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When the Medium Is the Message: A Meta-Analysis of Creative Media Advertising Effects

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ABSTRACT

Creative media advertising is a specific type of unconventional advertising in which a regular physical object serves as a medium to carry an advertising message. To better understand the workings of this type of advertising, we conducted a meta-analysis. In this study, we explore the direct effects of creative media advertising, several moderators, and the possible underlying mechanisms. The results show that exposure to creative (versus traditional) media advertising has an overall positive effect on brand association strength and persuasion (i.e., ad attitude, brand attitude, purchase intentions, and electronic word of mouth [eWOM]). Both these effects are moderated by metaphor use, meaning that the effects are stronger when the physical object is a good metaphor for the message it carries. Furthermore, indirect (e.g., social media, printed picture) exposure to the message positively moderates the effect of creative media advertising on brand association strength but not on persuasion. Brand familiarity does not play a moderating role. Finally, a meta-analytic structural equation modeling (SEM) procedure was used to show that the main underlying mechanism of creative media advertising persuasiveness is surprise—and not perceived persuasive intent. For practitioners, this study shows that creative media ads are more effective when leveraging surprise and metaphors.

The medium is the message: These were the iconic words Marshall McLuhan (1964) used to stress the importance of media in communication. Where this holds true for communication in general, it also especially does for advertising formats like creative media advertising. Creative media advertising is a specific type of unconventional marketing communication in which a regular physical object serves as a medium to carry an advertising message (Dahlén 2005a, 2005b; Dahlén and Edenius 2007; Rauwers et al. 2018). A survey among ad agencies showed that more than one-third of agencies develop creative media ads for their clients (Meijers, Eelen, and Voorveld 2016).

A recent example of creative media advertising is the award-winning Heineken “Shutter Ads” campaign

(Cannes Lions 2022; Heineken 2021). During the COVID-19 pandemic, bars around the world were forced to close. On the closed shutters of more than 5,000 bars worldwide, Heineken used these spaces to advertise a hopeful slogan: “See this ad, enjoy this bar tomorrow.” The brewing company paid the involved bars for these ad spaces to help them cope financially with the consequences of the lockdown. When, after the lockdowns ended, consumers would pass by regular bar shutters, they might still be reminded of the ad campaign and order or purchase a Heineken. Although this is just one example, creative media advertising can range from egg cartons (e.g., Dahlén 2005a) to fire extinguishers (e.g., Wottrich and Voorveld 2016) and drinking straws (e.g., Eelen and Seiler 2016).

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Over the past two decades, advertising scholars have studied the effectiveness of creative media advertising (e.g., Dahlén 2005a, 2005b; Dahlén and Edenius 2007; Rauwers et al. 2018). While research has shown that creative media advertising can lead to more positive consumer responses than advertising in traditional media (e.g., print, radio, TV), a thorough quantitative synthesis of its effects is lacking.

In the current study, we conduct a meta-analysis to systematically quantify the effects of creative media advertising. By integrating 225 effect sizes from 26 experimental studies, we estimate integrated effect sizes for the effects of creative media advertising on brand association strength and persuasion (i.e., ad attitude, brand attitude, purchase intentions, and electronic word of mouth [eWOM]). Furthermore, the role of several moderators of these effects is explored. Some of these moderators have been proposed and tested in the literature before (i.e., the use of metaphors and brand familiarity). Others are novel and important in the current digital age (i.e., type of exposure; seeing the ad indirectly/online as a printed picture versus directly/in real life).

Regarding the underlying mechanisms of creative media advertising effectiveness, two main explanations are proposed in the literature: surprise (Hutter and Hoffmann 2014) and perceived persuasive intent (Rauwers and Van Noort 2016). In this context, surprise captures an emotional response to the unexpectedness of the ad characterized by feeling startled, which is hypothesized to lead to extra attention to the ad. Perceived persuasive intent, in contrast, captures the (lower) likelihood that one recognizes a creative media ad as advertising and would reduce resistance toward the ad.

For both mechanisms, the empirical evidence is mixed. When it comes to surprise, most empirical evidence suggests surprise is a positive mediator of creative media effects (Eelen et al. 2016), but some studies report nonsignificant effects (e.g., Rosengren, Modig, and Dahlén 2015). For perceived persuasive intent, some studies find that creative media advertising leads to a lower perceived persuasive intent (e.g., Dahlén and Edenius 2007), while others find no or even positive effects (Rauwers et al. 2018; Rauwers and Van Noort 2016). To resolve this, we will use a meta-analytic structural equation modeling (SEM) procedure to examine the (relative) roles of surprise and perceived persuasive intent in explaining the persuasiveness of creative media advertising.

This meta-analysis contributes to the extant literature in three distinct ways: (1) by systematically

comparing different consumer responses (e.g., ad attitudes, eWOM) to creative media advertising, (2) by investigating the role of several moderators (i.e., metaphor use, brand familiarity, type of exposure) of creative media advertising effects, and (3) by examining the underlying mechanisms of creative media advertising persuasiveness.

Conceptualizing Creative Media Advertising

Creative media advertising is defined as an advertising strategy that makes use of a nontraditional, novel medium that is not associated with advertising (Dahlén 2005a). Specifically, a regular physical object serves as a medium and carries an advertising message (e.g., the shutters of bars used by Heineken). This stands in contrast to traditional advertising media, such as print, TV, radio, billboards, and online (e.g., banners on websites) or social media (e.g., sponsored posts), where the medium is typically associated with advertising. It is important to note that a creative media ad is not necessarily more creative than a traditional ad (for a discussion of ad creativity, see Rosengren et al. 2020). The term *creative* essentially refers to the fact that a nontraditional medium is being used (Rauwers et al. 2018). Nevertheless, though the term *physical object advertising* would be more in line with the actual conceptualization of creative media advertising, we adhere to the naming of the construct as defined in prior academic research (Dahlén 2005a, 2005b; Rauwers et al. 2018).

Advertising strategies closely related to creative media advertising are ambient marketing, guerilla marketing, and street marketing. They overlap, yet none specifically refer to physical objects as advertising media. Creative media advertising can be considered ambient marketing when defined as “non-traditional out-of-home” media (Shankar and Horton 1999, p. 305). However, previous research has also classified digital media as ambient and nontraditional (Darley and Lim 2022), excluding physical objects. Creative media advertising is often encountered unexpectedly like guerilla marketing, but a flash mob (which can be a guerilla marketing tactic) does not entail physical objects. Similarly, some creative media advertising executions can be considered instances of street marketing—defined as using the public space for unconventional advertising (Levinson, Levinson, and Levinson 2007)—when encountered outdoors. However, not *all* street marketing actions are creative media ads, because street marketing (and ambient and guerrilla marketing) can also creatively use traditional

media. For instance, a billboard where a Miele vacuum cleaner is seen pulling a hot-air balloon from the sky (i.e., showing the strength of Miele vacuum cleaners) is an example of guerrilla, ambient, and street marketing but not of creative media advertising. This is because it makes use of a traditional medium (billboard) rather than a novel physical medium that generally does not carry advertising messages. Conversely, not all creative media ads are instances of street marketing. For example, think of pencils used typically to make notes and keep memories—but also distributed as merchandise to raise awareness for dementia (Meijers, Eelen, and Voorveld 2016).

Creative media advertising can thus be distinguished from other unconventional advertising actions by its use of a nontraditional physical medium. Other examples of creative media advertising are the use of an inflatable slide in a train station to allow passengers to get to the train tracks quickly (used as an ad by a mobile phone provider to illustrate the speed of its Internet; Eelen et al. 2016); handing out coffin-shaped bathing towels (as a campaign to illustrate the perils of sunbathing without sunscreen; Friends of Cancer Patients 2009); or having a dog wear a sign (as a striking ad for a coffee shop; Rosengren, Modig, and Dahlén 2015). This meta-analysis addresses the use of objects, from gadgets or merchandise to outdoor installations, and explains when and how such media, free from associations with ads, lead to positive outcomes among consumers.

The Main Effects of Creative Media Advertising

In the literature, creative (versus traditional) media advertising is found to positively affect both brand association strength and persuasion. In line with prior meta-analyses in the field of advertising (e.g., O’Keefe 2013; Van Berlo, van Reijmersdal, and Eisend 2021), the term *persuasion* is used to capture an overall integrated advertising effect and represents various affective and conative advertising effects (i.e., ad attitude, brand attitude, purchase intentions, and eWOM). Integrating affective and conative advertising effects is common practice in advertising meta-analyses because these effects are often comparable in direction and size (Eisend and Tarrahi 2016).

Effects on Brand Association Strength

The positive effects on brand association strength can be explained using human associative memory (HAM) theory (Van Osselaer and Janiszewski 2001), which posits that human memory is a network of nodes that

are connected through associative links. These associative links are created when two stimuli are presented at the same time. By pairing a brand with a novel physical medium, the associations people have with the medium are expected to also become associated with the brand (Dahlén 2005a; Dahlén, Granlund, et al. 2009). When companies choose wisely, creative media ads may be used to (re)position a brand in the desired direction and strengthen its brand associations.

For instance, many people will associate fire extinguishers with fires and heat. For a spicy salsa company, like Tabasco, these associations can be relevant for their products, which make a fire extinguisher a perfect creative medium to communicate that their sauce is very hot (Dahlén, Friberg, et al. 2009; De Graaf 2016; Wottrich and Voorveld 2016). This associative process is expected to be stronger for creative media ads than for traditional media ads, because a well-chosen physical medium is expected to reinforce the associations, whereas the traditional medium does not. Research has shown that even when a brand is no longer featured on the physical medium, the associations may endure over time (Dahlén, Granlund, et al. 2009). These associations are thus rather persistent. In the context of the fire extinguisher example, this means that each time a consumer passes a fire extinguisher the association with Tabasco may come to mind. All in all, we expect creative media advertising to lead to stronger brand associations than traditional media advertising.

H1: Creative (versus traditional) media advertising leads to stronger brand associations.

Effects on Persuasion

In addition to being effective in strengthening brand associations, creative media advertising messages are also believed to be more persuasive than those of traditional media advertising. In the literature, two potential explanations have been described. Compared to traditional media advertising, creative media advertising is believed to be (a) more likely to elicit surprise and (b) less likely to be recognized as advertising.

Both explanations are rooted in schema theory (Dahlén 2005a; Hutter and Hoffmann 2014). This theory explains how knowledge is stored (Rumelhart 1980) and posits that people store information (i.e., everything they know) about specific topics in schemata. To make sense of the world around them, people draw inferences from these schemata. Concretely, when encountering an ad while watching television, individuals are expected to activate their advertising

schema to help understand that the ad has persuasive intent (Friestad and Wright 1994). The advertising schema encompasses, among other things, all information on what ads usually look like, where people might encounter them, and expectations they might have concerning ads (e.g., that it is a persuasive tool; John and Whitney 1986).

Key to the effectiveness of creative media advertising is the fact that physical objects carrying advertising do not fit with people's operating advertising schema. When people experience a situation in which something occurs that is schema discrepant (e.g., an unexpected object, event, person, or action), they are expected to feel startled due to the unexpectedness of the situation (Maguire, Maguire, and Keane 2011; Noordewier, Topolinski, and van Dijk 2016). This startling experience is more generally known as surprise (Noordewier, Topolinski, and van Dijk 2016).

When advertising elicits surprise, this is expected to drive positive consumer responses. For starters, surprise can help advertisers break through the clutter by grabbing consumers' attention. In an advertising context, this is a great advantage, because people are known to actively try to avoid exposure to advertising (Benway 1998). As creative media advertising only partly fits the advertising schema, consumers are believed to try to make sense of what they are looking at, pausing other activities as a result (Hutter and Hoffmann 2014). Creative media advertising messages are thus more likely to be noticed and draw attention than traditional advertising messages. Furthermore, surprise is also believed to lead to higher advertising effectiveness, because deviation from expectation has been shown to lead to a higher appreciation of advertising (Van Mulken, Le Pair, and Forceville 2010) and is more likely to be shared online (Eelen and Seiler 2016).

A second explanation for the persuasiveness of creative media advertising is that creative media advertising is believed to be less likely categorized as advertising and subsequently leads to less resistance. Consumers are expected to show resistance toward an ad when they feel it tries to influence and persuade them (Friestad and Wright 1994)—in other words, when they recognize the persuasive intent of a message. This resistance may impair the persuasiveness of the ad and lead to less positive ad attitudes and lower purchase intentions (Fransen, Smit, and Verlegh 2015; Friestad and Wright 1994). Because creative media advertising does not fit existing advertising schema, it is less likely to be categorized as such (Dahlén and Edenius 2007). This would suggest that creative media

advertising messages (compared to traditional advertising ones) elicit lower levels of perceived persuasive intent, triggering less resistance, and resulting in a relatively higher persuasiveness of the message.

In sum, while the schema discrepancy of creative media advertising may, on the one hand, cause surprise and draw attention to the message, it may, on the other hand, also lessen the chance of being classified as advertising. Creative media advertising, compared to traditional media advertising, is therefore expected to lead to relatively higher advertising effectiveness. We formulated the following hypothesis:

H2: Creative (versus traditional) media advertising is more persuasive and leads to (a) more positive advertising attitudes, (b) more positive brand attitudes, (c) higher purchase intentions, and (d) more positive eWOM.

Moderators of Creative Media Advertising Effects

In the literature, several potential moderators are proposed for creative media advertising effects. Three important ones are included in this meta-analysis: The use of metaphors (metaphorical versus nonmetaphorical), brand familiarity (familiar versus unfamiliar), and the type of exposure (direct versus indirect).

Metaphor Use

Prior research suggests that the use of metaphors in creative media advertising can be advantageous (Dahlén 2005a; Keldermans and Smits 2017; Rosengren, Modig, and Dahlén 2015). This use, also sometimes defined as media-ad congruence, is characterized by choosing a creative medium that overlaps with the message that the advertiser wants to get across. For example, in the summer of 2012, the soft drink brand Sprite executed a campaign in which they placed a shower in the shape of a large soda machine on a hot beach where beachgoers could take a refreshing shower, to communicate that drinking Sprite is refreshing. The message (i.e., "Sprite is refreshing") and the medium (i.e., a refreshing shower on a hot day) thus overlap. This overlap is ultimately believed to help consumers interpret and understand the message and, as such, result in stronger brand associations and higher persuasion.

For the effect of creative media advertising on brand associations, metaphor use is expected to strengthen the effect, because the metaphorical medium implicitly communicates the advertising message (Dahlén 2005a). In the context of the Sprite example, if the brand wants to stress that Sprite is a

refreshing drink, the choice for the shower as a refreshment on the beach on a hot sunny day is appropriate. However, if Sprite would like to stress its natural ingredients, fresh lemons would be more suitable as a medium. The associations with the physical medium will be associated with the brand. We propose the following hypothesis:

H3: The effect of creative (versus traditional) media advertising on brand association strength is stronger when it concerns metaphorical creative (versus nonmetaphorical) media advertising.

The use of metaphorical messages is also expected to strengthen the persuasiveness of creative media advertising. In particular, people perceive metaphorical messages as more valuable (Dahlén, Granlund, et al. 2009). Subsequently, a higher perceived ad value is directly associated with more positive ad and brand responses, such as advertising attitudes, brand attitudes, purchase intentions, and eWOM, here referred to as persuasion (Modig, Dahlén, and Colliander 2014). Considering recent findings about the effectiveness of creative advertising, it could also be predicted that metaphorical creative media ads will be more persuasive than nonmetaphorical ones. It has been shown that creative ads have stronger positive effects on people's ad and brand attitudes if the creativity is expressed not only in terms of originality or newness but also in terms of appropriateness (Rosengren et al. 2020). Although physical objects containing advertising might certainly be novel and unexpected media for advertising, the ad may be perceived as more meaningful and relevant, hence appropriate, when the object embodies the message. In sum, we expect creative media advertising to be more effective when it concerns a metaphorical message, as opposed to a nonmetaphorical one. The following hypothesis is proposed:

H4: The effect of creative (versus traditional) media advertising on persuasion is stronger when it concerns metaphorical (versus nonmetaphorical) creative media advertising.

Brand Familiarity

In addition to metaphor use, brand familiarity is believed to be a moderator of creative media advertising effects as well. Brand familiarity reflects the degree to which consumers have had prior direct and indirect experiences with a brand (Campbell and Keller 2003; Rosengren et al. 2020). In the context of traditional media advertising, advertising from familiar brands is more likely to attract attention and be remembered than advertising from unfamiliar brands (Vaughan,

Beal, and Romaniuk 2016). For creative advertising messages, however, Rosengren and colleagues (2020) argue that familiarity with a brand might be less important for attracting attention to the ad. Attention is more likely to be driven by advertising creativity (the originality of the ad) rather than by familiarity with the brand.

Furthermore, Rosengren and colleagues (2020) point out that brand familiarity likely weakens the effects of creative advertising. One of the reasons for this is that consumers are expected to have more pre-existing associations with familiar brands than with unfamiliar brands, and because changing existing associations is believed to be more difficult than creating new associations (Campbell and Keller 2003). This suggests that creative media advertising from familiar brands (with which consumers already have many associations) will be less effective than creative media advertising from unfamiliar brands (with which consumers have little to no associations). We have formulated the following hypothesis:

H5: The effect of creative (versus traditional) media advertising on brand association strength is weaker when it concerns advertising from familiar (versus unfamiliar) brands.

Similar to the effect on brand association strength, we expect that consumers are also less likely to be persuaded by creative media advertising from a familiar brand when compared to an unfamiliar brand. Based on prior experience with familiar brands, consumers are expected to have more stable preexisting attitudes toward these brands than toward unfamiliar brands (Campbell and Keller 2003; Rosengren et al. 2020; Van Berlo, van Reijmersdal, and Rozendaal 2020). When confronted with creative media advertising from a familiar brand, consumers have additional prior experiences with the brand to draw from when asked for their evaluation of the brand—prior experiences which consumers do not have with unfamiliar brands. This suggests they are less likely to be affected by an advertising message from this type of brand.

Notably, Wottrich and Voorveld (2016) have proposed an opposite moderating relationship and argued that brand familiarity might instead strengthen the effect of creative media advertising on persuasion. They argue that existing associations with a familiar brand (e.g., bar shutters, Heineken beer) can aid consumers in comprehending creative media advertising from the brand and that this subsequently drives persuasion. Research into the processing of metaphors supports this theory and has shown that comprehension of metaphor is an important predictor of the

overall appreciation of a metaphorical message (Van Mulken, Le Pair, and Forceville 2010). We formulate the following hypothesis:

H6: The effect of creative (versus traditional) media advertising on persuasion is weaker when it concerns advertising from familiar (versus unfamiliar) brands.

Type of Exposure

One of the challenges of creative media advertising is that, due to the use of physical objects, it has a limited reach. Usually, it is much easier to reach people through advertising in media more typically associated with advertising, like television (e.g., Katz 1960) or social media. One way that creative media advertising can accomplish a higher reach is when pictures (or videos) of a creative media advertising object go viral.

It is unclear, though, whether being exposed to creative media advertising indirectly has the same effects as being exposed directly. Direct exposure is defined as seeing a creative media advertising execution in real life, for instance, having seen Sprite's soda machine showers on the beach firsthand in 2012. Indirect exposure is defined as seeing the creative media ad mediated—for example, seeing an image of the soda machine showers on social media, in a print ad, or on a friend's phone. Researchers investigating the effectiveness of creative media advertising by using indirect exposure suggest that such indirect advertising formats can be effective (Dahlén 2005a; Dahlén and Edenius 2007; Dahlén, Granlund, et al. 2009; Eelen and Seiler 2016; Hutter 2015). To provide insights on the persuasiveness of creative media advertising via direct or indirect exposure, the following research question is proposed:

RQ1: Does type of exposure (direct versus indirect) moderate the effect of creative (versus traditional) media advertising on persuasion?

Underlying Mechanisms of Creative Media Advertising

Surprise and perceived persuasive intent are often proposed as underlying mechanisms for the positive effects of creative media advertising on persuasion (e.g., Dahlén 2005a, 2005b; Dahlén and Edenius 2007; Eelen and Seiler 2016; Hutter 2015; Hutter and Hoffmann 2011, 2014; Rauwers and Van Noort 2016; Rauwers et al. 2018). However, these underlying processes have been investigated directly only a few times and yielded mixed results. Most empirical evidence seems to suggest that surprise is a positive mediator

of creative media effects (for an overview, see the literature review by Eelen et al. 2016). A notable exception is a study by Rosengren, Modig, and Dahlén (2015), who reported nonsignificant mediation effects of creative media advertising on brand attitude and purchase intentions via surprise. For the effect of perceived persuasive intent, the evidence remains particularly inconclusive, with some studies finding that creative media advertising leads to a lower perceived persuasive intent (Dahlén and Edenius 2007) while others find no effect or even a positive effect (Rauwers et al. 2018; Rauwers and Van Noort 2016).

To better understand the underlying processes of creative media advertising, we use a meta-analytic SEM procedure and examine the (relative) roles of surprise and perceived persuasive intent in explaining the persuasiveness of creative media advertising. We formulate an additional research question:

RQ2: To what extent can the persuasive effect of creative (versus traditional) media advertising be explained by surprise and perceived persuasive intent?

Methodology

Search and Selection Procedure

For this meta-analysis, we followed recommendations for conducting meta-analyses in advertising research (Eisend 2017). While discussing the review process, we distinguish papers and data sets. We use the term *paper* to refer to any document reporting original analyses and findings (e.g., journal article, book chapter, conference paper) and the term *data set* to refer specifically to the actual collection of data related to a particular experiment or survey. We make this distinction partly to allow for a more accurate discussion of the review process (e.g., a single paper could report on multiple data sets, or vice versa) but primarily to avoid including duplicate effect sizes in our analyses—which are ultimately based on data sets, rather than on papers.

A comprehensive search performed in March 2022 was conducted across three electronic databases (i.e., PsycINFO, Business Source Premier, and Communication Mass Media Complete) to identify all relevant published papers for our meta-analysis. Furthermore, we searched for unpublished papers (e.g., doctoral and master's theses) via the databases ProQuest, Narcis, Dare, DartEurope, and PQDT. By including both published and unpublished research in this meta-analysis, we aim to mitigate the impact of publication bias on our estimates (Eisend and Tarrahi

2014). For this search, we formulated an initial broad search string: “(advertising OR marketing) AND (creative media OR guer*illa OR ambient OR non*traditional OR unconventional).” No restrictions were imposed regarding the publication dates of the papers. This resulted in 10,773 unique papers (1,348 duplicates were omitted).

First, the titles and abstracts of all papers were scanned to determine the potential relevance of each. If the topic of a paper was creative media advertising, the paper would be considered for further examination. For these papers, we applied backward and forward searching procedures using both Web of Science and Google Scholar to see whether new studies could be found based on citations and references to these papers. Furthermore, a call was made for unpublished studies via various channels (e.g., mailing lists), and authors of previous creative media advertising publications were actively approached with the question of whether they may have had (un)published studies in the field of creative media advertising. These steps were repeated until no new potentially relevant papers were found.

Selection Criteria

For determining the relevance of each paper, we adopted four selection criteria. To be selected for our meta-analysis, papers had to (1) report on experimental data, (2) investigate the effects of creative media advertising by comparing creative media advertising with traditional media (e.g., magazine, TV) advertising, (3) be written in English, and (4) provide sufficient information to compute at least a single relevant effect size (e.g., means, standard deviations, group sample sizes). When all but the final criterion were met, the paper’s authors were contacted and asked whether they would be able to share any missing information.

Final Sample and Coding

A total of 26 relevant papers were found that met all selection criteria (covering 38 unique data sets). From each of these papers, we extracted and coded all relevant descriptive and statistical information. Definitions and operationalizations of the coded variables can be found in Table 1. When available, we also recorded reliability statistics for the scales that were used, because this information would allow us to attenuate individual effect size estimates (Eisend 2017). An overview of the final selection of papers and data sets can be found in Table 2.

Effect Size Computation

After all descriptive and statistical information was collected, we computed all individual effect sizes following suggestions by Schmidt and Hunter (2014). We used point-biserial correlation as common effect size. A total of 225 individual effect sizes were computed. An overview of the number of effect sizes per outcome variable can be found in Tables 1 and 3.

Most individual effect sizes (and corresponding variances) could be estimated directly from the coded information. However, in some cases, the information was limited, which meant we had to estimate a different effect size first and then apply an algebraic transformation to express the estimated effect size as a point-biserial correlation. To facilitate the transformations we used the *R* packages psychmeta (Dahlke and Wiernik 2019) and metafor (Viechtbauer 2010).

Individual Effect Size Correction

To increase the accuracy of our measurements, we corrected the observed effect sizes for several artifacts (i.e., study imperfections). We started by correcting the effect sizes for small-sample bias (Schmidt and Hunter 2014) using the following formula:

$$r_c = \frac{r_{obs}}{\left(\frac{2n-2}{2n-1}\right)} \quad (1)$$

where r_{obs} represents the observed correlation, r_c the correlation corrected for small-sample bias, and n the sample size within a given data set. This correction is important because it accounts for the fact that estimates from smaller (compared to larger) samples less closely reflect their population estimates. Subsequently, we corrected for measurement error, because this allows for making estimations that more closely resemble the true (rather than the observed) effect size. We used the following formula:

$$r_c = \frac{r_{xy}}{\sqrt{r_{yy}}} \quad (2)$$

where r_c represents the corrected correlation, r_{xy} the uncorrected correlation, and r_{yy} the reliability (i.e., Cronbach’s alpha) of an outcome variable within a given data set. When a study did not report the reliability of an outcome variable, we used the mean reliability (across data sets) for that outcome variable instead.

Model Specification Hierarchical Linear Model

We estimated several random-effects metaregression models to determine the effects of creative media

Table 1. Variables used for the meta-analysis.

Variable Name	Hypothesis/Research Question	Description	Operationalization	Data
Independent				
Type of advertising (creative media advertising vs. traditional media advertising)		Captures whether the ad makes use of a traditional medium or an unconventional medium	Coded as 1 = creative media advertising; 0 = traditional media advertising	
Dependent				
Brand association strength	H1	Captures the strength of associations one has with a brand	Brand association strength	31 ES across 7 data sets
Persuasion effects	H2	Captures whether one is persuaded by the ad	Ad attitude, brand attitude, purchase intentions, eWOM	107 ES across 34 data sets
Moderator				
Metaphor use (metaphorical vs. nonmetaphorical)	H3, H4	Captures whether the characteristics of the unconventional medium overlap with the advertising message (e.g., a shower for a refreshing drink)	Coded as 1 = metaphorical; 0 = nonmetaphorical	112/128 effect sizes were coded metaphorical (87.5%)
Brand familiarity (unfamiliar vs. familiar)	H5, H6	Captures whether the brand in the ad was unfamiliar or familiar. Fictitious brands were classified as unfamiliar.	Coded as 1 = familiar brand; 0 = unfamiliar brand	71/102 effect sizes were coded familiar brand (69.6%)
Type of exposure (direct vs. indirect)	RQ1	Captures whether the ad was seen in real life (direct) or on a picture (indirect)	Coded as 1 = direct exposure; 0 = indirect exposure	4/38 data sets were coded direct exposure (10.5%)
Mediator				
Surprise	RQ2	Captures a brief emotional state which is characterized by a startling response to an unexpected event	Surprise	
Perceived persuasive intent	RQ2	Captures the degree to which one is likely to classify a message as being persuasive	Perceived persuasive intent	
Exploratory				
Type of paper (unpublished vs. published)		Captures whether the paper is published (e.g., journal article, book chapter) or not (e.g., master's thesis)	Coded as 1 = published paper; 0 = unpublished paper	12/26 papers were coded published (46.2%)
Type of outcome variable (ad related vs. brand related)		Captures whether a persuasive outcome variable is ad related or brand related	Coded as 1 = ad related; 2 = brand related	46/107 effect sizes were coded ad related (43.0%)

advertising on brand associations and persuasion and to examine the moderating roles of metaphor use, brand familiarity, and type of exposure in these effects. To account for the dependency between effect sizes from the same studies, we modeled errors nested within studies. This so-called hierarchical linear model (HLM) approach is considered a best practice when testing for moderation in meta-analyses (Bijmolt and Pieters 2001). Following suggestions by Langan and colleagues (2019), restricted maximum likelihood (REML) heterogeneity variance estimators were used. We specified the following general model:

$$r_{ij} = \rho + \mu_j + \mu_{ij} + e_{ij} \quad (3)$$

where $i = 1, \dots, k$ effect size estimates, $j = 1, \dots, k$ data sets. For estimating the moderator roles of

metaphor use, brand familiarity, and type of exposure, we added a parameter for the moderator, resulting in the following general model specification:

$$r_{ij} = \gamma_{00} + \gamma_{01} * X_j + v_{0j} + u_{ij} \quad (4)$$

where $i = 1, \dots, k$ effect size estimates, $j = 1, \dots, k$ data sets, X_j = the average moderator value in the j th data set, and v_{0j} = residual error of the j th data set.

Publication Bias

To assess the validity of our meta-analytical estimates, we approximated the potential influence of publication bias in our estimates. Publication bias occurs when the likelihood that a paper is published is related to the effect size reported in that paper. We performed Egger's correlation tests (Sterne and Egger

Table 2. Overview of selected studies (ordered alphabetically).

Paper Characteristics		Data Set Characteristics				Study Design Characteristics		
Authors (year)	Source ^a	Data Set(s)	N	Country ^b	M _{Age}	Creative Medium	Traditional Medium	Outcome Variable(s)
Bohlander (2017)	—	1	225	NL	29.6	Break-glass-in-emergency box, public transport ticket gate	Poster	Brand association strength, persuasion
Dahlén (2005a)	JA	2	290	SE	.	Carton of eggs, elevator	Newspaper ad	Brand association strength, persuasion
Dahlén (2005b)	JCIRA	1	299 157	— SE	.	— Bag of bread	— Poster	— Brand association strength, persuasion
Dahlén and Edenius (2007)	JCIRA	2	205 212	SE —	.	Carton of eggs Elevator	Newspaper ad	Persuasion —
Dahlén, Friberg, et al. (2009)	JA	1	126	SE	.	Fire extinguisher	Poster	Brand association strength
Dahlén, Granlund, et al. (2009)	JCM	1	398	SE	.	Carton of eggs, fountain, crime-scene silhouette, steaming manhole, trash bin, pedestrian crossing	Poster	Persuasion
De Graaf (2016)	—	1	338	NL	37.5	Fire extinguisher, trash bin	Poster	Brand association strength, persuasion
De Jong (2018)	—	1	80	NL	23.0	Water cooler	Poster	Persuasion
Eelen and Seiler (2016)	AAR	1	287	NL	38.4	Drinking straw	Magazine ad	Persuasion
Heaton (2016)	—	2	169 356	NL —	40.5 39.8	Fountain, beach shower —	Magazine ad —	Persuasion —
Hutter (2015)	JMC	1	234	DE	28.2	Steaming manhole	Poster on a billboard	Persuasion
Jurca, Romoñi-Maniu, and Zaharie (2013)	MID	1	261	RO	.	Public playground	Magazine ad	Persuasion
Koedijk (2016)	—	2	123 130	NL —	31.4 34.5	Park bench —	Print ad —	Persuasion —
Koerselman (2014)	—	2	128 127	NL —	30.8 —	Plant —	Flyer —	Persuasion —
Meijer (2017)	—	2	102 105	NL —	28.1 25.6	Post-It notes on skin —	Magazine ad —	Persuasion —
Morlang (2015)	—	1	200	NL	34.0	Recycle bin, park bench	Newspaper ad	Brand association strength, persuasion
Özkan (2019)	—	4	67 67 65 65	TR TR — TR	27.0 — — —	Pedestrian crossing Bus station Trash bin Sofa	Print ad — — —	Persuasion — — —
Polman (2016)	—	2	93 88	NL —	39.6 39.2	Beach shower —	Flyer —	Persuasion —
Rauwers et al. (2018)	IJA	2	78 108	NL —	55.2 53.0	Supermarket cart —	Poster A4 board in cart	Persuasion —
Rauwers and Van Noort (2016)	AAR	1	68	NL	24.34	Supermarket cart	Poster	Persuasion
Rosengren, Modig, and Dahlén (2015)	JMC	1	293	SE	40	Clock, dog	Newspaper	Persuasion
Schoppers (2014)	—	1	140	NL	31.1	Stairs	Billboard/poster	Persuasion
Seiler (2013)	—	1	128	NL	24.6	Drinking straw	Magazine ad	Persuasion
Velsen (2016)	—	1	158	NL	26.6	Elevator	Poster	Persuasion
Volkerink (2013)	—	2	70 80	NL —	28.2 27.55	Snow cannon Tunnel	TV commercial —	Persuasion —
Wottrich and Voorveld (2016)	AAR	1	89	NL	21.1	Fire extinguisher	Poster	Persuasion

Note. Duplicate data set information is indicated with an em dash (—) and missing information with a dot (.).

^aEm dash (—) = not published; JA = *Journal of Advertising*; JCIRA = *Journal of Current Issues & Research in Advertising*; JCM = *Journal of Consumer Marketing*; AAR = *Advances in Advertising Research*; JMC = *Journal of Marketing Communications*; MID = *Marketing from Information to Decision*; IJA = *International Journal of Advertising*.

^bNL = the Netherlands; SE = Sweden; DE = Germany; RO = Romania; TR = Turkey.

Table 3. Matrix of meta-analytically integrated correlations.

	Creative Media Advertising	Surprise	Perceived Persuasive Intent	Persuasion
Creative media advertising	1	0.599	−0.085	0.147
Surprise	15 19 2,656	1	−0.008	0.368
Perceived persuasive intent	9 11 1,176	5 5 511	1	0.025
Persuasion	34 107 5,835	12 34 2,154	5 18 551	1

Note. The upper triangle shows the variance-weighted, reliability-corrected estimates of the correlation coefficients. The lower triangle shows the corresponding number of data sets (k), number of effect sizes (ES), and cumulative sample size (n) for each correlation coefficient. The total number of effect sizes included in the correlation matrix is 194 and the harmonic mean of sample sizes 1,065.

Table 4. Integrated effect sizes and heterogeneity estimates.

Output variables	Integrated Effect Sizes*						Heterogeneity [†]		Publication Bias
	k	ES	N	\bar{r}_c	SE	95% CI	Q	σ^2 (σ)	z_i
Brand association strength	7	31	1,635	.20	.06	.08 .31	315.90	.02 (.14)	−3.26
Persuasion	34	107	5,835	.15	.03	.08 .21	1,112.82	.03 (.19)	−3.62
Ad attitude	24	37	3,979	.19	.04	.10 .28	504.75	.04 (.21)	−3.63
Brand attitude	24	34	4,336	.09	.04	.01 .16	167.04	.03 (.17)	−0.33
Purchase intentions	21	26	3,149	.07	.04	.01 .14	156.95	.02 (.14)	−0.35
eWOM	8	10	1,318	.35	.06	.23 .47	38.83	.03 (.16)	−2.80

Note. Point-biserial regression coefficients, Q statistics, and z scores in bold are significant at the $\alpha = .05$ level. The statistics to estimate publication bias is the z score for the (i) Egger's regression test (Sterne and Egger 2005).

* k = amount of data sets; ES = number of individual effect sizes; N = total sample size; \bar{r}_c = attenuated integrated effect size (point-biserial correlation); SE = standard error of attenuated integrated effect size; 95% CI = 95% confidence interval of the attenuated integrated effect size.

[†] Q = weighted sum of squared differences between individual study effects and the attenuated integrated effect size; σ^2 = random variance component.

2005) to test for the association between the observed effect sizes and the precision of the corresponding studies. A significant association, in this case, could indicate the presence of publication bias. As shown in Table 4, the estimates of brand association strength, ad attitude, and eWOM (but not brand attitude and purchase intentions) might have been affected by publication bias (for further implications, see Discussion section).

Model Specification Meta-Analytic Structural Equation Modeling

To examine the underlying mechanism of creative media advertising persuasiveness, we used meta-analytic SEM. A pooled correlation matrix was created (see Table 3) following a procedure similar to the one described in Segijn and Eisend (2019). We started by coding the effects of creative media advertising on measures of persuasion, surprise, and perceived persuasive intent. Afterward, we completed the pooled correlation matrix by identifying all correlations between the variables creative media advertising, surprise, and perceived persuasive intent in the data sets included in the meta-analysis. The correlations were integrated and attenuated similarly to the correlations used to estimate the HLM. The harmonic mean of sample sizes ($N = 1,065$) was used as the sample size of the analysis. Furthermore, the input matrix was estimated with an estimation constraint (i.e., the

diagonal of the model implied correlation matrix consists of 1s). This constraint was necessary to account for the fact that maximum likelihood estimation generally assumes analysis of the covariance (instead of correlation) matrix as input (Jak 2015). Furthermore, error terms of the variables were constrained to 1, because measurement error was already corrected for during data preparation. Suggestions by Hu and Bentler (1999) were followed when evaluating the fit of the model (good fit: CFI $\geq .90$, TLI $\geq .95$, RMSEA $< .08$, SRMR $< .08$).

Results

Main Effects of Creative Media Advertising

The results, as displayed in Table 4, show significant integrated effects of creative media advertising on brand association strength and persuasion.

Main Effect on Brand Association Strength

Compared to traditional media advertising, creative media advertising was found to be more effective in strengthening brand associations ($\bar{r}_c = .20$), supporting hypothesis 1.

Main Effect on Persuasion

Furthermore, creative media advertising leads to more positive persuasive outcomes than traditional media advertising ($\bar{r}_c = .15$). When estimating the effect of

Table 5. Meta-regression estimates explaining brand association strength.

Moderator Variables	Brand Association Strength								
	<i>b</i>	SE	<i>z</i>	95% CI	σ^2 (σ)	<i>ES</i>	<i>k</i>	<i>Q</i>	<i>Q_M</i>
Main analyses									
Use of metaphors (versus nonmetaphorical)	.39	.03	11.85	[.32, .45]					
Familiar brand (versus unfamiliar brand)	.11	.09	1.25	[-.06, .27]	.01 (.07)	28	6	115.89***	152.98***
Direct exposure (versus indirect exposure)	-.26	.12	-2.27	[-.49, -.04]					
Exploratory analysis									
Published papers (versus unpublished)	.17	.08	2.07	[.01, .33]					

Note. Regression coefficients in bold are significant at least at the $\alpha = .05$ level. σ^2 = random variance component, *ES* = individual effect sizes, *k* = amount of data sets, *Q* = weighted sum of squared differences between individual study effects and the integrated effect size, *Q_M* = omnibus test moderators.

*** $p < .001$.

Table 6. Meta-regression estimates explaining persuasion.

Moderator Variables	Persuasion								
	<i>b</i>	SE	<i>z</i>	95% CI	σ^2 (σ)	<i>ES</i>	<i>k</i>	<i>Q</i>	<i>Q_M</i>
Main analyses									
Use of metaphors (versus nonmetaphorical)	.18	.04	4.82	[.10, .25]					
Familiar brand (versus unfamiliar brand)	.08	.07	1.17	[-.05, .21]	.04 (.19)	92	28	796.05***	141.97***
Direct exposure (versus indirect exposure)	-.06	.14	-0.43	[-.33, .20]					
Exploratory analyses									
Published papers (versus unpublished)	.11	.09	1.29	[-.06, .28]					
Ad-related outcome (versus brand-related outcome)	.17	.02	10.63	[.14, .20]					

Note. Regression coefficients in bold are significant at least at the $\alpha = .05$ level. σ^2 = random variance component, *ES* = individual effect sizes, *k* = amount of data sets, *Q* = weighted sum of squared differences between individual study effects and the integrated effect size, *Q_M* = omnibus test moderators.

*** $p < .001$.

creative media advertising for each of the four individual persuasive outcomes, the results show that the individual effects on ad attitude ($\bar{r}_c = .19$), brand attitude ($\bar{r}_c = .09$), purchase intentions ($\bar{r}_c = .07$), and electronic eWOM ($\bar{r}_c = .35$) are significant. This means that, in general, creative media advertising is more persuasive than traditional media advertising, supporting hypothesis 2.

Moderators of Creative Media Advertising Effects

We estimated two multiple-regression models to examine whether the use of metaphors, brand familiarity, and direct (versus indirect) exposure to the message were moderators of the effects of creative media advertising on brand associations and persuasion.

Moderators of Effects on Brand Association Strength

Metaphor Use. The results, as shown in Table 5, indicate that metaphor use is a significant moderator of the effect of creative media advertising on brand association strength. We found that metaphorical creative media advertising, compared to nonmetaphorical creative media advertising, leads to stronger brand associations. These findings support hypothesis 3.

Brand Familiarity. The results show that the moderation effect for brand familiarity was nonsignificant (see Table 5). The effect of creative media advertising on brand association strength did not differ between advertising from unfamiliar and familiar brands. The data do not support hypothesis 5.

Exposure Type. The effect of exposure type of brand association strength was significant. As shown in Table 5, indirect exposure (e.g., online, print) to creative media advertising was found to lead to stronger brand associations than real-life/direct exposure (research question 1).

Moderators of Effects on Persuasion

Metaphor Use. The results, as shown in Table 6, indicate that metaphor use is also a significant moderator of the persuasiveness of creative media advertising. This means that metaphorical creative media advertising, compared to nonmetaphorical creative media advertising, leads to higher levels of persuasion. These findings support hypothesis 4.

Brand Familiarity. As for the strength of brand associations, the persuasiveness of creative (versus traditional) media advertising does not differ between

advertising from unfamiliar and familiar brands. The data do not support hypothesis 6 (see Table 6).

Type of Exposure. In contrast to the findings for brand association strength, a nonsignificant moderation effect for persuasion was found for type of exposure (see Table 6). This means that the persuasiveness of creative media advertising does not depend on whether exposure is direct or indirect (research question 1).

Exploratory Moderator Analyses

A recent meta-analysis of advertising creativity (Rosengren et al. 2020) showed that creative advertising generally tends to have stronger persuasive effects related to the ad than to the brand. To test whether creative media advertising follows this pattern, we included the type of outcome variable (ad related versus brand related) as an exploratory moderator. In line with the earlier meta-analysis, our results (in Table 6) indicate that creative media advertising tends to have stronger persuasive effects related to the ad (e.g., ad attitude, eWOM of the ad) than to the brand (e.g., brand attitude, purchase intentions, eWOM of the brand).

Furthermore, as a second exploratory analysis, we tested whether the type of publication (published versus unpublished) moderated the effects of creative media advertising on brand association strength and persuasion. We did so to find out whether the effect sizes reported in the published studies were larger than in the unpublished studies. As shown in Table 5, for brand association strength, the moderation was significant, indicating that, overall, the effect sizes on brand association strength in the published studies were larger than in the unpublished studies. The moderation by type of publication of the persuasiveness of creative media advertising was nonsignificant (see Table 6).

Underlying Mechanism of Creative Media Advertising Persuasiveness

To examine the underlying mechanism of creative media advertising persuasiveness, we used meta-analytic SEM. The R statistical package Lavaan (version 0.6-10; Rosseel 2012) was used to estimate a path model (see Figure 1) with maximum likelihood (ML) estimation. The estimated model showed a good fit: $\chi^2(1) = 3.09$, $p = .079$, CFI = .997, TLI = .981, RMSEA = .04, 95% CI [.00, .10], p close = .451, SRMR = .02.

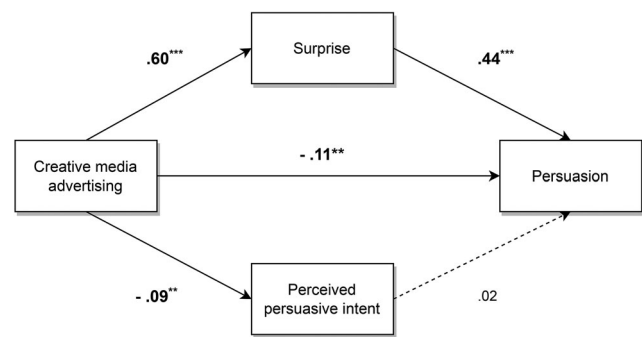


Figure 1. The underlying mechanism for the persuasiveness of creative media advertising. *** $p < .001$; ** $p < .01$.

As shown in Figure 1, we found a significant positive total effect of creative media advertising on persuasion, $b^* = 0.15$, $z' = 4.85$, $SE = .03$, $p < .001$. To test whether surprise and perceived persuasive intent explain the persuasiveness of creative media advertising, their indirect effects were estimated. While the indirect effect of surprise was significant, $b^* = 0.26$, $z' = 10.98$, $SE = .02$, $p < .001$, the indirect effect of perceived persuasive intent was nonsignificant, $b^* > -0.01$, $z' = -0.65$, $SE < .01$, $p = .517$. This means the data suggest that only surprise mediates the persuasive effect of creative media advertising.

Discussion

Drawing on a large body of creative media advertising literature, this study aimed to contribute to the extant literature in three distinct ways: (1) by systematically comparing the different consumer responses to creative media advertising, (2) by investigating the moderators of the persuasiveness of creative media advertising, and (3) by examining possible underlying mechanisms of creative media advertising. Based on the meta-analysis, six conclusions can be drawn.

The Overall Effects of Creative Media Advertising

First, we found that creative media advertising has an overall positive effect on brand association strength. This means that, compared to traditional media advertising, creative media advertising leads to stronger brand associations. This is in line with human associative memory theory (Van Osselaer and Janiszewski 2001) and suggests that creative media advertising can successfully be used to (re)position a brand in the desired direction and strengthen brand associations.

Second, we found that consumers are generally more persuaded by creative media advertising than by traditional media advertising. This supports the work

by, for instance, Dahlén (2005a, 2005b) and Rauwers et al. (2018), which showed positive effects of creative media advertising on various ad and brand outcomes. In addition to an overall effect of creative media advertising on persuasion, the meta-analysis also showed significant positive integrated effect sizes for all four measures of persuasion: (a) ad attitude, (b) brand attitude, (c) purchase intentions, and (d) eWOM. Strikingly, the findings indicate that creative media advertising seems particularly effective for driving eWOM and to a somewhat lesser extent ad attitude. This result supports prior research that showed consumers are more likely to share creative (versus traditional) media advertising with their peers (Eelen and Seiler 2016).

Moderators of Creative Media Advertising Effects

Third, the use of metaphors strengthened the overall positive effects of creative media advertising on brand associations and persuasion. This finding is in line with how advertising creativity works (Rosengren et al. 2020). An unconventional medium that also embodies and echoes the message of the advertiser might be truly creative precisely because it is not only novel and nontraditional but also meaningful (or appropriate). Ad creativity is known to have more dimensions than novelty alone (e.g., see Smith et al. 2007; Sasser and Koslow 2008). A metaphoric medium could thus be an effective creative ad because it might generate positive affect, help people process the message better, and even signal that the firm invested effort (time and money) into the ad (Rosengren et al. 2020).

The finding that metaphors in creative media advertising increase ad persuasiveness again shows the importance of media–ad congruency or a fit between an ad and the medium. A previous meta-analysis on media context effects (Kwon et al. 2021) identified that, for advertising in general, media–ad congruence has a positive effect on attitude toward the product and the ad, but only when the ad and the media context/content were presented simultaneously—as is the case for creative media advertising.

Fourth, contrary to our expectations, we found no indication that brand familiarity affected the effects of creative media advertising on brand association strength and persuasion. Creative media advertising seems as effective for familiar brands as for unfamiliar brands. We expected that the more stable preexisting attitudes toward familiar brands would reduce the effectiveness of creative media advertising for familiar

brands (see Rosengren et al. 2020), but our findings do not support this. Notably, our results also do not support the notion that existing associations with a familiar brand could aid comprehension of creative media advertising and subsequently drive persuasion (see Wottrich and Voorveld 2016).

Fifth, we found that type of exposure influences the effect of creative media advertising on brand association strength but not on persuasion. Specifically, we found that, for strengthening brand associations, indirect exposure (e.g., social media, print) to creative media advertising seems to be more effective than (direct) exposure to this type of advertising in real life. A potential explanation could be that indirect exposure (e.g., via social media) allows more careful processing of the ad than direct exposure because there are usually fewer distracting elements when exposed indirectly to creative media advertising. For example,¹ think of well-known works of art, like the *Mona Lisa*. It might be more difficult to fully process this art when seeing it in real life in a museum, rather than a print of it on paper. Reasons for this could be the distractions surrounding the artworks, as people flock to museums to see them, but other factors could also be an influence. The size might be smaller than expected or the colors less bright. The same may hold for creative media ads that consumers encounter outdoors. Here, too, it may be easier for people to process the creative media ads when seeing them indirectly rather than directly, in which case indirect exposure allows for the creation of stronger associations between the medium and the brand.

This discussion also resonates with findings by Darley and Lim (2022), who found in their meta-analysis of creative advertising effects that creative advertising in traditional advertising formats (operationalized as print and television) were more effective than those in nontraditional formats (operationalized as ambient and digital). They explained this by stating that people might have fewer mental resources available when processing ads in nontraditional advertising formats. It should be noted that Darley and Lim compared only the effects of creative media advertising between digital and ambient formats in their preliminary analyses (in which they reported no differences between digital and ambient creative advertising), which prevents a more detailed comparison between the two studies.

Exploratory Analyses

A first exploratory finding is that the persuasive effects of creative media advertising were stronger for

ad-related than brand-related outcomes. This is in line with earlier work (Eelen and Seiler 2016; Rosengren et al. 2020) that also showed more positive ad-related (versus brand-related) persuasive outcomes for creative advertising in general.

A second exploratory finding is that the published brand association effects of creative media advertising are considerably larger than the unpublished ones, suggesting that those findings should be interpreted with care. It most likely means that the effects are smaller than reported in the literature and calls for preregistered replication studies. We did not find publication bias for the effects on persuasion, indicating that those effects are likely robust. All in all, this validates our decision to incorporate both published and unpublished papers in our current meta-analysis to mitigate the potential impact of publication bias on our estimates (Eisend and Tarrahi 2014). Moreover, these findings serve as a reminder, for all advertising researchers, of the importance of reporting nonsignificant findings.

Underlying Mechanism for the Persuasiveness of Creative Media Advertising

Sixth, only surprise (and not perceived persuasive intent) was found to explain the persuasiveness of creative media advertising. These findings support prior research (e.g., Eelen et al. 2016; Hutter and Hoffmann 2011, 2014) that suggested when people are confronted with creative media advertising messages they are startled due to the unexpectedness of the situation. Also, the findings show that even though creative media advertising is less likely to be perceived as having persuasive intent, this ultimately does not affect the persuasiveness of the message. Altogether, no support was found for the notion set forth by Rauwers and colleagues (2018) that perceived persuasive intent might (partially) explain the persuasiveness of creative media advertising.

Limitations and Suggestions for Future Research

Most of the limitations of our study are common to meta-analyses. For starters, one of the main limitations is the potential presence of publication bias in some of the estimates—in particular, the main effects of creative media advertising on brand association strength, persuasion (overall), ad attitude, and eWOM (but not brand attitude and purchase intentions). This means that, even though the effect sizes reported in this article reflect the integrated effect sizes of the research that is currently available, they could be

somewhat inflated as a result of underreported (nonsignificant) findings in the literature. These effect size estimates should thus be treated cautiously.

Another limitation common to meta-analytical research is the limited number of effect sizes for non-metaphorical creative media ad executions. Although this somewhat limits the generalizability of the moderator effect, it should be noted that this is actually quite common in meta-analyses (e.g., see Palmatier et al. 2006; Segijn and Eisend 2019) and that the analysis that was used to test this effect is robust to uneven distributions of cases across the levels of the moderator. Moreover, the distinction between metaphorical and nonmetaphorical creative media in the examined studies is not an artifact, as there are many real-life examples of unconventional media used for advertising that do not connect the medium to the message (see Implications for Practitioners section).

Finally, by focusing exclusively on the effects of creative media advertising we restricted the amount of data that was collected and analyzed. Nevertheless, the number of data sets included in this meta-analysis was sufficient to draw robust and valid conclusions (Eisend 2017) and is comparable with other recent advertising meta-analyses (e.g., Van Berlo, van Reijmersdal, and Eisend 2021). The current meta-analysis enabled us to thoroughly examine the theoretical differences between creative media advertising and other types of advertising. However, future research should investigate whether the findings of our study also apply to advertising strategies closely related to creative media advertising.

Implications

Implications for Theory

For theory, it seems important to note that metaphor use was found to be a significant moderator, while brand familiarity was not. The findings also indicate that creative media have stronger effects on ad attitude than brand attitude. Together, these findings suggest that people are more likely to connect creative media advertising to the product category rather than to the brand. This may be due to the nature of the metaphors that are used in most campaigns: the metaphors generally link the medium with the message through the product category rather than the brand. An example related to the product category is the (closed) shutters campaign of Heineken (2021), reminding consumers of having a drink in a bar (i.e., the category) more than of the brand Heineken in particular.

Furthermore, the findings of this study contribute to a better understanding of the underlying mechanisms of creative media advertising. In the literature, two potential underlying mechanisms were suggested for the persuasiveness of creative media advertising: surprise and perceived persuasive intent. In adopting a meta-analytic SEM procedure, we found support only for surprise as an underlying mechanism of the effect of creative media advertising on persuasion—and not for perceived persuasive intent. It is important to note that even though the results showed, in line with Dahlén and Edenius (2007), that creative media ads are less likely to be identified as advertising (than traditional media ads), this ultimately was not found to drive persuasion.

The current work focuses on creative media advertising, which is a specific type of advertising. Where there are, theoretically, clear boundaries between creative media advertising and other types of advertising, these might not always be as clear in practice. Therefore, the underlying mechanisms of surprise and metaphorical messages may potentially apply as well to related types of advertising—like ambient and outdoor advertising.

Ambient advertising is becoming increasingly popular and includes, for instance, street art. Relying on the findings of the meta-analysis, we expect that encounters with ambient advertising should evoke surprise and attract attention to be effective. Also, outdoor advertising in traditional media, such as billboards, is becoming increasingly creative with respect not only to content but also to placement, format, and shape (e.g., smoke and water coming out of billboards, objects being encapsulated in the glass at bus stops). We speculate that metaphorical messages might be equally important for the creative choices in those media. For example, a billboard with a message written in bacteria may not suit every campaign, but the bacteria were well connected to the sci-fi movie *Contagion* (Warner Bros. Canada 2011).

The findings of this meta-analysis about the effectiveness of creative media advertising provide further evidence for the importance of the two dimensions of advertising creativity, as outlined by Rosengren and colleagues (2020): ad originality and ad appropriateness. First, the importance of originality is underlined by the finding that creative media ads are more effective when they are surprising. This highlights that the chosen medium should be sufficiently novel and unconventional. Second, in the context of creative media advertising, the metaphoric overlap between message and medium might reveal how an ad can be

meaningful and interesting to consumers. Taken together, to be truly creative, creative media ads should be unconventional physical objects carrying a well-chosen advertising message.

Implications for Practitioners

For practitioners, the findings of this meta-analysis suggest that, overall, creative media advertising can be an effective strategy to reach several advertising campaign goals. We found that, compared to traditional media advertising, creative media advertising drives brand association strength and persuasion. That is, it leads to positive ad and brand attitudes, increases purchase intentions, and creates buzz via eWOM.

We identified surprise as the main driver of the persuasive effect of creative media advertising. This means that creative media advertising works because it can startle consumers and attract their attention. However, a key characteristic of surprise is that what is surprising today will no longer be surprising tomorrow. This suggests that advertisers who want to use creative media advertising effectively need, foremost, to be innovative and keep looking for novel physical objects to carry their advertising message.

However, using a novel physical object as a medium might not be enough to create effective creative media advertising. In addition to using novel physical objects, it is also important that the physical objects are congruent with the advertising message a brand aims to communicate. This is important to emphasize, because a content analysis of real-world creative media advertising executions (Meijers, Eelen, and Voorveld 2016) showed that only about 60% of creative media advertising executions use metaphorical messages. In other words, four out of 10 real-world creative media advertising executions currently fail to realize the full potential of creative media advertising because they use a nonmetaphorical message.

Finally, the results show that consumers do not need to be exposed to creative media advertising in real life for them to be effective. Indirect exposure (e.g., online) has shown to be just as persuasive as direct exposure in real life. Moreover, for strengthening brand associations, indirect exposure to creative media advertising is found to be even more effective than direct exposure. This is important for brands to consider because it means that creative media advertising can also effectively be used in (online) advertising campaigns, which could be an efficient way to reach a larger audience. This said, creative media advertising should thus be an integral part of a firm's media and advertising mix because such advertising likely offers

positive synergistic advertising effects (Dens et al. 2018). To give an extra boost to the overall effectiveness of their creative media advertising campaigns, it could even be beneficial for advertisers to stimulate people to share pictures of their ad on social media, post pictures or videos of their creative media ads on their social media accounts, try to stimulate journalists to write about a campaign in the popular press, or include images or videos of their creative media advertising in digital or traditional advertising.

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