

A laboratory study of the effect of verbal rhetoric versus repetition when consumers are not directed to process advertising

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Rhetorical figures appear frequently in the headlines of magazine ads. This paper examines the effect of repetition on ads containing two types of rhetorical figures: easy-to-understand rhymes and challenging puns. The findings indicate that high levels of repetition may not be necessary when ad headlines contain such rhetorical figures, even under conditions where subjects are not directed to process the ads. Moreover, in contrast to some prior work, rhymes appear to be at least as effective as puns when consumers are free to ignore ads. Overall, the research supports the idea that getting the ad message right is probably more important than simply repeating the message a greater number of times.

Introduction

Contemporary consumers are deluged by advertising. Their resulting lack of interest and defence mechanisms have challenged advertisers to develop strategies that can rise above the commotion and motivate consumers to process ads. Among these strategies – based on insights that trace back to antiquity (Todorov 1982) – is the use of figures of speech, also known as rhetorical figures (e.g. rhyme, hyperbole, puns, metaphor).

Investigation into the nature, processes and effects of rhetorical figures in advertising was pioneered in Europe during the 1960s by Roland Barthes (1985, originally published 1964), Dubois *et al.* (1970), Jacques

Durand (translated and reported in Durand 1987), and Geoffrey Leech (1969). Subsequent work was scattered and slow to accelerate until about 15 years ago. Since then there has been a surge of research on advertising rhetoric by scholars worldwide, drawing on a variety of methods. These range from text analyses and literary interpretations to interview-based studies with consumers, and from advertising copy-testing to laboratory experiments (see, for example, Stern 1990; McQuarrie & Mick 1992, 1999; Tanaka 1992; Forceville 1994; Leigh 1994; Scott 1994; Dingena 1994; McGuire 2000; Mothersbaugh *et al.* 2002).

We extend this literature by examining the performance of rhetorical figures under circumstances where consumers are not directed to process ads and the number of ad exposures delivered varies from one to six. The conjunction of non-directed processing and ad repetition is important both practically and theoretically, but has rarely been studied. Practically speaking, these conjoined conditions reflect the challenges facing advertising in the world. Outside the laboratory, consumers' general lack of interest in advertising makes it difficult for any individual ad message to break through and register with the audience. This is why advertisers pay for repeated exposures: the hope is that if a consumer encounters an ad often enough, eventually they will grasp and appreciate its message. But if repetition is conceived as an antidote to consumers' lack of interest in ads, then it makes little sense to investigate ad repetition effects under conditions where consumers are instructed to look carefully at ads and think about the message.

In theoretical terms, the purpose of placing a rhetorical figure in a headline is to increase the probability that the consumer will pause on the ad, however briefly, and process its message to a deeper level (Greenwald & Leavitt 1984; McQuarrie & Mick 1996). As explained further below, a distinctive characteristic of rhetorical figures is that they stimulate greater elaboration. This is another way of saying that rhetorical figures motivate consumers to process the ads in which they appear. As with repetition, such motivation may be most important when consumers are not directed to process ads and are free to ignore them altogether.

Despite these fairly obvious linkages between non-directed processing, repetition and the use of copy strategies such as rhetorical figures, to date there has been no experimental investigation into how verbal rhetorical figures perform, with and without repetition, under circumstances where

the experimental subjects have the same opportunity to ignore ad stimuli as consumers do with respect to ads in the everyday world. The key question concerns the role of, or need for, repetition when an advertising headline is presented in the form of a rhetorical figure. On the one hand, when subjects are not explicitly instructed to look at ads presented within a magazine, repetition may be a necessary prerequisite for advertising to have any impact, regardless of headline style or technique. On the other hand, if placing a rhetorical figure in a headline is sufficiently motivating, it may not be necessary to repeat the ad several times, if at all, even when the subjects have no preset goal to look at the ads.

In our experiment, ads were embedded in several mock magazines, subjects were not directed to look at ads, and the target ads (either with or without rhetorical figures in the headlines) appeared up to six times. We next define the properties of rhetorical figures and examine alternative expectations for the impact of repeatedly exposing ads containing rhetorical figures. This is followed by a presentation of the experiment and a discussion of its results.

Rhetorical figures in advertising

The wordplay known as a rhetorical figure can be defined as an artful expression that deviates from expectation (Corbett 1990; McQuarrie & Mick 1996). Because it deviates, the figure typically evokes additional meanings (Genette 1982). An example discussed by McQuarrie and Mick (1996) is a metaphorical ad headline for band aids: 'Say hello to your child's new bodyguards.' Bodyguards are usually strong males who protect celebrities from violence. This headline offers an opportunity to elaborate meanings that a more literal statement about the value of band aids for covering cuts and scrapes would not provide. As a result, rhetorical figures in headlines have been shown in several studies to be more memorable than comparison ads without rhetorical figures (e.g. McQuarrie & Mick 1992; Tom & Eves 1999; Mothersbaugh *et al.* 2002).

In addition, because they are artful, rhetorical figures are also generally pleasing to process (Barthes 1985). This pleasing incongruity not only invokes greater elaboration that improves memory but also leads to a positive attitude towards ads containing rhetorical figures. Such results have been observed in several prior empirical studies, particularly when

subjects in the relevant studies have been directed to look at and evaluate the ads (e.g. McQuarrie & Mick 1992, 1999; Dingena 1994; McQuarrie & Phillips 2005).

Repetition and rhetorical figures

Ad repetition studies have had a long history (e.g. Zielske 1959) and have consistently shown that repetition is an effective learning technique. In laboratory conditions when consumers have been directed to process ads, message repetition produces a strong impact at even low levels of repetition, and it is found that repetition interacts with message style and content factors (see, for example, Campbell & Keller 2003).

To our knowledge, rhetorical figures have never been exposed repeatedly in a laboratory context, hence their impact under varying levels of repetition is simply unknown. The general expectation (e.g. Anand & Sternthal 1990; Huhmann 2007) is that, as repetition level increases, more resources will become available to the consumer. Since some kinds of message require more resources than other kinds, the type of message that will be most effective will vary as repetition level varies. More specifically, the artful deviation that characterises rhetorical figures may make the processing of ad headlines containing figures more challenging, as compared to a more literal headline, particularly when consumers have no preset goal to consider the ads. Under those circumstances ad headlines containing rhetorical wordplay may require more cognitive resources to fully process than are available at low levels of repetition. Only as repetition levels increase might ads with figurative headlines be elaborated more, remembered better, and liked more, and this would be visible as a significant interaction between this message factor and repetition level.

Alternatively, in field studies where participants have not been directed to process advertising, the results reported for message repetition are weaker. The most dramatic evidence is provided by the meta-analysis of 369 field studies reported by Lodish *et al.* (1995). A large number of these studies showed no significant effects when the number of message repetitions was increased by 50% or 100%. Lodish *et al.* (1995) concluded that, by and large, changing the character of the message itself has more impact on ad effectiveness than varying the level of message repetition. It is intriguing to consider that rhetorical figures could serve as one of the

characteristics of message content that might render an ad effective, independent of message repetition.

In developing their taxonomy of rhetorical figures McQuarrie and Mick (1996) speculated that rhetorical figures may be notably effective for advertisers under everyday exposure conditions, where consumers are bombarded with hundreds of ads and these ads are embedded in an editorial context that is the primary focus of attention. Under those circumstances consumers will generally not be motivated to look at or linger on any particular ad, so that the capacity of artful rhetorical figures to motivate additional elaborative processing might be particularly valuable. Indeed, Lodish *et al.*'s (1995) findings imply that one reason rhetorical figures are so prevalent in advertising is that they are able to encourage ad processing even when consumers have many alternatives, such as editorial matter, on which to focus. If this alternative logic were to hold, then message repetition may matter little or not at all under those conditions, and we would expect to see a main effect favouring ads with headlines using rhetorical figures, relative to their literal controls, across all repetition levels, including even single exposures.

Different types of rhetorical figure: schemes and tropes

McQuarrie and Mick's (1996) taxonomy also specifies that rhetorical figures can appear in two distinct modes called schemes and tropes (Leech 1969). Scheme figures deviate by being excessively regular at the sensory level. For example, in rhyme it is the redundancy of sounds that is deviant, as in this headline for a canned product with a pull tab: 'Pop the Top.' A trope figure deviates at a deeper level, by means of an irregular semantic usage. For example, in a pun it is the irregular excess of meaning that is deviant, as seen in this headline for the same sort of canned product: 'Pull a Fast One.'

McQuarrie and Mick (1996) argued that, on average, the deviation that composes a trope will exceed the deviation that composes a scheme. Hence, to the extent that the impact of a rhetorical figure on consumer response is largely a function of artful deviation, trope figures can be expected to have a greater impact than scheme figures on ad elaboration, memory and attitudes. Studies by McQuarrie and Mick (1999, 2003) and Mothersbaugh *et al.* (2002) provide assorted evidence for trope superiority.

Nonetheless, in developing their taxonomy of rhetorical figures, McQuarrie and Mick (1996) note that, because schemes are excessively ordered, scheme figures like rhyme may have an advantage, compared to open-ended irregular tropes, when the consumer is free to ignore ads and there are a large number of competing demands on consumer attention (as occurs in everyday media environments such as magazine reading). In those circumstances, ad headlines involving schemes should be experienced as requiring fewer processing resources to comprehend, so that the consumer is more likely to resolve the incongruity, elaborate further if inclined, and judge the headline more favourably. Were these findings to emerge, they would be the first evidence that schemes are capable of outperforming tropes under conditions paralleling everyday advertising exposure.

How might repetition affect schemes versus tropes when consumers are free to ignore ads? One possibility is an interaction effect involving the scheme/trope distinction. That is, since schemes with their internal redundancy should require fewer resources to process than tropes, the effectiveness of schemes could be apparent sooner, at lower repetition levels. Tropes, with their under-coded nature, might require relatively more resources to process, and may thus require higher repetition levels before a main effect relative to their controls emerges. But these effects are predicated on repetition being necessary to some degree if any kind of rhetorical figure is to have an effect. If, on the other hand, message repetition has a weak or null effect when subjects are not directed to process ads, in keeping with Lodish *et al.*'s (1995) findings on the relative impact of repetition versus message factors, then no interaction between the scheme/trope distinction and repetition level would be observed.

The laboratory study described next was designed to examine these different scenarios for how repetition might affect the processing of different types of rhetorical figures. Do rhetorical figures benefit from additional ad exposures when consumers are free to ignore ads? And is the impact of repetition the same across different types of rhetorical figures?

Method

Stimulus development

Pretest

We examined a large number of magazine ads to identify candidates for pretesting. Good candidates were those that: (1) contained a rhetorical figure in the headline that could be broken or removed without changing the claimed product attribute; (2) contained either a rhyme (to represent scheme figures) or a pun (to represent trope figures); and (3) concerned products consumed by college students. A total of nine scheme headlines and 12 trope headlines were selected for pretesting. These ads had appeared from five to fifteen years previously, making it unlikely that participants would be familiar with them.

For each headline, a control (foil) was constructed. Where possible, the control differed by only a single word ('pop the top' versus 'pop the lid'); at most, a component phrase was substituted ('discover the missing link' for 'discover our sausage'). The goal of each substitution was to maintain the same product claim or positioning, while removing the artful deviation that made up the original rhetorical figure in the headline. Thus, 'missing link', with its palaeontological connotations, puts a twist on 'discover', and also conveys ideas of adventure, quest, exotica, completion and more, while still conveying 'sausage' by means of its colloquial synonym 'link'. By contrast, 'discover our sausage' does not imply or suggest much beyond 'we have a food product for you to try'. The goal of the word substitutions, then, was to create non-figurative statements that made a simple claim that provided little opportunity to elaborate, but that was otherwise the same claim as that made by the corresponding figurative statements. This manipulation allows us to isolate the property of 'figurativeness' and determine its effect on ad processing.

The paired figure and control statements were presented to 110 undergraduates, who rated each one on three 7-point rating scales designed to assess figurativeness (e.g. 'artful, clever' versus 'straightforward, matter-of-fact'), and then rated the figurative headlines for scheme or trope properties (regularity, incompleteness). Based on the pretest results, we selected the headline pairs with the greatest difference in figurativeness, subject to the constraint that the final scheme set and trope set also show marked

differences in terms of the possession of scheme and trope properties. See Table 1 for the specific headlines used in the experiment.

Table 1: Description of test ads used in the experiment

| Type of figure | Headline text | | Picture and product |
|----------------|--|--|---|
| | Treatment | Control | |
| Scheme | Pop the <i>top</i> | Pop the <i>lid</i> | Coffee can being opened |
| Scheme | Put the best to the <i>test</i> | Put the best to the <i>challenge</i> | Close-up of a battery |
| Scheme | Asian Flair. <i>Anywhere.</i> | Asian Flair. <i>Any locale.</i> | Frozen food package, meal setting |
| Scheme | Can't say <i>no</i> to pistachio | Can't <i>refuse</i> a pistachio | Nuts spilling forth |
| Trope | <i>Pull</i> a fast one | <i>Open</i> the fast one | Canned macaroni being opened by a pull tab |
| Trope | Not your average <i>joe</i> | Not your average <i>meal</i> | Sloppy joe sandwich and can of meat sauce |
| Trope | The gift idea that leaves everybody <i>beaming</i> | The gift idea that leaves everybody <i>happy</i> | Miniature flashlight on gift wrapping |
| Trope | Discover the <i>missing link</i> | Discover our <i>sausage</i> | Plate with link sausage and salad, potatoes |

Note. The italicised words distinguish the figurative treatment headlines from the non-figurative control headlines, and this change in wording is the only difference between treatment and control ad pairs.

Construction of ads

A professional artist was hired to create full-page ads incorporating the pretested headlines. Each ad consisted of the headline in a large typeface placed at the top of the page, a picture of the product or its package that filled most of the centre, and then at the bottom of the page a fictitious brand name in the same typeface as the headline. The layout of these ads parallels those in McQuarrie and Mick (2003), except that we placed the headlines above the pictures rather than below. A total of 16 test ads were created, consisting of paired figure-control versions of eight ads for eight product categories, half representing schemes and half tropes. The control ads were identical to the figure versions except for the change in headline wording. The artist also created eight non-figurative filler ads designed to be indistinguishable from the test ads (e.g. same layout), so that these filler ads would also compete for participants' limited processing resources.

Construction of magazines

Six magazines, each containing 16 pages, were constructed. These consisted of two 'issues' of three 'titles': *College World*, *Student Life* and *School Affair*. Each title had its own theme (career, health and diet, and sports and recreation, respectively). The artist created covers for each issue and then laid out articles gathered from college student publications. The resulting magazines each had a cover page, seven pages of articles and eight pages of ads. Colour copies were made, three-hole punched, and then one issue of each title was placed in one binder and a second issue of each title was placed in a second binder (see explanations of procedure and design below).

Participants and procedure

Participants were 218 young adults at a large university who received course credit for attending a data collection session. Four answer booklets were eventually discarded due to excessive missing data, leaving a sample of 214 for analysis.

At the start of each session, participants had two binders and a sealed 9 × 12 envelope stacked before them. The experimenter read out the cover story attached to the first binder, which indicated that a magazine publisher had developed three prototypes for a new magazine, each with its own theme, and the publisher desired their input concerning which magazine held the most appeal. Participants were told that the prototypes were in rough form, but that they should try to approach these prototypes as they normally would a magazine. They were instructed to go through the magazines in order and to turn every page, but were also told that they did not have to look over any material that was not of interest. No mention of advertisements was made in the instructions. Instead, the cover story repeatedly encouraged participants to assess the magazines, their themes and the individual articles, in preparation for later questions about what aspects of these magazines they found most appealing.

After reviewing the first binder of three magazine issues at their own pace, participants rated how interesting they found each magazine. They were then told that, in doing this kind of research, publishers had found that it was important and more reliable for consumers to see at least two issues of each title. The instructions about turning every page, and only

looking over material of interest, were then repeated. Next, participants looked through the second binder containing another issue of each of the three magazines. When finished, they were instructed to open the sealed envelope and answer the questions in the booklet.

The first booklet page posed questions about the participants' interest in subscribing to each magazine, and questions concerning which of a sampling of articles from each magazine had been most interesting to them. This approach was intended to reinforce the cover story and to minimise short-term memory for the ads by ensuring that a few minutes elapsed before participants began answering ad questions. The remainder of the answer booklet presented, in order, the measures of Aad, cognitive responses and aided recall.

Design and data analysis plan

The experiment takes the form of a one-between-, two-within-subjects factorial design that allows us to test for treatment effects due to figurativeness, trope figure versus scheme figure, and repetition level. For the Aad measure and the valenced cognitive response measures, the design was analysed using the Linear Mixed Models (LMM) procedure in SPSS 14.0 (LMM is a generalisation of the more familiar GLM, MANOVA and ANCOVA procedures; see, for example, McCulloch & Searles (2001); Wallace & Green (2002)). For the dichotomous recall measure, and for the dichotomous cognitive response measure, this design was analysed using hierarchical loglinear models. This procedure allowed us to test the same factorial design on both the dichotomous and the continuous dependent measures.

The design, which is akin to a Latin square, has the following important elements. First, each participant is exposed to eight test ads, four of which are figurative and four of which are not (controls). Second, for one group of participants, the figurative ads contain scheme figures and the control ads are the control versions of the trope figure ads, while for the other group, the figurative ads contain trope figures and the control ads are the control versions of the scheme figure ads. Third, for each participant, one figure and one control ad are exposed once, another set twice, another set four times and another set six times. Hence, the repetition level is a within-subjects factor, the figure factor is a within-subjects factor, and the

scheme/trope distinction resides in the interaction between the figure factor and a between-subjects grouping variable. This design ensures that no participant ever sees both the figure and the control version of any one ad, and minimises the impact of differences across participants in degree of involvement with the specific product categories advertised.

Varying repetition levels were delivered as follows. The last magazine issue viewed contained all eight test ads; this was the only appearance for the ads assigned to the one exposure condition. The ads assigned to the six exposure condition appeared in every issue. The ads assigned to the two and four exposure condition appeared in some magazines but not others. No ad appeared more than once in any single issue, consistent with the norms of print advertising practice. A total of eight different versions of the magazines were printed, so that each ad rotated through the four repetition levels, as figure in four magazine versions and as control in the other four versions. Finally, the eight filler ads also appeared at varying levels of repetition, ranging from one to five insertions, to ensure that the repeated test ads did not attract undue attention by the very fact of being repeated. Counting all iterations of individual ads, participants encountered a total of 48 ad pages (plus 48 pages of non-advertising content).

Dependent variables

Aad

Participants were cued by the brand name only. For each target ad, they completed three 7-point semantic differential scales anchored by 'liked/disliked the ad', 'unpleasant/pleasant ad' and 'enjoyed/did not enjoy the ad'. With a coefficient alpha of 0.87, the three items were summed to form the measure of attitude towards the ad.

Cognitive responses

After completing the Aad measure, participants were asked to 'list any thoughts, feelings, or reactions you had as you were viewing each of the ads listed below', and were encouraged to report reactions for every ad, no matter how vague or limited. The only prompt was again the brand name. Two coders independently counted the total number of responses for each ad and coded the valence of each response (whether it was a positive, negative or neutral statement). In addition, coders counted the number

of responses that indicated engagement. This category of response was defined for the coders using examples such as 'catchy', 'looked interesting'. The counts of each response type are the measures analysed. Inter-rater agreements for categorising the different types of responses ranged from 88% to 96%, with disagreements resolved by the authors.

Aided recall

Next we presented participants with the brand name prompt, and beside it the stem common to both the figure and the control versions of that brand's ad (e.g. 'pop the _____'), and asked them to fill in the missing word or phrase ('top' or 'lid', depending on condition). The supposed advantage of rhetorical figures is that they encourage more elaboration, so that a greater number of memory traces get laid down. If a rhyme such as 'pop the top', or a pun such as 'missing link', does lay down a greater number of memory traces, then participants should be more likely to successfully retrieve the missing phrase from a figurative headline, relative to its control.

Results

Recall

In a loglinear analysis, there are no dependent or independent variables per se; the distribution of results (figurative headline present or not, headline recalled or not, etc.) is conceived as the multiplicative product of all the terms in the model (here 'term' means each factor and interaction; when all such terms are included, it is referred to as a saturated model). A hierarchical loglinear analysis proceeds by subtracting terms one by one from the saturated model to determine their incremental contribution to producing the observed distribution of results. Chi-square measures of partial association are the test statistics reported. Because of the nature of loglinear models, the lowest-order effects of interest are the two-way interactions that involve recall. The model tested has three factors in addition to recall: figure present or absent, trope figure or scheme figure in the figurative headline, and repetition level.

We found a very strong effect for the recall X figure interaction ($\chi^2(1) = 80.6, p < 0.001$), indicating that figures were better recalled than their

Table 2: Aided recall percentages

| | Schemes | | Tropes | |
|-------------------------|-----------|---------|-----------|---------|
| | Treatment | Control | Treatment | Control |
| <i>All</i> | 42.4 | 17.2 | 18.6 | 9.3 |
| <i>Repetition level</i> | | | | |
| 1 exposure | 39.4 | 12.8 | 16.2 | 7.6 |
| 2 exposures | 45.9 | 16.5 | 17.1 | 7.6 |
| 4 exposures | 34.9 | 15.6 | 21.9 | 9.5 |
| 6 exposures | 49.5 | 23.9 | 19.0 | 12.4 |

Note: For the trope and scheme treatments, the absolute values of the proportions shown are immaterial, since they are based on ads for different product categories. The analysis focuses on the relative size of the treatment vs control differences within and across conditions.

controls (Table 2). There was also a positive but comparatively much smaller effect for repetition on recall ($\chi^2(4) = 7.9, p < 0.05$). The impact of the figure manipulation produced a more substantial increase in recall (30.5% versus 13.2% recall) as compared to the more modest impact of repeating an ad, even when comparing the extremes of six and one exposures (26.2% versus 19.0% recall, respectively). In addition, the recall X figure X scheme/trope interaction approached significance ($p = 0.08$). As can be seen from Table 2, the incremental recall of scheme figures over their controls (42.4% versus 17.2%) is larger than the incremental effect of trope figures over their controls (18.6% versus 9.3%). The three-way interaction involving recall and figure with repetition level, and the four-way interaction adding the scheme/trope distinction, were not significant.

The results for aided recall indicate that changes in rhetorical structure (i.e. use of figurative versus non-figurative headlines) had a noticeably stronger effect on recall than increasing message repetitions up to six times. Particularly revealing is the absence of a figure X recall X repetition interaction. This result indicates that the superiority of figures over their controls was relatively consistent across all four levels of message exposure (Table 2). Hence, verbal rhetorical figures appear capable of positively affecting recall in the absence of any message repetition, even when participants were not directed to process ads; likewise, higher levels of repetition neither dampened nor elevated the figure effect on recall.

The results for aided recall also indicate that scheme figures outperformed trope figures, and not vice versa, as might have been predicted

from past research. Participants were more likely to recall a rhyme such as 'pop the top' as opposed to a pun such as 'pull a fast one'. This result is consistent with an ease of processing explanation that favours schemes; the excess regularity that characterises schemes appears to be advantageous when participants are free to ignore ads and they have many alternatives to process instead.

The results suggest an all-or-none process by which figures achieve their enhanced memorability. Regardless of repetition level, the processing of figurative headlines involves more elaboration, relative to control headlines, and thus is more likely to leave memory traces. In general these findings support, albeit indirectly, the proposition that people will voluntarily choose to elaborate ads when rhetorical figures are present, and that this elaboration is somewhat more likely to produce recall in the case of schemes. The following cognitive response results shed more direct light on participants' processing of, and reactions to, figurative ads.

Cognitive response measures

Ad engagement

Coders scored whether any of the cognitive responses recorded for an ad expressed engagement with it (e.g. 'cute saying', 'caught my attention'). A loglinear analysis of these counts showed a significant figure X engagement interaction ($\chi^2(1) = 6.54, p \leq 0.01$), and a significant figure X trope/scheme X engagement interaction that favoured schemes over tropes ($\chi^2(1) = 4.10, p < 0.05$). There was no main effect for repetition, nor was any other interaction significant.

The ad engagement findings supplement the memory findings by showing that an initial scan of the target ads, under circumstances where participants are not directed to process ads, is likely to lead to more processing of ad text in the case of rhetorical figures as compared to their controls. Furthermore, because schemes are manifest at the surface or sensory level, and given the nature of the processing environment that participants faced in this study, it was anticipated that schemes might outperform tropes in terms of motivating incremental processing. The results show that a scheme based on a sound echo that is also orthographically manifest (e.g. a rhyme like pop/top) can be grasped and reacted to

more readily than a trope (i.e. a pun like ‘Pull a fast one’), which requires semantic processing at a deeper level.

Valenced responses

The total count of cognitive responses per ad per participant was entered into a four-factor Linear Mixed Models (LMM) analysis that distinguished figure, trope/scheme, repetition level and valence (subtotals of positive, negative or neutral responses). The data set-up for LMM is exactly analogous to a loglinear set-up: 214 participants supplied three subtotals for each of eight ads, yielding 5,136 observations. The LMM procedure treats the participant variable differently (via correlated error terms) to adjust for the fact that the data are lumped into buckets of 24 per participant (McCulloch & Searles 2001; Wallace & Green 2002). Analysing cognitive responses by means of this four-factor LMM allows us to consider positive and negative response counts simultaneously, along with neutral counts, while avoiding the notorious problems with difference scores (see, for example, Peter *et al.* 1993).

The LMM showed no main effect for figure ($F < 1$), but instead revealed a significant figure X trope–scheme interaction ($F(1,5088) = 18.23, p < 0.001$). This is a symmetrical cross-over interaction, as can be seen from Figure 1. The absence of a main effect for figuration is a function of the fact that scheme figures triggered more responses overall relative to their controls, while trope figures produced fewer responses relative to their controls (Table 3). This result complements the scheme–trope results reported above in relation to ad engagement.

To more fully probe these findings, we unpacked the figure X trope–scheme X valence interaction that approached significance ($F(1,5088) = 2.52, p = 0.08$). As can be seen from Table 3 and Figure 2, the advantage of scheme figures with respect to total valenced responses is primarily

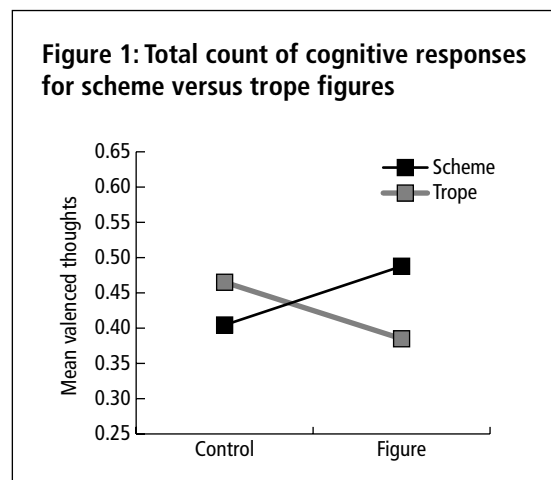
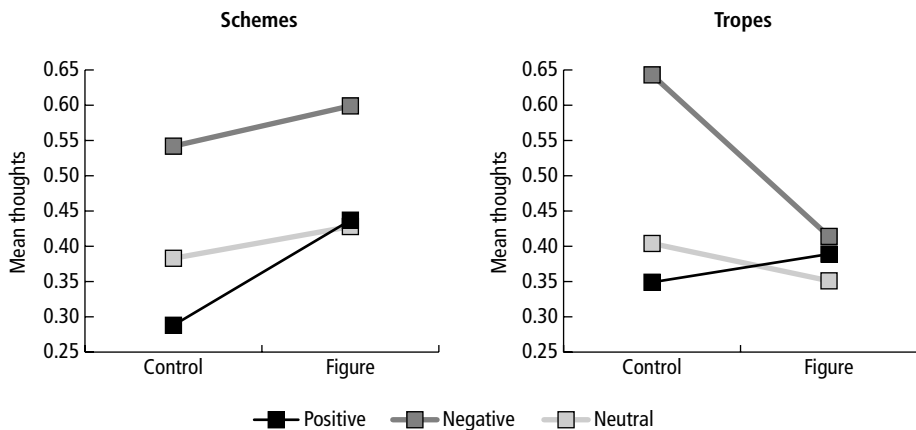


Table 3: Means for valenced cognitive responses

| | Schemes | | Tropes | |
|--------------------------|-----------|---------|-----------|---------|
| | Treatment | Control | Treatment | Control |
| <i>Positive thoughts</i> | 0.44 | 0.29 | 0.39 | 0.35 |
| <i>Repetition level</i> | | | | |
| 1 exposure | 0.34 | 0.24 | 0.32 | 0.29 |
| 2 exposures | 0.45 | 0.24 | 0.39 | 0.35 |
| 4 exposures | 0.48 | 0.28 | 0.39 | 0.34 |
| 6 exposures | 0.48 | 0.39 | 0.47 | 0.42 |
| <i>Negative thoughts</i> | 0.60 | 0.54 | 0.41 | 0.64 |
| <i>Repetition level</i> | | | | |
| 1 exposure | 0.47 | 0.39 | 0.31 | 0.41 |
| 2 exposures | 0.57 | 0.48 | 0.38 | 0.64 |
| 4 exposures | 0.68 | 0.69 | 0.49 | 0.74 |
| 6 exposures | 0.66 | 0.61 | 0.48 | 0.78 |
| <i>Neutral thoughts</i> | 0.43 | 0.38 | 0.35 | 0.40 |
| <i>Repetition level</i> | | | | |
| 1 exposure | 0.23 | 0.32 | 0.30 | 0.36 |
| 2 exposures | 0.49 | 0.30 | 0.31 | 0.32 |
| 4 exposures | 0.42 | 0.42 | 0.34 | 0.44 |
| 6 exposures | 0.56 | 0.50 | 0.45 | 0.50 |

Note: These are estimated marginal means (per ad) from a Linear Mixed Models (LMM) analysis. For the trope and scheme treatments, the absolute values of the mean counts shown are immaterial, since they are based on ads for different product categories. The analysis focuses on the relative size of the treatment vs control differences within and across conditions.

Figure 2: Effect of scheme and trope figures on positive, negative and neutral thoughts

due to the greater number of *positive* reactions they engendered, relative to their controls, whereas the apparent underperformance of trope figures may not be a disadvantage at all. Rather, the reduced number of cognitive responses for tropes relative to their controls was due primarily to the suppression of *negative* reactions, and secondarily to a reduction in the number of neutral responses.

These results are also consistent with an ease of processing explanation. Schemes, constructed from a deviation at the sensory or surface level, are relatively easier to comprehend. When available processing resources are scant or inadequate, schemes are more likely than tropes to yield the pleasure of the text (Barthes 1985) that is associated with successfully processed rhetorical figures (McQuarrie & Mick 1999). Schemes are also more likely to produce responses in general, including negative and neutral responses, simply because processing is easier. Complex tropes, constructed from a deviation at the semantic level, require more comprehension and elaboration effort. Under the conditions implemented in this study, where participants were not directed to process the ads, and had plenty of alternatives to process instead, the processing effort received by tropes was less likely to be sufficient. We may infer that it was completed for some participants, as seen from the fact that the count of positive responses for trope figures mildly increases relative to their controls. For the most part, however, processing was not completed, leading to a notable suppression of responses generally for tropes. This effect was specifically driven by a reduction in negative responses for tropes, as these typically require both message comprehension and then activation of mental schemata that facilitate the formation of counterarguments and other types of negative reactions. The available resources, relative to the demands imposed by tropes, appear to have been inadequate to permit very much ad ideation.

Attitude-toward-the-ad

The remaining issue concerns how the contrasting effects of schemes and tropes on thought production net out, with regard to a summary measure of participants' feelings about the ads. In both the rhetoric tradition specifically, and the larger research tradition on consumer response to advertising, scaled attitude measures have been used to address this question.

The purpose of such a scaled measure is to capture each participant's idiosyncratic weighting and holistic integration of their myriad reactions to an ad. Nevertheless, use of a scaled attitude measure in a study where subjects are free to ignore ads presents certain psychometric and analytical challenges. These are laid out in more detail in the Appendix. The key problem is that many subjects will fail to retrieve enough information about the ads to form an attitude. Hence, we resorted to an LMM, which allowed us to handle recall as a special kind of covariate.

The initial LMM analysis specified a full factorial design with figure and repetition as repeated-measure fixed effects with diagonal covariance matrices, scheme/trope as a between-subjects fixed effect, and subject as a random effects variable with correlated errors ($N = 1712$). As expected given the low overall levels of recall observed in this study, in the initial Aad analysis the figure main effect, and all interactions involving figure, were null ($F < 1$), and the repetition main effect was also null ($F < 1$).

Next we added recall as a covariate free to interact with the treatments. In support of this decision, we observe a significant figure X scheme/trope X recall interaction on Aad ($F(1,1498) = 10.1, p < 0.01$). In addition, the figure main effect on Aad became significant ($F(1,1622) = 4.83, p < 0.05$), and there was now a significant interaction between figure and scheme/trope ($F(1,1622) = 4.45, p < 0.05$). As Table 4 shows, figurative headlines produced more positive attitudes towards the ad, and there was a net Aad

Table 4: Means for attitude-towards-the-ad

| | Schemes | | Tropes | |
|-------------------------|-----------|---------|-----------|---------|
| | Treatment | Control | Treatment | Control |
| <i>All</i> | 4.00 | 3.87 | 4.08 | 4.00 |
| <i>Repetition level</i> | | | | |
| 1 exposure | 3.94 | 4.01 | 4.11 | 4.01 |
| 2 exposures | 4.02 | 3.87 | 3.97 | 4.11 |
| 4 exposures | 3.96 | 3.78 | 3.98 | 3.95 |
| 6 exposures | 4.09 | 3.83 | 4.25 | 3.94 |

Note: These are estimated marginal means from a Linear Mixed Models (LMM) analysis that included recall as a covariate entering into interactions with other fixed factors (see text). For the trope and scheme treatments, the absolute values of the means shown are immaterial, since they are based on ads for different product categories. The analysis focuses on the relative size of the treatment vs control differences within and across conditions.

effect, across repetition levels, that was greater for ads with scheme figure headlines versus ads with trope headlines. While these latter results may appear to vary by repetition level, the standard errors are large enough that the interaction between figure, scheme/trope and repetition level failed to be significant ($F < 1$).

Overall then, analyses of the Aad data, conditioned on recall, show that among those participants who exhibited signs of having allocated incremental processing resources to the ads, attitudes towards the figurative ads were more positive, as compared to the controls, and attitudes towards scheme ads, relative to their controls, were higher than attitudes towards trope ads, relative to their controls. Conversely, the effect of repetition was again negligible. Its main effect was not significant, and it did not interact with the other treatment factors to influence Aad.

Discussion

We asked participants to evaluate prototype magazines containing target ads that varied in their rhetorical structure (figurative or not, and scheme or trope figure), and that were repeated from one to six times. Our findings reveal that rhetorical alterations to advertising headlines can have a demonstrable impact on consumer response, without requiring repetition, even when subjects are not directed to process ads and have many alternatives on which to focus.

This research also provides new insights as to when and why tropes such as puns may not always trump schemes such as rhyme. The cognitive resources required to comprehend, elaborate upon and appreciate trope headlines – which are artfully deviant in an open-ended and incomplete manner – may be substantial. Our results suggest, in fact, that when the consumer has no preset goal to look at ads, the resources needed to process tropes are less likely to be available or sufficient. Instead, under those conditions ad headlines that contain over-coded and easier-to-process rhetorical schemes are more likely to be grasped and enjoyed. More particularly, the results showed that schemes outperformed tropes on recall, ad engagement, total cognitive responses and attitude towards the ad. The superiority of trope figures over scheme figures, as seen in some prior empirical work, now appears to be a contingent result of the relatively favourable processing conditions implemented in those studies. The quite different

findings in the present study underscore the need for rhetorical theory to evolve to more effectively account for such moderating factors.

Beyond its implications for rhetorical theory, another insight from this study pertains to the comparatively minor effects found for message repetition. Prior studies of repetition in the laboratory have routinely shown that repetition can be an important contributor to message learning and to increases and decreases in attitudinal responses. But in most laboratory repetition studies, subjects have been asked to look at and carefully consider the ads. In this study, where participants were not directed to focus on the advertisements, the repetition of target ads had a consistently weaker impact on memory and attitudes than the rhetorical structure of the ad headlines. These laboratory findings reinforce the field-study findings from Lodish *et al.* (1995) and send a cautionary signal to advertisers. Although repetition has a long history in psychological and advertising studies as a facilitator of human learning, that impact may nonetheless be weaker than otherwise expected when (1) repetition is compared to message characteristics that have their own history of demonstrated influence, such as rhetorical figures, and/or (2) repetition is delivered under conditions where subjects are free to ignore ads – as in the everyday world.

Limitations

This study was undertaken with a convenience sample of North American college students, which may raise questions about the generalisability of the findings to other populations (Sears 1986). Fortunately, the prior literature on rhetorical figures contains a straight replication of college student results on a population of adult consumers. McQuarrie and Mick (1992), who used a similar manipulation to create figurative and non-figurative headlines, repeated their experiment with a commercially recruited sample of adult consumers and reported that ‘all the significant treatment effects found in the student sample were replicated in the adult sample’ (p. 191). Of course, this does not imply that all the specific results in the present study would also generalise, but it does improve our confidence that the use of student subjects may have been an acceptable trade-off to obtain the internal validity advantages offered by a laboratory experiment.

Another limitation of the study is that brand attitude was not directly measured. However, in past studies of rhetorical figures where brand

attitude was measured (e.g. McQuarrie & Mick 1992; Mothersbaugh *et al.* 2002), results for brand attitude have closely paralleled results for Aad, as would be expected in the case of fictional brands with which subjects have no experience. Likewise, in the present study the prompt used to elicit Aad and cognitive responses was simply the brand name. Without the ad in view, and only the brand name as a prompt, there could not have been treatment effects if subjects had not been able to link their responses to the brand in memory.

Future research

One avenue would be to examine more closely, and further differentiate, the role played by elaboration in producing the effects associated with rhetorical figures. In its original formulation, the artful deviation that underlies a rhetorical figure is, all things being equal, supposed to cause incremental elaboration to occur, and this elaboration is held to be the source of both enhanced recall and positive shifts in Aad (McQuarrie & Mick 1996). However, it now appears that this initial theoretical formulation may be overly simplified.

McQuarrie and Phillips (2005) propose that there may be an involuntary as well as voluntary component to the elaboration that occurs in response to rhetorical figures (alternatively, both an automatic and a strategic process may be involved, per Grunert (1996)). That is, once initially processed, the incongruity that underlies a rhetorical figure may cause a kind of involuntary orientating response, and this response may be sufficient to lay down a memory trace – but not sufficient to produce an attitudinal shift. If so, this would suggest that recall effects may be a more prevalent or assured outcome of rhetorical figures than shifts in attitude towards the ad. Future research might explicitly attempt to create conditions where rhetorical figures produce recall but not ad liking – or even the reverse. Careful parsing of results from such designs ought to produce a more refined understanding of when rhetorical figures will be elaborated, and how this elaboration may proceed over the course of an ad encounter.

Another avenue of research would be to continue to probe the robustness of rhetorical figures under demanding circumstances corresponding to those in the everyday world where actual advertisements must accomplish their aims. In this study we gave the participants large quantities of

editorial matter while leaving them free to look at or ignore the ads, to see whether rhetorical figures, without repetition, might have any effect. Since they did, a logical next step would be to examine the extent to which the effect of rhetorical figures can survive a delay. Most magazine ads are not direct response ads – they must achieve their effect after some time has elapsed. Yet, the overwhelming majority of published experiments measure the impact of advertising immediately following exposure (McQuarrie 1998). A task for future research is to see if headlines containing rhetorical figures would be better recalled, and liked more, even after several days have passed.

Appendix: Problems with scaled attitude measures when ad exposure is not forced

When ad exposure is not forced, many participants will have little, if any, recall of particular ads regarding which they are being asked to express an attitude. As a result, when participants are subsequently asked to report their attitudes towards these target ads, many will comply by constructing or guessing their attitudes at the moment. An appropriate response, if participants draw a blank, is simply to tick the middle box on each attitude scale item (scored as 4.0 in the case of a 7-point semantic differential). And, in fact, in this study the mid-point of the Aad scale was ticked in as many as 42% of the ratings, depending on condition.

To appreciate the problem this response set creates for the analysis of Aad treatment effects, imagine that the true mean values for a pair of treatments are as shown on the right, with ‘true’ meaning the responses that would be observed if ample resources were available because subjects were told to look at and carefully consider the ads.

| | Treatment | Control |
|----------------|------------------|----------------|
| Contrast No. 1 | 4.25 | 3.95 |
| Contrast No. 2 | 4.05 | 3.75 |

Now consider what will be observed under conditions of imperfect retrieval due to minimal processing. As recall diminishes, more and more 4.0 responses will be given. If recall is low enough across the board, all means will converge on 4.0, and tests of both the main effects and interactions will yield null results. Another kind of confounding occurs when the occurrence of the information retrieval required to express an attitude is

itself subject to a main effect for one or both treatments, or to an interaction effect across treatments. Thus, if recall is markedly lower for only the control in contrast No. 2, its observed rating will be closer to 4.0, and treatment contrast No. 2 will test as null; conversely, if recall for control No. 1 is markedly low, treatment contrast No. 1 may still show a significant result, because the observed mean will not differ much from the true mean, no matter how little retrieval occurs. In short, under conditions where subjects are free to ignore ads, and where many subjects exercise this freedom, the resulting minimal processing of ads may yield either spuriously inflated *or* spuriously deflated means on scaled attitude items.

The conventional response to noisy data conditions of the sort described is to introduce a covariate to de-bias the observed results. But conventional covariate analysis cannot adequately address the hypothetical situation depicted. A covariate, introduced to capture information on whether there was enough retrieval to make a valid attitude judgement, would have to *lower* the observed means for the control cells, and *raise* the observed means for the treatment cells (since the observed means are all biased towards 4.0, while the true means are dispersed both above and below 4.0). Statistically, this means the covariate would have to interact with the treatment factors. This interaction cannot be accommodated in a conventional ANCOVA, but is readily dealt with in a Linear Mixed Models (LMM) procedure, as described in the 'Results' section.

Acknowledgements

The authors acknowledge financial support from Santa Clara University, in the form of Leavey and University grants, and the University of Virginia, in the form of McIntire grants. They also thank Brittney Rhoney, Dayna Koeninger and Martha Page for assistance in data collection and coding, and Jim Burroughs and Barbara J. Phillips for ideas and advice on the manuscript.

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