

OPENNESS IN METAPHORICAL AND STRAIGHTFORWARD ADVERTISEMENTS

Appreciation Effects

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ABSTRACT: Openness of visual metaphors in advertising stimulates the elicitation of consumers' elaborative thoughts. This effect has not been investigated with respect to the openness of straightforward advertisements. In this study, metaphorical and straightforward advertisements were created using identical visuals in different degrees of openness. In a pretest, more openness elicited more weak implicatures, and metaphors appeared to be less comprehensible than straightforward advertisements. An experiment using the same materials showed that openness interacted with rhetorical figures. Open and straightforward advertisements were appreciated more than either open or closed metaphors. Education and need for cognition moderated the appreciation effects of straightforward advertisements, and gender moderated appreciation and comprehension effects of metaphors.

Visual and verbal metaphors are being used increasingly in print advertisements (Phillips and McQuarrie 2002). The incongruity in visuals or in the combination of headline and visuals attracts attention, causing consumers to use more cognitive effort to interpret the advertisement. If the effort is rewarded with relevant meanings, consumers will appreciate the advertisement more. Visual metaphors may elicit more meanings than verbal metaphors, since they express a claim indirectly, and visual cues are more apt to convey immediate and uncontested thoughts (McQuarrie and Phillips 2005).

The difference between verbal and visual metaphors is that the latter are more open for interpretation (Eco 1976). Openness, which is a general property of both visual and verbal expressions, also applies to both metaphorical and straightforward expressions. Openness is defined as the number of particular thoughts an expression may elicit in an individual. Since meanings of verbal expressions are more specific than meanings of visual expressions (Barthes 1967), verbal meanings provide less room for particular thoughts per individual. Openness may define interference of verbal and visual expressions: Images are less open when combined with captions than they are without them (Ketelaar and Van Gisbergen 2006; Phillips 2000).

It has not yet been established whether it is a visual's metaphor or its openness that causes the higher elicitation

of thoughts and enhanced appreciation. This paper aims to distinguish between the effects of metaphor and openness by testing open straightforward advertisements versus metaphorical and more closed ones.

Consider a Dutch advertisement for shoes, shown in Figure 1. A very small classic car, a Fiat 500, is depicted on a road alongside a field. The headline reads "WALK, don't run." The logo makes it clear that the product being advertised is shoes rather than the car. The implication is that these shoes are classic and Italian, just like the car. The payoff claims that shoes are made for walking and not running. Most Europeans will know that this car is not designed for the freeway.

When individuals process the advertisement, they will infer that the car is like the shoes. Several cues may elicit elaborative thoughts about this metaphor. If the car is classic, then the shoes will be classic, too. If it is Italian design, the shoes will probably be Italian design, too. However, elaborative thoughts may be negative as well. If a Fiat 500 is very small, the shoes might pinch. If the car is slow, the shoes will not be suitable for running. Another visual cue is that the Italian car is located in a Dutch landscape, but it is not very clear how this cue adds to the metaphorical comparison. We may distinguish between thoughts related to the metaphor, and thoughts about (unrelated) visual cues.

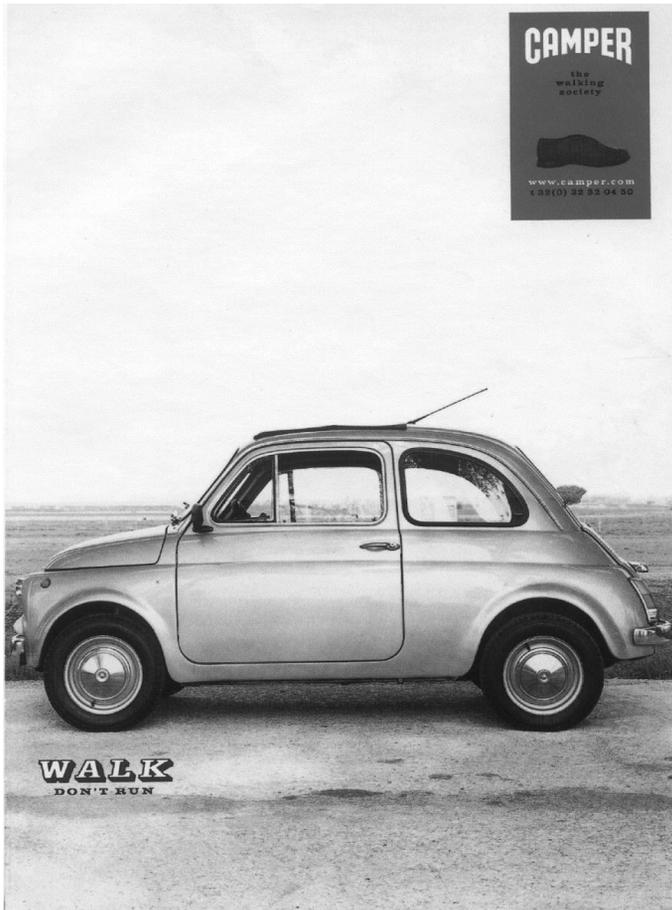
With respect to Figure 1, the visual cues and the metaphor not only elicit many thoughts; they also elicit particular thoughts. Within the realm of this study, the advertisement is therefore considered to be open. Other advertisements may

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FIGURE 1
Example of an Open Metaphorical Print Advertisement



be more closed. It is not quite clear whether the metaphor or the openness is responsible for more elaborative thoughts. We want to know whether it is possible to achieve openness effects by using visual cues similar to Figure 1, but without a metaphor. In other words, our Research Question is:

RQ: Does openness enhance appreciation of metaphorical or straightforward advertisements?

More background for the RQ is given in the subsequent sections by relating openness to complexity of images, weak implicatures, and consumer responses.

COMPLEXITY OF IMAGES

In linguistics and philosophy, metaphors are defined as two distinct concepts presented as being similar. Interpreters seek and invent possible similarities between the two concepts and create new meanings in doing so (Black 1962; Giora et al. 2004). When metaphors are used in texts or images, they are considered as rhetorical figures. A rhetorical figure is an artful deviation in form that adheres to an identifiable template (McQuarrie and Mick 1996; Phillips and McQuarrie 2004).

Research into metaphors in advertising first started more than 10 years ago (Leigh 1994; McQuarrie and Mick 1992), at the same time that attention began being paid to rhetorical analysis of images in advertising (McQuarrie and Mick 1996; Scott 1994). Visual rhetoric has since become an important topic in advertising research (McQuarrie and Mick 2003), with one of the main distinctions in rhetorical analysis being the difference between schemes and tropes.

A scheme is used in a famous Dutch slogan, “Heerlijk helder Heineken” (delicious, clear Heineken). As a rhetorical figure, it deviates from a normal sentence by its repetitive use of the initial consonant in each word. Because we recognize this deviation as alliteration (and also as a list of three; cf. Heritage and Greatbatch 1986), we appreciate it as being artful. Whether or not visual schemes exist is subject to debate. Verbal schemes are easily recognized as rhetorical figures without ambiguous meaning (McQuarrie and Mick 1996; Mothersbaugh, Huhmann, and Franke 2002), whereas visual schemes are often wrongly regarded as visual cues requiring alternative interpretations (Van Enschoot 2006). In this paper, we use the term visual cues to refer to deviant imagery that may or may not have further meanings (Phillips and McQuarrie 2004).

Tropes do change interpretations. Metaphors are examples of tropes. In Esso’s slogan “Put a tiger in your tank,” the deviation is conceptual: Tigers cannot physically fit into car tanks. We may reinterpret the slogan as being metaphorical (the tiger is like gasoline), think of links between tigers and fuel (powerful, fierce, dangerous), and appreciate it as artful. Tropes are considered to destabilize the interpretation of an advertisement because their meaning needs to be reestablished (McQuarrie and Mick 1996). Tropes can be visual as well, and classifications have been developed to categorize and analyze visual metaphors (Durand 1987; Forceville 1996; Groupe-μ 1992; McQuarrie and Mick 1996, 1999; Phillips and McQuarrie 2004).

A first classification of visual rhetoric was developed by French semioticists (Durand 1987; Groupe-μ 1992) and focused especially on the visualization of metaphors and meaningful contrasts. Their meaning theory distinguished between images expressing meaning accessible to every speech community member on the one hand, and images expressing both shared and particular meaning in more complex visual patterns on the other (based on Barthes 1967). In the latter case, the combination of two or more visual elements can be classified by the way in which they are combined and the kind of relation they express. A cross-classification between combinations and relations results in predictable complexities for types of visual tropes (Durand 1987; Groupe-μ 1992).

Building on the work of the French semioticists, several classifications have been defined and discussed (Forceville 1996; Phillips and McQuarrie 2004; Van Mulken 2003). Phillips and McQuarrie’s (2004) classification defines complexity of images by type of combination and meaning operation.

They distinguish between three combinations: juxtaposition (the two visual elements are set side by side in the image), fusion (the two visual elements are combined within one image), and replacement (only one of the elements is visible; the interpretation of the image refers to the other element). In Figure 1, we have a case of juxtaposition: The Fiat and the shoe are set side by side in the image. The combinations determine the complexity of the metaphor. The scale ranges from less complex juxtapositions, through moderately complex fusions, to complex replacements.

The three meaning operations are connection (the elements are associated with each other), similarity (one element is like the other), and opposition (one element is *not* like the other). In Figure 1, the car is intended to be like a shoe. Therefore, the meaning operation is similarity. The operations determine the richness of the metaphor: Connection is poor, similarity is well-to-do, and opposition is rich. The concept of richness is related to openness, and will be discussed in the next section.

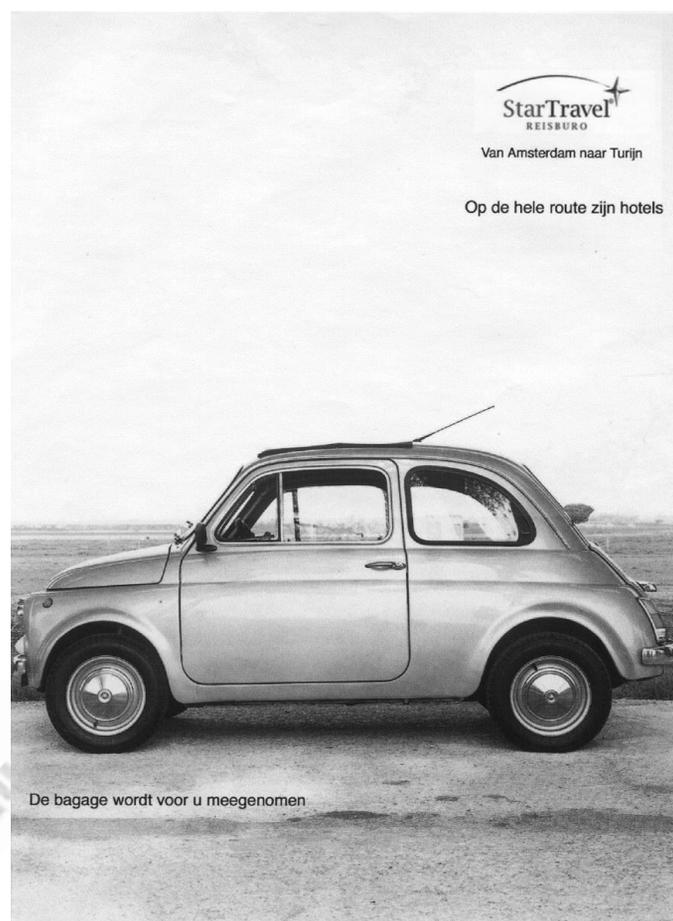
The cross-classification of combination and operation results in nine categories. The visual metaphor in Figure 1 predicts a moderate effect on cognitive elaboration and appreciation (Phillips and McQuarrie 2004).

These complexity-predicting classifications pose a general problem. The classifications assume that complexity is realized through a trope, in most cases a metaphor or contrast. Without two related elements, an adequate classification is not possible. If an image does not contain a metaphor or contrast, it lacks these two essential elements, and therefore falls outside the complexity classification. This can be illustrated by transforming the metaphorical advertisement in Figure 1 into a straightforward one, using the same image; this is represented in Figure 2.

Figure 2 shows the advertisement of a travel agency that takes care of all the unpleasant aspects of traveling, such as booking hotels and carrying luggage. It implicitly conveys the message that you can safely travel without running into any problems. In this case, there is no metaphor. The shoe logo has gone, so just one small visual element in the advertisement has been removed. The addition of alternative texts turns the advertisement into a straightforward one. Because there is no similarity or contrast relation between two (visual) elements, the advertisement cannot be classified for complexity. Still, it elicits quite a few elaborative thoughts.

In a pretest, respondents produced many particular thoughts related to the Fiat 500 (see the "Method" section for a more detailed discussion of this). For instance, a Fiat 500 was too small for carrying any luggage, and too old for driving long distances. Other thoughts were that Italian cars belong in Italy, or that owners of classic Italian cars probably prefer to visit Italy. The contrast between the Italian car and the Dutch landscape was mentioned and interpreted in several other particular thoughts.

FIGURE 2
Example of an Open Straightforward Print Advertisement



A high number of particular thoughts is not expected in the case of a simple straightforward advertisement (McQuarrie and Phillips 2005). Still, the advertisement in Figure 2 does elicit many thoughts. The triggers for these thoughts are visual and verbal cues, such as the Italian car itself, its scenery, and the association with traveling and Italy. These particular thoughts are elicited irrespective of a metaphorical interpretation, and their complexity cannot be determined a priori. If complexity can only be induced by tropes, these particular thoughts stem from another source. Openness could help explain the number of particular thoughts for Figure 2.

OPENNESS AND WEAK IMPLICATURES

Openness can be identified in images by the number and kind of visual cues eliciting particular thoughts. One of the assumptions in this study is that openness exists in both metaphorical and straightforward advertisements. In this section, we analyze thought elicitation in terms of strong and weak implicatures.

Phillips and McQuarrie (2004) propose defining the effects of visual cues in images in terms of richness. Richness refers to the number of alternative responses allowed for by the various meaning operations indicated in the image. These meaning operations may be inferred from visual cues related to a trope in the image.

The alternative responses, or particular thoughts, are also known as weak implicatures. According to relevance theory (Sperber and Wilson 1986), weak implicatures are thoughts more remotely connected with the basic proposition of an advertisement. More weak implicatures may lead to greater appreciation, up to a point where visual metaphors become too complex (Phillips and McQuarrie 2004). By contrast, we may define the notion of strong implicatures as being thoughts that many individuals would infer from an advertisement. The basic proposition of most product advertisements—"buy this product"—can be considered as a strong implicature (Forceville 1996; Phillips 1997).

Implicatures are made on the basis of the interpretation of text and visual cues. Text may even alter implicatures from the same visual cue. This is exemplified in Figures 3 and 4, which were used in the pretest of our materials. The same image of a cheetah is used twice in different textual surroundings. In one advertisement, the advertised service is the delivering of paper (see Figure 3). The headline reads, "Paper will be there soon." In the other advertisement, a plea is made to support the World Wildlife Fund (see Figure 4). The headline reads, "Don't let the cheetah die out. Donate now . . ." In Figure 3, a metaphor is expressed, characterized by replacement (no paper delivery visible) and connection (paper delivery is as fast as a cheetah). In Figure 4, the advertisement is straightforward. Respondents who saw Figure 3 made different remarks about the cheetah compared with respondents who saw Figure 4. Respondents thought the cheetah in Figure 3 to be fast, or dangerous, but the cheetah in Figure 4 was considered to be lonely, or sad-looking.

Figures 3 and 4 elicit different implicatures, guided by their textual context. From the results of a pretest (reported in the "Method" section), it appeared that the number of implicatures for Figures 3 and 4 was smaller than the number of implicatures for Figures 1 and 2. At the same time, the implicatures concerning Figures 3 and 4 were (per advertisement) more similar among respondents than the implicatures concerning Figures 1 and 2. In other words, the cheetah advertisements elicited more strong and fewer weak implicatures, whereas the Fiat advertisements elicited fewer strong and more weak implicatures. We refer to the former type as closed advertisements and the latter as open advertisements.

We use the term openness rather than richness because richness is dependent on the presence of a visual trope and is restricted to certain meaning operations (Phillips and McQuarrie 2004). Although we assume that openness is not restricted to specific meaning operations, we do not claim that it is an um-

brella term for all kinds of ambiguous and unguided interpretations (as proposed in Ketelaar and Van Gisbergen 2006). Rather, we would propose that openness has differential effects on, for example, metaphorical and straightforward advertisements.

The interference of different texts with identical images has been referred to earlier as verbal anchoring. When a visual metaphor is used with a heading explaining the metaphor, it is verbally anchored (Phillips 2000). It is difficult to apply the concept of verbal anchoring to images in general. Phillips (2000) verbally anchored images with "self-contained" visual metaphors: Even without relevant headings, they carried a metaphorical interpretation. This is different from the metaphors in Figures 1 and 3, where text is needed to create the metaphor.

CONSUMER RESPONSES TO OPENNESS IN ADVERTISEMENTS

Recent research shows that there is a connection between the use of (visual) rhetorical figures, certain types of implicatures, and appreciation. McQuarrie and Phillips (2005) propose that visual metaphors are more open than anchored visual metaphors, verbal metaphors, or literal advertisements. They collected weak implicatures for their experimental advertisements and exposed these advertisements to a second group of respondents, followed by a sequence of possible and false weak implicatures. Reaction times for acceptance of weak implicatures were shorter than those for rejection of weak implicatures in the unanchored visual metaphors condition. In the other conditions, reaction times for acceptance were longer than those for rejection of weak implicatures. Thus, unanchored visual metaphor responses were more spontaneous and less reluctant.

McQuarrie and Phillips (2005) regard this as the openness effect of visual metaphors. This effect did not occur when non-metaphorical visuals or anchored metaphors were used. Their operationalization of nonmetaphorical (or straightforward) advertisements consisted of realistic photographs of a product or its packaging. In our research, these would be considered closed straightforward advertisements. McQuarrie and Phillips's (2005) research is not conclusive for open straightforward advertisements. In addition, they did not verify the appreciation of the advertisements.

Mothersbaugh, Huhmann, and Franke (2002) found differential effects of rhetorical figures in headlines on meaning openness and brand attitude. Verbal tropes were rated as more open than nonrhetorical headlines, with openness of verbal schemes somewhere in between. Openness positively affected attitude toward the brand.

The effect of verbal schemes versus verbal tropes cannot be replicated for visual schemes, since the notion of visual schemes is problematic. Nevertheless, Van Enschot (2006) found that

FIGURE 3
Example of a Closed Metaphorical Print Advertisement

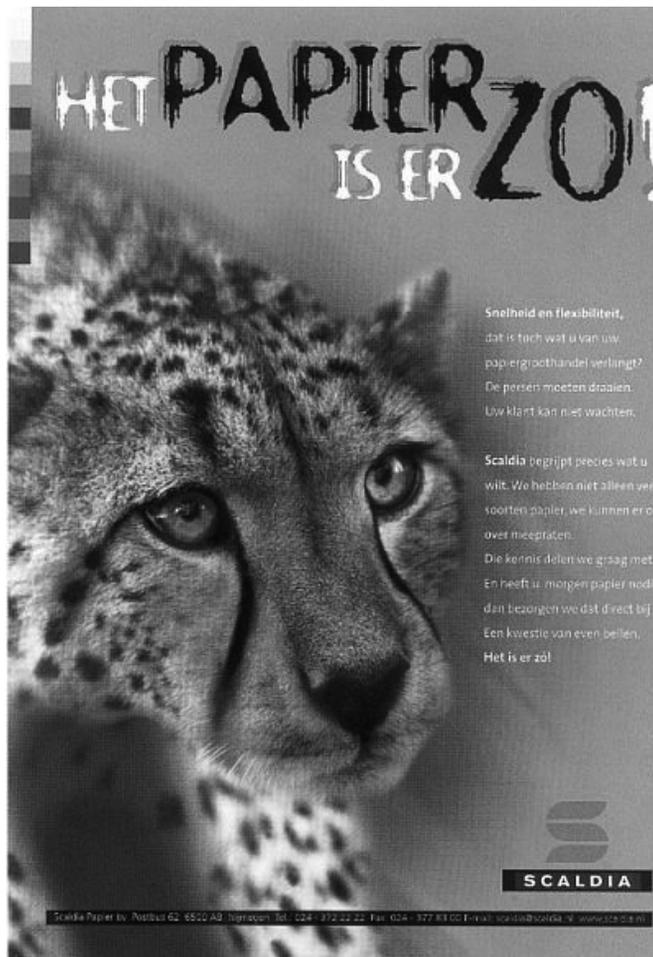
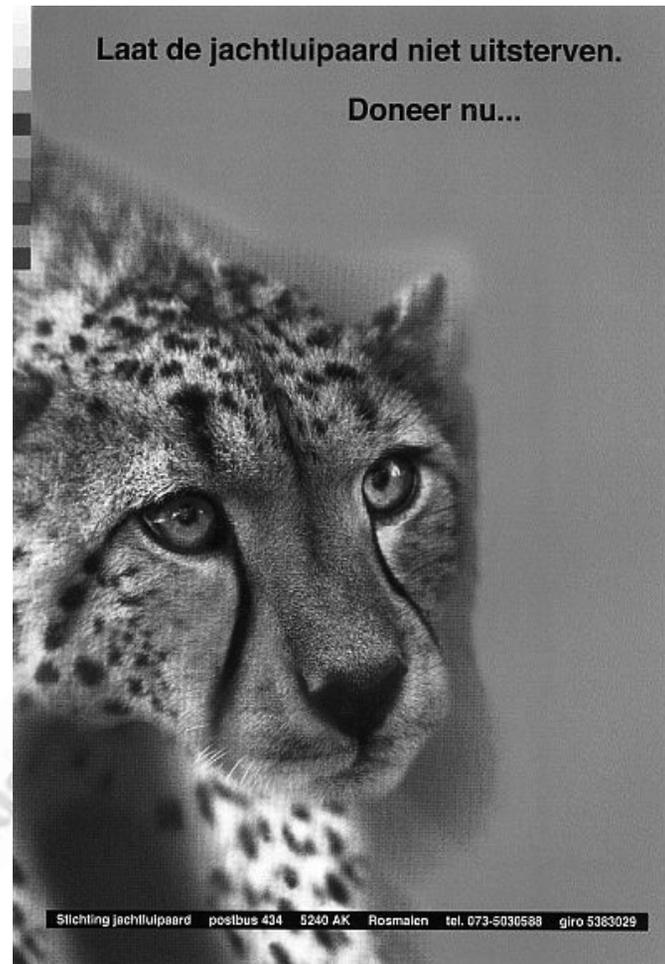


FIGURE 4
Example of a Closed Straightforward Advertisement



respondents who tried to interpret straightforward visual cues as visual tropes did not like the advertisements. The explanation for disliking them was that respondents were not able to come up with satisfactory interpretations.

In sum, more open advertisements will probably render more weak implicatures, because visual cues invite the consumer to elaborate on possible interpretations. In general, we assume that more weak implicatures lead to more appreciation. If advertisements lead to interpretation problems, however, appreciation decreases (Giora et al. 2004; Lagerwerf 2002; Phillips 2000; Van Mulken, Van Enschot, and Hoeken 2005). An inverted U pattern is expected for appreciation.

In Table 1, we outline our predictions for the four conditions in our design. These predictions are presented next to the results of Phillips (2000) and Van Mulken, Van Enschot, and Hoeken (2005). Like the visual metaphors without anchoring (Phillips 2000) and the extra implicit advertisements (Van Mulken, Van Enschot, and Hoeken 2005), we expect that the open metaphors will be too difficult, like the anchorless and extra implicit metaphors. We predict low appreciation for the closed

straightforward advertisements, comparable to the completely anchored metaphors and the explicit advertisements. Straightforward and explicit advertisements do not contain tropes, and the metaphor's meaning is stated explicitly in complete anchoring. A rewarding cognitive elaboration is not elicited in these cases. We expect closed metaphors to be appreciated in the same way that moderately anchored visual metaphors and implicit advertisements are. The open straightforward advertisements were not tested in Phillips (2000) or Van Mulken, Van Enschot, and Hoeken (2005). We predict that open straightforward advertisements will receive approximately the same appreciation as closed metaphorical advertisements.

The predicted outcomes in Table 1 are a summary of our appreciation hypotheses. Phillips and McQuarrie (2004) predict several effects for complexity and richness. One moderating factor they mention is need for cognition. They predict that need for cognition (Cacioppo, Petty, and Kao 1984; Pieters, Verplanken, and Modde 1987) moderates complexity, but not richness. Complexity appeals more to people with a high need for cognition, because more complex visuals are more

TABLE I
Predictions for Advertisement Appreciation per Condition and Appreciation Effects for Similar Conditions in Phillips (2000) and Van Mulken, Van Enschoot, and Hoeken (2005)

Prediction		Phillips (2000)		Van Mulken, Van Enschoot, and Hoeken (2005)	
Condition	Appreciation	Anchoring	Appreciation	Implicitness	Appreciation
Open metaphor	Low	No heading	Low	Extra implicit	Low
Closed metaphor	High	Hinting	High	Implicit	High
Open straightforward	High				
Closed straightforward	Low	Explaining	Low	Explicit	Low

challenging to comprehend. Richness is not necessarily more difficult, so need for cognition does not moderate appreciation for richness. The hypothesis is that need for cognition moderates appreciation for rhetorical figures.

Most of the research on rhetorical figures does not take into account differences between respondents (McQuarrie 1998). Samples of homogeneous populations, often students, make it difficult to investigate effects of demographic differences. In the current research, respondents differed in gender, age, and education, and we will explore the differences these factors may make.

METHOD

In an experiment, we verified the effects of metaphors and openness on appreciation in print advertisements. Our hypotheses are derivable from the first columns in Table 1.

Stimulus Development

Ten print ads were selected, all containing a metaphor created by the combination of verbal copy and an image of the advertised product. On the basis of intuitive judgments about alternative interpretations, two judges divided the advertisements into two sets: five containing open metaphors and five containing closed metaphors. Straightforward advertisements were made by changing logos and verbal copy of these 10 advertisements (we do not speak of "literal advertisements" because this would be problematic regarding the insights from metaphor analysis; cf. Giora 2002; Lakoff and Johnson 1980). Open metaphorical variants were converted into open straightforward variants, and closed metaphorical variants were converted into closed straightforward variants. With reference to Figures 1 and 2, and 3 and 4, this manipulation has already been explained. In Table 2, all advertisements are mentioned, with a description of the image and product.

Open interpretations should be characterized by eliciting more weak implicatures than strong implicatures. To check differences in implicatures, we conducted a pretest on the

materials. Using an Internet survey tool, 28 students (5 male) described the content of the advertisements on the screen by answering four questions (in Dutch): (1) In your own words, please describe the ad; (2) Ignore what the advertiser might have intended and describe your opinions and feelings about the ad; (3) What do you think the advertiser was trying to communicate with this ad? (4) How do you know what the advertiser was trying to communicate with this ad? What makes you think so? These questions were designed to elicit the meanings of advertising images (in Phillips 1997).

Students visited the survey Web site by clicking on a link. They read the instruction, and then saw the first advertisement on the screen. The four questions appeared together with text windows for the answers when respondents scrolled down. There were four sets of five advertisements. No set contained a pair with identical visuals. The conditions' presenting order varied between the sets. Having answered all the questions, respondents were given the opportunity to send an e-mail to the researcher to take part in a draw for a gift token. Their submission to the survey Web site was anonymous.

The answers to the questions were collected and arranged in a pooled data set. The unit of analysis was formed by the answers to the questions for each advertisement and each respondent. This way, each case represented a textual answer to a question. Each answer was divided into at most three simple statements. If statements were very similar, they were phrased identically.

All statements were classified into four types. First, statements of incomprehension were identified. Two statements were counted: "I don't know," and "It (the ad) is unclear." Second, ad-stylistic implicatures were counted (Mothersbaugh, Huhmann, and Franke 2002). These implicatures were evaluative ("the ad is pretty" or "the image is ugly"), concerned the advertisement and not its content, and did not consist of self-reports ("I want to do this, too"). Positive statements were counted as 1, negative statements as -1, and neutral ones as 0. The sum of ad-stylistic implicatures was noted (Klein-nijenhuis, De Ridder, and Rietberg 1997; Mothersbaugh, Huhmann, and Franke 2002). Third, strong implicatures

TABLE 2
Original Metaphors and Created Straightforward Variants of Print Ads

Ad, original brand	Product (original, metaphor)	Image	Product (changed, straightforward)
Scaldia (closed)	Wholesale paper supply	Cheetah	Donations to Cheetah Foundation
Xerox (closed)	Printers	Magnet	Magnetizer and reflex therapist
Prins Bernard Cultural Foundation (closed)	Donations to foundation (theater metaphor)	Husband and wife in a window between curtains looking outside	Police force (call the police instead of watching)
e-mark (closed)	E-mail marketing solutions	X-rays of people's legs	Röntgen Technical Service
Spa (closed)	Spa mineral water	Ant drinking from bottle	Nuon Waterworks
Olympus (open)	Digital photo camera	Father looking at child	<i>Ouders van nu</i> (Modern parents) magazine
PPGH JWT (open)	Tennis tournament	Ball-shaped croquette	Kwekkeboom croquettes
Giethoorn Ten Brink (open)	Printing business	Golf player	Amelisweerd golf course
Camper (open)	Shoes	Classic car on road	Travel service
Hollandinbeeld (open)	Photo download service	Child in train looking out of the window	Railway company

were identified. If more than 50% of the respondents used an identical statement to describe the content or tenor of a specific advertisement, it was counted as a strong implicature (cf. Phillips 1997). Fourth, the remaining statements were counted as weak implicatures, except for answers to the fourth question that said either "from the text" or "from the image."

A coder classified all the statements, creating four variables ($n = 560$ for each variable). A second coder classified all statements according to specific instructions. Interrater agreement was good for all four variables: Cohen's κ ranged between .80 and .98.

We calculated a strong/weak ratio for the implicature counts by dividing the number of strong implicatures by the number of weak ones. We aggregated the resulting three variables (ad-stylistic, incomprehension, and strong/weak ratio) by taking the means of the respondents' four answers per advertisement condition. In a general linear model of repeated measures, differences between the open versus closed conditions and metaphorical advertisement versus straightforward advertisement were tested. The means for the kinds of implicatures are presented in Table 3.

There was a main effect of openness for the strong/weak ratio. Closed interpretations show a greater strong/weak ratio. Relatively more strong implicatures are elicited in the closed interpretation condition. There was a main effect of metaphor on incomprehension statements. Respondents (spontaneously) reported less comprehension for metaphors in the advertisements. There was a main effect of metaphor on ad-stylistic evaluations. Metaphorical advertisements were evaluated more negatively than straightforward ones.

We should not interpret the latter result directly as an attitude toward the ad. There was a trade-off between weak and ad-stylistic implicatures. More ad-stylistic implicatures were made regarding straightforward advertisements, presumably because interpretative (weak) implicatures were not possible or desirable. Less ad-stylistic implicatures were made in the metaphorical condition, and they were negative more often. Metaphors elicited more weak implicatures, however, and weak implicatures predict appreciation just as well (Phillips 1997). Ad-stylistic statements did not exclusively predict appreciation.

The developed stimuli elicited implicatures in the desired way. Openness led to more weak implicatures, metaphors resulted in more signals of misunderstanding than straightforward advertisements, and straightforward advertisements elicited more ad-stylistic implicatures.

A possible bias of these stimuli could be that misunderstanding of the metaphors is a direct cause of a lack of appreciation. The metaphors were correctly understood in most cases, however. Respondents uncovered the metaphors' intended interpretations in strong implicatures for most advertisements. Only two open metaphor advertisements elicited the intended interpretation in weak implicatures. This was more a matter of different formulations than different interpretations (identical phrasing was required for strong implicatures). We therefore chose to use the materials without changes in the experiment.

Respondents

A purposive sample of 160 respondents was selected from the regions of Utrecht, North Brabant, and Limburg in the

TABLE 3
Means and Standard Deviations of Strong/Weak Implicature Ratio, Incomprehension Counts, and Ad-Stylistic Evaluations for Rhetorical Figures and Openness in Advertisements (Aggregated Data; $n = 28$)

	Metaphor				Straightforward			
	Open		Closed		Open		Closed	
	M	SD	M	SD	M	SD	M	SD
Strong/weak ratio ^a	.313	.359	1.003	1.360	.375	.416	.804	1.156
Incomprehension ^b	.786	.966	.607	.832	.196	.458	.411	.872
Ad-stylistic ^c	-.232	1.190	-.304	1.377	.875	1.191	.375	1.259

^a Main effect of openness: $F(1, 27) = 7.582, p < .05$.

^b Main effect of metaphor: $F(1, 27) = 5.351, p < .05$.

^c Main effect of metaphor: $F(1, 27) = 9.176, p < .01$.

Netherlands. The sample consisted of 160 respondents averaging 40 years old, with 44% men and 56% women. Half the respondents had studied at Intermediate Vocational Education (IVE) level, 15.6% at lower than IVE level, and 34.4% had an academic education.

Procedure

Ten advertisements were assembled in two sets of ads, alternated with questions for each ad. No variants of the same ad occurred in either set. Both versions contained two or three ads from each condition.

People were approached in public transportation and in a number of companies to take part in the research. First, each respondent completed a questionnaire containing general questions and a list of questions for measuring need for cognition. Next, an advertisement was presented, followed by a list of questions on appreciation and comprehension. After completion of the question list, the next advertisement was presented.

Measures

Need for cognition was measured by using the validated Dutch translation of the original need for cognition scale (Pieters, Verplanken, and Modde 1987). Need for cognition had a good reliability after deleting one item (Cronbach's $\alpha = .72$). Appreciation was measured by using three items from different components of attitude toward the ad (Coulter and Punj 1999; Mitchell 1986; Mitchell and Olson 1981). The global component item was "this ad is good," the affective item was "this ad is amusing," and the cognitive item was "this ad is informative." We added an item to the questionnaire that could typically be sensitive for tropes, namely, "this ad is surprising" (Graesser, Long, and Mio 1989).

A perceived comprehension scale consisted of two items: "Picture and text are well-matched" and "I understand the ad" (Coulter and Punj 1999). Five-point Likert scales were used to record the measurements of all the dependent variables.

A pooled data set was set up to test reliability. The unit of analysis was respondents per advertisement, so that every item was represented in one column in the matrix. Each respondent saw 10 advertisements, so tests were conducted for $n = 1,600$ cases per scale item. First, we performed an exploratory factor analysis with Varimax rotation on the six items. All six items loaded on one factor with an eigenvalue greater than 1. The items stating "good," "amusing," "informative," and "surprising" had factor loadings between .70 and .90. To discriminate between the different scales, a second exploratory factor analysis was conducted on the three largest factors. In this analysis, factor loadings larger than .70 (differentiated from other loadings with at least .40) were used as a threshold. "Amusing" and "surprising" now formed one factor, "understand the ad" and "well-matched text and picture" formed a second factor, and "informative" was a third factor. The item "good" did not discriminate between the factors. Therefore, the single item "good" was taken as the global component of A_{ad} , or A_{adGlob} . The affective component, A_{adAff} , was constituted by "amusing" and "surprising" (Cronbach's $\alpha = .81$), and comprehension was constituted by "understand" and "well-matched text and picture" (Cronbach's $\alpha = .71$). We omitted the "informative" item.

Data Analysis

In a general linear model of repeated measures, differences between conditions of openness and trope were tested for the dependent variables comprehension, A_{adGlob} and A_{adAff} . Qualification of interaction effects was determined by performing post hoc t tests with a threshold of $p < .01$. Within

TABLE 4
Means and Standard Deviations of A_{adAff} , A_{adGlob} , and Comprehension for Rhetorical Figures and Openness in Advertisements ($n = 160$)

	Metaphor				Straightforward			
	Open		Closed		Open		Closed	
	M	SD	M	SD	M	SD	M	SD
A_{adGlob}	2.94	.79	3.15	.72	3.37	.78	3.22	.82
A_{adAff}	3.07	.70	3.09	.64	3.34	.72	2.86	.75
Comprehension	3.02	.68	3.35	.60	3.55	.60	3.47	.65

Notes: A_{adAff} = attitude toward the ad, affective component; A_{adGlob} = attitude toward the ad, global component. Interactions and main effects presented in Table 5.

TABLE 5
F Values of Main and Interaction Effects on A_{adGlob} , A_{adAff} , and Comprehension

Variable and direction of effect	F(df), p
A_{adGlob}	
Main: straightforward > metaphor	$F(1, 159) = 22.647, p < .001$
Main: open \approx closed	$F(1, 159) < 1$
Interaction: rhetorical figure and openness	$F(1, 159) = 13.729, p < .001$
Gender: men > women for metaphor	$F(1, 158) = 13.102, p < .001$
Education: lower > high for straightforward	$F(1, 157) = 3.790, p < .05$
A_{adAff}	
Main: straightforward \approx metaphor	$F(1, 159) < 1$
Main: open > closed	$F(1, 159) = 28.130, p < .001$
Interaction: rhetorical figure and openness	$F(1, 159) = 38.966, p < .001$
Education: lower > high for straightforward	$F(1, 157) = 6.916, p < .01$
Need for cognition: low > high for straightforward	$F(1, 158) = 4.377, p < .05$
Comprehension	
Main: straightforward > metaphor	$F(1, 159) = 60.132, p < .001$
Main: closed > open	$F(1, 159) = 7.733, p < .01$
Interaction: rhetorical figure and openness	$F(1, 159) = 23.563, p < .001$
Gender: men > women for closed metaphor; women > men for closed straightforward	$F(1, 158) = 4.438, p < .05$

Notes: A_{adGlob} = attitude toward the ad, global component; A_{adAff} = attitude toward the ad, affective component. > = left-hand mean higher than right-hand mean; \approx = nondifferentiated means. Gender, education, and need for cognition are between-subjects factors.

the repeated measures model, need for cognition was treated as a between-subjects factor. Respondents were classified as having a high or low need for cognition by means of a median split. Other between-subjects factors were age, gender, and education.

RESULTS

In Table 4, means are given for the dependent variables in each condition. Highest mean scores for all dependent variables are in the open straightforward condition. We used a general linear model of repeated measures to calculate the main and interaction effects on the dependent variables. Each variable revealed interaction of openness and metaphor. Main effects were not always significant. There were moderation effects of

gender, education, and need for cognition. An overview of the effects is presented in Table 5.

Straightforward advertisements had a higher A_{adGlob} than metaphorical ones, but there is no main effect of openness. The interaction effect consisted of low A_{adGlob} scores for open metaphorical advertisements where open straightforward advertisements had higher scores. Respondents with academic education had lower A_{adGlob} for the straightforward advertisements than respondents with IVE or lower. Men rated A_{adGlob} higher for metaphors than did women.

Open advertisements had higher A_{adAff} than closed ones, but there is no main effect of metaphor. The interaction effect consisted of low A_{adAff} scores for closed straightforward advertisements versus high scores for open straightforward advertisements. The education effect on A_{adGlob} was also found

on A_{adAff} . There was also an effect of need for cognition: Respondents with a low need for cognition rated A_{adAff} higher for straightforward advertisements.

Comprehension for open advertisements was perceived as being better than comprehension for closed ones; straightforward advertisements had higher comprehension than metaphorical ones. The interaction effect showed differentiation between all condition pairs except between open and closed straightforward advertisements, and between closed straightforward advertisements and closed metaphorical advertisements (post hoc t tests with a threshold of $p < .01$). The gender effect indicated that men perceive higher comprehension for closed metaphors, whereas women perceive higher comprehension for closed nonmetaphorical advertisements.

In Table 1, we summarized predictions for openness and rhetorical figures. Indeed, open metaphors on the one hand (A_{adGlob}) and closed straightforward ones on the other (A_{adAff}) received less appreciation than the other advertisement types, which confirmed our predictions. Closed metaphors were appreciated, but were not distinguished from closed straightforward advertisements on the one hand (A_{adGlob}) or open metaphors on the other (A_{adAff}). Open straightforward advertisements received the most appreciation (A_{adGlob} and A_{adAff}). Thus, except for the moderately appreciated closed metaphors, the predictions in Table 1 are confirmed.

The prediction that need for cognition moderates appreciation for rhetorical figures is partially confirmed. Need for cognition moderated A_{adAff} for straightforward advertisements.

DISCUSSION

Our results revealed that openness interacts with rhetorical figures. Openness enhanced straightforward advertisements, but the expected effect on closed metaphors was not borne out. Differences between our outcomes and previous research may be explained by our operationalization of openness and by our sample.

This research was the first to apply openness to both metaphorical and straightforward advertisements. Moreover, our straightforward advertisements contained the same visual cues, acknowledging that openness is not restricted to metaphor or ambiguity.

Our respondents varied in age and education. It is possible that the variation in need for cognition was also greater. Education appeared to moderate appreciation for rhetorical figures, leading to less favorable ratings for metaphors at large. Most of the earlier visual rhetoric experiments used convenience samples from student populations.

Need for cognition played an interesting role in distinguishing cognitive effort from weak implicatures. Respondents with a high need for cognition and high education disliked straightforward advertisements, whereas metaphors were equally ap-

preciated by both groups. This means that need for cognition and education differentiate for complexity rather than for openness (cf. Phillips and McQuarrie 2004). It also shows that we should be cautious when using convenience samples in research into advertising images (McQuarrie 1998).

The results show that appreciation for openness in advertisements applies to both metaphorical and straightforward advertisements. Elicitation of weak implicatures is connected with openness rather than complexity. Complexity was absent in the straightforward advertisements because they do not contain two objects of comparison. Building on McQuarrie and Phillips (2005) and Phillips and McQuarrie (2004), we now conclude that it is metaphor that causes cognitive effort and openness that causes weak implicatures. In both cases, there is more cognitive elaboration, but it is of a different kind.

Appreciation is not specifically caused by either cognitive effort or weak implicatures. A_{adGlob} and affective A_{adAff} were both determined by an interaction of openness and metaphor, but had different main effects. A_{adGlob} did not have a main effect of openness, and A_{adAff} did not have a main effect of metaphor. This may explain the results in Van Mulken, Van Enschoot, and Hoeken (2005) and Van Enschoot (2006), who found effects of degrees of implicitness, rather than effects of rhetorical figure. Implicitness probably consists of both complexity and openness.

Openness is a property of images that plays a specific role in appreciation for advertisements. This conclusion raises the question of how openness can be constituted in advertisements. Part of the execution of openness is the use of visual cues or other incongruities, without specific interpretation. Random insertion of strange elements would probably not lead to desired results, however. Weak implicatures will only be elicited when it seems rewarding to look for alternative interpretations (Tanaka 1992; Van Enschoot 2006). The opportunities for rewards by inferring weak implicatures may be found in the kind of incongruity that interpreters have to deal with. The distance between the artful deviation and the identifiable template should be optimal (Giora 2002; Groupe- μ 1992; McQuarrie and Mick 1996). Future research should establish the circumstances in which openness enhances appreciation of advertisements.

There were some limitations in this research. We did not use the standard set of semantic differentials to measure the A_{ad} (developed in Mitchell and Olson 1981). One reason was that respondents saw 10 advertisements, so it was necessary to minimize the number of items in the questionnaire. Additionally, the design of the questionnaire was more extensive than reported in the "Method" section because other instruments were also used to measure affect. Since the nonverbal way of measuring affect (Desmet 1999; Morris et al. 2002) did not provide interpretable results, it was omitted in this paper. Although the number of A_{ad} items was minimal, the factor

and reliability analyses indicated that the results are probably comparable to other investigations.

The affective component A_{adAff} was constituted by “amusing” and “surprising,” according to the results of a factor analysis. These items might have had the effect of measuring rhetorical effects more than affective attitude toward the ad. More specifically, we may wonder why this measure lacks a main effect in rhetorical figures, whereas A_{adGlob} and comprehension do show this main effect. In our view, this is what we should expect of the affective component. Appreciation for metaphors is established through comprehension (McQuarrie and Mick 1999; Phillips 2000). The designs of earlier experiments did not activate an affective component in a direction diverging from the cognitive component. In our design of openness versus rhetorical figures, it is understandable that affective A_{adAff} diverges from comprehension. In open straightforward advertisements, weak implicatures are not elicited to solve a puzzle, but entail more diverging elaborative thoughts. Future research should be aimed at disentangling cognitive effort and diverging elaborative thoughts.

The finding that straightforward advertisements are appreciated more than metaphorical ones might be explained by two differences in this research compared with other visual rhetoric research. First, the straightforward advertisements were not very simple; instead, they contained the same visual cues as the metaphor, with an intelligible direct interpretation. Second, education and need for cognition effects showed that earlier effects might have been specific for students, whereas other target groups might have other preferences. Future research should take into account that the appreciation for rhetorical figures has cultural or demographic dimensions.

In this study, we have shown that openness may have positive effects on advertisement appreciation, independent of visual metaphor. This result contradicts findings of Ketelaar and Van Gisbergen (2006), who did not find effects of openness in successive experiments. In our view, this is due to their operationalization. They replaced the concept of metaphor, or even incongruence in general, with openness. We applied openness as a property of rhetorical figures: Both metaphorical and straightforward advertisements can be more or less open. Our results have shown that openness does not replace metaphor, but rather interacts with it. Moreover, different routes to appreciation seem to be involved with these concepts. Future research on openness should be operationalized within specific visual formats, and should assess different routes to appreciation.

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