

European Advertising Academy

Verolien Cauberghe

Liselot Hudders

Martin Eisend *Editors*

RESEARCH

Advances in Advertising Research IX

Power to Consumers



EUROPEAN
ADVERTISING
ACADEMY



Springer Gabler

European Advertising Academy



Executive Board Members:

- P. De Pelsmacker, Antwerp, Belgium
- M. Eisend, Frankfurt an der Oder, Germany
- S. Rosengren, Stockholm, Sweden
- S. Diehl, Klagenfurt, Austria
- T. Langner, Wuppertal, Germany
- H. Voorveld, Amsterdam, The Netherlands
- S. Boerman, Amsterdam, The Netherlands
- V. Zabkar, Ljubljana, Slovenia
- V. Cauberghe, Ghent, Belgium
- L. Hudders, Ghent, Belgium

The objective of the European Advertising Academy (EAA) is to provide a professional association to academics and practitioners interested in advertising and its applications that will promote, disseminate and stimulate high quality research in the field.

Executive Board Members:

Prof. Patrick De Pelsmacker
University of Antwerp, Belgium

Prof. Martin Eisend
Europa-Universität Viadrina
Frankfurt an der Oder
Germany

Prof. Sara Rosengren
Stockholm School of Economics
Sweden

Prof. Sandra Diehl
Alpen-Adria-Universität Klagenfurt
Austria

Prof. Tobias Langner
Bergische Universität Wuppertal
Germany

Prof. Hilde Voorveld
University of Amsterdam
The Netherlands

Dr. Sophie Boerman
University of Amsterdam
The Netherlands

Prof. Vesna Zabkar
University of Ljubljana
Slovenia

Prof. Verolien Cauberghe
Ghent University
Belgium

Prof. Liselot Hudders
Ghent University
Belgium

More information about this series at <http://www.springer.com/series/12465>

Verolien Cauberghe · Liselot Hudders
Martin Eisend
Editors

Advances in Advertising Research IX

Power to Consumers

 Springer Gabler

Editors

Verolien Cauberghe
Ghent, Belgium

Martin Eisend
Frankfurt (Oder), Germany

Liselot Hudders
Ghent, Belgium

European Advertising Academy

ISBN 978-3-658-22680-0

ISBN 978-3-658-22681-7 (eBook)

<https://doi.org/10.1007/978-3-658-22681-7>

Library of Congress Control Number: 2018949599

Springer Gabler

© Springer Fachmedien Wiesbaden GmbH, part of Springer Nature 2018

This work is subject to copyright. All rights are reserved by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, express or implied, with respect to the material contained herein or for any errors or omissions that may have been made. The publisher remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Printed on acid-free paper

This Springer Gabler imprint is published by the registered company Springer Fachmedien Wiesbaden GmbH part of Springer Nature

The registered company address is: Abraham-Lincoln-Str. 46, 65189 Wiesbaden, Germany

Advances in Advertising Research: Power to Consumers

Liselot Hudders, Verolien Cauberghe, and Martin Eisend

We are very proud to present to you the ninth volume of *Advances in Advertising Research*, a publication of the European Advertising Academy. This book presents a selection of the research presented at the 16th International Conference on Research in Advertising, which has been organized by Ghent University in June 2017. The members of the Center for Persuasive Communication at the Department of Communication Sciences at Ghent University welcomed academics studying the effects and working of persuasive communication in general, and advertising in particular. The university is located in Ghent and is one of the major universities in Belgium. Ghent University consists of eleven faculties, spread over different locations in Ghent. The Faculty of Political and Social Sciences is located in the heart of the city. Ghent is a beautiful, authentic and lively city that can rely on a well-preserved and restored medieval heritage, yet also incorporates an energetic culture and modern city life.

About 160 academics from more than 30 countries all over the world came together in Ghent to exchange ideas and insights into present-day advertising topics. The conference's tagline 'Keep it Simple, but Significant' guaranteed a fruitful exchange of ideas between academics as presentations were kept simple and short, leaving more time for discussion and interaction. The central theme of the conference was '*power to consumers*' as consumers (e.g., social media influencers) have become central content-makers in today's advertising world. More than 140 papers were organized into 33 parallel sections. Based on a double blind reviewing process, best papers from the conference were invited to be developed further and submitted to *Advances in Advertising Research Vol. IX: Power to Consumers*, the book you hold in your hands.

The twenty-five chapters in the book represent a wide variety of topics that relate to the latest research on advertising. The papers are grouped into six parts reflecting different aspects of how advertising persuades consumers. In the first part, five chapters reflect on how new advertising formats may affect consumers. These papers examine the effectiveness of different ad formats, 360 degree video ads, embedded ads, programmatic TV ads, Instagram ads, and content marketing in a B2B context. In the second part, three empirical papers examine the effects of in-game advertising. The third part looks into ad execution styles and presents insights from six different papers on how different strategies used in advertising can affect its effectiveness. In particular, strategies as green appeals in brand placement, minimalism, humor, religious stereotypes, voice accent and pitch are examined. Additionally, in this part a paper is presented on how emo-

tional variables can be used in media planning. The fourth part presents four chapters discussing the value and effects of corporate social responsibility (CSR). These papers examine the effects of using emotional claims in CSR, the effects of CSR in Hong Kong and the value of entertainment to fight childhood obesity. In addition, this part presents a study on how consumers respond to pharmaceutical advertising regulation. The fifth part consists of three papers discussing the value of engaging consumers for marketing purposes. In particular, these chapters examine how eWOM can be fostered in experiential retailing, how temporal characteristics affect eWOM, and how trust in eWOM can be affected by similar vs. dissimilar others. The final part discusses the impact of situational influences on advertising effects. More specific, four papers examine how physical effort, social exclusion, scent cues, and acculturation to global consumer culture affects consumers' responses to advertising.

To conclude, we would like to take this opportunity to thank the EAA, the organizing committee of the 16th ICORIA, and all the authors who have contributed to this book. This book bundles the latest research on how advertising affects consumers and offers the reader with many innovative ideas for future research in advertising. We hope you enjoy reading it.





EUROPEAN ADVERTISING ACADEMY

The objective of the association is to provide a professional association to academics and practitioners interested in advertising and its applications that will promote, disseminate and stimulate high quality research in the field.

The association particularly serves as a meeting and communication forum for its members. It offers a network for the exchange of knowledge on an international level and constitutes a framework allowing for a better dissemination of information on research and teaching.

The association also aims at the development of relations with all other professional and research-oriented associations which are active in the field, as well as with European or international committees and authorities concerned with political decision making, active in this field.

The EAA is closely related to the yearly International Conference on Research in Advertising (ICORIA). The purpose of the conference is to create a forum where people studying advertising in the academic world could exchange ideas, and where they could meet with practitioners who have experience with advertising in the commercial world.

Every natural person that is professionally concerned with or interested in research or teaching in the field of advertising is, irrespective of nationality, eligible to become a full member of the association.

For further information please visit our website: www.icoria.org

Table of Contents

Preface

V

Part I – Going Beyond: Persuading the Consumer with New Advertising Formats

M^a Concepción Castellanos, José Manuel Ausin, Jaime Guixeres, and Enrique Bigné

Emotion in a 360-Degree vs. Traditional Format Through EDA, EEG and Facial Expressions 3

Robert Freeman Cartwright, Suzanna J. Oprea, and Eva A. van Reijmersdal

“Fool’s Gold”: Linking Materialism to Persuasion Knowledge Activation and Susceptibility to Embedded Advertising 17

Edward C. Malthouse, Ewa Maslowska, and Judy Franks

The Role of Big Data in Programmatic TV Advertising 29

Tanja Steinhart and Heribert Gierl

Me, Myself or the Blogger? How to Use Instagram as a Content Platform to Promote Products from the Company’s Perspective 43

Wei-Lin Wang, Edward C. Malthouse, and Ebru Uzunoglu

The Effects of Engaging with Content Marketing on Business Outcomes for B2B Service Providers 57

Part II – Getting Inside the Game: Effectiveness of In-Game Advertising

Sonja Bidmon and Johanna Röttl

Advertising Effects of In-Game-Advertising vs. In-App-Advertising 73

Laura Herrewijn and Karolien Poels

The Effectiveness of In-Game Advertising: Examining the Influence of Ad Format 87

Kathryn G. Charlton

Keeping it Real: Applying Realistic Periods of Gameplay to the Study of Recall and Recognition of In-Game Advertising in a Console Video Game 101

Part III – How to Create Your Ad: An Insight into the Effects of Advertising Execution Styles

Megha Dubey, Janise Farrell, and Lawrence Ang

How Accent and Pitch Affect Persuasiveness in Radio Advertising 117

Kostoula Margariti, Christina Boutsouki, and Leonidas Hatzithomas

Less is More or Less is A Bore? 131

Marijn H. C. Meijers, Eva A. van Reijmersdal, and Anja Krafczyk

The Positive Effect of Green versus Conventional Brand Placement: The Roles of Brand Warmth and Persuasion Knowledge 143

Anna Rößner and Martin Eisend

Advertising Effects of Religious Stereotypes: The Moderating Influence of Context News Valence 163

Don E. Schultz and Martin P. Block

Beyond Demographics: Enhancing Media Planning with Emotional Variables 177

Maria C. Voutsas, Leonidas Hatzithomas, and Christina Boutsouki

Superiority Theory and Disparagement Humor: The Role of Gelotophobia, Gelotophilia, and Katagelasticism 191

Part IV – Doing Good: Corporate Social Responsibility and Consumer Protection*Luisa Agante*

How Can Entertainment Fight Childhood Obesity? A Study using Nutriventures Series 207

Sonja Grabner-Kräuter, Ulrike Krisch, and Robert Breitenecker

Consumer Responses to Corporate Social Responsibility Communication in Hong Kong 219

Patrick Hartmann, Paula Fernández, Vanessa Apaolaza, and Clare D'Souza

Emotional Claims in CSR Tweets: The Moderating Role of CSR Message Fits 231

Isabell Koinig, Sandra Diehl, and Barbara Mueller

“For Risks and Side Effects, Ask Your Doctor or Pharmacist.” Cross-Cultural Consumer Responses to Pharmaceutical Advertising Regulation – Evidence from Brazil, Germany and the US 243

Part V – Let Them Talk: How to Increase and Evaluate Word of Mouth*Isabelle Köhler and Franz-Rudolf Esch*

Increasing Brand Experiences and Word of Mouth in Experiential Retailing - A Cross-Cultural Perspective 259

Komala Mazerant and Lotte M. Willemsen

Now and Wow! How Temporal Characteristics Affect the Word of Mouth of Topical Advertising 273

Stephan Winter and Lena Schulte-Bockholt

When Do We Trust Online Reviews by Similar vs. Dissimilar Users? An Application of Construal Level Theory 287

**Part VI – It's All About Context: Situational Influences
on Advertising Effects**

<i>Sofie Sagfossen, Magnus Söderlund, and Carl-Philip Ahlbom</i> The Embodied Retail Consumer: Physical Effort in Shopping-Related Tasks and its Impact on Reactions to Messages	303
<i>Hamed Aghakhani and Kelley J. Main</i> The Impact of Social Exclusion and Permeability on Consumers' Responses towards Advertising	317
<i>Shalom Levy and Yaniv Gvili</i> The Moderating Role of Mood in Consumer Response to Scent Cues in Advertising	329
<i>Barbara Czarnecka and Bruno Schivinski</i> The Effects of Acculturation to Global Consumer Culture on Impulsive Buying and Attitudes Towards Advertising in General	343

Part I – Going Beyond: Persuading the Consumer with New Advertising Formats



Emotion in a 360-Degree vs. Traditional Format Through EDA, EEG and Facial Expressions

M^a Concepción Castellanos, José Manuel Ausin, Jaime Guixeres, and Enrique Bigné

1 Introduction

Digital video advertising is growing exponentially. It is expected that digital video ad spending of the US will see double-digit growth annually through 2020 (eMarketer, 2016). Moreover, advertisers are spending on average more than \$10 million annually on Digital Video, representing an 85% increase from 2 years (iab, 2016). This huge increase is mediated by advances in technology and the massive use of the technology by the consumers (Krawford, 2011). Among the most prominent technological tools are new forms of virtual reality, specifically 360-degree video (Argyriou et al., 2016), that is one of the newest trends in online marketing in the last years (Gudacker, 2016).

Compared to traditional videos in which the point of view is a focal one determined by the director, in a 360-degree format the viewer has a free and omnidirectional viewpoint. In this way, the viewer can decide at every moment the point of view to see the video scenes, being able to move their viewpoint in an arbitrary way to each one of the angles of a 360-degree radius. This change in the point of view means a new interactive experience with the advertisements that was not achieved before. The consumers have the freedom to explore the content based on their interest, without being restricted by the creator or director's choices, and deciding "where and what" to look (Su and Grauman, 2017).

The aim of this exploratory study is to evaluate the effect of interactivity in emotion during the viewing of a 360-degree video ad, compared to a traditional one through a quantitative methodology. Surprisingly, advertising research on 360-degree ads is scarce. As far as we know, there have been some case studies regarding engagement of those ads, but not emotion. For example, Google had run an experiment to find out if spherical video advertising drive more viewer engagement than standard video advertising (Habig, 2016). Hence, the question of interest here is if a 360-degree video advertisement engages more arousal and positive emotions than the same video ad presented in a traditional way.

2 Theoretical Background

2.1 *Emotion and Advertising*

Emotion refers to the coordination of cerebral, physiological, and behavioral changes that facilitate an external or internal response of significant relevance (Davidson 2004). In the last 30 years emotions has been playing an important role in the consumers' response: as markers, mediators and/or moderators (Bagozzi et al., 1999), as increasers of brand attitude (Russell, 2002), as persuaders of consumption (Johar et al., 2006), or as a predictors of brand intent purchase (Morris et.al, 2002). Advertisers' creation of surprising, engaging and entertaining ads, in which the emotional content is emphasized, leads to consumers to remember the product and build positive associations with the brand (McDuff, 2017). Related to engaging, previous research has found that emotions as joy and surprise can be leveraged to engage consumers in watching Internet video advertisements (Teixeira et al., 2012).

2.2 *Emotion and 360-Degree Video*

The user's experience with a 360-degree video has two important features. First, it resembles navigation in both 3D virtual and real worlds (Smolic et al., 2006). Second, it leads to a more immersive experience (Ramalho and Chambel, 2013). Both of them seem to intensify the emotional response. For example, (Visch et al., 2010) found that the stronger the immersion, the more intense emotions participants felt viewing a film.

2.3 *Measuring Emotional Responses to Video Ads*

Poels and Dewitte (2006) pointed out two major types of methods to measure emotions. The first ones, self-report methods, measure the subjectively and consciously experienced feelings and can be biased from desired to please (or not) and comfort with the context and other factors (Aaker et al., 1986). The second ones, autonomic psychophysiology methods, focus their measurements on continuous emotional reactions and changes in central, autonomic and somatic nervous system and are affected by neither higher cognitive processes nor a post-hoc reflection (McDuff, 2017).

Among the various psychophysiological techniques (Wang and Minor, 2008), we are going to focus on both electroencephalography (EEG) and facial coding (FC) as measures of valence (stimulus or situation pleasantness), and electrodermal activity (EDA) as measure of arousal (stimulus or situation intensity or activation level). Valence and arousal have been used as axes to frame emotion in the past and current research (Lang, 1995; Kuppens et al., 2013).

Regarding EEG, it enables to measure the asymmetries of the electrical activity of brain hemispheres in the frontal part of the brain (Pentus et al., 2014). It has been proposed that the greater activity of the left hemisphere is associated with approach-related action planning (and therefore related with positive emotions caused by stimuli), and the greater activity of the right hemisphere should be associated with withdrawal-related emotion (Davidson, 2004). (Ohme et al., 2010) and (Vecchiato et al., 2011) found a dominance of the left hemisphere related to the pleasantness of TV commercial advertisements. The frontal asymmetry is calculated as an index or ratio between right and left EEG activity. Higher values mean a relative dominance of the left hemisphere.

FC is an observational method of capturing behavior on the face (McDuff, 2017), using an objective-coding scheme of muscle movements or facial actions. Most objective coding uses the Facial Action Coding System (FACS) (Cohn et al., 2007), and describes the appearance of the face when muscle movements are present, and the emotions related to these muscle movements. (Teixeira et al., 2012, 2014) found links between facial expressions and “zapping” behavior, and facial responses and purchase intent, respectively.

Used in advertising research as a means to analyze an emotional state produced by advertising stimuli (Ohme et al., 2009; Peacock et al., 2011), EDA measures the electrical conductance of the skin according to the amount of moisture (sweat) that correlates positively with the intensity of an emotional activation caused by stimuli. It is a reliable, valid means to measure the level of excitement or arousal (Bolls, Lang and Potter, 2001). An increase in conductance can be interpreted as a physiological activation. Related to interactivity, EDA was higher when participants had control over the onset of the stimuli –pictures– they had to evaluate (Wise and Reeves, 2007).

The goal of this research was twofold: 1) to compare the elicited emotions of two ad formats (360-degree vs. traditional video) through psychophysiological measurements; and 2) to assess self-reported measurements with physiological ones in 360-degree vs. traditional formats.

The research questions related to those goals were:

RQ1: Do self-reported measures differ between 360-degree and traditional video ads?

RQ2: Will emotional valence (measured by means of FC, and frontal asymmetry) be greater for a 360-degree video ad than for a traditional video ad?

RQ3: Will emotional arousal (measured by means of EDA) be greater for a 360-degree video ad than for a traditional video ad?

3 Method

3.1 Sample

The sample consisted of 79 participants (38 females and 41 males, 19-37 years old, $M = 26.08 \pm 4.15$), being recruited from the database of the i3B Institute of the Polytechnic University of Valencia (UPV). This database is composed of people inscribed through e-mail or telephone and willing to join as participants. They were reimbursed for their participation with a gift card of 15€. As explained in the Results Section, some participants were excluded from the analyses.

3.2 Design, Stimuli and Apparatus

This experiment was part of a larger study relating driving and advertising in which the EEG, the EDA, the FC, eye-tracking (ET) and electrocardiogram (ECG) were recorded. First, participants watched a TV program in which a road safety campaign (or a control ad) was included in the commercial breaks. Second, participants watched the BMW M2 advertisement and responded some related questions. And third, participants drove a selected route in a driving simulator. This research is focused in the second part, and only the EEG, the EDA and the FC measures are going to be described. This experiment was planned as a one-way independent samples design, being the intergroup factor the video format. Participants were randomly assigned to the two groups, a 360-degree video ad Group (360-degree Group) and a non 360-degree video ad Group (non 360-degree Group). Both groups were shown a similar video ad, from the BMW M2, presented in different formats. Participants included the 360-degree Group were exposed to a 360-degree video ad (<https://www.youtube.com/watch?v=q87oVPusWT0>), the most popular 360-degree ad on YouTube Ads Leaderboard (YouTube 2016). In the other group, the non 360-degree Group, participants were exposed to the video ad in a traditional format (<https://www.youtube.com/watch?v=DVOOfGIlgScE>). In both videos, viewers were invited to keep their eyes on a famous model, which climbed into the passenger side of one of three blue cars. Then the three cars started moving and two other cars appeared. The five cars weaved in and out of each other's lanes while tearing down a runway. At the end, all five cars came to a stop in a neat row and the ad invited to guess in which car the model was.

A marked difference between the ads was their duration; in the traditional format lasted about 45 seconds, and in the 360-degree format, about 80 seconds. Although both ad durations differed, the analyzed data were the average of the continuous data (see Section 3.4). As Luck (2010) noted, the mean or average is a measure that it is not biased by the number of points included in its calculation.

The ad videos in both formats and questionnaires were displayed on a 23" TFT screen (1920x1080) connected to a PC in which all the sensors were connected. This PC, running iMotions software (iMotions 2016), presented the videos, collected the questionnaires responses, recorded all data and performed some on-line processing of the data (noted below).

For recording EEG and ECG the wireless B-Alert X-10 system (www.advancedbrainmonitoring.com/xseries/; Johnson et al., 2011) was used. This system consisted of nine Ag/AgCl EEG channels – scalp positions F3, Fz, F4, C3, Cz, C4, P3, POz, and P4 according to the International 10-20 system (Klem et al., 1999) - and two ECG lead sites, located under the right clavicle and on the lower left abdomen within the rib cage frame of the participant, respectively. Another two channels were placed on both left and right mastoids and were used as EEG references. EEG and ECG data were acquired at 256 Hz. A wireless Affectiva's Q sensor (www.affectiva.com) recorded EDA, consisting of a bracelet with attached AgCl dry electrodes and situated at the ventral side of wrist of the non-dominant hand. Data was recorded at a sampling rate of 32Hz. ET was recorded at a sampling rate of 300Hz by a Tobii TX300 Eye Tracker (Tobii Technology AB, Danderyd, Sweden) attached to the bottom of the screen. For recording FC a webcam Logitech QuickCam Pro 9000 (1600 x 1200 @ 30 fps) was placed on the top of the screen.

3.3 Procedure

Experimental session was performed individually in a dim lab room at the i3B Institute of the Polytechnic University of Valencia (UPV). Each participant was received, informed about the study, and was asked to sign an informed consent form, approved by the UPV's Ethic Commission. Participants then sat in front of the experimental screen and they were fitted with EEG, ECG, and EDA recording devices and the goodness of their recordings checked. While the sensors were placed, participants filled in a pre-questionnaire about demographic characteristics. Then began an EEG baseline recording of nine minutes followed by an ET calibration of nine points. When this calibration was excellent or good, the study and data acquisition began. The first and third experimental phases, watching a TV program with some commercial breaks, and driving a selected route in a driving simulator, are not analyzed in this work. After participants finished the first phase ET was calibrated again. Then, a baseline stimulus for FC (a grey screen lasting 6 seconds) was presented, and the BMW's ad started. Participants' task was a kind of shell game: they have to keep their eyes in the car in which the model was while the cars moved in a fast-paced vehicle choreography, making the task virtually impossible. When the cars stopped, participants had to identify the model's car, submitting their guesses at a BMW's dedicated microsite (<http://www.eyesongigi.com>, now canceled).

Procedure for both groups was the same, excepting that participants in the 360-degree Group have to use the mouse to change the point of view of the scene. In order to do that, they had little practice before watching the video.

After watching the video ad, both groups completed a survey regarding feelings towards the brand (one item, free answer), likeability towards the brand (one item, five-point scale -“None” to “A lot”-), attitude towards the brand (Marks and Olson, 1981); five bipolar items labeled “Attractive/Unattractive”, “Good/Bad”, “Likeable/Unlikeable”, “Favorable/Unfavorable”, “Friendly/Unfriendly”, 2-point scale), willingness to buy the product if money were available (1 item, 4 points scale -“Definitively not” to “Definitively yes”), attitude toward the ad technology (1 item: “I believe this advertisement makes use of the latest available technology”, 5-point scale -“Totally disagree” to “Totally agree”-) and attitude towards advertising (8 items: “Ads give me new ideas”, “I know newest and most competitive products through advertising”, “I like advertising because do not offend any society”, “Advertising appreciates creativity”, “I do not approve advertising because it does not provide a real view of the advertised product”-reverse coding-, “Advertising influences my buying decision process”, “I do not like advertising because tend to be deceptive” -reverse coding-, “My general opinion about advertising is positive”; 5-point scale -“Totally disagree” to “Totally agree”-) as well as questions about the more likeable element and meaning of the ad (both free answers). Also, participants complete a memory test including a recall brand question, and questions about the number, color, and model of the cars as well as the name of the girl who appears in the ad (free answers). Participants’ responses to these recall tests were labeled as correct or incorrect for posterior analyses. The memory test results are not included in this work.

3.4 *Data Processing*

Analyses of ET and ECG are not included in this work. B-Alert system (incorporated in iMotions software) performed processing of EGG on-line (Berka et al., 2007). EEG signal was filtered with a band-pass filter (0.5–65Hz) before the analog-to-digital conversion. To remove power network artifacts, notch filters at 50, 60, 100, and 120Hz were applied. B-Alert system features automatic signal decontamination of EEG including measures for electromyography (EMG), electrooculography (EOG), spikes, saturations, and excursions. After that, the power spectral densities (PSD) of all frequency bands were computed for both videos on a second-by-second basis in each electrode site using a Fast-Fourier transform with a 50% overlapping window. The frontal asymmetry index was calculated off-line using an in-house MATLAB script. First, alpha power (frequency band of 8-13Hz) in F3 and F4 sites was first natural log transformed for each 1 second epoch. Then a difference score was calculated ($(\ln[F4]-\ln[F3])$)

to summarize the relative activity at homologous right and left sites (Allen et al., 2004, Smith et al., 2017). Finally, those difference scores were averaged together.

EDA data were analyzed with LEDALAB (www.ledalab.de). Data were down-sampled offline at 10 Hz (Lajante et al., 2012) and then analyzed by the method of continuous decomposition analysis (CDA), reflecting the skin conductance level (SCL) in continuous measures of tonic EDA and the skin conductance response (SCR) in continuous measures of phasic EDA (Lajante et al., 2012). To determine the SCR, a threshold criterion of 0.05 μS was used. Following Lajante et al. work, SCR index was quantified as integrated SCR (ISCR, units of $\mu\text{S} \times \text{second}$), which represents the area under the curve of the phasic activity and allows the integration of both the spatial and temporal dimensions of SCRs. Finally, data were normalized thorough the formula $SC^* = \log(1 + |SC|)$, in order to reduce between-participants differences in the magnitude of the response (Lajante et al., 2012).

FC data were automatically processed on-line by an automatic facial expression recognition analysis software incorporated in iMotions software. This software track, frame-by-frame, 20 action units corresponding to an individual face muscle or muscle group based on the Facial Action Coding System. Different combinations of different action units constitute different target expressions, and each target expression is classified as a different emotional state. The software provides an Evidence measure in logarithmic (base 10) of the odds of a target expression being present. Namely, the software classifies seven basic emotions (joy, anger, surprise, fear, contempt, disgust, and sadness), two complex emotions (frustration, confusion) and valence (positive, negative and neutral). Only joy and surprise were analyzed in this work. Off-line analysis using an in-house MATLAB script to calculate the time percentage in which a joyful or surprised expression was considered as present if the evidence score was above an amplitude-based threshold of 0.5, meaning a chance of 75% of being in that state. Before this calculation, a baseline correction was carried out by subtracting the median score during the baseline from the median of each target expression in both video ads.

Some participants were excluded in the following analyses due to a high level of artefacts and noise in the recordings: 6 participants in the EEG data, 13 participants from the FC data and 43 participants from the EDA data.

4 Results

Digital video advertising is growing exponentially. It is expected that digital video ad spending of the US will see double-digit growth annually through 2020 (eMarketer, 2016). Statistical analyses were carried out with SPSS software

(IBM SPSS v22.0. Chicago, IL). Results are reported as the mean \pm SD or as the median when distributions were not normal.

All the questionnaires were analyzed except feelings towards the brand, the more likeable element and the meaning of the ad. Items regarding likeability towards the brand, willingness to buy the product if money were available and attitude toward the ad were analyzed through Mann-Whitney's U test for independent samples. Scores for the attitude towards the brand (Cronbach's alpha =0.79 for non 360-degreeGroup, and 0.77 for 360-degree Group) and the attitude towards advertising scales (Cronbach's alpha =0.73 for non 360-degreeGroup, and 0.61 for 360-degree Group) were measured by the mean of the responses to the items composing each scale. Their distributions were not normal, according to Kolmogorov-Smirnov test, so the Mann-Whitney's U test for independent samples was used to compare both groups.

Regarding the normality of continuous measures, both the EDA data and frontal asymmetry index were normalized after data processing, as noted above. Hence, to compare both groups those measures were analyzed by a t-test for independent samples. An exploratory analysis showed the distribution for the FC data was not normal, according to the Kolmogorov-Smirnov test, and was analyzed by the Mann-Whitney non-parametric test for independent samples.

We found (see Figure 1) a significantly larger index of frontal asymmetry for the 360-degree Group (0.09 ± 0.07) than for the non 360-degree Group (0.13 ± 0.07) ($t(72) = -2.476, p = .016$).

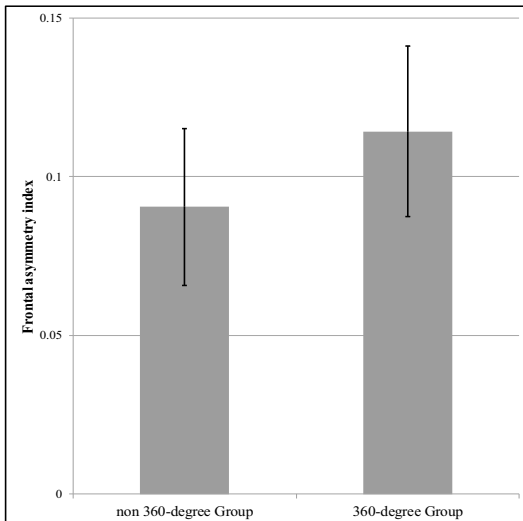


Figure 1. Mean of the frontal asymmetry index. Error bars show SEM.

Related to emotional expression (Figure 2), the percentage of time expressing joy was higher and significantly different in the 360-degree Group compared to the non 360-degree Group ($U = 355.00$, $z = -2.38$, $p < .0$). There was no difference between both groups in the time expressing surprise ($U = 499.50$, $z = -5.22$, ns).

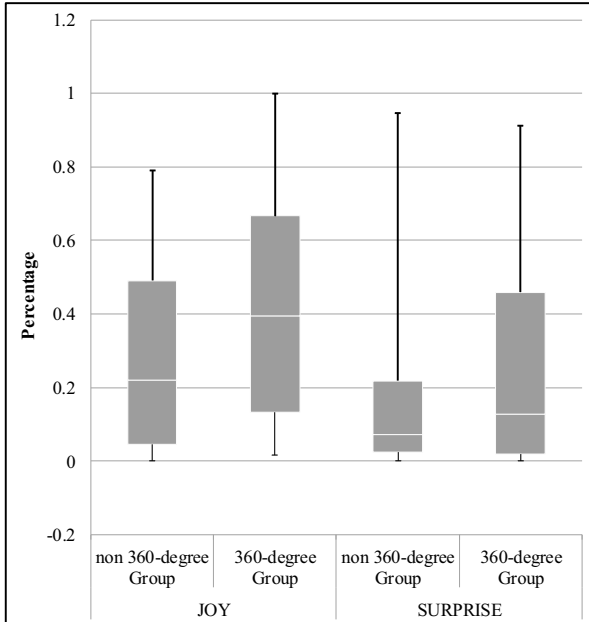


Figure 2. Box plot of the joy and surprise emotion. White lines depict median of each group, boxes represent interquartile range and whiskers represent the range of the data.

Related to emotional activation or arousal, the ISCR did not differ between the 360° Group (0.26 ± 0.16) compared to the non-360° Group (0.21 ± 0.06) ($t(24.738) = 0.827$, ns).

5 Discussion and Implications

In digital advertising, it seems clear that the advance of the technology determines its expansion. In our study, we wanted to evaluate a new format of a video advertisement, concretely the 360-degree video. This format allows the consumer to experience the content of the ad based on its interest, leading to a more immersive and emotional experience. Our study is one of the first in its field in analyzing the attitudinal and emotional impact of a 360-degree video advertisement compared to a traditional one. The evaluation was carried out

through self-report measures and psychophysiological techniques. The self-reported measures only reported differences in the attitude about the advertisement technology. The psychophysiological techniques reported differences between the groups in valence but not in arousal. Immersive and interactive features of a 360-degree advertisement enhanced participants' emotional responses of valence. The higher frontal asymmetry index and the longer time expressing joy watching a 360-degree ad, compared to a traditional one, are in line with previous findings in advertisement research.

Nevertheless, there were not differences between both videos in the surprise expression, and in measure of arousal. Due to the duration of the videos, the expression of surprise could be circumscribed to the beginning of the videos, and the average of the continuous measure could hide it. The similarity of the arousal level could be explained by the kind of task participants had to perform in both video formats, because the shell game it is virtually impossible to achieve.

Main managerial implications of our work are twofold. First, the 360-degree video ad seems to produce more positive emotion than the traditional one, therefore it could be a good solution for the digital advertising. Second, non-conscious and continuous measures as EEG and FC can help both brands and digital advertisers to evaluate consumers' emotional response during the video ads viewing.

6 Limitations and Future Research

Our research presents some limitations. First, the self-report measures did not include emotional evaluation. It would be interesting to compare the results of subjective and conscious measures on one hand, and more objective and non-conscious measures on the other. Second, we did not measure the subjective experience of interaction, navigation and immersion for the two formats. We assumed that the 360-video ad is more interactive and immersive, but a measure of how participants evaluate this features seems necessary. Third, we presented the 360-degree ad in a PC and the change of the viewpoint had to be made by the mouse. Other devices as mobile and virtual reality glasses could produce a more "real" experience in which the perspective change is made by the head movement, for example, and the emotional effect could be higher.

7 Acknowledgements

Acknowledgement: This work was supported by the Ministry of Economy and Competitiveness (Spain) under Grant ECO2014-53837R.

8 References

- Aaker, D. A.; Stayman, D. M. and Hagerty, M. R. (1986), "Warmth in advertising: Measurement, impact, and sequence effects," in *Journal of Consumer Research*, Vol. 12(4), 365-381.
- Allen, J.J.; Coan, J.A., and Nazarian, M., (2004), "Issues and assumptions on the road from raw signals to metrics of frontal EEG asymmetry in emotion," in: *Biological Psychology*, Vol. 67, 183-218.
- Argyriou, L.; Economou, D., Bouki, V., and Doumanis, I. (2016), "Engaging immersive video consumers: Challenges regarding 360-degree gamified video applications," In: *Ubiquitous Computing and Communications and 2016 International Symposium on Cyberspace and Security (IUCC-CSS), International Conference* on (pp. 145-152). IEEE.
- Bagozzi, R. P.; Wong, N., and Yi, Y. (1999), "The role of culture and gender in the relationship between positive and negative affect," in: *Cognition and Emotion*, Vol. 13(6), 641-672.
- Berka, C.; Levendowski, D. J., Lumicao, M. N., Yau, A., Davis, G., Zivkovic, V. T., ... and Craven, P. L. (2007), "EEG correlates of task engagement and mental workload in vigilance, learning, and memory tasks," in: *Aviation, space, and environmental medicine*, Vol. 78(5), B231-B244.
- Bolls, P. D.; Lang, A., and Potter, R. F. (2001), "The effects of message valence and listener arousal on attention, memory, and facial muscular responses to radio advertisements," in: *Communication Research*, Vol. 28(5), 627-651.
- Chambel, T.; Chhaganlal, M. N., and Neng, L. A. (2011), "Towards immersive interactive video through 360 hypervideo," In: *Proceedings of the 8th International Conference on Advances in Computer Entertainment Technology*, (p. 78), ACM.
- Cohn, J. F., Ambadar, Z., & Ekman, P. (2007). "Observer-based measurement of facial expression with the Facial Action Coding System" in: *The handbook of emotion elicitation and assessment*, 203-221.
- Davidson, R. J. (2004), "What Does the Prefrontal Cortex 'Do' in Affect: Perspectives on Frontal EEG Asymmetry Research," *Biological Psychology*, 67, 219-33.
- eMarketer 2016. "Digital Video Advertising Continues to Expand," accessed January 10. Retrieved from <https://www.emarketer.com/Article/Digital-Video-Advertising-Continues-Expand/1013722>
- Gudacker, J. (2016), "360 Degree Videos - An Online Marketing Revolution? A Critical Review and Outlook for Social Media Marketers," accessed January 10. Retrieved from <http://www.brandba.se/blog/2016/8/23/360-degree-videos-an-online-marketing-revolution-a-critical-review-and-outlook-for-social-media-marketers>
- Habig, J. (2016) , "Is 360 video advertising worth it? Think with Google. Retrieved from <https://www.thinkwithgoogle.com/advertising-channels/video/360-video-advertising/>
- iab (2016), "2016 IAB Video Ad Spend Study," accessed January 10. Retrieved from <https://www.iab.com/wp-content/uploads/2016/04/2016-IAB-Video-Ad-Spend-Study.pdf>
- iMotions Biometric Research Platform 6.0, iMotions A/S, Copenhagen, Denmark, 2016.

- Johar, G. V., Maheswaran, D., and Peracchio, L. A. (2006), "Mapping the frontiers: Theoretical advances in consumer research on memory, affect, and persuasion," in: *Journal of Consumer Research*, Vol. 33(1), 139-149.
- Johnson, R. R.; Popovic, D., Olmstead, R. E., Stikic, M., Levendowski, D. J., and Berka, C. (2011), "Drowsiness determination through EEG: development and validation," in: *Biological Psychology*, Vol. 87(2), 241-250.
- Klem, G. H.; Luders, H. O., Jasperf, H. H., and Elger, C. (1999), Section 1. "EEG (Technical Standards and Glossary)-1.1. The ten-twenty electrode system of the International Federation," in: *Electroencephalography and Clinical Neurophysiology, Supplements only*, (52), 3-6.
- Krawford, K. (2011) "Digital Technologies Effect on Humans and Societies," accessed January 10, 2017. Retrieved from <http://cyberpsych.tumblr.com/post/13004936142/increased-use-of-digital-devices>
- Kuppens, P.; Tuerlinckx, F., Russell, J. A., and Barrett, L. F. (2013), "The relation between valence and arousal in subjective experience," in: *Psychological Bulletin*, Vol. 139(4), 917.
- Lajante, M.; Droulers, O., Dondaine, T., and Amarantini, D. (2012), "Opening the "black box" of electrodermal activity in consumer neuroscience research," in: *Journal of Neuroscience, Psychology, and Economics*, Vol. 5(4), 238.
- Lang, P. J. (1995), "The emotion probe: Studies of motivation and attention," in *American Psychologist*, Vol. 50(5), 372
- Luck, S.J. (2010), "Is it legitimate to compare conditions with different numbers of trials?" accessed May 10, 2016 from http://erpinfo.org/Members/sjluck/Mean_Peak_Noise.pdf/view
- Marks, L. J., and Olson, J. C. (1981), "Toward a cognitive structure conceptualization of product familiarity," in: "NA - *Advances in Consumer Research* Volume 08, eds. Kent B. Monroe, Ann Arbor, MI : Association for Consumer", Vol. 8, 145-150.
- McDuff, D. (2017), "New Methods for Measuring Advertising Efficacy". *Digital Advertising: Theory and Research*.
- Morris, J. D.; Woo, C., Geason, J. A., and Kim, J. (2002), "The power of affect: Predicting intention," in: *Journal of Advertising Research*, Vol. 42(3), 7-17
- Ohme, R.; Reykowska, D., Wiener, D., and Choromanska, A. (2009), "Analysis of neurophysiological reactions to advertising stimuli by means of EEG and galvanic skin response measures," in: *Journal of Neuroscience, Psychology, and Economics*, Vol. 2(1), 21.
- Ohme, R.; Reykowska, D., Wiener, D., and Choromanska, A. (2010), "Application of frontal EEG asymmetry to advertising research," in: *Journal of Economic Psychology*, Vol. 31(5), 785-793.
- Peacock, J.; Purvis, S., and Hazlett, R. L. (2011), "Which broadcast medium better drives engagement?," in: *Journal of Advertising Research*, Vol. 51(4), 578-585.
- Pentus, K.; Mehine, T., and Kuusik, A. (2014), "Considering Emotions in Product Package Design through Combining Conjoint Analysis with Psycho Physiological Measurements," *Procedia-Social and Behavioral Sciences*, Vol. 148, 280-290.
- Poels, K., Dewitte, S. (2006), "How to Capture the Heart? Reviewing 20 Years of Emotion Measurement in Advertising," in: *Journal of Advertising Research*, Vol. 46(1), 18-37.

- Ramalho, J., and Chambel, T. (2013, October), "Immersive 360 mobile video with an emotional perspective," In: *Proceedings of the 2013 ACM international workshop on Immersive media experiences* (pp. 35-40), ACM.
- Russell, C. A. (2002), "Investigating the effectiveness of product placements in television shows: The role of modality and plot connection congruence on brand memory and attitude," in: *Journal of consumer research*, Vol. 29(3), 306-318.
- Smith, E. E.; Reznik, S. J., Stewart, J. L., and Allen, J. J. (2017), "Assessing and conceptualizing frontal EEG asymmetry: An updated primer on recording, processing, analyzing, and interpreting frontal alpha asymmetry," in: *International Journal of Psychophysiology*, Vol. 111, 98-114.
- Smolic, A.; Mueller, K., Merkle, P., Fehn, C., Kauff, P., Eisert, P., and Wiegand, T. (2006), "3D video and free viewpoint video-technologies, applications and MPEG standards," in: *Multimedia and Expo, 2006 IEEE International Conference on* (pp. 2161-2164), IEEE.
- Su, Y. C., and Grauman, K. (2017), "Making 360-degree Video Watchable in 2D: Learning Videography for Click Free Viewing". *arXiv preprint arXiv:1703.00495*.
- Teixeira, T., Picard, R., and El Kaliouby, R. (2014), "Why, when, and how much to entertain consumers in advertisements? A web-based facial tracking field study," in: *Marketing Science*, Vol. 33(6), 809-827.
- Teixeira, T., Wedel, M., and Pieters, R. (2012), "Emotion-induced engagement in internet video advertisements," in: *Journal of Marketing Research*, Vol. 49(2), 144-159.
- Vecchiato, G.; Toppi, J., Astolfi, L., Fallani, F. D. V., Cincotti, F., Mattia, D., and Babiloni, F. (2011), "Spectral EEG frontal asymmetries correlate with the experienced pleasantness of TV commercial advertisements," in: *Medical and biological engineering and computing*, Vol. 49(5), 579-583.
- Visch, V. T.; Tan, E. S., and Molenaar, D. (2010), "The emotional and cognitive effect of immersion in film viewing," in: *Cognition and Emotion*, Vol. 24(8), 1439-1445.
- Wang, Y. J.; and Minor, M. S. (2008), "Validity, reliability, and applicability of psychophysiological techniques in marketing research," in: *Psychology and Marketing*, Vol. 25(2), 197-232.
- Wise, K., and Reeves, B. (2007), "The effect of user control on the cognitive and emotional processing of pictures," in: *Media Psychology*, Vol. 9(3), 549-566.
- YouTube 2016, "Most popular 360 Ads on YouTube - Cannes 2016" Accessed January 10. Retrieved from <https://www.thinkwithgoogle.com/intl/en-gb/platforms/video/leaderboards/360-ads-youtube-cannes-2016.html>



“Fool’s Gold”: Linking Materialism to Persuasion Knowledge Activation and Susceptibility to Embedded Advertising

Robert Freeman Cartwright, Suzanna J. Oprea, and Eva A. van Reijmersdal

1 Introduction

Within the first two seconds of the music video for “Focus” (2015), the artist Ariana Grande debuts a Samsung phone—clearly showing the brand logo and using the product to write the title of the track. The usage and incorporation of a brand into a storyline is an advertising technique known as embedded advertising, as the brand is embedded into the content (Bhatnagar et al., 2003). Although this practice is used in other forms of media such as television, movies, vlogs, and video games, embedded advertising usage in music videos grew by 15.9% in 2015 with over 1,100 brands working with artists (PQ Media, 2015; Smith, 2017). An explanation for embedded advertising’s growth in the music video medium involves its relevance in reaching a young demographic. Youngsters (i.e., adolescents and young adults between the ages of 12 and 24) frequently watch music videos, and often do so via YouTube. As many as 84% of adolescents and young adults watch music videos on YouTube at least once a month (Smith, 2017).

Both adolescents and young adults are frequently exposed to embedded advertising in music videos, yet the former are believed to be particularly susceptible to its effects because of their insecurities and susceptibility to peer influence (Caspi and Roberts, 2001). The more insecure adolescents are, the more their personalities are subjective to change, and the more likely it is that they use brands for constructing their identity (Rhee and Johnson, 2012). Furthermore, the more insecure adolescents are more susceptible to peer influence, and tend to look up to celebrities and copy their behavior (Giles and Maltby, 2004): If their favorite celebrity owns a Samsung phone, they might be more likely to (want to) own one too. Though no such research has been conducted among adolescents, research with young adults showed that women want to buy the products owned by their favorite TV-characters (Voorveld et al., 2017).

Compared to older generations, adolescents show heightened levels of materialism (Jaspers and Pieters, 2016) and this is yet another reason why adolescents may be particularly vulnerable to the effects of embedded advertising. Past research has not only shown that brand conscious individuals think of themselves as being more susceptible to embedded advertising (Nelson and McLeod, 2005), but also suggests that they are. Materialists tend to be highly brand con-

scious as they typically believe it is important to own and acquire products and brands, for the reason that they lead to enhanced happiness and success (Richins and Dawson, 1992). Materialistic individuals display higher levels of brand alertness, implying that they can recognize embedded advertising faster (i.e., show higher levels of so-called conceptual persuasion knowledge). Yet, at the same time, materialistic individuals may use embedded advertising as a source of information / inspiration, be less critical about its content (i.e., show lower levels of so-called attitudinal persuasion knowledge) and – therefore – be more susceptible to its effects (e.g., as found by Voorveld et al., 2017).

Despite the role that materialism *could* play in predicting advertising effectiveness, to our knowledge there has not been a previous study looking into (1) the effect of materialism on adolescents' persuasion knowledge activation while watching a music video containing embedded advertising, (2) the effect of materialism on adolescents' brand responses after watching a music video containing embedded advertising, and (3) adolescents' attitudes towards embedded advertising in music videos. This study's aim is to provide insights into the role of materialism in the processing, effects, and acceptance of attitudes towards embedded advertising in music videos among adolescents.

The results of this study are both scientifically and socially relevant because they help improve our understanding of factors determining adolescents' susceptibility to the effects of embedded advertising. These insights are not only important for academics and companies, but also for policy makers who are set out to implement interventions to reduce advertising effects on youth.

2 Theoretical Framework

As said, materialism deals with individuals' views on products and brands: the extent to which their ownership is deemed central to one's life, and considered crucial for achieving happiness and success (Richins and Dawson, 1992). Materialism can be perceived as a state (i.e., meaning it is subject to gradual change, see for instance Oprea et al., 2014) or as a trait (i.e., meaning it is stable, or at least within generations and/or life phases, see Jaspers and Pieters, 2016). As previous research has indicated that a one-time exposure to an advertisement does not induce materialism (Cartwright and Oprea, 2016), we will treat it as a state within this study. Over the decades, advertising has shifted its focus from promoting the utilitarian features of a product to promoting materialistic themes (Belk and Pollay, 1985). Advertisers use materialistic cues and themes as they serve to enhance the tone and persuasive intent of the advertised message (Phillips and McQuarrie, 2004; Borgerson and Schroeder, 2002). Though accumulative exposure to these cues and themes in advertising was found to positively predict materialism in longitudinal research (e.g., Oprea et al., 2014), we test the

assumption that in a single-exposure scenario, materialism *predicts* adolescents’ vulnerability to the materialistic cues and themes in embedded advertising.

2.1 *Materialism and Persuasion Knowledge Activation*

Persuasion knowledge is a multi-faceted construct, and includes both conceptual and attitudinal components. According to Robertson and Rossiter (1974), persuasion knowledge evolves and grows in three stages during the developmental stages in childhood. During the first stage, children learn to recognize simple forms of advertising (in traditional media that is; at the age of 11 still struggle to recognize even simple Internet banners, see Vanwesenbeeck, Oprea and Smits, 2017). During the second stage, children gradually learn to also understand that advertising is made to sell products. Roberts (1983) discovered that by approximately the age of 8, most children have a basic understanding of the selling intent within traditional television commercials. These two first stages pertain to the development of conceptual advertising literacy, yet the third relates to attitudinal persuasion knowledge. Recognizing advertising and its selling intent is prerequisite to children’s / adolescents’ ability to scrutinize its content. In the third and last stage, so do Robertson and Rossiter (1974) argue, young adolescents may be able to understand the truthfulness and validity about advertising. Rozendaal et al., (2011) refined the concepts of attitudinal persuasion knowledge by introducing new elements such as trust and credibility.

This sequence was developed using explicit television advertising as its stimuli. However, embedded advertising presents a unique challenge to our abilities of activating psychological defense mechanisms to cope with being advertised to. This type of advertising obscures the lines between programming content and advertising. Such that, advertised messages can be hidden—often without individuals consciously recognizing the brand (Van Reijmersdal et al., 2007). If an individual cannot recognize the content as advertising, they cannot process the selling intent within it, thus are not able to determine whether the advertising is trustworthy.

The relationship between conceptual and attitudinal persuasion knowledge has been examined for television, (Boerman et al., 2012, 2014; Cain, 2011), advergames (Van Reijmersdal et al., 2015; An et al., 2014), and music videos (Matthes and Naderer, 2015). However, materialism has not been included in these studies. The complexity of materialism and its role within the psychological processes of persuasion remain unexamined; save for one study by Koller et al., (2013), which found an exploratory negative correlation between materialism and adults’ persuasion knowledge. Their measure for persuasion knowledge (derived from Bearden et al., 2001), however, only includes items on attitudinal persuasion knowledge and not conceptual persuasion knowledge. Hence, more materialistic individuals seem to be less likely to possess or activate attitudinal

persuasion knowledge, but we don't know whether this is also true in the context of embedded advertising, for conceptual persuasion knowledge, for the adolescent demographic. In order to identify the role of materialism within the spectrum of psychological processing of embedded advertising, the following exploratory research question has been posed:

RQ1: How is adolescents' materialism related to their activation of conceptual and of attitudinal persuasion knowledge regarding embedded advertising in music videos?

2.2 *Materialism and Brand Responses*

The effectiveness of traditional advertising is determined by examining whether an advertisement or commercial results in higher brand recall, improved brand attitude, and higher behavioral intention (for a review see, Van Reijmersdal et al., 2009). The difference between traditional and embedded advertising is that traditional advertising is explicit, whereas embedded advertising is covert. Often the brand may consciously go unnoticed (Gupta and Lord, 1998). Still, given that materialistic adolescents have a higher general brand awareness, they might be more likely to spot and recognize embedded brands. Previous research has shown that materialistic adult women are susceptible to product placement in ordinary TV content (Voorveld et al., 2017). In this study we investigate whether the same holds for adolescents in a music video context:

RQ2: How is adolescents' materialism related to their responses to the brand (i.e. brand recall, brand attitude, and behavioral intention)?

2.3 *Materialism and Attitude Towards Embedded Advertising*

As explained before, materialism and brand consciousness are closely linked. Still, although research has found that brand conscious individuals were more favorable of embedded advertised as opposed to their peers (Nelson and McLeod, 2005), the relation between materialism and attitude towards embedded advertising is yet to be examined. To narrow this gap, the final research question has been posed:

RQ3: How is adolescents' materialism related to their attitude toward embedded advertising?

3 **Methods and Results**

To answer the before mentioned research questions, we conducted a secondary analysis on a dataset from a study that was originally designed to investigate whether disclosures types mitigate embedded advertising's effects (cf. Cartwright et al., 2017). The study included four experimental conditions, each using a different type of sponsorship disclosure. The dataset contained information on