



This work has been submitted to **NECTAR**, the **Northampton Electronic Collection of Theses and Research**.

### **Conference Proceedings**

**Title:** Understanding advertisements: how difficult should it be?

**Creators:** Mortimer, K. and Lloyd, S.

**Example citation:** Mortimer, K. and Lloyd, S. (2010) Understanding advertisements: how difficult should it be? In: Haley, E. (ed.) *Proceedings of American Academy of Advertising European Conference 2010*. Milan, Italy: American Academy of Advertising.

It is advisable to refer to the publisher's version if you intend to cite from this work.

**Version:** Accepted version

<http://nectar.northampton.ac.uk/3627/>



## UNDERSTANDING ADVERTISEMENTS: HOW DIFFICULT SHOULD IT BE?

*Kathleen Mortimer, University of Northampton, UK*  
*Stephen Lloyd, Auckland University of Technology, New Zealand*

Although it has been recognised that implicit messages in magazine advertisements can be effective, little research has been undertaken on the impact of different levels of implicitity. This study looks specifically at metaphors in advertising and examines the impact that an implied message has on comprehension and likeability. The results indicate that likeability can be high when the challenge of understanding the advertisement is moderate but if the advertisement is perceived to be either too easy or too hard to understand likeability levels drop, suggesting a quadratic relationship between these two variables. The implications of these findings are discussed.

Magazine advertisements have become increasingly implicit in the way that they communicate their messages. A study by Phillips and McQuarrie (2002) who examined advertising from 1954 to 1999, found that there was a gradual reduction in the amount of explanation provided and an increase in the use of a rhetorical approach such as puns, metaphors and irony. Such advertisements have been referred to by some as 'post-modern' (Procter, Procter and Pappasolomou 2005; Bulmer and Buchanan-Oliver 2004). The purpose of this paper is to examine this phenomenon to establish how implicit a message can be before it has a negative impact on levels of comprehension and/or likeability.

### **Background**

One popular way of implying a message instead of providing a clear explanation is by using metaphors. Indeed, metaphors have been identified as “an important tool used by real-life advertisers that warrant specific scholarly attention” (Batra 2002, p. 264). They are classified as one of the more complex types of rhetoric because of their level of deviation from what is expected (McQuarrie and Mick 1996). Goldenberg and Mazursky (2008) refer to them as examples of a replacement template which is a recognised creative design structure. Metaphors work on the assumption that the reader can identify a similarity between two terms or objects not normally associated together. Readers thereby transfer the attributes of one term or object to another. The similarity implied between the two terms is surprising initially, but after some consideration is understood. It is the identification of these attributes, common to both objects, which enables the consumer to establish the advertising message. Such attributes are referred to as implicatures or inferences because they are not directly or explicitly communicated.

Advertisements containing metaphors demand some cognitive processing and elaboration from the respondents for understanding to take place (Scott 1994; Phillips 1997). Facing this challenge can be a pleasurable experience and the increased involvement in the advertisement leads to it being more memorable. McQuarrie and Mick (1999) found that

respondents enjoyed solving the puzzles and this led to a more positive attitude to the advertisement with no reduction in the understanding of the key brand attributes. Such findings, based mainly on advertising experiments, find support in the real world. Tom and Eves (1999) looked at performance data from advertisements examined by Gallup and Robinson and found that those containing rhetorical devices performed better in terms of recall and persuasion. Advertisements containing metaphors are also original and this divergence from the norm means they are perceived to be creative which, in itself, can have a positive effect on brand awareness and brand liking (Smith, Chen and Yang 2008; Baack, Wilson and Till 2008).

The identification of inferences is obviously an important step in understanding the advertising message and these can be classified as either strong or weak (Forceville 1996). A strong inference is the most obvious meaning to be taken from the advertisement and probably that intended by the advertiser. A weak inference is less obvious and may have been intended by the advertiser or perhaps has been identified due to the idiosyncratic interpretation of the consumer (Phillips 1997). It is also possible for these weak inferences to be identified by the consumer without the need for a high level of involvement, referred to by McQuarrie and Phillips (2005) as the weak-implicature formulation. However it is argued that these weak inferences can be very effective for the advertiser. Indeed it is this opportunity for the consumer to create multiple positive interpretations that can make such indirect advertising so persuasive. A study by McQuarrie and Phillips (2005) examined the effectiveness of advertisements that utilised visual metaphors without any verbal explanation i.e. highly implicit. They found that such advertisements resulted in the creation of a large number of weak inferences which they argue are advantageous to the advertiser for a number of reasons. Firstly, the inferences are normally positive due to consumers' awareness of the role of advertising. Secondly, the consumer produces few counterarguments because of the high number of inferences that are interpreted. Lastly, this amalgamation of a number of distinct positive inferences can lead to an overall strong positive communication. Other research has also proposed that the believability of the message can increase due to the consumer identifying the inferences independently (Phillips and McQuarrie 2002) and, as earlier mentioned, this processing activity can lead to a positive attitude towards the advertisement (McQuarrie and Mick 1999) which has been found to extend to a positive brand attitude (MacKenzie and Lutz 1989). With so many positive outcomes, it is perhaps not surprising that levels of implicitness are increasing.

However the cost of this high level of implicitness is the increased risk that the consumer may not understand the main message or strong inference that the advertiser is trying to communicate. An examination of the way comprehension has been measured in past studies would suggest that there is a range of opinion on the importance of communicating the strong inference. In the Morgan and Reichert (1999) study the level of comprehension was measured by counting the number of pre-selected inferences that the respondents identified. Weak inferences that were not predicted were considered invalid even if they were of a positive nature. This would imply that unexpected positive inferences are not considered to be a favourable outcome, an approach which seems incongruent with general metaphor literature. Indeed, Mick and Politi (1989) argue that

different interpretations of the same image cannot be identified as wrong or right because no one reality exists. In a study by Phillips (2000) comprehension was measured by asking the respondents whether they found the advertisement easy or difficult to understand i.e. their perceived level of comprehension. It is perhaps their perception that is most important when one is examining relationships between comprehension and likeability, as discussed below. Indeed Phillips (1997) found that consumers who identified weak inferences did not perceive them to be weak but to be the correct interpretation. However this measure of comprehension is not helpful in identifying whether the main message has been communicated, which may be important to the advertiser.

### **Relationship between Comprehension and Likeability**

The level of difficulty in understanding the metaphor is crucial if the advertisement is to achieve maximum effectiveness. A challenge that is perceived to be too demanding can lead to a number of different outcomes (McQuarrie and Mick 1996). Firstly consumers may not take up the challenge because they perceive it to be difficult and do not have either the motivation or ability to work out the puzzle. Alternatively the consumer may have the motivation to take up the challenge but lack the ability to identify any inferences to transfer from the metaphor to the product or service. In both of these scenarios comprehension levels will be low.

Perhaps more importantly, there is evidence to suggest that if the advertisement is understood it is also liked (McQuarrie and Mick 1992). It would therefore follow that if a consumer feels that they have not understood an advertisement then levels of likeability will be low. However the relationship between comprehension and likeability may not be that straightforward. In a study by Phillips (2000) it was found that when an advertisement is made slightly easier through verbal anchoring this leads to increased comprehension and ad liking. However when a complete explanation of the advertisement is provided that level of assistance has a direct negative effect on ad liking because the pleasure in solving the puzzle is lessened. This would suggest that the relationship between comprehension and likeability is not of a linear but a quadratic nature. If such a quadratic relationship exists this has implications for practitioners who need to balance their requirement for the message to be understood with maintaining an appropriate level of interest and challenge for the consumer.

One of the limitations that Phillips (2000) identified in her study was that the visual images utilised in her experiment were fairly easy to understand and were comprehended by the majority of the participants before any assistance in terms of explanation was provided. It is therefore perhaps not surprising that the inclusion of an explanation had an adverse effect on the levels of likeability. Phillips (2000) suggested that similar studies involving more complex visual images would contribute to our understanding of this relationship. This study heeds this call by examining the relationship between perceived comprehension and likeability across a range of different advertisements with different levels of difficulty. Its purpose is to establish whether the relationship between

comprehension and likeability for such advertisements is of a quadratic nature, an area which has not previously been explored. More specifically it is expected that there is a negative relationship between level of difficulty and likeability overall but when advertisements are perceived to be easy to understand likeability levels will drop. The following hypotheses will therefore be tested:

**H1:** There is a quadratic relationship between levels of difficulty and likeability

**H1a:** There is generally a negative relationship between levels of difficulty and likeability

**H1b:** Likeability decreases when advertisements are perceived to be at the lowest level of difficulty

### **Methodology**

The advertisements utilised to construct the experiment were taken from the Radio Times, a general interest magazine in the UK and appeared approximately six months before the experiment was performed. This delay was to ensure that the brand names may be familiar but the details of the advertisements would be forgotten by the participants. It was felt important to use real advertisements as recommended by Thorson (1990) to increase the external validity of the research and provide authenticity and applicability to the findings. The chosen advertisements were for a microwave oven, a beer, a hair cream and an internet provider. These products were chosen to represent "informational" (Rossiter and Percy 1997) or "thinking" (Vaughn 1986) products and thereby provide some homogeneity in terms of processing. They are also products considered of importance to the target audience.

The four full-page colour advertisements were chosen due to their use of pictorial metaphors with a range of verbal anchoring to ensure that different levels of comprehension would be created. The headlines in the hair cream and microwave oven advertisements explain the visual and comprehension levels were therefore expected to be high. The beer and the internet headlines describe an attribute of the product but provide no explanation of the visual and comprehension levels were therefore expected to be low.

The participants were business under-graduate university students (n = 126) aged between 19 and 22 years old. This size and type of sample is reflected in studies of a similar nature (e.g. Morgan and Reichert 1999; Phillips 2000). The students were requested to participate in the study during class time as part of their normal timetable and consequently participation was 100% with no incentive necessary. Six different classes were visited in order to obtain the right number of participants, with an average of twenty students in each class. These classes were chosen with care to avoid duplication of students and to minimise disruption to the teaching syllabus. All questionnaires from overseas students were removed from the analysis as there is a body of evidence to suggest that culture has an impact on the interpretation of metaphors (Littlemore 2003;

Callow and Schiffman 2003; Scott 1994). This brought the sample size down to 100 participants.

The procedure followed was similar to that utilised by Phillips (1997). Firstly qualitative data was collected on the four advertisements without and then with verbal anchoring for a separate investigation. This study concentrates on the second stage where the complete advertisements were shown, containing all verbal elements of the advertisements accompanied by the visual. The participants were then asked to provide some quantitative data in terms of their attitude towards the advertisement and their perceived level of difficulty. The measurement of these two dependent variables was achieved by using the differential scales utilised previously by McQuarrie and Mick (1999). Attitude towards the advertisement was measured by the sum of three five-point semantic differential scales, anchored by 'liked'/'disliked', 'pleasant'/'unpleasant' and 'enjoyed'/'did not enjoy' ( $\alpha \geq .90$ ). Difficulty of comprehension was also measured by the sum of three five-point semantic differential scales, anchored by 'easy to understand'/'difficult to understand', 'straightforward'/'confusing' and 'the meaning is certain'/'the meaning is ambiguous' ( $\alpha \geq .79$ ). These results are similar to McQuarrie and Mick (1999) who found that the alpha value for Likeability overall at 0.90 was higher than for Difficulty at 0.87. Phillips (2000) who utilised a similar scale in her study found an overall alpha of 0.89 for both variables. All the results were above acceptable level as proposed by Nunnally (1978) and it was therefore deemed possible to compute the means for analysis.

## Results

The relationship between comprehension and likeability was then examined by undertaking a statistical analysis of the quantitative data. These results are provided in Table 1. As the same sample of respondents was utilised for all four advertisements it was necessary to undertake a repeated measure ANOVA on the data and this confirms that there were significant differences in the level of difficulty and likeability for all four advertisements. As predicted the perceived level of difficulty was lower for the oven advertisement and the hair cream advertisement. The internet advert and the beer advertisement were perceived to be more difficult to understand. The Pearson's correlation indicates that there is a strong negative relationship between difficulty and likeability, providing support for hypothesis 1a. As an advertisement increases in levels of difficulty, the level of likeability decreases overall.

---

Place Table 1 about here

---

A regression analysis was then undertaken on the most liked and perceived easiest advertisement (hair cream) and the less liked and the perceived most difficult advertisement (internet) for comparison as they represented both ends of the spectrum. The results indicate that the level of comprehension for the internet advertisement can explain 58% of the likeability level in a linear relationship and increases slightly to 59% in a quadratic relationship ( $R^2$  linear = 0.58,  $R^2$  quad = 0.59). There is therefore a strong causal relationship between the two variables i.e. comprehension has a strong influence

over whether a person likes an advertisement or not. In the hair cream advertisement only 21% of likeability levels can be explained by comprehension in the linear relationship ( $R^2_{\text{linear}} = 0.21$ ) but this rises to 26% when a quadratic relationship is examined ( $R^2_{\text{quad}} = 0.26$ ). This indicates that comprehension has a significant impact on likeability when the advertisement is perceived to be difficult and consequently the difference between the linear and quadratic relationship is low. However, when the advertisement is perceived to be easy to understand, comprehension has less influence on likeability, leading to a more quadratic relationship. The regression analysis for all four advertisements also reveal that the quadratic relationship provides more explanation of the relationship between the two variables than the linear ( $R^2_{\text{linear}} = 0.34$ ,  $R^2_{\text{quad}} = 0.35$ ). There is therefore support for Hypothesis 1 i.e. that there is a quadratic relationship between levels of difficulty and likeability but it should be noted that this relationship is more applicable to advertisements that are easier to understand. These relationships for the hair cream and internet advertisements are shown graphically in Figure 1.

---

Place Figure 1 about here

---

This analysis of fit also provides support for Hypothesis 1b. They reveal that if an advertisement is perceived by consumers to be very easy to understand likeability levels drop. This is taking place for both advertisements but is stronger for the hair cream advertisement. This may be because the advertisement was perceived to be easier to understand than the internet advertisement and therefore the additional assistance provided by the headline was not necessary or welcome. These findings support the work of Phillips (2000) who found that when an easy to understand advertisement was provided with verbal assistance that level of assistance had a direct negative impact on the level of likeability of the advertisement because any pleasure in solving the puzzle was removed.

The graphs reveal two other interesting findings which have not been discussed in the literature previously. Firstly it can be seen that the participants enjoyed solving the puzzle in the hair cream advertisement if their perception was mid-way in terms of difficulty. In other words the level of likeability is not falling in line with levels of comprehension. This finding gives credence to the suggestion that people do enjoy a puzzle that requires some consideration to solve (McQuarrie and Mick 1999). Secondly the graphs indicate that comprehension and likeability can take different routes at the other end of the spectrum as well. The participants who found the easier advertisement difficult to understand i.e. the hair cream advertisement, had a strong dislike for the advertisement. The reason for this can only be speculated at this point but it may be possible that a level of frustration or annoyance at not being able to solve the puzzle is evident.

### **Discussion**

The results from this experiment provide some assistance in understanding the relationship between comprehension and likeability and reveal that it may be more complicated than initially thought. If an advertisement is perceived to be difficult then comprehension levels explain a large proportion of likeability. Those people who feel that

they have understood the advertisement but found it challenging generally like the experience and the advertisement. However there seems to be some kind of threshold at either end of the spectrum. People who find the advertisement very easy or very hard to decipher do not like the advertisement. In both of these situations the person has not experienced the feeling of achieving something that was worth achieving. It is therefore very important for the advertising practitioner to get the balance right for the target audience in question. In order to do that it is important to consider the type of person who is being communicated with in two ways. Firstly, how intelligent are they and therefore how capable are they in deciphering the message? Secondly, how likely is it that this person will put the effort in to work out what the message is e.g. what level of motivation would they have to concentrate on the challenge? The impact of ability and motivation is an important element of the Elaboration Likelihood Model proposed by Petty and Cacioppo (1980). This was tested by Mackenzie and Spreng (1992) who found that increases in motivation led to increases in cognitive processing. Although metaphors have been identified as providing this motivation this positive outcome is only possible if the level of challenge they provide is at the right level and this will vary from person to person. Sasser and Koslow (2008) in their overview of advertising creativity research indicate the importance of understanding individuals at “personal intimate level”. (p. 15). This research reveals that if the challenge is too hard or too easy, the result in terms of the likeability of the advertisement is the same. Precise targeting is therefore necessary in order to design an advertisement which may only be of interest to a small select group of people but these people will be reached successfully. The use of metaphors in a campaign adopting a more scatter gun approach will be less effective. Such precise targeting can obviously be assisted by appropriate pre-testing of the campaign utilising accurate measures of comprehension and likeability.

### **Limitations**

A limitation of this study is that comparisons are being made across a number of different advertisements. This has its advantages in that it has been possible to identify a common pattern across the advertisements and thereby posit a more generalisable finding. However it is important to acknowledge that there are other variables such as the visual elements used in the advertisements and the different product categories which may have an impact on levels of likeability independent of comprehension. Inconsistent levels of familiarity in terms of brand names may also have an influence. Nonetheless, the commonality of results across the four advertisements provides some reassurance that the impact of other variables is minimal.

It should also be noted that the experiment utilised the use of students. This is common practice and is evident in many of the main studies cited here (i.e. Phillips 2000; McQuarrie and Phillips 2005; McQuarrie and Mick 1999). Reassuringly, the wide range of perceived comprehension and likeability levels found in this study for all four advertisements across the student sample would suggest a lack of homogeneity. However it is possible that students may take more pleasure in and be more proficient at doing puzzles than other sectors of the population. A study by Jacoby and Hoyer (1989) found that comprehension levels for advertising generally were higher for people who had participated in higher education.



## **Conclusion**

The results of this study demonstrate the challenge that advertisers face when using metaphors in advertising in terms of choosing the right level of implicitness. Although likeability is generally negatively related to perceived comprehension this is a quadratic relationship. If the advertisement is seen to be too easy or too hard to understand then the advertisement is not liked. Implications for advertising managers are that caution needs to be taken to ensure that an advertisement presents a solvable but interesting challenge to the majority of their consumers. This can only be achieved by knowing their target audience well in terms of their product, advertising and cultural knowledge, all sources of information that are utilised when interpreting metaphors (Phillips, 1997). This knowledge would have an impact on their ability to understand the message and their motivation to face the challenge.

## References

- Baack, Daniel W., Rick T. Wilson and Brian D. Till (2008), "Creativity and Memory Effects: Recall, Recognition, and an exploration of Nontraditional Media," *Journal of Advertising*, 37(4), 85 – 94.
- Batra, Rajeev (2002), "Style and Metaphor in Visual Persuasion," *Advances in Consumer Research*, 29, 264 – 266.
- Bulmer, Sandy. and Margo Buckanan-Oliver (2004), "Meaningless or meaningful: Interpretation and intentionality in post-modern communication," *Journal of Marketing Communications*, 10 (March), 1 – 15.
- Callow, Micheal and Leon G. Schiffman, (2003), "Sociocultural meanings in visually standardized print ads," *European Journal of Marketing*, 38 9/10, 1113 – 1128.
- Forceville, Charles, (1996). *Pictorial Metaphor in Advertising*. New York: Routledge.
- Goldenberg, Jacob and David Mazursky, (2008), "When deep structures surface: Design Structures That Can Repeatedly Surprise," *Journal of Advertising*, 37(4), 21 - 34
- Jacoby, Jacob and Wayne D. Hoyer, (1989), "The comprehension/Miscomprehension of Print Communication: Selected Findings," *Journal of Consumer research*, 15, 434 – 441.
- Littlemore, Jeannette (2003), "The Effect of Cultural Background on Metaphor Interpretation," *Metaphor and Symbol*, 18(4), 273 – 288.
- McQuarrie, Edward F. and David G. Mick, (1996), "Figures of Rhetoric in Advertising Language," *Journal of Consumer Research*, 22, 424 – 438
- \_\_\_\_\_ and \_\_\_\_\_ (1999), "Visual Rhetoric in Advertising: Text-Interpretive, Experimental, and Reader-Response Analyses," *Journal of Consumer Research*, 26, 37 – 54.
- \_\_\_\_\_ and Barbara J. Phillips (2005), "Indirect Persuasion in Advertising: How Consumers Process Metaphors Presented in Pictures and Words," *Journal of Advertising*, Vol 34(2), 7 –20.
- MacKenzie, Scott B. and Richard J. Lutz (1989), "An Empirical examination of the Structural antecedents of Attitude towards the Ad in an advertising Pretesting context," *Journal of Marketing*, 53(2), 48 – 65.
- Mackenzie, Scott B. and Richard A. Spreng (1992), "How /does Motivation Moderate the Impact of Central and Peripheral Processing on Brand attitudes and Intentions?," *Journal of Consumer Research*, Vol. 18, pp. 519 – 529.
- Mick, David G. and Laura G. Politi (1989), *Consumers' Interpretations of Advertising Imagery: A Visit to the Hell of Connotation*, Interpretive Consumer Research, Elizabeth Hirschman, ed. Provo, UT: Association of Consumer Research, 85 – 96.
- Morgan, Susan. E. and Tom Reichert (1999). "The Message is in the Metaphor: Assessing the Comprehension of Metaphors in Advertisements," *Journal of Advertising*, XXVIII (4), 1 – 12.
- Nunnally, Jum C. (1978), *Psychometric Theory*, Second Edition, McGraw-Hill, New York.
- Petty, Richard. E. and John T. Cacioppo, (1980), "Issue Involvement as a moderator of the effects on attitude of advertising content and context", *Advances in Consumer Research*, Vol. VIII, pp. 20 - 24

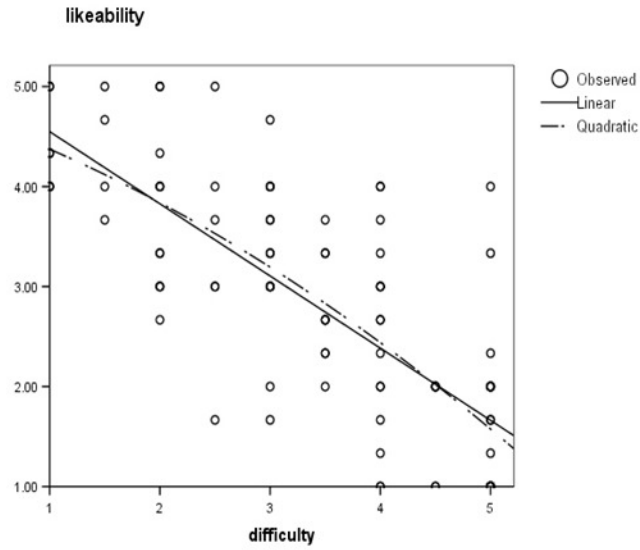
- Phillips, Barbara J., (1997), "Thinking Into It: Consumer Interpretation of Complex Advertising Images," *Journal of Advertising*, XXVI (2), 77 – 87.
- \_\_\_\_\_ (2000), "The Impact of Verbal Anchoring on Consumer Response to Image Ads," *Journal of Advertising*, XXIX (1), 15 – 24.
- \_\_\_\_\_ and Edward F. McQuarrie, (2002), "The Development, Change and Transformation of Rhetorical Style in Magazine Advertisements 1954 – 1999," *Journal of Advertising*, 31(4), 1 – 13.
- Procter, Tony, Stella Procter and Ioanna Papasolomou, (2005), "Visualizing the Metaphor," *Journal of Marketing Communications*, 11 (1), 55 – 72.
- Rossiter, John R. and Larry Percy. (1997), *Advertising Communications and Promotion Management*, 2nd Ed. International Edition: McGraw-Hill
- Sasser, Sheila L. and Scott Koslow (2008), "Desperately seeking Advertising Creativity; Engaging an Imaginative "3Ps" research Agenda," *Journal of Advertising*, 37(4), 5 – 19.
- Scott, Linda M., (1994), "Images in Advertising: The Need for a Theory of Visual Rhetoric," *Journal of Consumer Research*, 21, 252 – 274.
- Smith, Robert E., Jiemiao Chen and Xiaojing Yang, (2008), "The impact of advertising creativity on the hierarchy of effects," *Journal of Advertising*, 37(4), 47 – 61.
- Thorson, Esther (1990), *Consumer Processing of Advertising in Current Issues and Research in Advertising*, J. H. Leigh and C. Martin, Jr., Eds., Ann Arbor, MI: University of Michigan School of Business, 197 – 230.
- Tom, Gail. and Anmarie Eves (1999), "The Use of Rhetorical Devices in Advertising," *Journal of Advertising Research*, July/August. 39 – 43.
- Vaughn, Richard (1986), "How advertising works: A Planning Model revisited," *Journal of Advertising Research*, 26(1), 57 – 64.

**Table 1**  
**Likeability and Difficulty results for each advertisement**

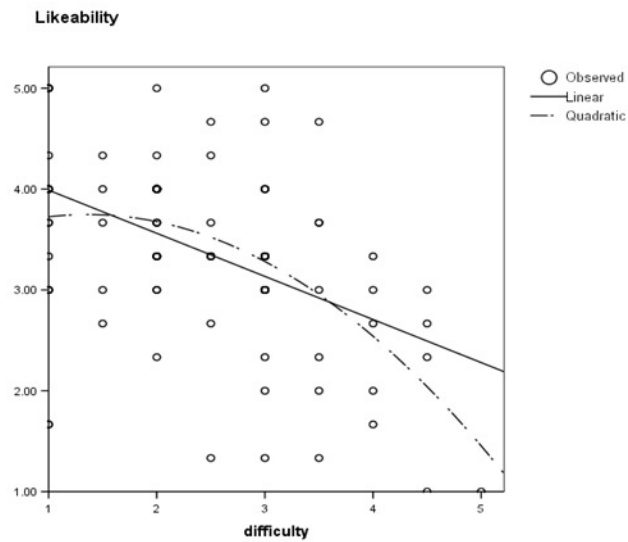
Advertisement	Difficulty Mean	Likeability Mean	Pearson's correlation
Internet	3.40	2.82	-.762*
Beer	2.82	3.13	-.570*
Oven	2.60	3.31	-.586*
Hair cream	2.40	3.39	-.462*
F Value	12.87*	3.79*	

Note: \* = p less than .01

**Figure 1**  
**Linear and quadratic relationship between difficulty and likeability for two advertisements**



Internet advertisement



Hair cream advertisement