Understanding Pictorial Metaphor

pilot study

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Introduction

Charles Forceville posited four categories of pictorial metaphor in his book 'Pictorial Metaphors in Advertising': "pictorial metaphors with one pictorially present term", "pictorial metaphors with two pictorially present terms", "pictorial similes", and "verbo-pictorial metaphors" (1996, 163). Kim Erwin renamed these categories "integration", "hybridization", "juxtaposition", and "simultaneous queueing". She also added "insertion", in which one pictorial term is inserted into the other. Insertion is similar to hybridization except that the two terms are not fused into a hybrid, but are rather distinct elements overlapping in space. When I learned about these categories in Kim Erwin's class on metaphor at the Institute of Design my immediate question was, "Are these the categories of visual metaphor?" Specifically, are these categories mutually exclusive and collectively exhaustive. Do they overlap? Are there others?

To answer these questions one must understand the differences between the categories of pictorial metaphor. Are these categories merely methods of drawing comparison, akin to syntax decisions by authors, or do these categories modulate meaning? In written language, "to call a sentence an instance of metaphor is to say something about its meaning, not about its orthography, its phonetic pattern, or its grammatical form." (To use a well-known distinction, "metaphor" must be classified as a term belonging to " semantics and not to syntax "-or to any physical inquiry about language.)" (Black 1954, 276). Thus, if these are merely syntactic categories, we should feel free to discard the categories as having no influence on meaning. If, on the other hand, these categories influence the meaning of the metaphor, we should continue our investigation to discover how they influence meaning. Forceville agrees with and summarizes Black's interaction theory of metaphor when he states, "While a verbal metaphor can occur in a variety of grammatical forms, the conceptual metaphor(s) underlying it invariably take the form 'A IS B'" (Forceville 1996, 34). This raises a important question. If all metaphor can be reduced to a conceptual core, regardless of its grammatical form, then how can categories of metaphor affect meaning? Since these are open questions, we shall proceed with our investigation and hopefully ascertain whether these categories do or do not modulate meaning, and in what ways they might do this.

To investigate these questions, we must first say a few words regarding the nature of metaphor. This study assumes that Max Black's Interaction Theory of metaphor is an accurate, or at least helpful, view of the mechanics of metaphor. In this view, a metaphor is composed of three parts: a primary or target concept (A), a secondary or source concept (B), and a context in which they interact. "The metaphor works by applying to

the principal subject [A] a system of " associated implications " characteristic of the subsidiary subject [B]" (Black 1954, 292). These implications, which can be regarded as sets of characteristics shared by the two subjects, can be emphasized or diminished by the context. As Black explains in the example 'Man is Wolf', "These implications will not be those comprised in the commonplaces normally implied by literal uses of man. The new implications must be determined by the pattern of implications associated with literal uses of the word 'wolf '. Any human traits that can without undue strain be talked about in 'wolf-language' will be rendered prominent, and any that cannot will be pushed into the background. The wolf-metaphor suppresses some details, emphasises others-in short, organizes our view of man" (Black 1954, 288). Thus, the purpose of this study will be to examine how the interactions of these two sets of characteristics can be affected by the visual form of the metaphor.

Lagerwerf and Meijers explore this idea in relation to advertising images. They begin by identifying three classifications of visual metaphor: "juxtaposition (the two visual elements are set side by side in the image), fusion (the two visual elements are combined within one image), and replacement (only one of the elements is visible; the interpretation of the image refers to the other element)" (Lagerwerf 2008, 3). These are roughly equivalent to Kim Erwin's "juxtaposition", "hybridization", and "integration". Lagerwerf and Meijers go on to propose that these classifications form a scale of complexity which will modulate viewer appreciation. "The scale ranges from less complex juxtapositions, through moderately complex fusions, to complex replacements" (Lagerwerf 2008, 3). Furthermore, they draw on Sperber and Wilsons system of strong and weak implicatures, analogous to Black's emphasis and suppression of details, to explain how this modulated appreciation takes place (Forceville 1996, 168),(Black 1954, 288). "More weak implicatures ,[uncommon responses to the metaphor], may lead to greater appreciation, up to a point where visual metaphors become too complex (Phillips and McQuarrie 2004). By contrast, we may define the notion of strong implicatures as being thoughts that many individuals would infer from an advertisement" (Lagerwerf 2008, 4). Appreciation may indeed be the way in which these categories modify meaning, but for our purposes we will focus on the general implication. Classifications of metaphor will lead to different weak implicatures resulting in variable emotional responses.

This hypothesis of Lagerwerf is supported by the work of Forceville. Since A and B, of the core conceptual metaphor, are both present or referred to in metaphorical images, the strong implicature will most

likely be the same. However, the weak implicatures will likely vary between participants. “There is often room for weak implicatures to be derived by the addressee, and the weaker the implicatures are, the more responsibility for deriving them rests with the addressee rather than the communicator” (Forceville 1996, 166). Thus, if the metaphor is successfully communicated, the strong implicature will be constant. While it is possible that participants will have idiosyncratic weak implicatures, this study will attempt to identify common ones that could form the basis for categories of metaphor. If there is a semantic difference among categories of visual metaphor, it will most likely be expressed as weak implicatures which are common to that category but independent of the metaphor. As suggested by Lagerwerf, these weak implicatures will likely be emotional.

Thus we arrive at my research question, “How are pictorial metaphors understood?” Specifically, “Are there detectable differences between how categories of pictorial metaphor are understood?” The value of answering these questions is for me a practical one. If some understanding can be gained about how each category affects the meaning of the metaphor, one can use the categories to clarify meaning, and use visual metaphor more precisely. While this pilot study does not anticipate answering this question in full, it intends to test a research method and gain some initial insight into whether this course of study will succeed.

Research Design for Pilot Study

For this pilot study, five metaphors were selected from advertising and literature. These five metaphors were then illustrated using the five categories of metaphor postulated by Kim Erwin, for a total of 25 images. By including literary metaphors in addition to advertising images I was able to include negative metaphors which did not express a favorable opinion of the target item. This is a different approach than that taken by many studies which focus solely on advertising images (Forceville, 1996), (Lagerwerf, 2008), (McQuarrie, 1996). By including both positive and negative metaphors, I will be able to test emotional response in general, compared with just appreciation as Lagerwerf had. Furthermore, by including every metaphor in every category, I was able to control for the content of the images. Previous studies had not taken this approach, instead using a different metaphor for each category (Forceville, 1996). These images would allow me to test how participants understand pictorial metaphor. Do they understand the image as metaphorical? What is their emotional response?

These 25 images were then divided into five mutually exclusive groups of five images, each containing only one instance of each metaphor and category. Participants were randomly assigned a group and shown the five printed color images from their assigned category in random order, to control for priming. After each image, participants were asked four questions. Q1:What do you see in the image? Q2:What does it tell you? Q3:How does this make you feel? Q4:What do you think the intended message is? Participants were not prompted beyond these four questions. Participant responses were audio recorded and were later transcribed for analysis.

15 participants were selected from the student body at the Institute of Design. They were selected mainly for convenience. Since this was merely a pilot study, they offered a ready sample group with which to test the research method. Six participants were male; nine were female. 12 participants were American, one was from Korea, two were from India. Participants were generally aware that the study they were joining was investigating metaphor. Being students at the Institute of Design, participants were generally familiar with graphic design, and gave formal criticism. Future studies should seek other sample populations since this group offered many idiosyncratic difficulties.

Participants were offered snacks to compensate them for their time. It was made clear at the time of the interview that there were no right answers to the questions and their answers would not negatively affect them in any way. Before each interview I stated, "I will show you a series of 5 images. After each image there will be 4 questions. There are no right answers, so answer freely." The 15 interviews resulted in three responses for each of the 25 images. This provided a minimum sample size from which to ascertain a common understanding of the metaphorical content. Future studies should use a larger participant population to get more robust data.

Responses from the research were then transcribed into a matrix by participant. These responses were then reorganized into clusters by each of the 25 images. Aggregate responses were generated for two intermediate questions. IQ1: what was the strong implication of the metaphor? IQ2: what was the emotional response? Answers were generated using any keywords reported by at least two participants. For IQ1, common themes were identified from answers to Q2 and Q4. Many participants reported a variety of answers beyond their initial impression. Thus, answers given to either Q2 or Q4 were used to aggregate the common response. Common answers to IQ2 were aggregated directly from Q3. Responses to Q1 were generally very brief and literal and were used only to initiate the conversation. In the analysis, they were only used to verify that

participants understood the primary and secondary subjects of the image. No quantitative methods were used since the data set was so small.

Aggregate answers to the intermediate questions, IQ1 and IQ2, were then tallied along the rows and columns to analyze differences between metaphors and categories. If participants identified a metaphorical transfer of characteristics, even if it was not the intended one, the answer was scores as a success. Only in cases where the participants common answer was of a trivial or superficial similarity did the response get scored as a failure. Emotional response was tallied into two groups 'Strong Emotion' and 'Weak Emotion'. These tallies were then used to answer the main question, "Are there categories of metaphor?"

Results

Looking at aggregated responses from participants in Table 1, we can observe that all metaphors were understood more than half the time. The iPhone-Swiss Army Knife and Mini Cooper-Boxing Glove metaphors were understood across all five categories. Both Man-Wolf and Earth-Egg were misunderstood once under juxtaposition. The VW-Lemon was least well understood, only three out of five categories. It was confused in both Insertion and Integration.

The categories of metaphor were all understood more than half the time across the metaphors. Hybridization and Simultaneous Queueing were best understood; no confusion resulted for any metaphor. Insertion and Integration were both misunderstood once for the VW-Lemon metaphor. Juxtaposition was the least well understood category. It was misinterpreted for both Man-Wolf and Earth-Egg. This was the only time these metaphors were misinterpreted.

Emotional response was mixed both positive and negative, although some common themes did emerge. Among the metaphors, VW-Lemon and Earth-Egg resulted in the strongest emotions. Both resulted in three positive emotions, and one response of "Confused". iPhone-Swiss Army Knife and Mini Cooper-Boxing Glove both had three emotional responses, which were pretty evenly split, positive and negative. Man-Wolf resulted in the least emotional response and was solely negative.

Among the categories of metaphor, Simultaneous Queueing was the most emotional, and elicited a strong emotional response from all five images. Emotional responses were evenly split between positive and negative reactions. Hybridization elicited four emotional responses. Responses were more positive than

negative. Insertion and Integration were nearly split with three emotional responses and two unemotional responses. While Insertion had a mixed positive and negative response, Integration resulted in three negative responses. Finally, Juxtaposition was the least emotional category, eliciting just one response, "Curious/ Thoughtful".

Discussion

Reflecting on the interviews, many participants responded to the graphic design of the images and analyzed line weight and image quality for meaning. In most cases, this did not result in undue confusion, and participants generally arrived at a consistent understanding. Many participants expressed confusion, and struggled to discover meaning in the images, although they usually found it. Responses generally could be categorized into those that initially got the metaphor and then departed, and those that were initially confused and later arrived at the 'correct' response. This was part of why responses to both Q2 and Q4 were used when aggregating responses to IQ1.

With such a small sample size, and only the one study, it is difficult to draw concrete conclusions. However, it is interesting that Juxtaposition was the least well understood category of metaphor. Given VW-Lemon was the cause of confusion among Insertion and Integration and that VW-Lemon was the least well understood metaphor, we can reasonably assign these misunderstandings to the fault of either the metaphor or the images themselves. The Integration image was most often taken to mean "This is a Photoshop image", which clearly points to the obscure qualities of the image. Thus, Juxtaposition was the lone example of a poorly understood category. One might posit that the confusion resulted from the lack of context surrounding the images. However, all 25 images were stripped of context. Only in Integration, where the source concept is inferred by contextual referents, is there any context surrounding either concept. Therefore, we can suppose that this confusion is the result of either the format of the images, separated by a line, or a fault of the category itself. Since the Mini Cooper-Boxing Glove metaphor was taken directly from a print advertisement, and that the line is a fairly conventional means of juxtaposing, it is unlikely that the line was at fault. Lets turn to the aggregate emotional responses before we draw our final conclusion.

Among the metaphors, Man-Wolf was the least emotional. This could perhaps be because this was the only black and white image, and it was silhouettes, making it a fairly abstract image. One participant referenced

Rorschach tests in their response. Further testing would need to be conducted to confirm this. It would be interesting to investigate the emotional weight of black and white versus color images, and silhouettes versus more complex graphics.

Among the categories of metaphor Simultaneous Queueing elicited the most emotional response. This was very surprising, since Simultaneous Queueing replaced the target concept's image with a word. My expectation was that the abstraction of the word would reduce the emotional response, however this was clearly not the case. It would be very interesting to know why.

Juxtaposition was the least emotional of all the categories. In comparing this lackluster emotional response with the accuracy of the metaphorical understanding, it is interesting to note that the least emotional category was also the least well understood. Since participants voiced their confusion elsewhere but not here, we might surmise that the lack of emotion resulted in participants disengaging and not investigating the metaphorical imagery. Were the images so boring that participants disengaged when there was no obvious link between source and target? Without further testing it is impossible to say.

A final observation. Among the metaphors the degree of understanding was inversely correlated with the emotional response. Where metaphors were well understood they elicited poor emotional response. Where metaphors were merely understood they elicited a stronger emotional response. This was exactly the opposite among the categories of metaphor. Categories that were well understood were strongly emotional. Those that were confusing, were not very emotional. This is a very interesting finding that needs to be explored in greater depth.

From these preliminary results, it appears that there is some evidence for categories of metaphor. Furthermore, the hypothesis that if a variation existed it would be observed in the emotional reaction of participants was confirmed. The largest variance was observed in the emotional response between categories. These categories were all understood more than half the time, but emotional response varied widely. Both Simultaneous Queueing and Hybridization stood out as being understandable and emotional. Juxtaposition stood out as being un-metaphorical and un-emotional.

Reflections

This was a very limited pilot study which had limited means and an even more limited time frame. Thus, there were many areas where the study could be improved, and there are many channels open for further inquiry. While this pilot study cannot say conclusively that categories of metaphor exist, and how they are different, the first signs of a semantic difference between the categories was observed. There is still work to be done to probe these differences and to insure that the categories are mutually exclusive and collectively exhaustive.

There were two main problems with this study. First, participants were selected from a limited and skewed pool of design students. An accurate study would need to recruit more participants from a much larger and diverse pool. There should be a greater variation in age, a more balanced gender ratio, and culture should be controlled for. While it would be very interesting to probe the effects of culture, using a single participant population one should control for cultural factors. While I initially believed that this would not be a problem, and that participants would be open to new metaphors that they were not familiar with, it appears that cultural biases do exist. In my scoring, I did not differentiate between metaphorical understanding, only between metaphorical and superficial comparisons. However, in some cases, the confusion that resulted hindered the analysis of the results, since it was unclear whether the image or the metaphor was at fault. Black and Forceville both espouse that culture can have a dramatic effect on the understanding of metaphor (Black 1954, 287), (Forceville 2002, 11). For a more detailed study, controlling for these effects would be important.

Second, metaphor images were not always relevant or effectively communicated. There were many comments about graphic design. While this could be the result of the participants in the study, it could also have been the result of the images. Clearly the VW-Lemon/Integration image was fraught with problems. It would be interesting to use either multiple images of each metaphor within each category, or to have participants draw their own images, to observe how they would visualize these metaphors. Having participants draw their own could be an valuable step toward capturing the full set of categories and generating a data set which could then be shown to a second set of participants to repeat this study and examine understanding.

Table 1.

	Juxtaposition	***Hybridization***	***Insertion***	***Integration***	***Simultaneous Queueing***
iPhone-Swiss Army Knife	**Multifunctional.** Get it.	**Multifunctional** Fun.	**Multifunctional** Get it.	**Multifunctional** Irritated.	**Multifunctional** Enlightened. Dislike.
Man-Wolf	**Separate. Contrast.** None.	**Aggressive.** None.	**Bad.** Distrust.	**Act like animal.** Abstract.	**Strong.** Shouting.
VW-Lemon	**Bad car.** None.	**Bad car. Summer.** Validation. Good.	**Citrus smell.** Like.	**Photoshop.** Confused.	**Bad car.** Cute. Fun.
Earth-Egg	**Shape.** Curious/ Thoughtful.	**Life.** Interest.	**Life.** Thoughtful.	**Care.** None.	**Care.** Confused.
Mini-Boxing Glove	**Strong. Power.** Recognizable.	**Strong. Power.** Dissonance.	**Sporty. Tough.** None.	**Sporty. Focus of attention.** Bad.	**Sporty.** Fun.

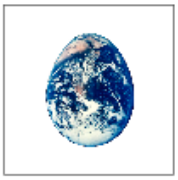
Table 2.

iPhone-Swiss Army Knife	**Well Understood.** Weak Emotion.
Man-Wolf	**Understood.** Weak Emotion.
VW-Lemon	**Understood.** Strong Emotion.
Earth-Egg	**Understood.** Strong Emotion.
Mini-Boxing Glove	**Well Understood.** Weak Emotion.

Table 3.

Juxtaposition	***Hybridization***	***Insertion***	***Integration***	***Simultaneous Queueing***
Understood.	**Well Understood.**	**Understood.**	**Understood.**	**Well Understood.**
No Emotion.	Strong Emotion.	Weak Emotion.	Weak Emotion.	Strong Emotion.

Table 4.

	Juxtaposition	Hybridization	Insertion	Integration	Simultaneous Queueing
Advertisment					
Literary Reference					
Advertisment					
Literary Reference					
Advertisment					

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