THE IMPACT OF VISUAL STRUCTURE COMPLEXITY ON AD LIKING, ELABORATION AND COMPREHENSION

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The use of visual rhetorical figures in advertisements has been steadily increasing over the years. The purpose of this study was to empirically test a portion of Phillips and McQuarrie (2004) typology of visual rhetoric. A group of 185 students from a mid-western university participated in a three-group (juxtaposition, fusion, and replacement visual structure) between - subject experimental design. The results provide partial support for the typology. Contrary to the prediction of the typology, juxtaposition structure elicited more cognitive elaboration than fusion and replacement structures. Fusion structure was more difficult to comprehend than either juxtaposition or replacement structure. Visual metaphor ads with juxtaposition and replacement visual structures were liked more when compared to fusion structure.

INTRODUCTION

The use of visuals in advertisements has been steadily increasing over the years (Phillips & McQuarrie, 2004). More weight is being given to visual elements and less to verbal elements in advertisements (Gisbergen, Ketelaar & Beentjes, 2004; McQuarrie & Phillips, 2008). In fact, consumers are increasingly considering magazine ads as pictures to view rather than documents to read (McQuarrie & Phillips, 2008). The use of figurative pictures in ads has also been increasing (Phillips & McQuarrie, 2003). There is even a trend towards less verbal anchoring of rhetorical pictures, which indicates that advertisers have been moving away from telling consumers how to interpret their ads and are leaving the interpretation open to each individual (Phillips & McQuarrie., 2003). Overall, there is a general decline in verbal references to products, as well as verbal anchoring and guiding consumers towards interpretation, while there is an increase in unrealistic visuals in ads. The increasing popularity of using visual rhetorical figures in advertisements may be because of empirical evidence that suggests these ads produce more elaboration, more favorable attitudes towards the ads, result in superior recall and superior persuasion compared to advertisements that do not use rhetorical figures (McQuarrie & Mick, 1999; Tom & Eves, 1999). Further, the incongruity associated with the visual rhetoric enables the message to carry additional meanings and, as a result, increases the persuasive effect of the advertising message (Tom & Eves, 1999).

Although, the use of visual rhetoric in advertisements is on the rise and research on visual rhetoric has gained importance in advertising (McQuarrie & Mick, 2003a), for a long time there was no theory or typology to help practitioners differentiate or organize the visual elements in advertisements into meaningful categories (Malkewitz, Wright, & Friestad, 2003). However, in the last decade and a half, Forceville (1996, 2005), Phillips and McQuarrie (2004), and Gkiouzepas and Hogg (2011) proposed different typologies of visual rhetoric. The purpose of this study is to empirically test a part of Phillips and McQuarrie's typology. Due to its complex nature, it is difficult to test the entire typology in a single study. Hence, this study investigated only a portion of the typology. Specifically, it investigated the impact of visual structure on consumers' ad liking, ad comprehension, and ad elaboration.

The rest of the paper is organized as follows. First, three typologies of visual rhetoric are briefly described followed by the development of hypotheses based on Phillips and McQuarrie's (2004) typology. Next, research methodology is described, and analysis and

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results are presented. Then discussion is initiated and implications of the findings are presented. Finally, limitations of the study are presented, and suggestions for future research are proposed.

TYPOLOGIES OF VISUAL RHETORICAL FIGURES

A rhetorical figure is an expression that artfully deviates from the familiar expectation but is not rejected as nonsensical or faulty due to the deviation (McQuarrie & Mick, 1996). There are varieties of rhetorical figures such as rhymes, ironies, puns or metaphors. Broadly, all rhetorical figures can take either verbal or visual form (Scott, 1994). As stated earlier, the focus of the present study is visual rhetorical figures, specifically visual metaphors. Given their increasing popularity, scholars have attempted to develop typologies in order to effectively classify various types of visual rhetorical figures into meaningful categories. The following typologies are the three important ones to classify one type of visual rhetorical figures, namely visual metaphors. A summary of the three typologies including the definitions of various terms is presented in Table 1.

Gkiouzepas and Hogg (2011)'s Framework: This typology consists of two dimensions. The first dimension is the object's mode of representation - whether the two metaphorical objects in the ads are separated (juxtapositioned) or fused together (synthesis).The second dimension is the visual scenarios and addresses how the two metaphorical objects are constructed in order to be related to each other. There are three types of visual scenarios: Realistic symbiosis, replacement, and artificial symbiosis.

This framework proposes six possibilities of creating visual rhetorical figures. The framework was tested and it was found that ad visuals synthesizing conceptually similar metaphorical objects led to greater elaboration and elicited more favorable attitude towards the ad compared to ad visuals simply juxtaposing metaphorical objects (Gkiouszepas & Hogg, 2011).

Forceville (1996, 2005)'s Typology: This typology distinguishes three types of visual metaphors– Simile, Hybrid metaphor and Context metaphor. Simile is a visual metaphor in which the source and target domains are presented separately while Hybrid Metaphor is one in which source and target domains are fused. Context Metaphor is a visual metaphor in which only one domain (target/source) is present and the other domain is absent and is only suggested by the pictorial context. The reader has to decipher the absent domain based on the domain present in the visual metaphor.

The Forceville typology was tested by Van Mulken, Le Pair, & Forceville (2010), who examined consumers' reactions to the deviations from expectations and complexity across three European countries and found that the hybrid metaphor was the most preferred type of visual metaphor. It was also found that the deviation from expectation and comprehension positively impacted appreciation of the advertising messages while perceived complexity had a negative correlation with message appreciation.

Phillips and McQuarrie (2004) Typology: The primary argument of Phillips and McQuarrie (2004) is that advertisers select visual elements from a palette which has an internal structure. Although this typology is derived in part from previous taxonomies, such as Forceville (1996), unlike them, this typology predicts several cognitive and emotional responses of consumers to various types of visual rhetorical figures that can be empirically tested (Phillips & McQuarrie 2004). This typology differentiates visual rhetorical figures along two dimensions as shown in Figure 1.

The first dimension is the 'visual structure' which refers to "the way the two elements that comprise the visual rhetorical figure are physically pictured in the ad" (p.116). There are three possibilities of visual structure—juxtaposition, fusion, and replacement. Juxtaposition structure refers to presenting two elements separately side by side. Fusion structure is a combination of two elements that are fused together. In replacement structure one element is present while the other element is absent. The element present in the ad calls to mind the element that is absent. Phillips and

TABLE 1:
Summary of Three Typologies of Visual Rhetorical Figures

Typology	Description
Forceville (1996, 2005)	This typology distinguishes three types of visual metaphors
Simile	A visual metaphor in which source and target domains are presented separately
Hybrid metaphor	A visual metaphor in which source and target domains are fused
Context metaphor	A visual metaphor in which only one domain (target/source) is present and the other domain is absent but is suggested by the pictorial context
Gkiouzepas and Hogg (2011)	This typology consists of two dimensions-- object's *mode of representation* and *visual scenarios* resulting in six (2 X 3) different types of visual rhetorical figures
Mode of Representation	Refers to how the two metaphorical objects are arranged
Juxtaposition	The two metaphorical objects are separated from each other
Synthesis	The two metaphorical objects are fused together
Visual Scenarios	Refers to how the two metaphorical objects are constructed in order to be related to each other
Realistic symbiosis	The two metaphorical objects represent real-life events and are linked showing unexpected similarities in terms of color, position, or angle of view
Replacement	One of the metaphorical objects is replaced by an object foreign to the schema. Both metaphorical objects are present in their entirety
Artificial symbiosis	The two metaphorical objects are artificially placed together; visual space lacking realistic visual background, and other elements, such as the lack of perspective, differences in position, and size
Phillips and McQuarrie (2004)	This typology consists of two dimensions-- *meaning operation* and *visual structure* resulting in nine (3 X 3) different types of visual rhetorical figures
Meaning Operation	Refers to the target or focus of the cognitive processing required to comprehend the picture
Connection	The two metaphorical elements are associated with each other in some way (A is associated with B)
Comparison for similarity	The two metaphorical elements are similar in some way (A is like B)
Comparison for opposition	The two elements are featured in such a way that one is *not* like the other (A is not like B)
Visual Structure	Refers to how the two metaphorical objects are physically arranged
Juxtaposition	The two metaphorical elements are presented side by side separately
Fusion	The two metaphorical elements are fused together
Replacement	Of the two metaphorical elements, only one element is present while the other element is absent

FIGURE 1:
Typology of Visual Rhetoric

Visual Structure				RICHNESS: Less → More		
				Connection (A is associated with B)	**Similarity** (A is like B)	**Opposition** (A is not like B)
COMPLEXITY	Less ↓ More		**Juxtaposition** (Two side-by-images)			
			Fusion (Two combined images)			
			Replacement (Image present points to an image absent image)			

Source. Phillips and McQuarrie (2004); Shaded portion is tested in this study.

McQuarrie (2004) suggest that the complexity increases from juxtaposition to fusion to replacement structure. In other words, the processing demands on consumers increases from juxtaposition to fusion to replacement, and this differential demand contributes to differences in their responses to advertisements.

The second dimension is 'meaning operation', which "refers to the target or focus of the cognitive processing required to comprehend the picture" (p.116). The typology distinguishes three meaning operations: Connection, Comparison for similarity and Comparison for opposition.

In connection, the two elements are associated with each other in some way (A is associated with B). Consumers' response involves detecting how the two elements are associated. In comparison for similarity operation, the two elements are similar in some way (A is like B). The elements are either similar in form or appearance or they share similar structural features. Consumers are expected to compare the elements and infer the similar features between them. Finally, in the comparison aimed at identifying differences, two elements are featured in such a way that one is *not* like the other (A is not like B). Consumers are expected to compare the elements and infer in what way (s) the elements are similar as well as different from each other. Phillips and McQuarrie (2004) propose that the degree of ambiguity, or richness of reference increases from connection operation to comparison of similarities and to comparison of differences. In other words, consumers are expected to come up with many alternative meanings as they move along this dimension.

Overall, according to this typology, there are nine fundamentally distinct types of visual rhetorical figures. Phillips and McQuarrie (2004) suggest that differences in consumer responses to rhetorical figures arise from the different combinations of rhetorical figures along these two dimensions. According to this typology, visual rhetorical figures have a wide range—from simple and readily interpretable

figures to highly complex figures with a wide range of meaningful interpretations. The next section discusses the development of hypotheses based on this typology.

HYPOTHESES

Consumers enjoy and experience a sense of pleasure in trying to understand the meaning of a rhetorical figure (Peracchio & Meyers-Levy, 1994). When complexity in the ad is not too much, it is pleasurably arousing and is associated with greater ad liking (Phillips & McQuarrie, 2004). Jeong (2008) speculates that this is due to tension and release processes. The deviation from expectations in the rhetorical figures may induce tension at the beginning, but once the meaning is understood, the negative tension is relieved. The initial ambiguity may stimulate interest and motivate consumers to spend cognitive effort to process the ad and, as a result, the subsequent deciphering of the meaning is rewarding (Jeong, 2008). As the complexity increases from juxtaposition to fusion to replacement, the tension and ambiguity also increases along the same lines. Therefore, the degree of pleasure should also be greater from juxtaposition to fusion to replacement provided the meaning is deciphered. In turn, greater pleasure should lead to greater liking of the ad. Hence, we advance the following hypothesis:

H_1: Visual metaphor ads with more complex visual structure will increase ad liking. Specifically, ad liking increases from juxtaposition to fusion to replacement visual structures.

Rhetorical figures are complex in nature and are an artful deviation from expectations (McQuarrie & Mick, 1996). Due to this deviation with prior expectations, individuals will engage in more elaborate processing of the information presented (Heckler & Childers, 1992). In fact, ads with rhetorical figures induce higher levels of elaboration than similar ads without rhetorical figures (McQuarrie & Mick, 1999). This is because visual rhetorical figures are similar to puzzles and require consumers to put different pieces present in the ad together to fully understand the content. Phillips and McQuarrie (2004) argue that as complexity increases, greater elaboration is produced and the demands on consumer processing of the ad also increases in order to understand the meaning of the ad.

In juxtaposition structure, the demands on consumers processing the content are the least (Phillips & McQuarrie, 2004). This is because there are two elements in the ad that are clearly separated. Consumers simply have to discern how the two elements are related.

In fusion structure, the complexity increases because the two elements are merged together and consumers have to disentangle them before they can process the information (Phillips & McQuarrie, 2004). This increases the demand on consumers' processing.

Replacement structure is the most demanding due to the fact that consumers must discern the missing second element that is related to the element present in the ad and then process how the two elements are related (Phillips & McQuarrie, 2004). Identifying the missing element and then relating it to the element present requires significantly higher processing efforts compared to either fusion or juxtaposition structures. Hence, we advance the following hypothesis:

H_2: Visual metaphor ads with more complex visual structure will increase elaboration. Specifically, cognitive elaboration increases from juxtaposition to fusion to replacement visual structures.

Although, complex rhetorical figures increase demands on consumer processing, they are also more difficult to comprehend than ads without rhetorical figures (McQuarrie & Mick, 1996). Too much complexity in rhetorical figures reduces the comprehension of the ad (Phillips, 2000). This finding is also supported by Morgan and Reichert's (1999) study of concrete and abstract metaphors. They found that abstract metaphors, which are more complex than concrete metaphors, were more difficult to understand by the respondents. Hence, as the typology predicts that complexity of rhetorical figures increases from juxtaposition to fusion to replacement, we argue that comprehension decreases along those same lines. Hence, we offer the following hypothesis.

H_3: Visual metaphor ads with more complex visual structure will decrease comprehension. Specifically, ad comprehension decreases from juxtaposition to fusion to replacement structures.

METHOD

A three-group (juxtaposition, fusion, and replacement) between-subjects experimental design was used holding the 'meaning operation' dimension constant so as to manage the scope of the study. Participants, who were non-business major students from a regional mid-western university, were randomly assigned to one of the three experimental conditions. Two $25 gifts were offered as an incentive for participating in the study. Business majors were avoided, as they are believed to respond differently or may have a special interest or expertise in advertising (Phillips, 1997). Further, actual ads with real brands were used to increase external validity as recommended by Thorson (1990).

Advertising Stimuli

To begin with, a large set of ads containing visual metaphors were collected from various online sources, such as www.adsoftheworld.com and www.adrants.com. Ads that contained sexual content or celebrities were avoided. We controlled the 'meaning operation' dimension by including only 'comparison of similarity' types of ads (A is like B; see Figure 1). We made this decision for two reasons: to manage the scope of the study, and due to the fact that most studies of visual rhetorical figures have focused on similarity comparisons (Phillips and McQuarrie, 2004).

All ads contained little or no verbal copy. Although visual rhetorical figures can be of many types such as puns, antithesis, or metaphors (McQuarrie & Mick, 2003b), for the purpose of this study, only ads containing visual metaphors were included because consumers' processing of ads may be different for different types of rhetorical figures (McQuarrie & Mick, 1996). From this set, twelve test advertisements were selected; four ads for each of the three experimental conditions, juxtaposition, fusion and replacement. It was decided to use multiple ads in each group in order to minimize the possibility that the study results are due to the choice of ads selected (Phillips, 2000). One of the authors classified the ads into three conditions after discussions with two faculty members, who were not in marketing discipline. Later, this classification was confirmed with the other two co-authors of this study. To further confirm the test ads set, a pretest was conducted with 22 students. Phillips and McQuarrie (2004) typology and definitions of various terms were explained to the participants and then ads were showed on a projector screen one at a time. Participants placed ads into the three experimental conditions. Only those ads which were most often placed in the right conditions were retained. Three ads, one from each condition were removed based on this pretest.

In order to maintain broad applicability of the results, advertisements were not altered, except when the text size was too small to read, at which time the font size was increased using Photoshop by an art instructor. Each ad was printed on a matte presentation paper and the questions were printed below the ad. Ads were placed in random order in each booklet. The order of questions was also varied. The different ads used in the study are briefly described in Table 2.

Measures

All measures were taken from extant literature. Ad liking was measured using a three item, five -point semantic differential scale (Phillips, 2000). The reliability of the scale was high in all three groups, with Cronbach's alpha ranging from 0.94 to 0.97. An overall mean score was computed with a higher score indicating greater ad liking. Cognitive elaboration was measured by a six-item, five-point semantic differential (McQuarrie & Mick, 1999). The reliability of the scale was high in all three groups, with Cronbach's alpha ranging from 0.82 to 0.85. An overall mean score was computed with a higher score indicating greater elaboration. Ad comprehension was measured by a three-item, five-point semantic differential scale (McQuarrie & Mick, 1999). The reliability of the scale was high in all three groups, with

TABLE 2:
Summary of Test Advertisements

Product Advertised	Visual Structure	Meaning Operation	Description
Sony VAIO Laptop	Juxtaposition	Similarity	The laptop is shown to be lightweight by placing it amidst a bunch of floating papers in a gust of strong wind, which is coming from the propellers of a plane.
Samsonite Luggage	Juxtaposition	Similarity	The luggage is placed among sandbags in an army post to create a perception of sturdiness and protection that the sandbags offer to the soldiers behind them.
Kia Motors	Juxtaposition	Similarity	The car is compared to the elegance of a peacock and the sturdy shell of a turtle by superimposing a picture of a turtle on a peacock and placing it next to the car.
Orbit White Chewing Gum	Fusion	Similarity	A model with a bright lampshade on her head is shown holding the product to create the perception that her smile will be as bright as a lamp after using the product.
Tolnaftate Antifungal Cream	Fusion	Similarity	The product is placed next to slippers which are a pair of straps superimposed on a pair of dead fish similar to a fungal foot condition that the product is being advertised to treat.
Philips Anti-insect Bulbs	Fusion	Similarity	A picture of a frog is superimposed inside that of a bulb to create a perception of anti-insect functionality of the bulb, which is similar to that of a frog feeding on insects.
Orbit White Chewing Gum	Replacement	Similarity	Glowing bulbs were arranged to create the perception of a pair of bright smiling teeth that the product is being advertised to facilitate.
HP Printers	Replacement	Similarity	A baby appears to be attached to the wall of an office cubicle to create the perception that the product helps print life-like pictures.
Erdal Shoe Polish	Replacement	Similarity	A neatly polished shoe replaces the rear view mirror of a car to create the perception that the advertised product can help shine a shoe to a mirrored finish.

Cronbach's alpha ranging from 0.90 to 0.96. An overall mean score was computed with a higher score indicating better comprehension.

Procedure

To increase the generalizability of results, students with a variety of majors were included in the study. Participants received a booklet that contained instructions, a brief description of the purpose of the study and information about confidentiality, the prize to be raffled, demographic questions, and three advertisements of one type of visual structure. Participants were randomly placed into one of the experimental conditions. To simulate realistic viewing conditions, participants were instructed to view the ads as they normally would when reading a magazine and to look at each ad for as long as they liked. Participants

completed demographic questions first and then answered questions at their own pace after viewing each ad. A total of 185 surveys were completed (99 women, 86 men, M_{age} = 26.15 years, age range: 18-71 years). Sixty students were in juxtaposition structure condition, sixty one in fusion structure condition, and sixty four were in replacement structure condition.

RESULTS

A one-way multivariate analysis of variance (MANOVA) was conducted to determine the effect of the three types of visual structures, juxtaposition, fusion and replacement, on three dependent variables, ad liking, cognitive elaboration, and ad comprehension; however, prior to conducting the MANOVA, a series of Pearson correlations were performed between all of the dependent variables in order to test the MANOVA assumption that the dependent variables would be correlated with each other in the moderate range, i.e., .20 -.60 (Meyers, Gamst, & Guarino, 2006). As shown in Table 3, the correlations are moderate, suggesting the appropriateness of a MANOVA. Additionally, a non-significant Box's *M* value of 16.00, with $p > .05$ indicates a lack of evidence that the homogeneity of variance-covariance matrix assumption was violated.

The main effect of the between subjects variable 'visual structure' was significant, Wilks' l = .726, F (6, 360) = 10.41., $p < .001$. This indicated that the type of visual structure (viz., juxtaposition, fusion, or replacement) had an impact on ad liking, cognitive elaboration, and comprehension. The multivariate effect size was estimated at .148, which implies that about 15% of the variance in the canonically derived dependent variable was accounted for by the independent variable.

Given the significance of the overall test, the univariate main effects were examined; however, prior to conducting a series of follow up ANOVAs, the homogeneity of variance assumption was tested for all three dependent variables. The Levene's tests were not statistically significant, $p > .05$. Thus, the assumption of homogeneity of variance is met for this sample (see Table 4). As shown in Table 4, significant univariate main effects for complexity of visual structure were obtained for all three dependent variables: ad liking, F (2, 182) = 13.13, $p < .001$, cognitive elaboration, F (2, 182) = 5.86, $p < .05$; and comprehension, F (2, 182) = 25.94, $p < .001$.

Finally, the post hoc analyses (LSD) were perfumed to examine individual mean difference comparisons across three levels of visual structure and three dependent variables. The results of this post hoc analysis are presented in Table 5.

Hypothesis 1

Hypothesis 1, which stated that ad liking increases from juxtaposition to fusion to replacement visual structures, was partially supported. As shown in table 5, post hoc analysis showed that there was a significant difference between juxtaposition (M = 3.75, SD = .72) and fusion (M = 3.06, SD = .80) structures, $p < .05$. There was also a significant difference between fusion (M = 3.06, SD = .80) and replacement (M = 3.61, SD = .82)

TABLE 3:
Pearson Correlations, Means and Standard Deviations Associated with Dependent Variables

Dependent Variable	1	2	3	*M*	*SD*
Ad liking	1			3.47	.83
Elaboration	.610**	1		3.34	.66
Comprehension	.599**	.351**	1	3.65	.84

Note. N = 185
**$p < .01$, two tailed.

TABLE 4:
One-Way ANOVAs

	Levene's Test		ANOVAs			Juxtaposition		Fusion		Replacement	
Dependent Variables	*F*(2,182)	*p*	*F* (2, 182)	*p*	η^2	*M*	*SD*	*M*	*SD*	*M*	*SD*
Ad liking	.11	.892	13.13	.000	.13	3.75	.72	3.06	.80	3.61	.82
Elaboration	.73	.485	5.86	.003	.06	3.57	.64	3.22	.60	3.23	.69
Comprehen-sion	.58	.561	25.94	.000	.22	4.01	.67	3.09	.80	3.84	.76

Note. N = 185
η^2 = Partial eta squared

TABLE 5:
Post Hoc Analysis: Multiple Comparisons

Dependent Variable	(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	*p*
Ad Liking	Juxtaposition	Fusion	0.69*	.142	.000
		Replacement	0.14	.140	.316
	Fusion	Juxtaposition	-0.69*	.142	.000
		Replacement	-0.55*	.140	.000
	Replacement	Juxtaposition	-0.14	.141	.316
		Fusion	0.55*	.140	.000
Elabora-tion	Juxtaposition	Fusion	0.35*	.118	.003
		Replacement	0.34*	.116	.004
	Fusion	Juxtaposition	-0.35*	.118	.003
		Replacement	-0.01	.116	.906
	Replacement	Juxtaposition	-0.34*	.116	.004
		Fusion	0.01	.116	.906
Compre-hension	Juxtaposition	Fusion	0.92*	.136	.000
		Replacement	0.17	.134	.189
	Fusion	Juxtaposition	-0.92*	.136	.000
		Replacement	-0.74*	.134	.000
	Replacement	Juxtaposition	-0.18	.134	.189
		Fusion	0.74*	.134	.000

Note. Based on observed means; the error term is Mean Square (Error) = .560;
*p< .05, two tailed.

structures, $p < .05$. However, ad liking for juxtaposition did not differ from replacement structure, $p > .05$. This means, both juxtaposition and replacement visual structures were liked equally when compared to fusion structure, which was least liked. Although this result was contrary to our prediction, replacement structure elicited greater ad liking compared to fusion structure, as predicted by the typology.

Hypothesis 2

Hypothesis 2, which stated that cognitive elaboration increases from juxtaposition to fusion to replacement visual structures, was not supported. As shown in table 5, there was a significant difference between juxtaposition (M= 3.57, SD = .65) and fusion (M= 3.22, SD = .60) structures, $p < .05$ and between juxtaposition (M= 3.57, SD = .65) and replacement (M= 3.23, SD = .69) structures, $p < .05$. However, there was no significant difference between fusion (M= 3.22, SD = .60) and replacement (M= 3.23, SD = .69) structures, $p > .05$. This means both fusion and replacement visual structures elicited the same amount of elaboration and this was less than the elaboration elicited by juxtaposition structure. In other words, juxtaposition structure elicited highest cognitive elaboration, which was contrary to what the Phillips and McQuarrie (2004) typology suggests.

Hypothesis 3

Hypothesis 3, which stated that ad comprehension would decrease from juxtaposition to fusion to replacement visual structures, was partially supported. As shown in table 5, there was a significant difference between juxtaposition (M= 4.01, SD = .67) and fusion (M= 3.09, SD = .80) structures, $p < .05$ and between fusion (M= 3.09, SD = .80) and replacement (M= 3.84, SD = .76) structures, $p < .05$. However, the difference was not significant between juxtaposition (M= 4.01, SD = .67) and replacement (M= 3.84, SD = .76) structures, $p > .05$. This means, as predicted by the typology, fusion structure was more difficult to comprehend when compared to juxtaposition structure; however, contrary to the prediction, juxtaposition and replacement visual structures were equally comprehended. In other words, visual metaphor ads with fusion structure were more difficult to comprehend than either with juxtaposition or replacement structures.

DISCUSSION

The use of visual rhetoric in print media has seen a steady rise within the last forty years (McQuarrie and Phillips, 2008). It appears that visual rhetorical figures are also popular in TV advertising. In a content analysis of 199 British and Dutch TV commercials, it was found that nearly 70% of them contained visual rhetorical figures (Enschot, Beckers, & Mulken , 2010).
The present study tested the visual rhetoric typology proposed by Phillips and McQuarrie (2004). The main contribution of this study is that it empirically tested the typology and expanded our understanding of consumers' liking, elaboration, and comprehension of ads with visual metaphors. Overall, the results provided mixed support for the typology.

The typology predicts that ads with more complex visual structure will be better liked. In other words, ad liking increases from juxtaposition to fusion and from fusion to replacement visual structure. The results of this study do not support this contention. This study showed that both, ads with juxtaposition and replacement visual structures are equally liked while ads with fusion structure are least liked.

The second prediction of Phillips and McQuarrie (2004) typology is that ads with more complex visual structure will elicit more cognitive elaboration. The results of this study do not support this prediction. The results indicate that ads with juxtaposition visual structure elicit most cognitive elaboration compared to ads with either fusion or replacement structure. Thus, juxtaposition structure appears to be more complex than either fusion or a replacement structure, which is in the opposite direction of what the typology predicts. One possible explanation for why juxtaposition structure is more complex is that consumers have to connect the two elements that are separated in the ad and then identify how they are connected. Identifying the connection may impose more cognitive processing demands because consumers are required, first of all, to understand the message before identifying the product that is being advertised. This could lead to more demands on cognitive processing. Further, in a juxtaposition structure, due to the presence of two images, the number of distinct elements might increase, which could contribute to higher visual complexity. Whereas in fusion structure the two figures are already combined and often fade into each other which means consumers may quickly identify the connection between the elements and, as a result, this might place fewer

demands on processing. In replacement structure, even though one element is missing (which might possibly require a higher demand on cognitive resources) it is likely that the designers of advertisements provide clues in the ad to help viewers identify the missing element. These clues could help reduce the demands on cognitive resources. The other alternative explanation is that the study might have failed in controlling the complexity for each of the three experimental conditions because there is still a lack of understanding as to how visual complexity can be controlled in advertising (Pieters, Wedel, & Batra, 2010). Further, visual complexity is not just about how two figures are arranged as suggested by the typology. Visual complexity can also be distinguished between feature complexity and design complexity (Pieters et al., 2010).

Finally, the typology predicts that as complexity increases, ad comprehension decreases. The results presented only mixed support for this prediction. It appears that ads with fusion structure are more difficult to comprehend than ads with either juxtaposition or replacements structure.

This study offers several recommendations for practitioners. Advertising professionals should note that not all visual metaphors elicit the same level or degree of reactions from consumers. Our study results suggest that the manner in which the two metaphorical objects are placed in the ad can impact ad liking, elaboration and comprehension. Specifically, when creating visual metaphor ads, it is best to use juxtaposition structure i.e., to keep the two metaphorical objects as separate. Such ads are most liked, elicit more elaboration and are better understood compared to ads that have other types of visual structures. The next best is the replacement structure i.e. to show only one of the two metaphorical objects in the ads. These ads produce same degree of liking and comprehension like ads with juxtaposition structure, although they do not elicit as much elaboration. This means, if the primary objective is either creating a pleasant and enjoyable ad or an easy to understand ad with clear meaning for consumers, ad creators should use either juxtaposition or a replacement structure, because both of these structures are equally effective. As an illustration, if the objective is to create an ad for a light weight Sony laptop, clearly and straightforwardly establishing its light weight feature by associating it with a bunch of floating papers, then either juxtaposition or replacement structure will work. Such an ad can be effective with the target audience who are specifically looking for a light weight laptop. However, if the primary communication objective is to stimulate multiple meanings, or provoke consumers' imagination, then they should use only a juxtaposition structure. This creative strategy can be effective in appealing to multiple segments with one ad.

Our study results also suggest that metaphor ads with fusion structure i.e. the two metaphoric objects are fused to create the impression of one single figure should be avoided, or care must be taken when deigning them. Such ads are least liked, elicit least cognitive elaboration, and are also more difficult to understand compared to ads with either juxtaposition or replacement visual structure.

LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

There are certain limitations that should be taken into account when considering the contributions of this study. First, participants viewed the print ads in a classroom environment. Such an artificial situation might have forced respondents to devote more cognitive resources than they would normally use. This might have affected their comprehension and elaboration. Instead of such a forced setting, future researchers might use a more natural setting to assess the typology. Secondly, this study used real advertisements as stimulus materials. Using real advertisements might have influenced participants' responses. It is difficult to control the level of difficulty for each of the three experimental conditions. This could have affected the internal validity of the study, although there are advantages of using real ads such as increasing external validity. Additionally, by using real ads, it is possible that we actually tested the specific ads and not the typology. Further, we should have taken a juxtaposition ad and created a fusion and replacement ad and did likewise with all the ads and thus created three sets of ads. That would

have ensured a better way of testing the typology. Thirdly, we did not test the interactions between the three variables. Finally, we used a convenience sample of students, which reduces the generalizability of results; although students are heavily exposed to advertisements when compared to other groups of demographics and are suitable for studies such as this one.

The following suggestions for future research are offered. First, in this study we held 'meaning operation' dimension constant by restricting visual figures to only one of the three possibilities of richness, such as 'A is like B'. Researchers can test the typology for the other two possibilities, namely 'A is associated with B' and 'A is not like B'. Alternatively, future researchers might hold 'visual structure' dimension constant and vary the 'meaning operation' dimension. Secondly, this study did not investigate the moderator effects. Phillips and McQuarrie (2004) suggest such constructs as need for cognition, consumers' competence, and general attitude towards advertising as moderators. Future research should incorporate them to better understand their impact on both complexity and richness of visual figures. Another important research consideration would be to investigate other dependent variables such as ad credibility and ad recall. Finally, researchers should investigate individuals' 'looking time' and its relationship to complex visual figures. Morrison and Dainoff (1972) found a positive relationship between visual complexity of magazine ads and looking time.

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