

1 **Visual Metaphors in Food Advertising: A cross-cultural study**

2 **Abstract**

3 Even though, to date, numerous studies in food advertising have considered the use of
4 visual metaphors, their impact on consumers' responses in diverse cultures has been
5 only narrowly investigated. The present study scrutinizes the conditional indirect
6 effect of visual metaphors on the moderated by culture attitude toward the ad and the
7 resulting attitude toward the brand. Two 2x2 full factorial between-subjects
8 experiments with two levels of visual metaphor (presence and absence) and two levels
9 of culture (India and the USA) were used to test our hypotheses. Participants, 417
10 (207 Indian, 210 US) for the first experiment and 181 (82 Indian, 99 US) for the
11 second experiment were divided in four treatment groups (one for each condition).
12 Two versions of two print advertisements for a novel coffee and a novel ice-cream
13 brand were the experimental stimuli in experiments 1 and 2 respectively. SPSS macro
14 (PROCESS tool) was used for data analysis. Both experiments provided evidence in
15 support of the proposed framework. Visual metaphors in high context cultures (India)
16 seem to have a significantly more positive effect on attitude toward the ad and
17 eventually on attitude toward the brand compared to low context environments
18 (USA).

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20 *Keywords: Culture, Visual Metaphors, Food Industry, Attitudes*

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39 **1. Introduction**

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41 **1.1. Motivation and contribution of the study**

42 Recent years saw a systematic, growing research interest in the role of visual
43 metaphors in advertising (Gkiouzepas & Hogg, 2011; Lagerwerf, Hooijdonk &
44 Korenberg, 2012; McQuarrie & Mick, 1992; Phillips & McQuarrie, 2002, 2004). A
45 metaphor is “an implied comparison between two dissimilar objects, such that the
46 comparison results in aspects that normally apply to one object being transferred or
47 carried over to the second object” (Sopory & Dillard, 2002, p. 382). For instance, a
48 print advertisement depicts a bottle of Tabasco sauce that looks like a hand grenade.
49 The ad compares two dissimilar objects, the Tabasco sauce and the hand grenade and
50 due to this comparison the characteristics of the grenade are transferred to Tabasco
51 sauce. The ad tagline states “Explode your sense. Little bottle big flavor”.

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53 Metaphors in general and visual metaphors in particular constitute a common
54 approach in a wide range of food and beverage advertising campaigns. For instance,
55 in McDonald’s print advertisement "*Happy Halloween*" in 2014 a visual metaphor
56 depicted two fried potatoes, one of them covered in tomato sauce, symbolizing
57 Dracula’s teeth. In a different instance, Heineken’s advertising campaign "*Made to
58 entertain*" in 2014, used a visual metaphor to imply that it is a fun brand of beer. The
59 stacked CDs in this ad portray a keg and insinuate a joyful social situation, often
60 associated with beer consumption. Driven by the popularity of metaphorical images
61 among food and beverage advertising practitioners, a number of studies (Gkiouzepas
62 & Hogg, 2011; Phillips & McQuarrie, 2004; Van Mulken, Van Enschot & Hoeken,
63 2005) have to date incorporated metaphorical food and beverage advertising stimuli in
64 their experimental processes.

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66 Visual metaphors are smart and artful rhetorical figures that channel multiple
67 messages and connotations (Phillips & McQuarrie, 2004). They seem to engage
68 consumers into experiencing and elaborating their meaning (Lagerwerf et al., 2012)
69 and lead to favorable attitudes toward the advertising stimulus (Gkiouzepas & Hogg,
70 2011; McQuarrie & Mick, 1992). On a number of occasions visual metaphors have
71 been found to increase attention (Morgan & Reichert, 1999), positive attitudes
72 (Burgers, Eden, de Jong & Buningh, 2016), recall (Van Mulken, le Pair & Forceville,
73 2010), comprehension and appreciation (Van Mulken, Van Hooft & Nederstigt, 2014;
74 Van Mulken et al., 2005) subject to their level of creativity (artful divergence) (Ang,
75 Lee & Leong, 2007; Ang & Low, 2000), complexity and incongruity (Mohanty, 2008;
76 Phillips & McQuarrie, 2002, 2004). A recent study in mobile applications indicates
77 that metaphorical images tend to create more persuasive, more frequently downloaded
78 applications that lead to favorable brand attitude and improved behavioral intentions
79 compared to apps that are void of metaphorical icons (Burgers et al., 2016).

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81 Despite the popularity of visual metaphors as communication stimuli and their noted
82 effectiveness in advertising, few research studies have adopted a cross-cultural

83 approach on the use of visual metaphors in advertising and their effectiveness across
84 nations (Van Mulken et al., 2005; Van Mulken et al., 2014). It is noteworthy that
85 these studies indicate no statistically significant variations among the different
86 Western societies examined. Yet, a subsequent study across England, Spain and China
87 (Littlemore & Perez-Sobrino, 2017) indicated significant cross-cultural variations
88 with respect to the figurative complexity in the interpretation of advertisements. The
89 time of processing, the depth of interpretation and the linguistic subjectivity are
90 subject to consumers' cultural characteristics. Empirical evidence originating from the
91 field of cognitive linguistics, suggests that the elucidation of metaphors depends
92 significantly on the interpreter's cultural context and idiosyncratic experiences
93 (Forceville, 2008). Significant differences have been recorded between metaphors
94 among Western and Asian cultures, whereas the differences among Western societies
95 seem to be minor (Forceville & Urios-Aparisi, 2009). For instance, a dragon is a mean
96 scary creature in Western mythology but a lucky one for Chinese. Significant
97 differences have also been recorded among Western and Asian societies with respect
98 to the use of weather as a metaphor of emotions (Forceville, 2005; Kövecses, 2005;
99 Shinohara & Matsunaka, 2009). Complex metaphors seem to be cultural- and
100 language-specific (Forceville & Urios-Aparisi, 2009). Cultural factors can determine
101 not only whether a metaphor can or should be interpreted but also, how it would be
102 interpreted (Forceville, 2008). Universality and variation in metaphors across and
103 within languages and cultures are according to Kövecses (2005) the most intriguing
104 aspects in the study of metaphors and cultures.

105 Evidence on the cross-cultural differences regarding the use and role of visual
106 metaphors highlights a general trend, that of a distinction between Western and Asian
107 countries, or in other words high and low context societies (Hall, 1976). Yet, to date,
108 no study has focused on the impact of visual metaphors on consumers' attitudes
109 toward the advertisement and the associated brand across cultures. The present study
110 aims to fill this research gap, scrutinizing the indirect effect of visual metaphors on
111 attitude toward the brand via attitude toward the ad when it is moderated by culture
112 (India: high context vs. the USA: low context). Moreover, it contributes to the
113 relevant literature by addressing new avenues for research: a) it provides fruitful
114 evidence with respect to the effectiveness of visual metaphors not only for marketers
115 in the food industry but also for cognitive linguists and semioticians, b) it
116 demonstrates that the appreciation of visual metaphors is not universal but varies
117 across different social contexts, c) it extends the advertising research of visual
118 metaphors in Asian countries and especially in India, d) it proposes and tests a model
119 on the influence of visual metaphors on consumer attitudes and e) it introduces Hall's
120 (1976) theory of high and low context cultures into the discussion of visual metaphor
121 effectiveness by investigating its application in figurative advertising. Moreover, this
122 study is a timely response to the Pérez-Sobrino's (2016) call to cross-culturally
123 examine the factors influencing the effectiveness of metaphors in advertising. The
124 remaining of the paper is organized as follows: first, the theoretical underpinnings of
125 the study and the research hypotheses are addressed. Second, the methodology and the

126 results of the two experiments are reported and third, implications, limitations and
127 suggestions for further research are discussed.

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129 ***1.2 Responses to metaphorical advertising: The mediating effect of attitude toward***
130 ***the ad***

131 Prior research (see Sopory & Dillard, 2002, for a meta-analysis of this research
132 stream) suggests that metaphorical messages produce a significant shift in attitude
133 compared to literal ones. Jeong (2008) indicates that advertisements with visual
134 metaphors, compared to those with literal visual images, lead to more positive attitude
135 toward the ad. Visual metaphors are ambiguous puzzles (incongruities) that engage
136 consumers' brains in an effort to solve how one thing resembles or is linked to
137 another (van Hooft, van Mulken & Nederstigt, 2013). Consumers experience both
138 cognitive (Berlyne, 1971) and aesthetic pleasure (Barthes, 1964), through the relief of
139 tension as they solve the incongruent advertising content (Gkiouzepas & Hogg, 2011;
140 Kim, Baek & Choi, 2012). The metaphor-elicited cognitive and affective elaboration
141 enhances advertising perceptions and credibility, and eventually influences
142 consumers' attitude toward the ad (Kim et al., 2012). Visual metaphors seem to have a
143 positive impact on attitude toward the ad irrespective of the advertised product
144 category. However, in the case of low involvement, hedonic products, the effect of
145 affective elaborations on attitude toward the ad, is greater than the effect of cognitive
146 elaborations (Kim et al., 2012). Likewise, in high involvement, utilitarian products,
147 the impact of affective elaborations is lower than the one of cognitive elaborations.

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149 We further expect visual metaphors to exert a positive effect on attitude toward the
150 advertised brand, through attitude toward the ad. Prior research advocates that attitude
151 toward the ad influences attitude toward the brand both directly and indirectly through
152 its impact on brand cognitions (dual mediation hypothesis) (Lutz, MacKenzie &
153 Belch, 1983). The effect of advertising stimuli, however, indicates a decline between
154 lower and higher order communication effects, with the effect size on attitude toward
155 the ad being stronger than the effect size for attitude toward the brand (Eisend, 2009;
156 Jeong, 2008). Advertising attitude seems to act as a mediator on the relationship
157 between ad stimuli and brand attitude. The improved brand attitude is mainly
158 attributed to the significant influence of ad stimuli on ad attitude (Brown & Stayman,
159 1992; Lutz et al., 1983; MacKenzie & Lutz, 1989). This implies that attitude toward
160 the ad might, also, mediate the relationship between visual metaphors and attitude
161 toward the brand. Therefore, it is suggested that:

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163 *H1: Attitude toward the ad mediates the positive relationship between visual*
164 *metaphor and attitude toward the brand.*

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166 ***1.3 Responses to metaphorical advertising: A reflection of culture***

167 Ever since Levitt's (1983) initial argument about the globalization of markets and the
168 standardization in marketing, vivid discussions have been evoked on whether the
169 convergence of economies signifies a convergence in cultural values (Mooij, 2004).

170 Although originally accepted, Levitt's (1983) suggestion that brands and advertising
171 need little adaptation to effectively work across cultures was soon questioned (Caillat
172 & Muellre, 1996; Cheung & Leung, 2017; Copus & Carnogursky, 2017; Frazer,
173 Sheehan & Patti, 2002; Koudelova & Whitelock, 2001; Orth, Koenig & Firbasova,
174 2007). Culture is people's way of living, the sum of their behavioral patterns, attitudes
175 and material things (Hall, 1959, p. 42). According to Hofstede (2001, p. 9) culture is
176 "*the collective programming of the mind distinguishing the members of one group or*
177 *category of people from others*".

178
179 Cultural values and beliefs are highly significant in understanding consumer behavior
180 (Orth et al., 2007; Van Mulken et al., 2010; Zhang & Gelb, 1996). Research in
181 advertising has tried to explain how cultural divergence is linked to the use of
182 different advertising appeals, creative strategies and styles (Ji & McNeal, 2001;
183 Koudelova & Whitelock, 2001). Studies have also focused on the specific dimensions
184 of cultures portrayed in advertising messages; on how cultural values explain the
185 perceived discrepancies in advertising and on providing thorough explanations of
186 observed differences in advertising messages (Caillat & Mueller, 1996; Dahl, 2004;
187 Hatzithomas, Zotos & Boutsouki, 2011; Ji & McNeal, 2001).

188
189 Hall (1976), in his seminal studies, makes a clear distinction between high and low
190 context cultures based on whether information is communicated implicitly or
191 explicitly. In high context cultures (i.e. India, China and Japan) personal contact and
192 relationships are of great importance. Communication is indirect and ambiguous
193 (Gudykunst, Matsumoto, Ting-Toomey, Nishida, Kim & Heyman, 1996). It is visual
194 rather than verbal, even silent, while one needs to consider messages into the right
195 context to interpret them and get satisfaction from the process (Hall, 1976; Kim, Pan
196 & Park, 1998; Lewis, 1999; Wurz, 2005; Zaidman, 2001). In contrast, low context
197 communication is more direct, precise and based on true intentions. Low context
198 cultures (i.e. Scandinavian, German, US) prefer explicit statements and verbal
199 communication, to deal with the abundance of information (Hall & Hall, 1990; Wurtz,
200 2006).

201
202 Based on Hall's (1976) theory, prior studies established a prime distinction between
203 the culture in India and the USA (Hall & Hall, 1990; Lewis, 1999; Wurtz, 2006;
204 Zaidman, 2001). People in India use images to convey messages and prefer more
205 implicit and indirect communication in which the message evolves within the context,
206 but does not directly refer to the problem. They are collectivistic with interdependent
207 self-construal (Kapoor, Hughes, Baldwin & Blue, 2003). Being individualists
208 (Hofstede, 2001) within independent self-construal (Kapoor et al., 2003), consumers
209 in the USA prefer straightforward and effective message communication (Wurz,
210 2005). Hence, when Indian websites focus on visual communication with consumers,
211 Western websites offer verbal in-depth explanations of a brands' slogan, emphasizing
212 the importance of individuality and subjectivity. Indian websites highlight the
213 entertainment value of the advertised brands, whereas Western websites praise the

efficiency and the functionality of the products (Wurz, 2005). Indians prefer to use illustrations rather than photographs compared to Americans, given that photographs are more realistic (Woo & Lee, 2007). In instant messaging, Indians use more audio-video chat and emoticons than North Americans (Kayan, Fussell & Setlock, 2006). Indians, have a preference for bright colors and highly decorated clothes, whereas people in the USA usually follow a more informal and comparatively colorless dress code (Mushahary, 2014). Thus, it is presumed that visual metaphors as an implicit, visual language would lead to more positive attitude toward the ad in high context cultures, as India, rather than in low context ones, as the USA. Hence, it is suggested that:

H2: Culture moderates the effect of visual metaphor on attitude toward the ad in a way that: the effect of visual metaphor on attitude toward the ad is more positive in a high context culture (e.g. India) compared to a low context culture (e.g. USA).

Based on the above analysis, it is theorized that visual metaphors are related to attitude toward the brand through attitude toward the ad (hypothesis 1) and culture moderates the relationship between visual metaphors and attitude toward the ad (hypothesis 2). Taken into consideration, hypotheses 1 and 2 combined, predict a moderated mediation model. Hence, a third hypothesis is also advanced:

H3: Culture moderates the indirect effect of visual metaphor on attitude toward the brand through attitude toward the ad in a way that: this indirect effect through attitude toward the ad is more positive in a high context culture (e.g. India) compared to a low context culture (e.g. USA).

2. Experiment 1

2.1 Materials and Methods

2.1.1 Stimuli, Participants and Procedure

A 2 (presence vs. absence of visual metaphor) x 2 (India vs. USA) between-subjects experiment was designed in order to investigate: a) the mediating effect of attitude toward the ad on the relationship between visual metaphors and attitude toward the brand, b) the moderating effect of culture on the relationship between visual metaphors and attitude toward the ad and (c) the conditional indirect effect of visual metaphors on attitude toward the brand through the moderated by culture attitude toward the ad. The presence or absence of a visual metaphor and culture (India or the USA) represent the between-subjects factors of the experiment.

India and the USA represent two discrete, geographically distant and culturally diverse countries. India is the birthplace of Buddhism and Hinduism, while Christianity is the most adhered religion in the USA (Pariona, 2018; Zimmermann, 2017). Indian is a representative example of a high context culture, whereas the US is

258 a point of reference for a low context culture (Hall, 1976). Moreover, India and the
259 USA were used as reference countries in several cross-cultural studies in marketing
260 (Nicholls, Roslow, Dublish & Comer, 1996; Wang, Zhou, Mou & Zhao, 2014),
261 advertising (Davari & Iyer, 2014; Muralidharan, La Ferle & Sung, 2017) and
262 communication (Bie, Tang & Treise, 2016). According to their findings, variations in
263 the content and effectiveness of advertising, individuals' different communication
264 styles, as well as consumers' purchase behaviors could be attributed to the cultural
265 differences between the two countries. For instance, Indians seem to have a more
266 favorable disposition toward green advertisements with collectivistic attributes
267 compared to Americans who are drawn to individualistic attributes (Muralidharan et
268 al., 2017). In business to consumer communication, advertisements in India use
269 information cues to a lower extent compared to corresponding ads in the USA (Davari
270 & Iyer, 2014). Based on the underlined differences among the two countries, it is
271 expected that consumer responses to the metaphorical advertising stimuli will mirror
272 their cultural values (Zimmermann, 2017).

273
274 The experimental stimuli were based on definitions and characteristics established in
275 prior studies (Margariti, Boutsouki & Hatzithomas, 2018; Phillips & McQuarrie,
276 2004). An actual advertisement of the coffee brand "Nescafe", that incorporates a
277 visual metaphor (a cup of coffee transformed into an alarm clock) was used in the
278 experiment. The background, the brand name of the coffee and the slogan were
279 altered to cater for the experimental design. A non-metaphorical version of the
280 advertisement (the plain cup of coffee) was also created. Therefore, two versions of
281 an advertisement for a fictitious coffee brand "CROWNED CUP", with the same logo
282 and the slogan "time for coffee..." were eventually the advertising stimuli. The visual
283 metaphor version depicted a cup of coffee converted into an alarm clock, whereas the
284 non-metaphoric one, depicted a plain cup of coffee (Figures 1 and 2).

285 Coffee was adopted as an appropriate example within the general food and beverages
286 product category. On one hand, there is an abundance of coffee brand advertising
287 campaigns that incorporate visual metaphors in their message communication. Beans
288 & Beyond's 2009 campaign "*Extra strong coffee*" and Black and Blaze's campaign
289 "*Coffee turns you, 5*" in 2013, are two representative examples of coffee brand
290 advertising campaigns with metaphorical images. Moreover, coffee is a highly
291 consumed and appreciated beverage worldwide (Caporaso, Genovese, Canela,
292 Civitella & Sacchi, 2014). Prior studies in cross-cultural advertising focused on coffee
293 (Morris & Waldman, 2011) and established a strong correlation between ad liking and
294 the emotions awakened during the coffee consumption experience (Bhumiratana,
295 Adhikari & Chambers IV, 2014). The USA, known for its increased coffee
296 consumption, is described as a highly "caffeinated" nation (Sethi, 2017), while in
297 India, coffee is replacing tea and is becoming increasingly popular among younger
298 consumers (Statista, 2017; Venkat, 2017). This trend is reinforced by the fact that
299 India is a prime producer of coffee alongside Brazil, Vietnam, Colombia, Indonesia,
300 Ethiopia and the Honduras (Szenthe, 2018). Based on an overall similarity of

301 preferences in coffee consumption between India and the USA, a coffee
302 advertisement was deemed appropriate. USA, the world's first coffee drinker, has a
303 longstanding tradition in coffee consumption. US consumers turn to new types and
304 tastes of coffee (Downey, 2018; Laughland, 2015). At the same time, coffee drinking
305 in India indicates a tendency toward consumption of strong coffee known as "Kaapi",
306 and a variety of tastes and flavors (Ahuja, 2016; Foody, 2017).

307
308 Overall, 417 (207 Indian and 210 US) participants in four treatment groups (one for
309 each condition) participated in an online experiment. Participants were recruited
310 through a crowd-sourcing platform (<https://www.figure-eight.com>). Figure-Eight is a
311 Human-in-the-Loop Machine Learning platform, or otherwise an online reward
312 portal, that develops customized large scale high-quality training data. Figure-eight
313 offers users the opportunity to run research studies and carries out user experience
314 assessment by asking contributors to complete surveys. Figure-Eight uses crowd
315 platforms (contributors) to run demographic or psychological surveys in almost any
316 country. In our study, to safeguard the collection of reliable data from a large and
317 diverse population, "*Level 2*" of contributors was selected. "*Level 2*" refers to a
318 medium size pool of contributors that ensures fast and reliable responses. Participants
319 were compensated 0.30 \$ per complete response and were only allowed to participate
320 once in the study. A unique contributors' ID is automatically provided to each
321 participant in order to ensure that only one reply is submitted. Each participant was
322 exposed to only one of the two experimental stimuli at his/her own time and pace.
323 Quality Control Settings in Figure-eight oblige participants to spend at least 500
324 seconds on completing the questionnaire.

325

326 **2.1.2 Measures**

327 Following Gkiouzepas and Hogg's (2011) study, we used artful deviation and
328 deviation from reality to test the manipulation of the incorporated visual metaphors.
329 Artful deviation was measured by a single item ("artful, clever/ plain, matter of fact")
330 and deviation from reality by a two-item scale ("realistic/unrealistic" and
331 "real/fictitious"). The cultural diversity of the two countries (high vs. low context)
332 was assessed through a 17-item scale, provided by Richardson and Smith (2007).

333

334 The dependent variables of the study were measured by a 6-item scale for attitude
335 toward the ad (Baker & Kennedy, 1994) and a 4-item scale for attitude toward the
336 brand (Geuens & De Pelsmacker, 1998) (Table 2). The covariates of ad and brand
337 familiarity were measured by single item scales, ranging from "Completely
338 Unfamiliar" to "Completely Familiar". All variables were measured in a five-point
339 Likert scale ranging from "strongly disagree" (1) to "strongly agree" (5).

340

341 Cronbach's alpha was used in order to check the reliability of scales. Cronbach's
342 alpha measures the internal consistency of a group of items (e.g. the items that used to
343 measure attitude toward the ad). Coefficient alpha was satisfactory (>.7) for all
344 variables under study: deviation from reality (alpha=.97), high/low context

345 communication ($\alpha=.73$), attitude toward the ad ($\alpha=.83$) and attitude toward
346 the brand ($\alpha=.92$).

347

348 Attention check items were also incorporated among the questionnaire items to ensure
349 the quality of information provided. Three dichotomous variables (with "Yes/ No"
350 answers) were included: "I have 17 fingers on my left hand", "I was born on planet
351 Earth" and "The sun revolves around the earth". Overall 67 of the participants failed
352 the attention control and were excluded from the analysis. Table 3 summarizes the
353 study's demographics.

354

355 **2.2 Results**

356 **2.2.1 Manipulation Checks**

357 To verify that the manipulations were effective, participants were asked to rate the
358 manipulations of the metaphor and the culture. For the visual metaphors' manipulations,
359 the independent samples t-test results show that participants rated deviation from reality
360 significantly higher in the condition of a visual metaphor than in the non-metaphorical
361 condition ($t_{\text{deviation from reality}}(413)=7.25$, $p<.001$; $M_{\text{vm}}=3.86$,
362 $SD=.96$; $M_{\text{nm}}=3.18$, $SD=.98$). Furthermore, Indian participants rated deviation from
363 reality higher in the condition of the visual metaphor than in the condition of no visual
364 metaphor ($t_{\text{deviation from reality}}(199)=4.22$, $p<.001$; $M_{\text{vm}}=3.87$, $SD=1.15$; $M_{\text{nm}}=3.13$,
365 $SD=1.36$), and so did the US participants ($t_{\text{deviation from reality}}(142)=7.98$, $p<.001$;
366 $M_{\text{vm}}=3.86$, $SD=.7$; $M_{\text{nm}}=3.22$, $SD=.39$).

367

368 Also, with respect to the manipulation of visual metaphor, independent t-test analyses
369 showed that participants rated artful deviation higher in the condition of visual
370 metaphor than in the non-metaphorical condition ($t_{\text{artfuldeviation}}(413)=4.86$, $p<.001$;
371 $M_{\text{vm}}=3.93$, $SD=1.06$; $M_{\text{nm}}=3.39$, $SD=1.22$). Indian participants rated artful deviation
372 higher in the case of the visual metaphor than in the case of no visual metaphor
373 ($t_{\text{artfuldeviation}}(204)=3.38$, $p<.001$; $M_{\text{vm}}=4.01$, $SD=1.08$; $M_{\text{nm}}=3.49$, $SD=1.15$), and so
374 did the US participants ($t_{\text{artfuldeviation}}(207)=3.36$, $p<.001$; $M_{\text{vm}}=3.84$, $SD=1.04$;
375 $M_{\text{nm}}=3.29$, $SD=1.28$).

376

377 To confirm the independence of each manipulation, we ran two 2x2 ANOVAs with
378 visual metaphor (present, absent) and culture (India, USA) as independent variables
379 and deviation from reality and artful deviation as dependent variables. Besides the
380 main effect of visual metaphor on deviation from reality ($F(1, 413)=52.57$, $p<.001$)
381 and artful deviation ($F(1, 413)=22.67$, $p<.001$), no other main effect or interactions
382 were found. These findings indicate that the manipulations were successful.

383

384 Statistically significant differences were also recorded between the two countries with
385 respect to the high/low context culture criterion as Indian participants rated
386 themselves to prefer silence and indirect communication (i.e. high context
387 communication) more than Americans ($t_{\text{high/low context culture}}(415)=6.34$, $p<.001$; $M_{\text{India}}=$

388 3.37, SD=.41; M_{US}=3.1, SD=.45). The above analysis indicates a successful
389 manipulation of metaphor, as well as of the high/low context culture parameter.

390

391 **2.2.2 Moderated Mediation Analysis**

392 Hayes's bootstrapping process (Hayes, 2013) provides a reliable estimation of direct
393 and conditional indirect effects. A moderated mediation analysis was conducted in
394 PROCESS SPSS (model 7 with 5000 bootstrap samples) with visual metaphor as the
395 independent variable, culture (India vs. the USA) as a moderator, attitude toward the
396 ad as a mediator and attitude toward the brand as the dependent variable. Ad and
397 brand familiarity were used as covariates, since an independent sample t-test indicated
398 a statistically significant difference between the two countries: ad ($t_{ad\ familiarity}(413)=$
399 4.92, $p<.001$; $M_{India}= 3.32$, SD=1.35; $M_{US}= 2.64$, SD=1.47) and brand familiarity
400 ($t_{brand\ familiarity}(414)=6.31$, $p<.001$; $M_{India}=3.36$, SD=1.31; $M_{US}=2.52$, SD=1.40). Both
401 ad and brand familiarity can significantly affect consumers' evaluations of the
402 advertisement and the advertised brand (Hardesty, Carlson & Bearden, 2002) and as
403 such must be taken into consideration.

404

405 In line with hypothesis 1, attitude toward the ad mediates the relationship between
406 visual metaphors and attitude toward the brand. However, the mediation effect is
407 evident only for Indian participants. Hence, hypothesis 1 is partially supported. Given
408 that culture moderates the effect of visual metaphors on attitude toward the ad ($\beta=-$
409 0.37, $p=.028$), hypothesis 2 is supported (Tables 4 and 5). It appears that the effect of
410 visual metaphor on attitude toward the ad is more positive in a high context culture
411 (e.g. India) ($M_{vm}=3.79$, SD=.75; $M_{nm}=3.52$, SD=.82) compared to a low context
412 culture (e.g. USA) ($M_{vm}=3.38$, SD=.88; $M_{nm}=3.48$, SD=1.01) (Table 4).

413

414 The moderated mediation index is, also, statistically significant for attitude toward the
415 brand (Index=-.1992 (.0903); 95% CI= [-.3814; -.0256]). In high context culture (i.e.
416 India) there is a positive and statistically significant indirect effect of visual metaphors
417 through attitude toward the ad on attitude toward the brand ($\beta=.1245$, SE=.0577;
418 [.0173; .2414]), whereas there is a negative not statistically significant indirect effect
419 of visual metaphors via attitude toward the ad on attitude toward the brand in low
420 context culture (i.e. the USA) ($\beta= -.0748$, SE=.0692; [-.2085; .0589]). Thus,
421 according to the proposed model and in line with the study's expectations, a visual
422 metaphor leads to more positive attitude toward the ad in a high context culture (i.e.
423 India) rather than in low context culture (i.e. USA), which in turn has a significant
424 positive effect on attitude toward the brand. Hence, H3 is also supported (Tables 4
425 and 5). The R² of the moderated mediation model is .61, which corresponds to large
426 effect sizes ($R^2=.61$, $F(4, 412)=158.51$, $p<.001$) (Cohen, 1992).

427

428 **2.3 Discussion**

429 The results of the experiment provide evidence for the moderating effect of culture on
430 the indirect effect of visual metaphors on attitude toward the brand through attitude
431 toward the ad. Visual metaphors lead to more favorable attitude toward the ad and the

432 brand in India rather than in the USA. Experiment 1 extends prior research in
433 metaphorical advertising as it reveals the decisive role of culture in the appreciation of
434 visual metaphors. Given that experiment 1 focused exclusively on an unknown coffee
435 brand, it is important to verify whether a similar pattern will emerge in a different
436 product category. This approach would enhance both the ecological and the external
437 validity of the study.

438

439 **3. Experiment 2**

440

441 **3.1 Materials and Methods**

442

443 **3.1.1 Stimuli, Participants and Procedure**

444 A second 2 (presence vs. absence of visual metaphor) x 2 (India vs.USA) between-
445 subjects experiment was performed to verify and complement the results of the first.
446 The presence or absence of a visual metaphor and the culture (India or USA) were the
447 between-subjects factors. Attitude toward the ad was the mediator and attitude toward
448 the brand the dependent variable.

449

450 The experimental stimuli in the second experiment (two versions of an ice-cream
451 advertisement, (see Figures 3 and 4) were based on the characteristics defined in prior
452 studies (Margariti et al., 2018; Phillips & McQuarrie, 2004). An actual advertisement
453 of the brand "Unimed", that includes a visual metaphor (a cone of ice-cream
454 transformed into a trophy of ice-cream) was used. Similarly to the first experiment,
455 the background, the brand name of the product and the slogan were altered and a non-
456 metaphorical version of the advertisement (the plain cone of ice-cream) was created.
457 Thus, the experimental stimuli depict a fictitious ice-cream brand "Luv Milkie", the
458 same logo and the same slogan, "You deserve it". The metaphorical version illustrates
459 a cone of ice-cream converted into a trophy, whereas the non-metaphorical one
460 portrays a plain cone of ice-cream.

461

462 Ice-cream was selected as an appropriate product example for a number of reasons.
463 First, both countries indicate a heavy ice-cream consumption. Notably, India's ice-
464 cream sales volume has increased dramatically between 2011 and 2016 and there is a
465 similar projection for the coming years leading to 2021. Ice-cream is a favorite dessert
466 in the USA with millions of Americans indulging in it (Statista, 2018). Second, over
467 the last years, people in India are turning into more sophisticated, demanding and
468 adventurous ice-cream consumers, similar to Americans (Statista, 2018; Thomas,
469 2017). The USA on the other hand is among the world's largest ice-cream
470 consumption nations, alongside New Zealand and Australia. Despite a general
471 preference in vanilla flavor, Americans like to experiment with different flavors and
472 confections of candies and chocolate (Chepkemoi, 2017; IDFA, 2018). Third, a
473 number of cross-cultural studies have used ice-cream as a stimulus for the purposes of
474 their experimental studies (Prescott, Bell, Gillmore, Yoshida, O'Sullivan, Korac,
475 Allen & Yamazaki, 1997; Rozin, Fischler, Shields & Masson, 2006; Sjolander, 1992),

476 whereas numerous advertising campaigns of ice-cream brands, experiment with visual
477 metaphors. Two leading examples are Bellissimo's 2016 campaign "*Bellissimo Ice*
478 *Cream Victory Day 2016*" and Algida's, Solero campaign "*Fruit. Now as ice cream*"
479 in 2004.

480
481 Overall, 181 (82 Indian and 99 US) participants in four treatment groups (one for each
482 condition) contributed to the second online experiment. Similar to the first
483 experiment, participants were recruited through Figure-Eight crowd-sourcing platform
484 and were reimbursed 0.30\$ per complete response. "*Level 2*" of contributors was
485 selected, allowing them to participate only once in the study. Participants at their own
486 convenience saw one of the two ad versions spending at least 500 seconds on the
487 questionnaire.

488

489 **3.1.2 Measures**

490 Manipulation checks, dependent variables and attention check items were
491 administered in an identical to the first experiment manner (Table 2). Cronbach's
492 alpha was satisfactory for all variables (higher than .7), except for the manipulation
493 check of high context culture ($\alpha=.68$). However, composite reliability values of .6 to
494 .7 are acceptable in exploratory research (Nunnally & Bernstein, 1994). The
495 evaluation of the attention check items (Table 2) resulted 58 respondents being
496 excluded from the second experiment. Table 6 summarizes the study's demographics.
497

498

499 **3.2 Results**

500

500 *3.2.1 Manipulation Checks*

501 Independent t-test analyses demonstrated that the participants rated deviation from
502 reality significantly higher in the condition of a visual metaphor than in the non-
503 metaphorical condition ($t_{\text{deviation from reality}}(179)=5.98$, $p<.001$; $M_{\text{vm}}=3.43$, $SD=1.06$;
504 $M_{\text{nm}}=2.54$, $SD=.95$). Moreover, Indian people rated deviation from reality higher in
505 the condition of the visual metaphor than in the condition of no visual metaphor
506 ($t_{\text{deviation from reality}}(80)=3.76$, $p<.001$; $M_{\text{vm}}=3.48$, $SD=1.09$; $M_{\text{nm}}=2.61$, $SD=.94$), and so
507 did the US participants ($t_{\text{deviation from reality}}(97)=4.41$, $p<.001$; $M_{\text{vm}}=3.38$, $SD=1.04$;
508 $M_{\text{nm}}=2.49$, $SD=.96$).

509

510 Moreover, with respect to the manipulation of visual metaphor, independent t-test
511 analyses also indicated that there is a statistically significant higher rating of artful
512 deviation in the condition of visual metaphor than in the condition of no visual
513 metaphor ($t_{\text{artfuldeviation}}(179)=3.52$, $p<.001$; $M_{\text{vm}}=4.27$, $SD=.85$; $M_{\text{nm}}=3.78$, $SD=1.0$).
514 Indian participants rated artful deviation higher in the case of the visual metaphor than
515 in the case of no visual metaphor ($t_{\text{artfuldeviation}}(80)=2.11$, $p=.038$; $M_{\text{vm}}=4.32$, $SD=.84$;
516 $M_{\text{nm}}=3.89$, $SD=1.02$), and so did the US participants ($t_{\text{artfuldeviation}}(97)=2.58$, $p=.011$;
517 $M_{\text{vm}}=4.21$, $SD=.87$; $M_{\text{nm}}=3.72$, $SD=1.0$).

518

519 In order to confirm the independence of each manipulation, we ran two 2x2 ANOVAs
520 with visual metaphor (present, absent) and culture (India, USA) as independent
521 variables and deviation from reality and artful deviation as dependent variables.
522 Similarly to experiment 1, besides the main effect of visual metaphor on deviation
523 from reality ($F(1, 177) = 33.05$, $p < .001$) and artful deviation ($F(1, 177) = 10.84$,
524 $p = .001$), no other main effect or interactions were found. These findings indicate that
525 the manipulations of the visual metaphor were successful.

526

527 Statistically significant differences were also recorded among the two countries with
528 respect to the high/low context culture criterion. Indian participants rated themselves
529 as preferring silence and indirect communication (i.e. high context communication)
530 more than Americans ($t_{\text{high/low context culture}}(179) = 3.72$, $p < .001$; $M_{\text{India}} = 3.34$, $SD = .37$;
531 $M_{\text{US}} = 3.13$, $SD = .4$).

532

533 **3.2.2 Moderated Mediation Analyses**

534 Just as in the first experiment, a moderated mediation analysis was conducted in
535 PROCESS SPSS (model 7 with 5000 bootstrap samples) with visual metaphors as the
536 independent variable, culture (India vs. the USA) as a moderator, attitude toward the
537 ad as a mediator and attitude toward the brand as the dependent variable. Ad and
538 brand familiarity were used as covariates, since an independent sample t-test indicated
539 a statistically significant difference between the two countries: ad (t_{ad}
540 familiarity($179) = 3.43$, $p < .001$; $M_{\text{India}} = 2.99$, $SD = 1.36$; $M_{\text{US}} = 2.28$, $SD = 1.39$) and brand
541 familiarity ($t_{\text{brand familiarity}}(179) = 2.33$, $p = .021$; $M_{\text{India}} = 2.59$, $SD = 1.3$; $M_{\text{US}} = 2.14$,
542 $SD = 1.26$).

543

544 The moderated mediation analysis indicates that attitude toward the ad mediates the
545 relationship between visual metaphors and attitude toward the brand. However, the
546 mediation effect is evident only for Indian participants. Thus, hypothesis 1 is partially
547 supported. Provided that culture moderates the effect of visual metaphors on attitude
548 toward the ad ($\beta = -.13$, $p = .036$), hypothesis 2 is supported (Tables 4 and 5). It appears
549 that the effect of visual metaphor on attitude toward the ad is more positive in a high
550 context culture (e.g. India) ($M_{\text{vm}} = 4.17$, $SD = .65$; $M_{\text{nm}} = 3.82$, $SD = .77$) compared to a
551 low context culture (e.g. USA) ($M_{\text{vm}} = 3.57$, $SD = .94$; $M_{\text{nm}} = 3.74$, $SD = .67$) (Table 7).

552

553 Culture, also, moderates the effect of visual metaphors on attitude toward the brand.
554 The moderated mediation index is statistically significant for attitude toward the
555 brand (Index = .1904 (.094); 95% CI = [.0131; .3792]). In high context culture (i.e.
556 India) there is positive and statistically significant indirect effect of visual metaphors
557 through attitude toward the ad on attitude toward the brand ($\beta = .127$, $SE = .0613$;
558 [.0095; .2505]) whereas there is a negative not statistically significant indirect effect
559 of visual metaphors via attitude toward the ad on attitude toward the brand in low
560 context culture (i.e. the USA) ($\beta = -.0633$, $SE = .0679$; [-.2012; .0622]). Thus, a visual
561 metaphor generates more positive attitude toward the ad in a high context culture (i.e.
562 India) rather than in low context culture (i.e. USA), which in turn has a significant

563 positive effect on attitude toward the brand. Therefore, H3 is supported (Tables 7 and
564 8). The R^2 of the moderated mediation model is .58, which corresponds to large effect
565 sizes ($R^2 = .58$, $F(4,176) = 62.63$, $p < .001$) (Cohen, 1992).

566

567 **3.3 Discussion**

568 Experiment 2, a replication of the first experiment in a different product category,
569 confirms the original findings (experiment 1) and provides further evidence that the
570 indirect effect of visual metaphor on attitude toward the brand through attitude toward
571 the ad is more positive in a high context culture (India) rather than in a low context
572 one (USA). Experiment 2 underlines the hypothesized relationships and provides
573 further evidence in support of the robustness and generalizability of the proposed
574 model.

575

576 **4. General Discussion**

577

578 **4.1 Theoretical Implications**

579 The main objective of the study is to investigate the potential moderation effect of
580 consumers' national culture on the impact of visual metaphors on brand attitude
581 through the prior established attitude toward the ad. Given that the use of visual,
582 metaphorical language in food advertising has proliferated in recent years, the
583 examination of its effect on consumers' attitudes in different cultural contexts
584 becomes quite timely. Even though the appreciation of visual metaphors is subject to
585 cultural values (Kövecses, 2005; Shinohara & Matsunaka, 2009), the effect of culture
586 on consumers' responses toward visual metaphors in advertising has only been
587 narrowly investigated (Littlemore & Perez-Sobrino, 2017; Van Mulken et al., 2010).

588

589 Fruitful theoretical implications for advertising, cognitive linguistics and semiotics
590 derive from this study. Two experiments highlight the moderating effect of culture
591 (high and low context) on the relationship between visual metaphors and attitude
592 toward the ad. Visual metaphors when exposed to consumers in India lead to more
593 positive attitude toward the ad compared to consumers in the USA. In line with Hall's
594 (1976) theory, it appears that people in India prefer a more implicit, visual
595 communication (visual metaphors), than US consumers who favor direct
596 communication (literal visuals) (Gudykunst et al., 1996; Kim, et al., 1998; Wurtz,
597 2006). Along these lines, the present study extends Hall's (1976) high/low context
598 theory, confirming its applicability in the study of visual metaphors in advertising.

599

600 Moreover, it further builds on the scarce literature on the role of cultural influences on
601 visual metaphor appreciation in advertising (Littlemore & Perez-Sobrino, 2017; Van
602 Mulken et al., 2010). Along prior relevant studies in linguistics (Kövecses, 2005;
603 Shinohara & Matsunaka, 2009), we highlight differences in the appreciation of visual
604 metaphors between Asian (India) and Western (USA) cultures. The consistency in
605 these findings could be attributed to the fact that research so far has mainly
606 concentrated in Asian (i.e. India, China and Japan) (Shinohara & Matsunaka, 2009)

607 and Western societies (i.e. USA, England, Germany and Netherlands), deemed
608 representative of high and low context cultures accordingly (Van Mulken et al.,
609 2005).

610
611 However, our results seem to contradict Littlemore and Perez-Sobrino's (2017) study
612 that postulates an insignificant effect of the linguistic and cultural background on
613 perceived effectiveness of metaphorical advertisements. In a value judgment, we
614 could attribute these differences to methodological discrepancies among the two
615 studies (measures of effectiveness used). In Littlemore and Perez-Sobrino (2017)
616 study participants were asked to assess the effectiveness of the advertisements on a
617 single-item three-point rating scale ranging from "not very effective" to "highly
618 effective. In fact, participants were assigned an advertisers role without previously
619 being informed and trained for the task. The word "effectiveness" is a rather technical
620 term, not easily understood by consumers, who often hold naive meanings about
621 advertising effectiveness and persuasion (Briñol, Rucker & Petty, 2015). The present
622 study on the other hand, asked participants to express their affective reactions to the
623 advertisements and advertised brand, using two indirect measures of advertising
624 effectiveness (i.e. attitude toward the ad and brand).

625
626 Contrary also to prior studies indicating a positive overall association between visual
627 metaphors and attitude toward the ad (Jeong, 2008; Kim et al., 2012), as well as
628 attitude toward the brand (Burgers et al. 2016) the present study reveals that these
629 relationships stand only for the Indian and not the US sample. Similarly, the
630 mediating effect of attitude toward the ad on the relationship between visual
631 metaphors and attitude toward the brand is evident only for Indian participants. In
632 other words, although both Indians and Americans perceive the ads as metaphorical to
633 the same extent, only Indians are significantly affected and form a more positive
634 attitude toward these ads and the associated advertised brand. Such variations could
635 be attributed to the respondents' cultural background. Being in a low context culture,
636 Americans (Hall, 1976) rely mainly on explicit verbal communication and as such
637 they may not be significantly influenced by the visual variations.

638 Eventually this study proposes a moderated mediation model to advance the
639 theoretical understanding on the relationships between visual metaphors, consumers'
640 attitudes and culture. Particularly, the proposed moderated mediation framework
641 confirms the hypothesis that an advertisement with a visual metaphor exerts a greater
642 positive effect on attitude toward the ad and eventually on attitude toward the brand
643 on consumers in high context cultures (India) rather than in low context cultures
644 (USA). The proposed model elucidates the influence of visual metaphors on
645 consumers' attitudes across cultures. As such it significantly extends prior studies on
646 the use of figurative advertising.

647

648 **4.2 Practical Implications**

649 The present study examines consumers' attitudes toward metaphorical advertisements
650 in two industrial world economic powers; India and the USA. India is a growing
651 economy with a GDP growth rate of 6.74 (Statista, 2017), whereas the USA is the
652 "steam engine" of the global economy. Given their crucial role for the global
653 economy, any potential understanding of the factors that shape consumer attitude is of
654 paramount importance for international food advertisers. As this study reveals,
655 international food advertisers should consider incorporating more visual metaphors in
656 their advertising campaigns addressed to audiences in high context cultures (India).
657 People in these environments seem to prefer implicit forms of communication (i.e.
658 richer and more ambiguous visuals). Hence, visual metaphors could improve
659 consumers' attitude toward the ad and the associated advertised brand. In low context
660 cultures (USA), the use of visual metaphors in advertising does not seem to have a
661 significant positive effect. Hence, merely the presence of a visual metaphor in an ad
662 does not necessarily guarantee its success. Metaphorical advertisements should offer
663 more added value for consumers in the USA to be considered effective advertising
664 approaches.

665

666 ***4.3 Limitations and further research***

667 The study's limitations provide the basis for further discussion and corrective
668 research. First, Figure-eight.com does not allow researchers to identify the different
669 ethnicities (such as African-American, Latin-American, Native-American and others)
670 that form part of the total US population and thus address a more homogeneous and
671 culturally distinct group. It would be of interest to focus on specific ethnicities within
672 the USA, as their underlining cultural differences could alter responses. In line with
673 Dahl's (2004) argument, cross-cultural studies should highlight how cultural
674 differences within the same country or between two culturally confined countries can
675 affect consumers' responses.

676

677 Another limitation is that 67 participants in the first experiment and 58 participants in
678 the second experiment failed to successfully respond to the attention check items and
679 were excluded from the study. Even though there is a considerable discrepancy
680 among the two samples (16% and 37% were excluded in the first and second
681 experiment respectively) that significantly reduced our sample size, the elimination of
682 these participants did not introduce any demographic bias in the study. No statistically
683 significant demographic differences were recorded between the two groups
684 (remaining vs. excluded participants) in neither of the two experiments. Demographic
685 bias is the main concern and limitation of attention check measures affecting a study's
686 external validity (Vannette, 2016).

687

688 This study focuses on a specific type of visual metaphor, fusion. Future research
689 endeavors should consider different types of visual metaphors, such as juxtapositions
690 and replacements (Phillips & McQuarrie, 2004). Different levels of verbal anchoring
691 to visual metaphors across different countries should also be introduced, to assess
692 their interaction effect on consumers' responses.

693
694 Our mediation analysis results demonstrate that attitude toward the ad does not fully
695 mediate the relationship between visual metaphors and attitude toward the brand.
696 Thus, future research should consider other mediating variables such as perceived
697 emotions (i.e. surprise), perceived creativity, perceived innovativeness, affective and
698 cognitive elaboration.

699
700 Prior studies have indicated that metaphors change across time periods in accordance
701 to changing social conditions (Hidalgo, Kraljevic & Nunez-Perucha, 2013). Thus,
702 future research could identify the influence of time and cultural changes on the
703 appreciation of visual metaphors, since the present study may be a picture of the
704 present.

705
706 According to Kovecses (2005) the human body constitutes the basis for many
707 conceptual metaphors (embodiment). People are used to describe abstract concepts
708 by using concrete source concepts derived from their perceptual experience (Meier,
709 Schnall, Schwarz & Bargh, 2012). For instance a bad relationship is usually described
710 as a "distant relationship", whereas a good relationship as "close" one, since we prefer
711 to be physically close to loved ones and those we care for deeply, and distant from
712 people we dislike. Given that body experiences are nearly universal, metaphors that
713 are based on this have an increased possibility of being universally understood
714 (Kovecses, 2005). In this study, the metaphors used in the two experiments are not
715 embodied metaphors. We used two worldwide known symbols with their meanings, a
716 clock and a trophy, to generate the two metaphors. As a result, participants in both
717 countries (India and the USA) perceived the advertising stimuli metaphorical to a
718 similar extent. However, the objective of our study was not to assess the perception of
719 visual metaphors across cultures, but their effect on attitude toward the ad. It appears
720 that the perception of visual metaphors does not always ensure positive attitude
721 toward the ad and the brand. Future research endeavors could investigate the effect of
722 embodiment on the standardization strategy of metaphorical advertisements and their
723 resulting influence on consumers' attitudes.

724

725 **5. Concluding Remarks**

726 The present study manifests that visual metaphors form a powerful and effective
727 advertising design strategy in high context (India) rather than low context cultures
728 (USA). Visual metaphors lead to more positive attitude toward the ad and in turn
729 attitude toward the brand in India rather than in the USA, as consumers in high
730 context environments demonstrate significantly greater preference for indirect
731 communication. Our findings build on the argument that even though visual
732 communication is perceived as somewhat universal (Bulmer & Buchanan-Oliver,
733 2006), the appreciation of metaphorical figures is subject to existing knowledge that
734 pertains to cultural values and beliefs. Consumers tend to respond more favorably to
735 advertising stimuli that best match their cultural values and beliefs (Zhang & Gelb,
736 1996). The visual process is an active response, learned and developed by surrounding

737 contexts, such as the cultural one (Scott, 1994). Hence, metaphorical advertisements
738 should take into serious consideration the cultural values of their target audience.

739

740 **References**

- 741 Ang, S.H., Lee, Y.H., & Leong, S.M. (2007). The ad creativity cube:
742 Conceptualization and initial validation. *Journal of the Academy of Marketing
743 Science*, 35, 220-232.
- 744 Ang, S.H., & Low, S.Y. (2000). Exploring the dimensions of ad
745 creativity. *Psychology & Marketing*, 17, 835-854.
- 746 Baker S.M., & Kennedy P.F. (1994). Death by Nostalgia: A diagnosis of context
747 specific cases. *Advances in Consumer Research*, 21, 169–174.
- 748 Barthes, R. (1964). *Rhétorique de l'image*. Communications: 40–51.
- 749 Berlyne, D. (1971). *Aesthetics and Psychobiology*. Appleton, New York.
- 750 Bhumiratana, N., Adhikari, K., & Chambers IV, E. (2014). The development of an
751 emotion lexicon for the coffee drinking experience. *Food Research
752 International*, 61, 83-92.
- 753 Bie, B., Tang, L., & Treise, D. M. (2016). Be aware of superbugs: Newspaper
754 coverage of NDM-1 in India, UK, and the USA. *Asian Journal of
755 Communication*, 26(1), 58-75.
- 756 Bolognesi, M., van den Heerik, R., & van den Berg, E. (2016). *VisMet 1.0: An online
757 corpus of visual metaphors*.
- 758 Briñol, P., Rucker, D. D., & Petty, R. E. (2015). Naïve theories about persuasion:
759 Implications for information processing and consumer attitude
760 change. *International Journal of Advertising*, 34(1), 85-106.
- 761 Brown, S. P., & Stayman, D. M. (1992). Antecedents and consequences of attitude
762 toward the ad: A meta-analysis. *Journal of consumer research*, 19(1), 34-51.
- 763 Bulmer, S., & Buchanan-Oliver, M. (2006). Visual rhetoric and global advertising
764 imagery. *Journal of Marketing Communications*, 12, 49-61.
- 765 Burke, M.C., & Edell, J. A. (1989). The impact of feelings on ad-based affect and
766 cognition. *Journal of marketing research*, 26, 69-83.
- 767 Burgers, C., Eden, A., de Jong, R., & Buningh, S. (2016). Rousing reviews and
768 instigative images: The impact of online reviews and visual design
769 characteristics on app downloads. *Mobile Media & Communication*, 4(3), 327-
770 346.
- 771 Caillat, Z., & Mueller, B. (1996). The Influence of Culture on American and British
772 Advertising. *Journal of Advertising Research*, 36, 79-89.
- 773 Caporaso, N., Genovese, A., Canela, M.D., Civitella, A., & Sacchi, R. (2014).
774 Neapolitan coffee brew chemical analysis in comparison to espresso, moka
775 and American brews. *Food Research International*, 61, 152-160.
- 776 Cheung, F.S.L., & Leung, W. F. (2017). Cross-cultural perspectives on attitude
777 toward outdoor advertising in Internet era. *GSTF Journal on Business Review
778 (GBR)*, 2(4).
- 779 Cohen, J. (1992). *A power primer*. *Psychological Bulletin*. 112(1), 155–159.

- 780 Copuš, L., & Čarnogurský, K. (2017). Intercultural marketing: Culture and its
781 influence on the efficiency of Facebook marketing
782 communication. *Management & Marketing*, 12(2), 189-207.
- 783 Dahl, S. (2004). Cross-cultural advertising research: What do we know about the
784 influence of culture on advertising?. *Middlesex University Discussion Paper*
785 No.28.
- 786 Davari, A., & Iyer, P. (2014). *A Cross Cultural Analysis of Advertisements: Content*
787 *Analysis of Print Advertisements of Local and Global Companies in B2B and*
788 *B2C Contexts across USA and India. Advances in Marketing*, 79.
- 789 De Mooij, M. (2004). Consumer behavior and culture. *Consequences for global*
790 *marketing and advertising*.
- 791 DeRosia, E.D. (2008). The effectiveness of nonverbal symbolic signs and metaphors
792 in advertisements: An experimental inquiry. *Psychology & Marketing*, 25 (3),
793 298-316.
- 794 Eisend, M. (2009). A meta-analysis of humor in advertising. *Journal of the Academy*
795 *of Marketing Science*, 37(2), 191-203.
- 796 Eisend, M. (2011). How humor in advertising works: A meta-analytic test of
797 alternative models. *Marketing letters*, 22, 115-132.
- 798 Frazer, C.F., Sheehan, K.B., & Patti, C.H. (2002). Advertising strategy and effective
799 advertising: comparing the USA and Australia. *Journal of Marketing*
800 *Communications*, 8, 149-164.
- 801 Forceville, C. (2005). Visual representations of the idealized cognitive model of anger
802 in the Asterix album La Zizanie. *Journal of pragmatics*, 37(1), 69-88.
- 803 Forceville, C. (2008). Metaphor in pictures and multimodal representations. *The*
804 *Cambridge handbook of metaphor and thought*, 462-482.
- 805 Forceville, C., & Urios-Aparisi, E. (Eds.). (2009). *Multimodal metaphor* (Vol. 11).
806 Walter de Gruyter.
- 807 Foss, S.K. (2005). Theory of Visual Rhetoric. In K.L. Smith, S. Moriarty, G.
808 Barbatsis, & K. Kenney (Eds.), *Handbook of Visual Communication :*
809 *Theory, Methods, and Media* (pp. 141-152). 1st edition, Routledge.
- 810 Geuens, M., & De Pelsmacker, P. (1998). Feelings evoked by warm, erotic, humorous
811 or non-emotional print advertisements for alcoholic beverages. *Academy of*
812 *Marketing Science Review*, 19, 1-32.
- 813 Gkiouzepas, L., & Hogg, M.K. (2011). Articulating a new framework for visual
814 metaphors in advertising. *Journal of Advertising*, 40, 103-120.
- 815 Goldsmith, R.E., Lafferty, B.A., & Newell, S.J. (2000). The impact of corporate
816 credibility and celebrity credibility on consumer reaction to advertisements
817 and brands. *Journal of advertising*, 29, 43-54.
- 818 Gudykunst, W.B., Matsumoto, Y., Ting-Toomey, S.T.E.L.L.A., Nishida T., Kim, K.,
819 & Heyman, S. (1996). The influence of cultural individualism-collectivism,
820 self construals and individual values on communication styles across
821 cultures. *Human communication research*, 22, 510-543.
- 822 Hall, E.T. (1959). *The silent language*. New York: Doubleday.
- 823 Hall, E.T. (1976). *Beyond culture*. New York: Doubleday.

- 824 Hall, E.T. &Hall, M.R. (1990). *Understanding cultural differences*. Yarmouth, ME:
825 Intercultural Press Inc.
- 826 Hardesty, D. M., Carlson, J. P., & Bearden, W. (2002). Brand familiarity and invoice
827 price effects on consumer evaluations: the moderating role of skepticism
828 toward advertising. *Journal of advertising*, 31(2), 1-15.
- 829 Hatzithomas, L., Zotos, Y., & Boutsouki, C. (2011). Humor and cultural values in
830 print advertising: a cross-cultural study. *International Marketing Review*, 28,
831 57-80.
- 832 Hayes, A.F. (2013). *Introduction to mediation, moderation, and conditional process
analysis: A regression-based approach*. New York: Guilford Press.
- 833 Hidalgo Downing, L., Kraljevic Mujic, B., & Nuñez-Perucha, B. (2013).
834 Metaphorical creativity and recontextualization in multimodal advertisements
835 on e-business across time. *Metaphor and the Social World*, 3(2), 199-219.
- 836 Hofstede, G. (1980). Culture and organizations. *International Studies of Management
& Organization*, 10, 15-41.
- 837 Hofstede, G., & Bond, M. H. (1984). Hofstede's culture dimensions: An independent
838 validation using Rokeach's value survey. *Journal of cross-cultural
psychology*, 15(4), 417-433.
- 839 Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors,
institutions and organizations across nations*. Sage publications.
- 840 Jeong, S.H. (2008). Visual metaphor in advertising: Is the persuasive effect
841 attributable to visual argumentation or metaphorical rhetoric?. *Journal of
Marketing Communications*, 14 (1), 59-73.
- 842 Ji, M.F., & McNeal, J.U. (2001). How Chinese children's commercials differ from
843 those of the United States: A content analysis. *Journal of Advertising*, 30, 79-
844 92.
- 845 Kapoor, S., Hughes, P. C., Baldwin, J. R., & Blue, J. (2003). The relationship of
846 individualism-collectivism and self-construals to communication styles in
847 India and the United States. *International Journal of Intercultural
Relations*, 27(6), 683-700.
- 848 Kayan, S., Fussell, S. R., & Setlock, L. D. (2006). Cultural differences in the use of
849 instant messaging in Asia and North America. In *Proceedings of the
2006 20th anniversary conference on Computer supported cooperative
work* (pp. 525-528). ACM.
- 850 Kim, J., Baek, Y., & Choi, Y.H. (2012). The Structural Effects of Metaphor-Elicited
851 Cognitive and Affective Elaboration Levels on Attitude toward the Ad.
852 *Journal of Advertising*, 41, 77-96.
- 853 Kim, D., Pan, Y., & Park, H.S. (1998). High-versus low-Context culture: A
854 comparison of Chinese, Korean, and American cultures. *Psychology &
Marketing*, 15, 507-521.
- 855 Koudelova, R., & Whitelock, J. (2001). A cross-cultural analysis of television
856 advertising in the UK and Czech Republic. *International Marketing Review*,
857 18, 286-300.

- 867 Kövecses, Z. (2005). *Metaphor in culture: Universality and variation*. Cambridge:
868 University Press.
- 869 Lagerwerf, L., Van Hooijdonk, C.M., & Korenberg, A. (2012). Processing visual
870 rhetoric in advertisements: Interpretations determined by verbal anchoring and
871 visual structure. *Journal of Pragmatics*, 44, 1836-1852.
- 872 Levitt, T. (1983). The Globalization of Markets. *Harvard Business Review May-June*:
873 92-102.
- 874 Lewis, R.D. (1999). *When cultures collide: Managing successfully across cultures*.
875 London: Nicolas Breadley.
- 876 Littlemore, J., & Pérez-Sobrino, P. (2017). Eyelashes, speedometers or breasts? An
877 experimental cross-cultural approach to multimodal metaphor and metonymy
878 in advertising. *Textus*, 30(1), 197-222.
- 879 Lutz, R. J., MacKenzie, S. B., & Belch, G. E. (1983). Attitude toward the ad as a
880 mediator of advertising effectiveness: Determinants and consequences. *ACR
881 North American Advances*.
- 882 MacKenzie, S. B., & Lutz, R. J. (1989). An empirical examination of the structural
883 antecedents of attitude toward the ad in an advertising pretesting context. *The
884 Journal of Marketing*, 48-65.
- 885 Margariti K., Boutsouki C., & Hatzithomas L. (2018). Less is More or Less is A
886 Bore?. In: Cauberghe V., Hudders L., & Eisend M. (Eds), *Advances in
887 Advertising Research IX* (131-142). European Advertising Academy. Springer
888 Gabler, Wiesbaden
- 889 McQuarrie, E.F., & Mick, D.G. (1992). On resonance: A critical pluralistic inquiry
890 into advertising rhetoric. *Journal of Consumer Research*, 19, 180-197.
- 891 Meier, B. P., Schnall, S., Schwarz, N., & Bargh, J. A. (2012). Embodiment in social
892 psychology. *Topics in cognitive science*, 4(4), 705-716.
- 893 Mick, D.G. (1986). Consumer research and semiotics: Exploring the morphology of
894 signs, symbols, and significance. *Journal of Consumer Research*, 13, 196-213.
- 895 Mohanty, P. (2008). Role of Incongruity and 'Aha' Effect in Positive Affect
896 Experienced From Visual Metaphors. In A. Y. Lee & D. Soman (Eds.), *NA-
897 Advances in Consumer Research Volume 35* (pp. 1032). Duluth, MN: Association
898 for Consumer Research.
- 899 Mohanty, P., & Ratneshwar, S. (2015). Did you get it? Factors influencing subjective
900 comprehension of visual metaphors in advertising. *Journal of Advertising*, 44 (3),
901 232-242.
- 902 Morgan, S.E., Reichert, T. (1999). The message is in the metaphor: Assessing the
903 comprehension of metaphors in advertisements. *Journal of Advertising*, 28 (4), 1-
904 12.
- 905 Morris, P., & Waldman, J. A. (2011). Culture and metaphors in advertisements:
906 France, Germany, Italy, the Netherlands, and the United States. *International
907 Journal of Communication*, 5.
- 908 Muralidharan, S., La Ferle, C., & Sung, Y. (2017). Are we a product of our
909 environment? Assessing culturally congruent Green advertising appeals, novelty,

- 910 and environmental concern in India and the USA. *Asian Journal of*
911 *Communication*, 27(4), 396-414.
- 912 Nicholls, J. A. F., Roslow, S., Dubliss, S., & Comer, L. B. (1996). Relationship
913 between situational variables and purchasing in India and the USA. *International*
914 *Marketing Review*, 13(6), 6-21.
- 915 Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric Theory (McGraw-Hill Series*
916 *in Psychology) (Vol. 3)*. New York: McGraw-Hill.
- 917 Orth, U. R., Koenig, H. F., & Firbasova, Z. (2007). Cross-national differences in
918 consumer response to the framing of advertising messages: an exploratory
919 comparison from Central Europe. *European Journal of Marketing*, 41(3/4), 327-
920 348.
- 921 Perez-Sobrino, P. (2017). *Multimodal metaphor and metonymy in advertising*. John
922 Benjamins Publishing Company.
- 923 Phillips, B.J., & McQuarrie, E.F. (2002). The development, change, and
924 transformation of rhetorical style in magazine advertisements 1954-
925 1999. *Journal of Advertising*, 31, 1-13.
- 926 Phillips, B.J., & McQuarrie, E.F. (2004). Beyond visual metaphor: A new typology of
927 visual rhetoric in advertising. *Marketing theory*, 4, 113-136.
- 928 Richardson, R.M., & Smith, S.M. (2007). The influence of high/low-context culture
929 and power distance on choice of communication media: Students' media
930 choice to communicate with professors in Japan and America. *International*
931 *Journal of Intercultural Relations*, 31, 479-501.
- 932 Prescott, J., Bell, G. A., Gillmore, R., Yoshida, M., O'Sullivan, M., Korac, S., Allen,
933 S., & Yamazaki, K. (1997). Cross-cultural comparisons of Japanese and
934 Australian responses to manipulations of sweetness in foods. *Food Quality*
935 *and Preference*, 8 (1), 45-55.
- 936 Rozin, P., Fischler, C., Shields, C., & Masson, E. (2006). Attitudes toward large
937 numbers of choices in the food domain: A cross-cultural study of five
938 countries in Europe and the USA. *Appetite*, 46(3), 304-308.
- 939 Scott, L.M. (1994). Images in advertising: The need for a theory of visual
940 rhetoric. *Journal of Consumer Research*, 21, 252-273.
- 941 Seymour, M. (2010). Speech act pluralism, minimal content and pragmatics. *Journal*
942 *of Pragmatics*, 42, 2870-2881.
- 943 Shinohara, K., & Matsunaka, Y. (2009). Pictorial metaphors of emotion in Japanese
944 comics. *Multimodal metaphor*. 265-293.
- 945 Sopory, P., & Dillard, J.P. (2002). The persuasive effects of metaphor: A meta-
946 analysis. *Human Communication Research*, 28 (3), 382-419.
- 947 Spears, N., & Singh, S.N. (2004). Measuring attitude toward the brand and purchase
948 intentions. *Journal of Current Issues & Research in Advertising*, 26, 53-66.
- 949 Speck, P.S. (1991). The humorous message taxonomy: A framework for the study of
950 humorous ads. *Current issues and research in advertising*, 13, 1-44.
- 951 Sjolander, R. (1992). Cross-cultural effects of price on perceived product
952 quality. *European Journal of Marketing*, 26(7), 34-44.

- 953 Smith, K. L., Moriarty, S., Kenney, K., & Barbatsis, G. (Eds.). (2004). *Handbook of*
954 *visual communication: Theory, methods, and media*. Routledge.
- 955 Steen, G. (2008). The paradox of metaphor: Why we need a three-dimensional model
956 of metaphor. *Metaphor and Symbol*, 23(4), 213-241.
- 957 Van Hooft, A., Van Mulken, M., & Nedertigt, U. (2013). Cultural Differences? Visual
958 Metaphor in Advertising: Comprehension and Tolerance of Ambiguity in Four
959 European Countries. In *Advances in Advertising Research (Vol. IV)* (pp. 351-
960 364). Springer Gabler, Wiesbaden.
- 961 Van Mulken, M., Le Pair, R., & Forceville, C. (2010). The impact of perceived
962 complexity, deviation and comprehension on the appreciation of visual
963 metaphor in advertising across three European countries. *Journal of*
964 *Pragmatics*, 42, 3418-3430.
- 965 Van Mulken, M., VanEnschot, R., & Hoeken, H. (2005). Levels of implicitness in
966 magazine advertisements: An experimental study into the relationship between
967 complexity and appreciation in magazine advertisements. *Information Design*
968 *Journal & Document Design*, 13, 155-164.
- 969 Van Mulken, M., Van Hooft, A., & Nederstigt, U. (2014). Finding the tipping point:
970 Visual metaphor and conceptual complexity in advertising. *Journal of*
971 *Advertising*, 43, 333-343.
- 972 Vannette, D.L. (2016). Testing the Effects of Different Types of Attention
973 Interventions on Data Quality in Web Surveys. Experimental Evidence From a
974 14 Country Study. *Paper presented at the 71st Annual Conference of the*
975 *American Association for Public Opinion Research in Austin, TX*.
- 976 Wang, T., Zhou, L., Mou, Y., & Zhao, J. (2014). Study of country-of-origin image
977 from legitimacy theory perspective: Evidence from the USA and
978 India. *Industrial Marketing Management*, 43(5), 769-776.
- 979 Woo Jun, J., & Lee, H. S. (2007). Cultural differences in brand designs and tagline
980 appeals. *International Marketing Review*, 24 (4), 474-491.
- 981 Würtz, E. (2005). Intercultural communication on web sites: A cross-cultural analysis
982 of web sites from high-context cultures and low-context cultures. *Journal of*
983 *Computer-Mediated Communication*, 11, 274-299.
- 984 Zaidman, N. (2001). Cultural codes and language strategies in business
985 communication: Interactions between Israeli and Indian business people.
986 *Management Communication Quarterly*, 14, 408-411.
- 987 Zhang, Y., & Gelb, D.B. (1996). Matching advertising appeals to culture: The
988 influence of products' use conditions. *Journal of Advertising*, 25, 29-46.
- 989

990 **Web references**

- 991 Ahuja, A. The New Culture of Coffee in India. (2016).
992 <https://ineedcoffee.com/the-new-culture-of-coffee-in-india/> Accessed 11
993 September 2018
- 994 Chepkemtoi, J. Which Country Eats The Most Ice Cream?. (2017).

- 995 <https://www.worldatlas.com/articles/the-top-ice-cream-consuming-countries-of-the-world.html>/ Accessed 14 September 2018
- 996
- 997 Downey, G. 6 Coffee Industry Trends To Wake You Up In 2018. (2018).
www.repsly.com/blog/consumer-goods/coffee-trends-2018/Accessed 11
- 998
- 999 September 2018
- 1000 Foody, G. Coffee and Tea Trends in India. (2017).
<http://host.fieramilano.it/en/coffee-and-tea-trends-india/>Accessed 11
- 1001
- 1002 September 2018
- 1003 IDFA. Ice Cream Sales & Trends. (2018).
<https://www.idfa.org/news-views/media-kits/ice-cream/ice-cream-sales-trends/>
- 1004
- 1005 Accessed 14 September 2018
- 1006 Laughland, O. What is a flat white? A guide for Americans on Starbucks' next hit.
(2015). <https://www.theguardian.com/lifeandstyle/2015/jan/05/what-is-a-flat-white-starbucks/>Accessed 11 September 2018
- 1007
- 1008
- 1009 Mushahary, S. 24 Unusual Rituals And Festivals of India That Will Give You
Goosebumps.<https://www.scoopwhoop.com/inothernews/unbelieveable-celebrations-of-india/#.qkr7905q8/> Accessed 16 September 2018
- 1010
- 1011
- 1012 Pariona, A. Religious Demographics Of The USA (2018).
<https://www.worldatlas.com/articles/religious-composition-of-the-united-states.html>/ Accessed 16 September 2018
- 1013
- 1014
- 1015 Sethi, S.A Surprising New Trend In
Coffee.(2017).<https://www.forbes.com/sites/simransethi/2017/12/01/a-surprising-new-trend-in-coffee/#4d4339ac5b31/> Accessed 9 July 2018.
- 1016
- 1017
- 1018 Statista. The statistics portal.
(2017).<https://www.statista.com/outlook/30010000/119/coffee/india/#/>
- 1019
- 1020 Accessed 5 July 2018.
- 1021 Statista. India: Real gross domestic product (GDP) growth rate from 2012 to 2022
(compared to the previous year). (2017).
<https://www.statista.com/statistics/263617/gross-domestic-product-gdp-growth-rate-in-india/>.Accessed 16 September 2018
- 1022
- 1023
- 1024
- 1025 Statista. U.S. population: Consumption of ice cream and sherbet from 2011 to 2020.
(2018). <https://www.statista.com/statistics/283222/us-households-consumption-of-ice-cream-and-sherbet-trend/> Accessed 14 September 2018
- 1026
- 1027
- 1028 Szenthe, A. Top Coffee Producing Countries. (2018).
<https://www.worldatlas.com/articles/top-coffee-producing-countries.html>/Accessed 24 July 2018
- 1029
- 1030
- 1031 Thomas, M. In hot and humid India, the growth in ice cream sales is outpacing the
rest of the world. (2017). <https://qz.com/india/1024565/in-hot-and-humid-india-the-growth-in-ice-cream-sales-is-outpacing-the-rest-of-the-world/>
- 1032
- 1033 Accessed 14 September 2018
- 1034
- 1035 Venkat, P. Positive signs for Indian coffee market. (2017).<https://qrius.com/positive-signs-indian-coffee-market/> Accessed 5 July 2018.
- 1036
- 1037 Zimmermann, K.A. Indian Culture: Traditions and Customs of India. (2017).

1038 <https://www.livescience.com/28634-indian-culture.html>/ Accessed 16
1039 September 2018
1040

Table captions

Table 1. An overview of studies on visual metaphors

Table 2. Measurement Scales and Cronbach's alphas for Experiments 1 and 2

Table 3. Demographics of Experiment 1

Table 4. Analysis of Covariance for Experiment 1

Table 5. Moderated Mediation Analysis for Experiment 1

Table 6. Demographics of Experiment 2

Table 7. Analysis of Covariance for Experiment 2

Table 8. Moderated Mediation Analysis for Experiment 2

Table 1.

| Author(s) | Year | Country of study | Main Findings |
|--|-------------|--|---|
| <u>Field of Linguistics</u> | | | |
| Forceville | 2005 | France | This study indicates that: (1) the representations of anger in the Asterix album <i>La Zizanie</i> are compatible with the most popular anger metaphor showed by Kovecses (i.e. anger is the heat of a fluid in a container) and (2) in line with Marshall McLuhan's saying "the medium is the message" different mediums of comics may illustrate aspects of anger that are less noticeable or even absent in linguistic representations. |
| Shinohara & Matsunaka | 2009 | Japan | An analysis of pictorial metaphors of emotion in Japanese comics within the framework provided by Forceville (2005). This study indicates that culture-specific aspects found in verbal emotion metaphors may also be found in pictorial emotion metaphors. |
| Hidalgo, Kraljevic & Nuez-Perucha | 2014 | Print advertisements in "The Economist" and "Newsweek" | Metaphorical creativity can be expressed either in terms of novelty or in terms of adaptation to changing social situations. Changes in context play a significant role in the emergence of creative metaphors. The notion of recontextualization means that creative metaphors are not always novel, but use familiar scenarios to provide an unexpected twist in a new context. |
| Kovecses | 2005 | USA - Book | Issues of universality and variation in metaphors are discussed. The universality and variation of metaphors is subject to bodily experience (embodiment), social-cultural experience (context), and cognitive preferences and styles. A metaphor is a multifaceted phenomenon that involves language, conceptual system, social-cultural practices, neural and bodily activities. Metaphors that are shared among different cultures are highly abstract. Metaphor variation could be the result of people's divergent experiences in social and cultural life, gender, class, subculture etc. |
| <u>Field of Social Psychology</u> | | | |
| Meier, Schnall, Schwarz & Bargh | 2012 | Review paper | The study explores the notion of embodiment in social psychology, following other scientific fields such as cognitive psychology. It suggests that future research endeavors should put emphasis on a phenomenon-based approach, explore the theoretical boundary conditions and mediators that are involved. |
| <u>Field of Advertising</u> | | | |
| Perez-Sobrino | 2016 | A content | Advertisers mainly use text to communicate their products. The synergy of pictures and text is the |

| | | | |
|--------------------------------------|------|--|---|
| | | analysis of ads from international campaigns | most appropriate mode with respect to conceptual complexity. Marketing strategy and type of advertised product do not have a significant effect on the number and complexity of conceptual mappings. |
| Littlemore & Perez-Sobrino | 2017 | England, Spain, China | Figurative complexity of metaphors is not significantly related to speed of processing but is related to the complexity of interpretation, which in turn is significantly related to advertising effectiveness. There is a significant cross-cultural variation with respect to the figurative complexity in the interpretation of ads, and particularly to a) the time of processing, b) the depth of interpretation and, c) the linguistic subjectivity. |
| Gkiouzepas & Hogg | 2011 | Greece | Attitude toward the ad and the brand are more positive in visual metaphors with synthesis than with juxtaposition, in low-tension conditions. |
| Lagerwerf, van Hooijdonk & Korenberg | 2012 | Denmark | Fully anchored advertisements are more comprehended than advertisements with no text. Verbal anchoring generates deeper comprehension of connection rather than similarity. More cognitive elaboration is generated for similarity rather than connection, for saccades and image fixation duration. |
| McQuarrie & Mick | 1992 | USA | Manipulation of resonance generates positive treatment effects on liking for the ad, brand attitude, and unaided recall of ad headlines. The above effects are contingent on subjects' successful decoding of resonance and their tolerance for ambiguity. Both inconsistent-resonant and consistent- resonant advertisements lead to equally positive brand attitudes. Increased recall for headlines of resonant ads can be attributed to the evocation of a greater number of semantic chains or associational pathways. |
| Phillips & McQuarrie | 2002 | USA | Rhetorical style in magazine ads has become more complex over time. More and more advertisements start to use unanchored rhetorical figures and layer them more thickly. The incorporation of complex destabilization tropes has increased in the headlines and pictures of ads. Hierarchical taxonomies of rhetorical figures that make distinctions at multiple levels are empirically useful. |
| Phillips & McQuarrie | 2004 | USA | A new typology of visual rhetoric in advertising is proposed. |
| Van Mulken, Le Pair & Forceville | 2010 | Denmark, France, Spain | Hybrids are more favored than any other type of visual metaphor. Deviation from expectation and comprehension have a positive effect on appreciation. Perceived complexity negatively correlates with appreciation. Minimal differences were found among the three countries. |
| Mohanty | 2008 | USA | Moderate versus low or high levels of incongruity in a visual metaphor should lead to a greater level of positive affect. |
| Van Mulken, Van Hooft & Nederstigt | 2014 | France, Spain, Germany, Netherlands | Metaphoric advertisements generate greater appreciation, and comprehension. Visual metaphors of moderate complexity have a greater effect on appreciation than simpler or more complex metaphors. Comparable sources and targets in metaphors reduce appreciation. |

| | | | |
|-------------------------------------|------|---------|---|
| Van Mulken Van Enschot & Hoeken | 2005 | Denmark | The level of implicitness has a significant effect on ad appreciation. Appreciation follows an inverted U-curve pattern: advertisements that were considered most difficult to comprehend are less appreciated than relatively less complex advertisements. Implicit advertisements are more appreciated than explicit advertisements. However, the results indicate that extra implicit advertisements are also less appreciated by those who claim to have understood the advertisements. |
| Kim, Baek & Choi | 2012 | USA | Metaphoric advertisements exert more cognitive and affective elaborations than literal ones. Metaphor-elicited affective elaboration positively influences ad perceptions and ad credibility. Metaphor-elicited cognitive elaboration positively affects attitude toward the advertiser. In high involvement, utilitarian products, the effect of cognitive elaborations on Aad, high in metaphor, is greater than the effect of affective elaborations. In low involvement, hedonic products, the effect of affective elaborations on Aad, high in metaphor, is greater than the effect of cognitive elaborations. |
| Scott | 1994 | U.S.A | A critique to research dealing with advertising images that argues that pictures are reflections of reality. An alternative view is provided, according to which visuals are a convention-based symbolic system. Pictures are and must be cognitively processed, not just absorbed peripherally or automatically. Images constitute a sophisticated form of visual rhetoric. |
| De Rosia | 2008 | USA | Consumers with either low or high motivation, express less favorable responses toward non-verbal symbolic signs and metaphors as opposed to consumers with moderate motivation. A minimum level of cognitive effort is demanded to understand nonverbal symbolic signs and metaphors. |
| Mohanty & Ratneshwar | 2015 | USA | Metaphoric advertisements' subjective comprehension is poorer in higher incongruity. Consumers with high need for cognition demonstrate higher levels of comprehension. Need for cognition and type of processing are essential variables in comprehending the incongruity of visual metaphors. No significant effect of language and cultural contexts on the effectiveness of advertisements. |
| Burgers, Eden, De Jong & Buningh | 2016 | Denmark | Applications with icons that contain visual metaphors are more persuasive and more often downloaded compared to applications without visual metaphors. Visual metaphors in app icons generate more favorable attitude toward the app and more favorable behavioral intentions. Visual metaphors in app reduce the perceived complexity of icons. Different types of visual metaphors have different impact when they are incorporated in an online context of app stores compared to an offline context of print ads. |

Table 2.

| Variables | | Items | Responses | Cronbach's alpha | |
|---------------------|---------------------------------|---|--|----------------------------|--------------------------------|
| | | | | 1st experiment (coffee) | 2nd experiment (ice- cream) |
| Manipulation checks | High vs. Low context culture | <ul style="list-style-type: none">• Listeners should be able to understand what a speaker is trying to express even when the speaker does not say everything they intend to communicate• Speakers should not expect listeners will figure out what they really mean unless the intended message is stated precisely*• A listener should understand the intent of the speaker from the way the person talks• It is better to risk saying too much than be misunderstood*• It is more important to state a message efficiently than with great detail• Even if not stated exactly, a speaker's intent will rarely be misunderstood• The intended content of the message is more important than how the message is communicated*• People should be able to understand the meaning of a statement by reading between the lines• Intentions not explicitly stated can often be inferred from the context• A speaker can assume that listeners will know what they really mean | <p>5-point Likert scale</p> <p>1=Strongly agree, 2=Disagree, 3=Not sure, 4=Agree, 5=Strongly disagree</p> | 0.73 | 0.68 |

| | | | | | |
|------------|---|--|---|---|------|
| | | <ul style="list-style-type: none"> • People understand many things that are left unsaid • Fewer words can often lead to better understanding • The context in which a statement is made conveys as much or more information than the message itself • Misunderstandings are more often caused by the listener's failure to draw reasonable references, rather than the speaker's failure to speak clearly* • You can often convey more information with less words • Some ideas are better understood when left unsaid • The meaning of a statement often turns more on the context than the actual words | | | |
| | V.Metaphor vs. non metaphor Artful deviation Deviation from reality | <ul style="list-style-type: none"> • The image/visual is... • The image/visual is... • The image/visual is... | 1=Plain/Matte r of fact... 5=Artful/Clev er 1=Realistic... 5=Unrealistic and 1=Real... 5=Fictitious | - | 0.97 |
| Covariates | Ad familiarity | <ul style="list-style-type: none"> • This ad is... | 1=Completely Unfamiliar, 2=Very | - | - |

| | | | | | |
|-----------------------|---------------------------|---|--|------|------|
| | Brand familiarity | <ul style="list-style-type: none"> This brand is... | unfamiliar, 3=Not sure, 4=Very familiar, 5=Completely Familiar | - | - |
| Dependent variables | Attitude toward the ad | <ul style="list-style-type: none"> I like this advertisement a lot I don't think this advertisement is interesting* I think this advertisement is very convincing This advertisement is very appealing This advertisement is easy to forget* This advertisement is not effective* | 1=Strongly agree, 2=Disagree, 3=Not sure, 4=Agree, 5=Strongly disagree | 0.83 | 0.83 |
| | Attitude toward the brand | <ul style="list-style-type: none"> I like the advertised brand I think this is a good brand I favorably toward this brand I would recommend this brand to others | 1=Strongly agree, 2=Disagree, 3=Not sure, 4=Agree, 5=Strongly disagree | 0.92 | 0.91 |
| Attention check items | | <ul style="list-style-type: none"> I have 17 fingers on my left hand I was born on planet Earth The sun revolves around the earth | Yes/No | - | - |

*Reverse items

Table 3.

| | India | USA | Total |
|-------------------------------|--------------|------------|--------------|
| <u>Gender</u> | | | |
| Male | 65.2 (135) | 56.2 (118) | 60.6 (253) |
| Female | 34.78 (72) | 43.8 (92) | 39.4 (164) |
| <u>Education Level</u> | | | |
| Secondary Education | 1.4 (3) | 15.2 (32) | 8.4 (35) |
| Higher Education | 34.8 (72) | 55.2 (116) | 45.1 (188) |
| Master | 54.1 (112) | 23.8 (50) | 38.8 (162) |
| PhD | 0.0 (0) | 1.0 (2) | 0.5 (2) |
| Other | 9.7 (20) | 4.8 (10) | 7.2 (30) |
| <u>Age</u> | | | |
| 15-25 | 25.1 (52) | 15.7 (33) | 20.4 (85) |
| 26-35 | 52.7 (109) | 38.6 (81) | 45.6 (190) |
| 36-45 | 19.3 (40) | 21.4 (45) | 20.4 (85) |
| 46-55 | 1.4 (3) | 11.9 (25) | 16.7 (28) |
| 56-65 | 1.4 (3) | 9.5 (20) | 5.5 (23) |
| 66- | 0.0 (0) | 2.9 (6) | 1.4 (6) |

Table 4.

| Dependent Variables | Group Membership | | | | Main Effects | | | | Covariates | | | | Interaction | |
|---------------------------|------------------|--------------------|-----------------|--------------------|--------------|------|-----------------|------|----------------|------|-------------------|-------|---------------------------|------|
| | India | | USA | | Culture | | Visual Metaphor | | Ad Familiarity | | Brand Familiarity | | Culture x Visual Metaphor | |
| | Visual Metaphor | No Visual Metaphor | Visual Metaphor | No Visual Metaphor | F | Sig. | F | Sig. | F | Sig. | F | Sig. | F | Sig. |
| Attitude toward the ad | 3.79 (.75) | 3.52 (.82) | 3.38 (.88) | 3.48 (1.01) | 1.62 | .204 | .31 | .581 | .74 | .389 | 11.41 | .001 | 4.89 | .028 |
| Attitude toward the brand | 3.98 (.86) | 3.74 (.84) | 3.41 (.86) | 3.32 (.89) | 7.89 | .005 | 1.17 | .28 | .93 | .334 | 49.79 | .0001 | 1.75 | .187 |

Table 5.

| | Attitude toward the ad | | Attitude toward the brand | |
|-------------------------------|------------------------|--------------|---------------------------|---------|
| | b | t | b | t |
| Visual Metaphor | .61* | 2.27 | | .05 .97 |
| Culture | -.07 | .63 | | |
| Ad Familiarity | -.04 | -.86 | .06 | 1.9 |
| Brand Familiarity | .18*** | 3.38 | .24*** | 6.75 |
| Visual Metaphor x Culture | | | | |
| | -.37* | -2.21 | | |
| Attitude toward the ad | | | .53*** | 16.41 |

| Mediator | Index | LLCI | ULCI |
|------------------------|-------|--------|------------------|
| Attitude toward the ad | | -.1992 | (-.3814, -.0256) |

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

Table 6.

| | India | USA | Total |
|-------------------------------|--------------|------------|--------------|
| <u>Gender</u> | | | |
| Male | 78.05 (64) | 59.6 (59) | 67.96 (123) |
| Female | 21.95 (18) | 40.4 (40) | 32.04 (58) |
| <u>Education Level</u> | | | |
| Secondary Education | 6.1 (5) | 9.09 (9) | 7.73 (14) |
| Higher Education | 47.56 (39) | 62.63 (62) | 55.8 (101) |
| Master | 39.02 (32) | 17.17 (17) | 27.07 (49) |
| PhD | 1.22 (1) | 6.06 (6) | 3.87 (7) |
| Other | 6.1 (5) | 5.05 (5) | 5.52 (10) |
| <u>Age</u> | | | |
| 15-25 | 14.63 (12) | 16.16 (16) | 15.47 (28) |
| 26-35 | 41.46 (34) | 35.35 (35) | 38.12 (69) |
| 36-45 | 32.93 (27) | 26.26 (26) | 29.28 (53) |
| 46-55 | 7.32 (6) | 12.12 (12) | 9.94 (18) |
| 56-65 | 2.44 (2) | 8.08 (8) | 5.52 (10) |
| 66- | 1.22 (1) | 2.02 (2) | 1.66 (3) |

Table 7.

| Dependent Variables | Group Membership | | | | Main Effects | | | | Covariates | | | | Interaction | |
|---------------------------|------------------|--------------------|-----------------|--------------------|--------------|------|-----------------|------|----------------|------|-------------------|-------|---------------------------|------|
| | India | | USA | | Culture | | Visual Metaphor | | Ad Familiarity | | Brand Familiarity | | Culture x Visual Metaphor | |
| | Visual Metaphor | No Visual Metaphor | Visual Metaphor | No Visual Metaphor | F | Sig. | F | Sig. | F | Sig. | F | Sig. | F | Sig. |
| Attitude toward the ad | 4.17 (.65) | 3.82 (.77) | 3.57 (.94) | 3.74 (.67) | 8.41 | .004 | .539 | .464 | .11 | .74 | .03 | .856 | 4.46 | .036 |
| Attitude toward the brand | 4.13 (.68) | 3.59 (.84) | 3.21 (.99) | 3.69 (.65) | 8.79 | .003 | 0.57 | .453 | 2.08 | .151 | 14.531 | .0001 | 8.31 | .004 |

Table 8.

| | Attitude toward the ad | | Attitude toward the brand | |
|------------------------|------------------------|-------------|---------------------------|-------------------------|
| | <i>b</i> | <i>t</i> | <i>b</i> | <i>t</i> |
| Visual Metaphor | .03 | .52 | .03 | .59 |
| Culture | -.17** | 2.87 | | |
| Ad Familiarity | -.02 | -.33 | -.05 | .2 |
| Brand Familiarity | .01 | .18 | .25*** | 5.71 |
| Visual Metaphor | | | | |
| x Culture | -.13* | 2.11 | | |
| Attitude toward the ad | | | .72*** | 13.65 |
| Mediator | | | <i>Index</i> | <i>LLCI</i> <i>ULCI</i> |
| Attitude toward the ad | | | .1904 | (.0131, .3792) |

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