THE TIME  
HAS COME**

---



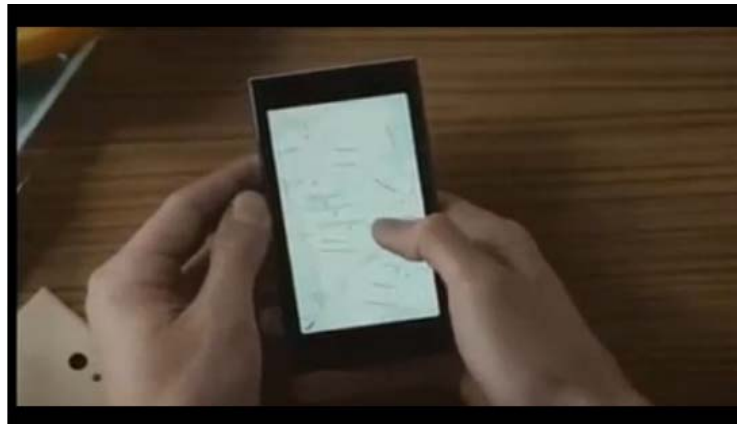
Fairy Dish Soap



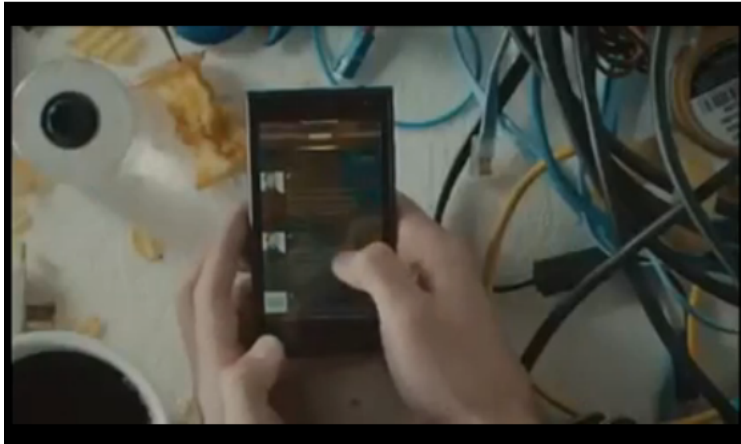
**No visual condition**

Appendix E:

Experiment 3 Stimuli and Primes







### **READ CAREFULLY**

INSTRUCTIONS: Fairy, Skoda and Jolla will soon market their products locally. Before the brand's introduction, the companies are interested in college students' reactions to the brand. You are to pay close attention to the brand information contained in the commercials and consider your interest. To create a normal viewing environment you will see the commercials along with a program.

### **READ CAREFULLY**

INSTRUCTIONS: You will see a segment from the Wall Street Journal concerning recent issues with marketing tactics. You will be asked several questions regarding your views on the issues addressed in the video you are about to watch. Although the video contains advertisements, the products advertised are not available locally.

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