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Successful stradegies?: linguistic elements used in advertising

Leanne Proctor
Northeastern University

ABSTRACT

This study identifies the most commonly used linguistic features in advertising based on a corpus of 102 advertisements collected from *TIME Magazine*. It examines whether advertisements exhibiting linguistic features are more effective than those not exhibiting linguistic features at increasing consumer memory of and interest in and advertisement. It expands on the findings of Dubitsky, Lowrey & Shrum (2003) which examined the memorability of linguistic features used in brand naming, and Smith (2004-2005) which studied the translational methods used to convert linguistic features found in English brand names into Russian. In the study, a perception group of 30 subjects was shown 18 print advertisements, 10 of which exhibited linguistic features and 8 of which did not; they were then asked to rate the advertisements in terms of how memorable, interesting and catchy each was. A recall group of 41 subjects was shown the same 18 sample advertisements in a first round of testing with no follow-up questions. For a second round of testing, the recall group was divided into Group A and Group B. During the second round, subjects in Groups A and B were shown two separate lists of 18 mixed linguistic and non-linguistic ads, half of which had been in the first trial (Original ads) and half of which were completely new (Alternate ads). The recall groups were asked whether or not they remembered each ad from the first round and if so, to explain what they found memorable about the advertisement. It was predicted that the subjects in the perception group would give the linguistic advertisements higher ratings on the Likert scales than the non-linguistic advertisements. It was further predicted that during the second round of testing, the subjects in the recall groups would remember the original linguistic and non-linguistic advertisements from the first round and would not remember the alternate linguistic and non-linguistic ads. Also their memory of the original linguistic advertisements would be stronger than their memory of the original non-linguistic advertisements and they would cite the linguistic features as being the motivation behind their remembrance. It was found that subjects in the perception group gave the linguistic advertisements slightly higher overall ratings in terms of memorability, interest, and catchiness than the non-linguistic advertisements. The original linguistic and non-linguistic advertisements were remembered significantly more often than the alternate linguistic and non-linguistic advertisements in the second round of recall testing. There was no significant difference between the original linguistic and non-linguistic ads in terms of overall memory scores and both sets of ads had the same scores for how often they were correctly recalled. Significant results were found for the individual advertisements when comparing their individual recall results with their individual perception results and the linguistic features of Contradiction, Expression, and the combination of the features Paronomasia and Repetition were identified as the most effective features at increasing subject attraction to, interest in, and memory of an ad. Furthermore, 56% of the time that subjects correctly remembered the original linguistic ads, subjects sited the linguistic feature as being the reason behind their remembering.

Leanne Proctor
Junior/Senior Honor's Research Project
Dr. Littlefield
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Successful Stradegies?: Linguistic Elements Used in Advertising

1   Introduction

The field of advertising relies heavily on spoken and unspoken language to draw attention to and encourage consumption of a product. Linguistic devices such as alliteration, rhyming, and affixation are a part of many different factors at play when a person engages with an advertisement. Advertisements that exhibit these linguistic devices are often called "catchy" and are associated with attracting a consumer's attention. However there has been minimal research pertaining specifically to the linguistic devices used in print advertising to support this claim. The research that does exist does not eliminate other influences such as photo images, character font, brand names or other elements commonly used in advertising.

This study was conducted in three stages[1] and is focused on print advertisements that use linguistic devices versus print advertisements that do not use linguistic devices. While all print advertisements are linguistic in the sense that they use words to express ideas and concepts, some advertisements use specific linguistic devices to portray these ideas. For the purpose of this study, the advertisements that use specific linguistic devices are referred to as "linguistic advertisements" and the advertisements that do not use specific linguistic devices are referred to as "non-linguistic advertisements"; this is a means of classifying the two types of advertisements in a concise and efficient manner.

The first stage, referred to as the research stage, examines which linguistic elements are most commonly used in advertising. In order to determine the linguistic devices commonly used in advertising, a corpus of advertisements was collected from multiple issues of *TIME Magazine* and were categorized according to the linguistic device being used. The first stage of the study is described in detail in Section 3.

The second stage of the study, referred to as the perception stage, is aimed at discovering which type of advertisement is most effective at increasing a consumer's attention to and interest in an ad. Both types of print advertisements, those that use linguistic devices and those that do not, were used to test this effectiveness. The goal of this second stage is to discover whether advertisements using linguistic devices are more memorable, interesting, and catchy than non-linguistic advertisements. The second stage is described in detail in Section 5.

The third stage, referred to as the recall stage, seeks to explore which type of advertisement is most effective at increasing a consumer's memory of and ability to recall an ad. Again, both linguistic and non-linguistic advertisements were used to test this effectiveness. One of the goals of this stage is to determine if advertisements using linguistic features are more effective at increasing a consumer's memory of an ad than those that do not use linguistic features. The second goal of this stage is to investigate whether there are specific linguistic

devices that are more effective than others at increasing a consumer's memory of an ad. The second stage of the study is fully described in Section 4.

2 Review of the Literature and Statement of the Hypotheses

There have been a limited number of research studies in the advertising industry that have been approached from a linguistic perspective. The better-known of those studies have primarily focused on linguistic elements used specifically in brand naming.

2.1 Relevant Studies

An experiment conducted by Dubitsky, Lowrey & Shrum (2003) addressed the ways that brand names are used to affect consumer memory and awareness of a brand. The study was focused on the linguistic features commonly used in brand name creation and tested whether those common features were effective at increasing consumer recall and recognition of various brand names. The study used a corpus of 480 established, national brand names in a range of product markets collected by ASI Market Research Inc. Each brand name was coded for 23 linguistic properties and any property that was present in less than 40 brand names was excluded from the study, leaving 10 common properties; these included: rhyme, onomatopoeia, initial plosives, acronyms, unusual spellings, affixation, paronomasia, metaphor, blending and semantic appositeness.

The study linked the corpus of brand names to a data set collected through ASI's commercial copy testing procedure. This procedure consisted of recruiting approximately 200 female respondents between the ages of 18-65 by telephone and inviting them to preview new program material on an unused cable television channel in the respondents' own homes. The respondents were then contacted the following day and were interviewed for the study using a questionnaire that collected data on both the program and the commercials. The respondents were asked whether they had seen a commercial for the specific product category of the brand being tested (e.g., juice). If the answer was yes, the respondents were then asked to recall the brand name of that product. If the answer was no, they were given a brand cue (e.g., Welsh's) and were asked if they had seen an advertisement for that brand name. All respondents who either accurately recalled or recognized the brand name were then asked what they remembered about the commercial.

The study revealed that linguistic devices were effective at increasing consumer memory of the less familiar brands, but showed little to no effect with the more familiar brands. These results indicated that consumers' memory of a brand name was affected by their familiarity with that brand. However, when a consumer's familiarity was removed, the linguistic devices did appear to increase recognition and recall of the brand name.

In her study, Smith (2004-2005) focused on British brand names and the translation methods used to create their Russian equivalents. A corpus of 2055 British brand names and a corpus of 1156 Russian brand names were coded; 45 matching pairs were identified to be used in the study. The 45 translation pairs were sorted into 6 linguistic categories, which included: phonological, orthographical, morphological, syntactical, semantic, and label (referring to a label name with an outside, referential meaning). Smith (2004-2005) found the percentage of use of each linguistic category across both corpora. For the British brand names, 64% were semantic, 29% were syntactical, 20% were phonological, 4% were orthographical, 9% were label, and 0% morphological.

2.2 Drawing on the Literature

This study draws from the findings of Smith (2004-2005) by using a similar categorization method. The method, which was applied to English and Russian brand names, was used instead for print advertisements in this study. While Smith (2004-2005) was able to provide insight into the aspects of linguistics that are most commonly used in brand naming, this study is able to provide the same insight only to print advertisements; with both perspectives, it is possible to find linguistic patterns within the advertising industry.

Similar to Dubitsky, Lowrey & Shrum (2003), this study focused primarily on linguistic features used in advertising to increase consumer memory. However, it was the goal of this study to turn the focus away from brand naming strategies and instead, redirect it toward print advertising strategies. This aspect of the advertising field is less-researched, but equally as relevant. Between magazines, newspapers, billboards, television, and the internet, ad slogans are similarly as prevalent in today's culture as brand names.

This study also aimed to eliminate the familiarity bias that affected the results of Dubitsky, Lowrey & Shrum (2003). By removing a subject's familiarity with an advertisement and its brand name, this study aimed to focus on the effect of the linguistic feature being used. Furthermore, instead of using preexisting data collected from an outside source, as was the case in Dubitsky, Lowrey & Shrum (2003), these results were gathered through a recall test that used advertisements created specifically for the study. In this way, the recall procedure, design and environment were controlled by the investigators.

2.3 Hypotheses

Based on the findings of Dubitsky, Lowrey & Shrum (2003), our first hypothesis stated that linguistic features are effective in increasing consumer memory of an advertisement. This hypothesis led to the prediction that subjects would be more likely to remember the linguistic advertisements of the study and less likely to remember the non-linguistic advertisements. Furthermore, it was predicted that subjects would be cognizant of the linguistic devices being used and would remember the linguistic advertisements as a result of those devices. This hypothesis and its predictions are constructed from the finding of Dubitsky, Lowrey & Shrum (2003) that subjects were highly capable of recognizing and recalling less familiar brand names when linguistic devices were incorporated in those names.

Furthermore, our second hypothesis stated that linguistic features are effective in increasing an advertisement's attractiveness and a consumer's interest in that advertisement. This hypothesis led to the prediction that subjects would find the linguistic advertisements more memorable, interesting and catchy than the non-linguistic advertisements when asked to rate each ad on three scales.

3 Stage 1: Current Linguistic Strategies in Print Advertising

To begin understanding how linguistic devices contribute to advertising effectiveness, it is important to first observe how advertisers are presently using said features. Being well-versed in their industry, advertisers may feel that they have a good understanding of which advertising elements work well and which elements do not; however, more concrete evidence could help solidify or alter those opinions. Thus the first part of this research was devoted to analyzing and understanding what advertisers believe to be best practices and determining what linguistic features are commonly used in current advertising strategies in order to test their effectiveness.

3.1   Method

For this study, a corpus of 102 print advertisements was collected. *TIME magazine* was used as the source for collecting data as it is a widely circulated magazine whose issues feature a variety of print advertisements. Advertisements were collected from 52 different issues of *TIME* dating between 2010 and 2012 to ensure a diverse sample of ads which were relevant and reflective of current advertising strategies.

Only full and half page advertisements exhibiting linguistic features were collected; all linguistic advertisements found within those 52 issues were collected. No linguistic advertisements found within those 52 issues were excluded and once all 52 issues were thoroughly combed through, 102 was the total number of linguistic advertisements identified. If the same advertisement appeared multiple times throughout the 52 issues, it was only collected once. If multiple ads from the same company or brand name were found, each individual ad was collected on the condition that it was completely unique from all other ads belonging to that company or brand. A running list was kept of linguistic features which could be continuously added to if new features were found, ensuring that the linguistic features to be used in later testing would not be limited and would be reflective of a wide range of features.

The magazine volume, issue number, title and publishing date were collected for each of the 102 advertisements along with the brand and product names associated with each advertisement. The linguistic feature was recorded for every advertisement along with the feature's linguistic category; linguistic features and categories are described in detail in the following sections. It was found that many advertisements used more than one linguistic feature; often ads used two features and several ads used three features. For advertisements exhibiting more than one linguistic feature, each feature was recorded as well as the feature's linguistic category.

3.2   Linguistic Features

There was a variety of linguistic features and combination of features found within the 102 *TIME Magazine* advertisements. In order to better understand how those linguistic features are used by advertisers to affect a consumer's response to an ad, it is important to understand exactly what each feature entails. Within the 102 advertisements, 14 individual linguistic features across four different linguistic categories were found. From those 14 features, the top 10 most frequently occurring features were identified to be used in the testing portion of this study; these top 10 features will be further discussed in Section 3.5. The definition of each device is specific to this study in that it is a variation of the standard linguistic definition. The four linguistic categories are described in the following sections along with the top 10 linguistic features associated with each category.

3.2.1   Semantics

Semantics is an aspect of linguistics that centers on meaning. Features within this category often manipulate the meanings typically associated with specific words and phrases in the English language. Of the 14 total linguistic features found in the *TIME Magazine* ads, nine fall under the category of semantics.

One of the semantic features is Acronym. In linguistics, Acronym refers to a word made of individual initial letters that represent a set of words in a phrase. For the purpose of this study, Acronym is considered a change or alteration to the assigned, known meaning of a well-known acronym or the creation of a completely new acronym. An example of Acronym can be seen in

the alteration of the common acronym SUV (Sport Utility Vehicle) to SUVW in the Volkswagen advertisement, "It's not an SUV. It's an SUVW." Another example of Acronym can be found in Hilton Garden Inn's ad, "The value of a *GNS is off the figures. *Good Night's Sleep."

Another semantic feature is Contradiction. In linguistics, Contradiction involves a statement or phrase which cannot be true based on the opposing meaning of two or more words. In this study, contradiction appears when two words or concepts counteract one another in order to highlight an important aspect of the product being advertised. An example of an advertisement using Contradiction is The Weight of the Nation's ad, "To win you have to lose. Confronting America's obesity epidemic." JetBlue also uses Contradiction in their ad, "Same country. Different world."

Converseness is also a semantic feature. Linguistically, Converseness involves the use of two or more words with opposite or contrary meanings that are defined in reference to each other. For this study, Converseness involves word pairs or concepts where both of the words or concepts represent opposite ends of a spectrum. The US Department of Health and Human Services employs Converseness in the advertisement "For many healthier tomorrows use your preventative benefits today.'" Converseness can also be seen in the advertisement for HP Officejet Pro, "Big business impact on a small business budget."

Expression is yet another semantic feature. Expression refers to common phrases used within a culture that have consistent, recognized meanings. For the purpose of this study, Expression focuses on the change or alteration to the recognized meaning of a common phrase. An example of expression can be seen in US Oncology's change to the phrase *united we stand* in their advertisement, "United we heal." Heifer International also employs Expression in their ad, "Think outside the gift wrapped box." which is an alteration of the phrase *Think outside the box*.

Metaphor is another feature that falls under the semantic category. In linguistics and in this study, Metaphor is considered the application of a word, phrase or concept to something to which it is not literally applicable in order to suggest a resemblance. Athenahealth uses metaphor in the advertisement "The health care system is a beast. We can help doctors tame it." Everest College uses Metaphor in their ad, "'Faith is taking the first step, even when you don't see the whole staircase.' MLK Jr."

Paronomasia is also one of the nine semantic features. Paronomasia, more commonly known as pun, refers to the use of a different sense of a word, or a similar sounding word to suggest a dual meaning; Paronomasia is often used to achieve humor. In this study, the same definition applies and it was found that many of the *TIME Magazine* ads use the brand name as part of the pun. This device can be seen in CHASE Bank's ad, "Chase what matters." CitiBank also uses Paronomasia in their ad, "For two centuries we've measured success not just in dollars, but in change."

Another semantic feature is Simile. Simile is a figure of speech in which two unlike things are explicitly compared using the words "like" or "as". This can be seen in the Turbo Tax advertisement "Turbo Tax guides you like a GPS to your maximum refund." Another example of Simile is found in the Starbucks Coffee ad, "May your day be as smooth as your coffee."

The final semantic feature is Word Coinage. Word Coinage describes the creation of a new word or phrase or the use of an existing word in a new sense. Samsung uses word coinage in their advertisement, "It's time for a better tablet. It's time to tab." Apple uses Word Coinage in their iPhone 5 ad, "The most iPhone yet." where the word *iPhone* is used as an adjective as opposed to a noun.

3.2.2 Phonetics

Phonetics is the aspect of linguistics that is centered on the individual sounds of a language. Features within this category often focus on a specific sound or sounds that they can either highlight, alter, or repeat. Of the 14 total linguistic features found in the *TIME Magazine* corpus, two fall under the category of Phonetics.

One of the phonetic features is Alliteration. Alliteration refers to the use of the same sound at the beginning of two or more words in a phrase. The Greater Boston Food Bank takes advantage of this device in their advertisement, "Hunger hurts. We can help." Alliteration is further seen in Target's ad, "Dare. Dream. Do."

Another phonetic feature is Same Manner of Articulation. Linguistically, manner of articulation refers to the way in which speech organs are used to produce a phonetic sound. For this study, Same Manner of Articulation indicates the replacement of one sound of a word with another sound that is produced in the same fashion to alter the meaning of the word. Each ad in the corpus that used Same Manner of Articulation used the device in combination with other devices such as Expression and Word Coinage. An example of this device can be found in Bentley University's advertisement, "Global warning" where the nasal /n/ of warning is replacing the nasal /m/ of *warming*. Schneider Electric also uses Same Manner of Articulation with an identical replacement of sounds in the ad, "The only good watt is a negawatt."

3.2.3 Phonology

Phonology is the branch of linguistics that focuses on patterns and relationships existing between sounds in a language. This category mainly involves the use of corresponding sounds within multiple words of a phrase. Only one phonological feature was identified in the corpus of advertisements; this feature is Rhyming.

Rhyming refers to the use of two or more words with matching syllable structures and sounds within a phrase. A great example of Rhyming can be seen in Sheraton's advertisement, "Wi-Fi Mai Tai Say Hi". Rhyming can also be seen in an ad by the Magazine Publishers of America, "Go the extra mile, recycle your pile."

3.2.4 Morphology

Morphology is the branch of linguistics focused on the individual linguistic units of a word such as affixes and root words. Three morphological features were identified in the corpus of *TIME Magazine* ads.

One of the morphological features is Affixation. In linguistics, Affixation refers to the process of adding an affix (prefix or suffix) to a word. For this study, Affixation is considered the process of adding an affix or other words that act as affixes onto a word in order to create a new meaning. An example of affixation can be seen in the KIA Optima advertisement "Re-redefining the midsize sedan." AT&T uses individual words as affixes which combine to create a new meaning in the ad, "Up-to-the-minute apps."

Another morphological feature is Blending. Blending indicates a word that is produced by combining parts of other words to create a new, unique meaning. Blending often co-occurs with Word Coinage. GE uses blending in the advertisement, "Healthymagination is your medical history delivered with the push of a button." Another example of Blending can be seen in GEICO's ad, "Geckonomics 301 an advanced lesson in saving money on car insurance."

The third morphological feature is Repetition. In linguistics, Repetition occurs when the same word or words are repeated within a sentence or phrase. For this study, Repetition focuses

on the use of the same words multiple times in a phrase to create an emphasis. Duracell demonstrates Repetition in the advertisement, "Always reliable. Always efficient. Always smart power." Jeep Liberty also uses Repetition in the ad, "I live. I ride. I am. Jeep."

3.3   Calculating the Results

The linguistic features identified in the corpus of advertisements were coded in terms of individual occurrence as well as co-occurrences. Thus, if a linguistic feature appeared alone in an advertisement it was counted once as an individual occurrence; if two features appeared together in an advertisement, they were counted once as a co-occurrence; if three features appeared together in an advertisement, they were counted once as a co-occurrence. The total number of occurrences was then calculated for each individual feature, thus if the linguistic feature alliteration appeared 13 times individually and 10 times in co-occurrences with other features, it's total number of occurrences would be 23.

Once each individual occurrence, co-occurrence, and total number of occurrence was calculated for each of the 102 advertisements, the values were cross-referenced and analyzed to determine the top 10 most frequently used linguistic features. Special weight was given to the total number of occurrence values. Therefore if a feature had a higher total number of occurrence value than other features that would qualify it to be considered top 10, but its individual occurrence value was low, it was still considered a top 10 feature. The raw distribution of features is provided in the results section below.

3.4   Results

The corpus consisted of 102 advertisements; some advertisements used only one linguistic feature, while others used a combination of two or three features. For each instance a feature was used in an ad, whether it be individually or in a combination, it was recorded as a singular instance of use. Every feature's instances were added together and within those 102 ads, 137 instances of linguistic features were found.

There were 14 individual linguistic features discovered in the corpus of *TIME Magazine* advertisements. There were also 23 different combinations of two linguistic features found in the corpus where two individual linguistic features were used in the same advertisement. Finally there were two combinations of three linguistic features found where three features were used in the same advertisement.

The number of times an individual feature occurred alone in an advertisement was calculated across all 102 Ads and considered the "number of individual occurrences". The number of times a combination of features occurred together in an advertisement was also calculated across all 102 ads; this was considered the "number of co-occurrences".

The number of times an individual linguistic feature occurred overall, meaning the number of times a feature was used alone in an advertisement in addition to the number of times it was used in a combination of two or three features was calculated and considered the "number of overall occurrences".

The distribution of the 14 individual linguistic features can be seen in the table below with the linguistic category of each feature, the number of times it occurred individually in an ad, and the overall number of times it occurred individually or in a combination of two or three features.

Individual Linguistic Feature	Category	Number of Individual Occurrences	Number of Overall Occurrences
Acronym	Semantics	0	2
Affixation	Morphology	3	3
Alliteration	Phonetics	13	23
Blending	Morphology	0	5
Contradiction	Semantics	3	5
Converseness	Semantics	5	11
Expression	Semantics	4	22
Metaphor	Semantics	12	13
Paronomasia	Semantics	10	23
Repetition	Morphology	4	19
Rhyming	Phonology	2	8
Same M●A	Phonetics	0	2
Simile	Semantics	1	3
Word Coinage	Semantics	2	7

Table 1: Distribution of the 14 Individual Linguistic Features

The individual feature distribution can also be seen in the figure below, where the number of individual occurrences as well as the overall number of occurrences is shown for each feature.
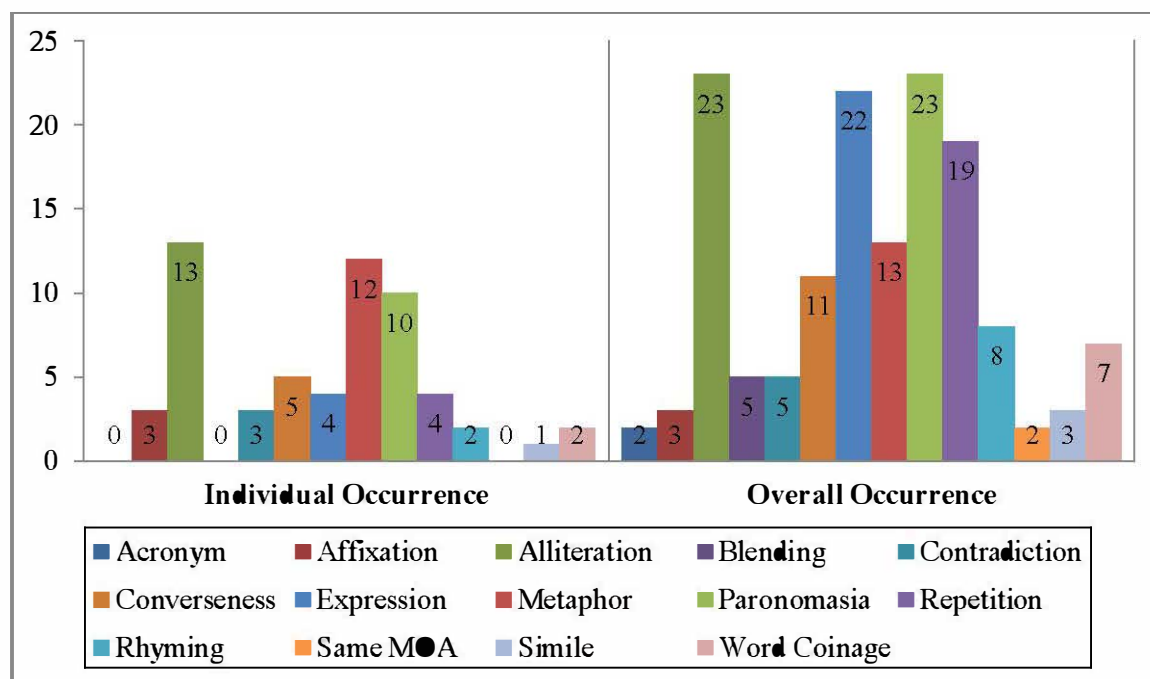

Figure 1: Distribution of Individual Linguistic Features

The distribution of the 23 combination of two linguistic features and the two combinations of three linguistic features can be seen in the table below with their respective categories and the number of times each combination occurred (number of co-occurrences).

Co-Occurring Linguistic Features	Categories	Number of Co-Occurrences
Acronym/Blending	Semantics/Morphology	1
Acronym/Expression	Semantics/Semantics	1
Alliteration/Converseness	Phonetics/Semantics	2
Alliteration/Expression	Phonetics/Semantics	2
Alliteration/Paronomasia	Phonetics/Semantics	1
Alliteration/Repetition	Phonetics/Morphology	4
Alliteration/Simile	Phonetics/Semantics	1
Blending/Word Coinage	Morphology/Semantics	2
Converseness/Repetition	Semantics/Morphology	1
Converseness/Rhyming	Semantics/Phonology	1
Converseness/Expression	Semantics/Semantics	2
Contradiction/Expression	Semantics/Semantics	2
Expression/Repetition	Semantics/Morphology	2
Expression/Rhyming	Semantics/Phonology	4
Expression/Same M●A	Semantics/Phonetics	1
Expression/Paronomasia	Semantics/Semantics	3
Expression/Metaphor	Semantics/Semantics	1
Paronomasia/Repetition	Semantics/Morphology	7
Paronomasia/Rhyming	Semantics/Phonology	1
Paronomasia/Word Coinage	Semantics/Semantics	1
Repetition/Simile	Morphology/Semantics	1
Blending/Repetition/Word Coinage	Morphology/Morphology/Semantics	1
Blending/Same M●A/Word Coinage	Morphology/Morphology/Semantics	1

Table 2: Distribution of 23 Linguistic Feature Combinations

The same distribution can be seen in the figure below with each combination's number of co-occurrences.
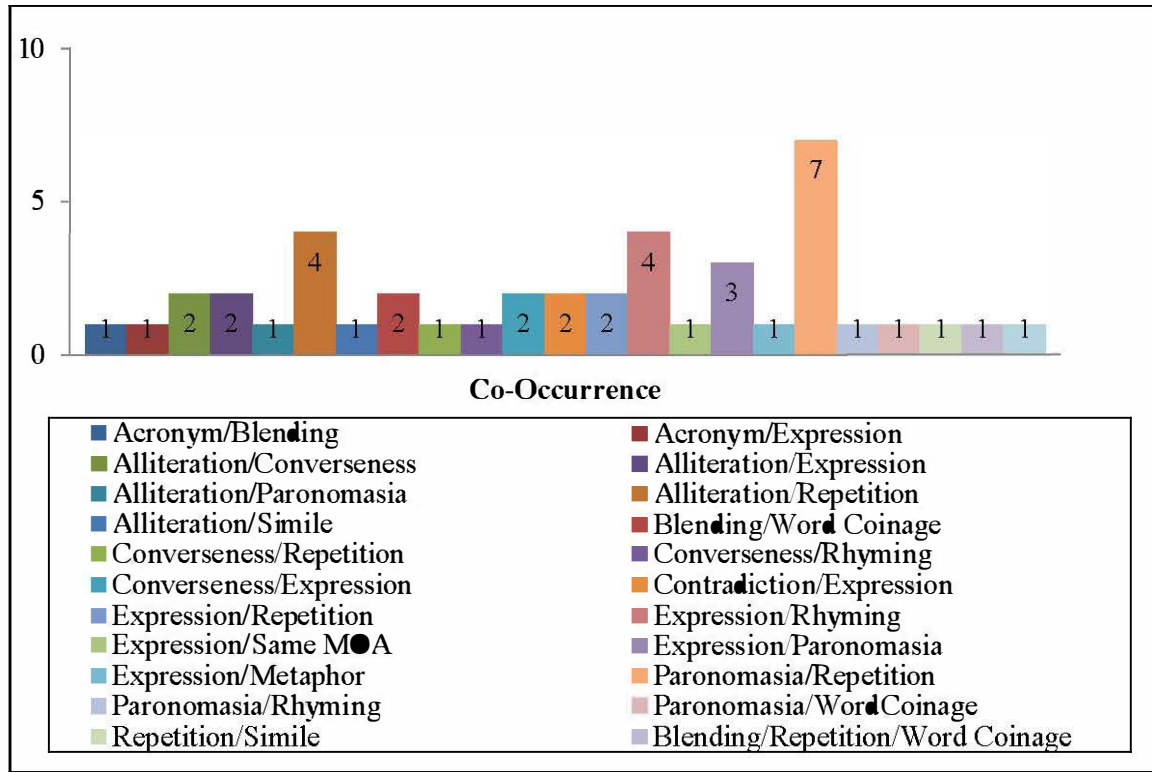
Figure 2: Distribution of Linguistic Feature Combinations

From those findings, the top 10 most frequently used linguistic features were determined. These can be seen in the table below.

Linguistic Feature/ Co-Occurring Features	Category(ies)	Individual Number of Occurrence	Overall Number of Occurrence/Number of Co-Occurrences
Alliteration	Phonetics	13	23
Paronomasia	Semantics	10	23
Expression	Semantics	4	22
Repetition	Phonetics	4	19
Metaphor	Semantics	12	13
Converseness	Semantics	5	11
Rhyming	Phonology	2	8
Word Coinage	Semantics	2	7
Paronomasia/Repetition	Semantics/Phonetics	0	7
Contradiction	Semantics	3	5

Table 3: Distribution of Top 10 Most Frequently Used Linguistic Features

The figure below further illustrates the distribution of the top 10 most frequently used linguistic features.
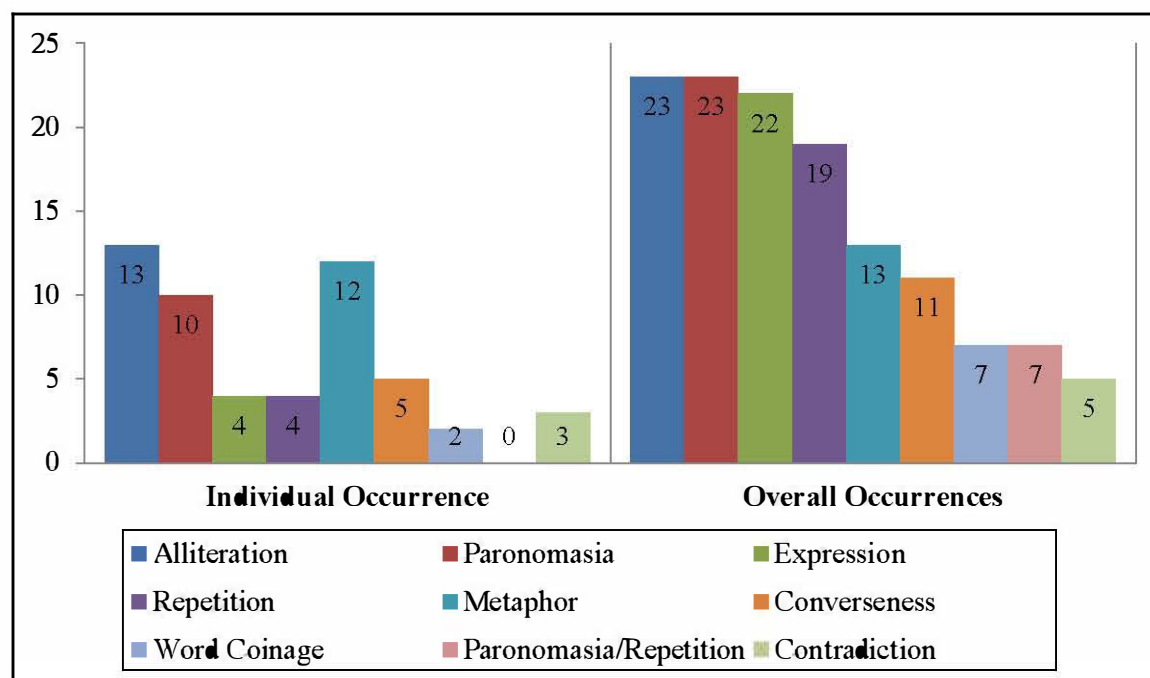
Figure 3: Distribution of Top 10 Most Frequently Used Linguistic Features

The combinations of features were considered along with the individual features in order to determine the top 10 list of features. The default for determining the top 10 features was the overall number of occurrences. However in the case of a tie, as with Contradiction and Blending which both had an overall occurrence of five, the individual number of occurrence was used as a means of breaking that tie. Therefore, Contradiction was placed on the top 10 list of features since it had an individual occurrence of three while Blending had an individual occurrence of zero.

The combination of Paronomasia and Repetition was the only combination of features to be considered part of the top 10 list because it not only had the highest number of co-occurrences out of all of the combinations of two or three features, but it also had a higher value than five of the individual linguistic features, which no other combination had.

As discussed above, each of the linguistic features found in the corpus of ads fell under a linguistic category. The ads using only one feature exhibited only one linguistic category while the ads using two features exhibited two categories and those using three features exhibited three categories. The combinations of two or three features in a single ad were assigned to their matching combination of categories. There were several combinations of features where both features belonged to the same category. There were also combinations of three features where two of the features belonged to the same category. In these cases each feature's category was recorded and considered its own combination, for instance an ad that used a combination of Expression and Converseness, which are both semantic features, was assigned the category combination of Semantics/Semantics.

The number of occurrence of each individual category was calculated as well as the number of co-occurrences of categories. A percentage was then found which describes how often each category or combination of categories was used across all 102 advertisements. The distribution of the individual categories and the combination of two or three categories can be seen in the table below.

Linguistic Category(ies)	Total Number of Occurrence/ Co-Occurrence	Percentage of Features
Semantics	37	36.3%
Semantics/Morphology	16	15.7%
Phonetics	13	12.7%
Semantics/Semantics	10	9.8%
Morphology	7	6.9%
Semantic/Phonetics	7	6.9%
Semantics/Phonology	6	5.9%
Phonetics/Morphology	4	3.9%
Phonology	2	2.0%
Morphology/Morphology/Semantics	2	2.0%

Table 4: Distribution of Linguistic Categories/Combination of Categories in 102 Ads

The distribution of each linguistic category and combination of categories is further shown in Figure (4).
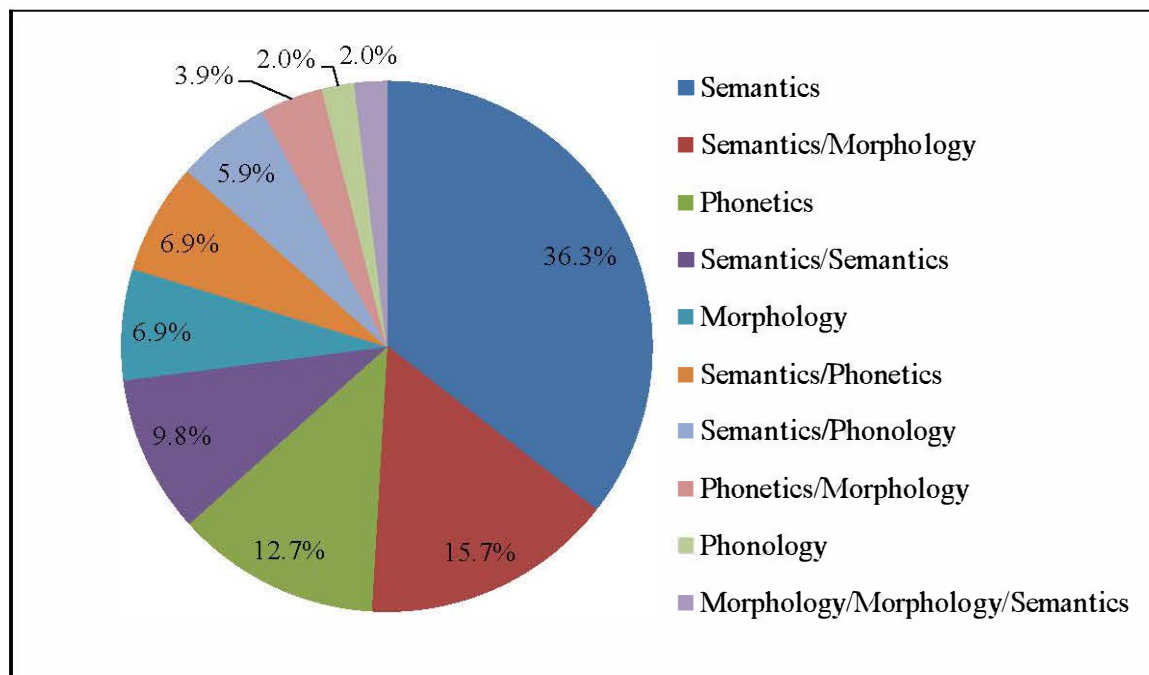

Figure 4: Distribution of Linguistic Categories/Combination of Categories across102 Ads

3.5   Discussion

Based on the data collected in the corpus of *TIME Magazine* linguistic advertisements, it was found that linguistic features are more commonly used individually in advertisements than in combinations of two or three features. In fact there were 59 advertisements that used only one individual feature and 43 advertisements that used a combination of features. This shows that either advertisers prefer to use one feature as a focal point in a print advertisement or that it is less complicated to use only one feature as opposed to two or three features in a single ad.

The list of top 10 most frequently used features demonstrates that Alliteration, Paronomasia, Repetition, Metaphor, Expression, Converseness, Rhyming, Word Coinage, Contradiction, and the combination of Paronomasia and Repetition are not only commonly used individually in advertisements, but also in combination with other features within an ad. Alliteration, Paronomasia, Expression and Repetition in particular are highly used in combination with other features as the data shows that all three are used more often in combinations than individually.

Finally, the majority of features used in advertising fall under the categories of semantics, phonetics, and the combination of the two categories of semantics and morphology, which have the highest percentages of use. It is also interesting that of all the combinations of linguistic categories used in ads, the combination of semantics and morphology is the most prevalent and that this combination has a higher frequency of use than the individual use of the phonetics, morphology, and phonology categories.

Advertisements are meant to both catch a consumer's attention and to create some sort of an association between the product being advertised and what it stands for. This is done to encourage a connection between what the consumer wants or needs and what the product is offering both physically and metaphorically. The catchiness of an ad or ability to attract attention relates to the linguistic categories dealing with sounds, such as phonetics and phonology which appeal to the ear. The overlying message of an advertisement concerning the product and what it stands for relates to the categories of linguistics that focus on meaning and word formation, which are semantics and morphology. Thus it is understandable that advertisers seek to use features that fall under the categories of phonetics or semantics and that the combination of the two linguistic branches of semantics and morphology is also commonly used in order to exploit the positive aspects offered by each.

4 Stages 2 & 3: Perception and Recall

The second and third stages of the study focus on determining the effectiveness of the different strategies identified in the initial research phase. For both of these phases, 36 advertisements were created based on the top 10 most frequently used linguistic features. The ads were created specifically for this study in order to eliminate any familiarity biases as well as to highlight only the linguistic aspects of advertising.

The specific advertisements used in the second stage, known as the perception stage, will be further discussed in Section 5. The specific advertisements used in the third stage, known as the recall stage, will be further discussed in Section 6. The specific advertisements used in the second and third stages of the study are all based off the general ad design described in Section 4.1.

Furthermore, the subjects used for testing in the second and third stages of the study were pulled from the same general subject pool. The subjects used in the second stage are further discussed in Section 5 and the subjects used in the third stage of the study are further discussed in Section 6. The general subject pool is described in Section 4.2.

4.1 Advertisement Design

In order to provide a context for subjects, each advertisement was associated with a product and product name. The products were uniformly assigned the brand name ACME to avoid any interference on a consumer's response that could stem from attention to individual brand names. Each advertisement was printed in 16 point, Times New Roman font. This standardization was

used to ensure that no other features could interfere with a consumer's focus on the print advertisement and, more specifically, the linguistic device being used. Furthermore, the advertisement itself was written in italics while the brand name and product name were left unitalicized in order to create a distinction between the advertisement and the product being advertised. Below is an example of one of the 36 ads created for this study.

Say goodbye to dust dirt and dander
Acme Carpet Cleaner

The advertisement above is one of the linguistic advertisements which uses the linguistic feature of Alliteration through the use of three words that begin with the sound /d/.

4.2   General Subject Pool
There were 71 total subjects used for this study. Thirty-three subjects were Northeastern University undergraduate students. Of those 33 students, six were male and 27 were female. All of the students were members of the No Limits Dance Crew student group. These subjects were selected because they were legal adults, were easily accessible, and demonstrated the opinions of a young demographic between the ages of 18 and 23. An additional 38 subjects were employees of the online child-care finding website, Care.com. Of those 38 employees, 14 were male and 24 were female. These subjects were similarly chosen because of accessibility and also because they represented a more adult, middle-aged demographic between the ages of 26-55.

5   Stage 2: Perception of Linguistic and Non-linguistic Ads
The second stage of the study focuses on how advertisements are perceived by consumers. In the first stage of the study, the current strategies used in print advertising were identified; this second stage seeks to investigate how those strategies affect a consumer's perception of an ad. Since advertisements are intended to catch a consumer's attention in order to pique interest in the product being advertised, it is important to analyze the degree to which certain strategies are effective at achieving that goal.

5.1   Method
Of the 36 advertisements that were created for this study, 18 were presented to subjects in the perception phase. The 18 ads included 10 linguistic ads and 8 non-linguistic ads. Each of the 10 linguistic advertisements was created to exhibit one of the 10 most commonly used linguistic features discovered in the research stage of the study. All 18 ads presented during the perception stage can be found in Appendix A.

5.1.1   Subjects
The perception group of subjects was composed of 30 subjects. The subjects were randomly selected across both the Care.com and Northeastern University subject pools. The data was collected from all 30 subjects.

5.1.2 Procedure

Subjects in the perception group were asked to complete one round of testing. The subjects were presented with the 18 advertisements discussed in Section 5.1; the subjects were asked to view each ad and to rate each ad on three separate Likert scales. The first scale asked how memorable was the ad from 1-5 (1 being not at all memorable and 5 being very memorable), the second asked how interesting was the ad from 1-5 (1 being not at all interesting and 5 being very interesting), and the third asked how catchy was the ad from 1-5 (1 being not at all catchy and 5 being very catchy). These three scales were designed to test a consumer's attraction to and interest in each advertisement.

5.2 Results

The findings of the perception stage of the study provide some interesting insight into how consumers interpret and react to advertisements. The perception results had three parts in that they addressed the subjects' ratings of each original advertisement on the three separate Likert scales in terms of memorability, interest and catchiness. All data were analyzed in terms of average and mode due to the small size of the subject pool which was unlikely to yield any significant statistical analyses.

5.2.1 Overall Linguistic and Non-linguistic Ratings

The average rating was calculated for each of the 18 original advertisements, linguistic and non-linguistic, on each of the three scales so that every ad had an average rating for catchiness, memorability and interest. Those ratings were then used to calculate an overall average rating for all of the linguistic advertisements on each of the three scales as well as the overall average for all of the non-linguistic advertisements on each of the three scales. In this way a comparison could be made between the overall average ratings of the linguistic and non-linguistic ads across all three scales; these ratings can be seen in Table (5).

Ad Type	Catchiness	Memorability	Interest
Linguistic Ads	3.12	3.17	3.04
Non-Linguistic Ads	2.68	2.92	2.75

Table 5: Linguistic and Non-linguistic Overall Average Perception Ratings across Three Scales

The overall average ratings can be further seen in the figure below in terms of catchiness, memorability, and interest.
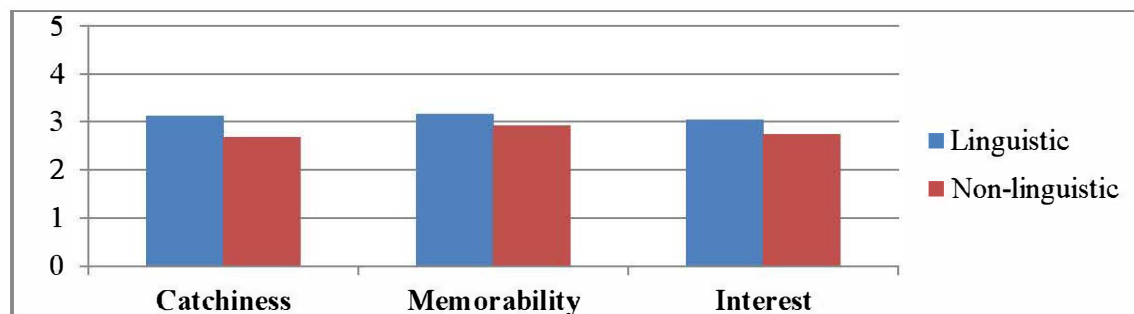

Figure 5: Linguistic and Non-linguistic Average Memorability, Interest, and Catchiness Ratings

The mode was then calculated for each of the 18 original advertisements, linguistic and non-linguistic, across all three scales. From those individual modes, an overall mode was calculated for all of the linguistic ads as well as for all of the non-linguistic ads. These overall modes can be found in the table below.

Ad Type	Catchiness	Memorability	Interest
Linguistic Ads	4	4	4
Non-linguistic Ads	2	3	3

Table 6: Linguistic and Non-linguistic Overall Mode Perception Ratings across Three Scales

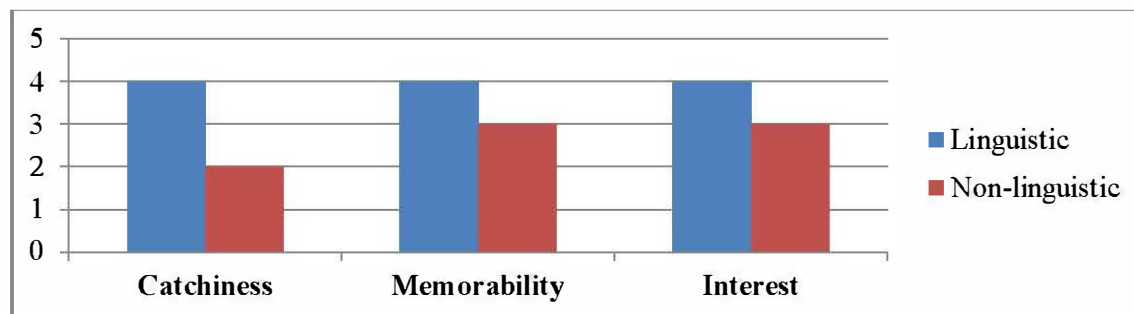These results can be further seen in the figure below.

Figure 6: Linguistic and Non-linguistic Catchiness, Memorability, and Interest Mode Ratings

5.2.2   Individual Advertisement Ratings

The average and mode ratings were calculated for each of the 18 individual advertisements, both linguistic and non-linguistic, on each of the three perception scales. Once the averages and modes were calculated, the 10 linguistic ads and the 8 non-linguistic ads were ranked according to their respective modes on each of the three scales. If multiple ads had the same mode rating, their average ratings were then used to create a distinction between the ads and determine their ranking position.

The mode rating was used as the default in determining the relative rankings of both the linguistic and non-linguistic advertisements because it reflects the most common rating given to each ad by the perception group. The investigators do not believe that the average rating illustrates the significance of the perception results as well as the mode rating.

5.2.2.1 Linguistic and Non-linguistic Catchiness Rankings

The primary goal of print advertising is to catch the consumer's attention, in the advertising world this is referred to as an ad's catchiness factor. It is because of the great importance placed on an ad's catchiness that the linguistic and non-linguistic advertisements were first ranked together in terms of their mode and average ratings on the catchiness scale. This ranking was conducted as a means of comparing how catchy the linguistics ads were perceived to be versus how catchy the non-linguistic ads were perceived to be.

The relative catchiness ranking of the 10 linguistic advertisements (represented by their linguistic features) and the 8 non-linguistic advertisements (represented by an assigned number label) is provided in the table below. The number labels assigned to each non-linguistic advertisement can be found in Appendix E.

Ranking	Feature/Number	Mode Rating	Average Rating
1	Paronomasia/Repetition	5	3.57
2	Rhyming	4	3.77
3	Contradiction	4	3.73
4	Non-linguistic 1	4	3.67
5	Converseness	4	3.57
6	Expression	4	3.40
7	Non-linguistic 2	4	3.10
8	Repetition	3	2.83
9	Word Coinage	2	3.20
10	Non-linguistic 3	2	2.87
11	Non-linguistic 4	2	2.80
12	Alliteration	2	2.50
13	Non-linguistic 5	2	2.43
14	Paronomasia	2	2.13
15	Non-linguistic 6	2	2.10
16	Metaphor	1	2.50
17	Non-linguistic 7	1	2.33
18	Non-linguistic 8	1	2.17

Table 7: Linguistic Vs. Non-linguistic Catchiness Ranking

The catchiness mode ratings for the 10 linguistic advertisements and the mode ratings for the 8 non-linguistic advertisements can be seen in the figures below.
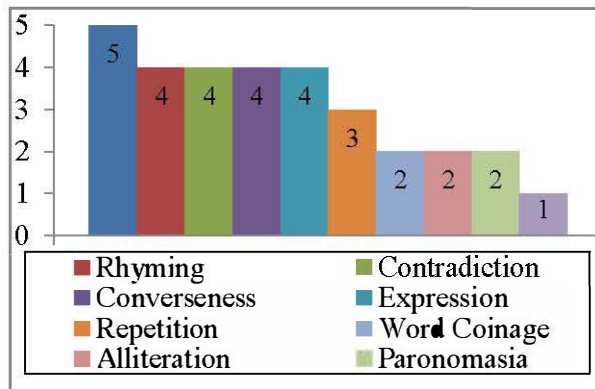

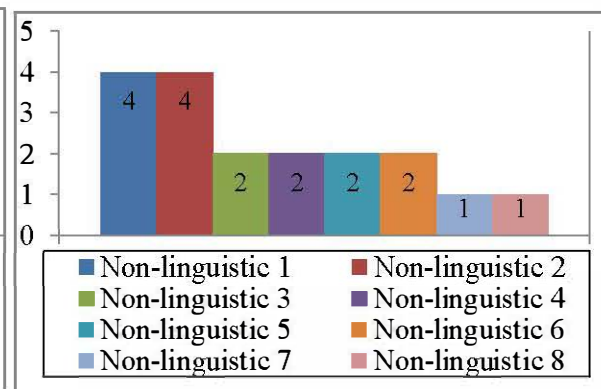Figure 7: Mode Ratings of Linguistic Ads

Figure 8: Mode Ratings of Non-linguistic Ads

Of the advertisements that were considered most catchy by subjects in the perception stage, the majority were linguistic. Specifically, seven of the top 10 ranked "catchy" advertisements were linguistic and included the features of Paronomasia/Repetition, Rhyming, Contradiction, Converseness, Expression, Repetition, and Word Coinage. There were only three non-linguistic advertisements that ranked in the top 10 for catchiness, which included non-linguistic ads 1, 2, and 3. The linguistic strategies of Alliteration, Paronomasia, and Metaphor were ranked lower than the other linguistic features, and fell in the bottom eight rankings, along with the majority of the non-linguistic ads (five of eight fell in the lower eight rankings).

5.2.2.2 Linguistic and Non-linguistic Memorability Rankings
The secondary goal of print advertising is to create an advertisement that is memorable; this increases the chance that the consumer will remember the ad in the future when they are in the market to buy the particular product being advertised. Thus the second ranking of the linguistic and non-linguistic advertisements was calculated for the memorability scale. This ranking was also organized primarily by the ad's mode rating and secondarily by the ad's average rating.

The relative Memorability ranking of both the 10 linguistic advertisements and the 8 non-linguistic advertisements is provided in the table below.

Overall Ranking	Feature	Mode Rating	Average Rating
1	Paronomasia/Repetition	5	3.93
2	Contradiction	4	3.93
3	Non-linguistic 1	4	3.70
4	Converseness	4	3.57
5	Rhyming	4	3.53
6	Expression	4	3.50
7	Word Coinage	4	3.17
8	Non-linguistic 2	3	3.10
9	Non-linguistic 3	3	3.00
10	Non-linguistic 4	3	3.00
11	Non-linguistic 8	3	2.60
12	Non-linguistic 6	3	2.47
13	Repetition	3	2.37
14	Non-linguistic 5	2	2.90
15	Paronomasia	2	2.67
16	Non-linguistic 7	2	2.60
17	Metaphor	2	2.37
18	Alliteration	2	2.33

Table 8: Linguistic Vs. Non-linguistic Memorability Ranking

The memorability mode ratings for the 10 linguistic advertisements and the mode ratings for the 8 non-linguistic advertisements can be seen in the figures below.
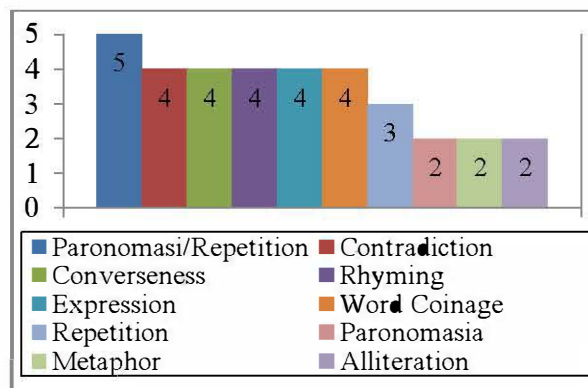

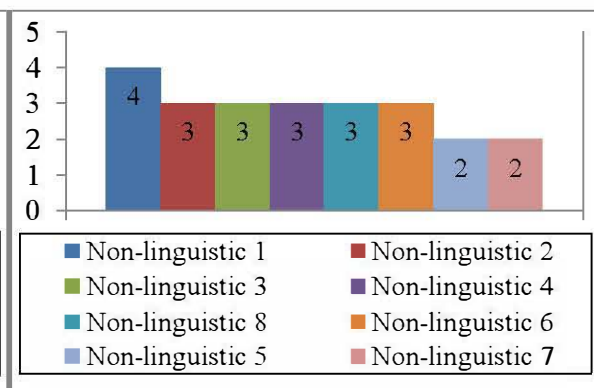Figure 9: Mode Ratings for Linguistic Ads

Figure 10: Mode Ratings for Non-linguistic Ads

Similar to the catchiness ranking, the memorability ranking shows that linguistic advertisements make up the majority of ads that were considered highly memorable. Six of the top 10 ranked memorable advertisements were linguistic and included the features of Paronomasia/Repetition, Contradiction, Converseness, Rhyming, Expression, and Word Coinage. There were only four non-linguistic advertisements that ranked in the top 10 for memorability, which included non-linguistic ads 1, 2, 3, and 4. The linguistic features of Repetition, Paronomasia, Metaphor, and Alliteration were ranked lower than the other linguistic features, and fell in the bottom eight rankings, along with four of the eight non-linguistic ads.

5.2.2.3 Linguistic and Non-linguistic Interest Rankings

The tertiary goal of print advertising is to create consumer interest in an advertisement. Though not as important as catchiness or memorability, the extent to which a consumer finds an ad to be interesting may impact their perception of the advertisement and could add to its catchiness and memorability. Therefore, the third scale on which both the linguistic and non-linguistic advertisements were ranked in terms of mode and average ratings is the interest scale.

The relative interest ranking of the 10 linguistic advertisements and the 8 non-linguistic advertisements is provided in the table below.

Overall Ranking	Linguist Feature	Mode Rating	Average Rating
1	Contradiction	4	3.97
2	Expression	4	3.37
3	Rhyming	4	3.20
4	Non-linguistic 5	4	2.67
5	Non-linguistic 1	3	3.67
6	Paronomasia/Repetition	3	3.63
7	Converseness	3	3.47
8	Word Coinage	3	3.10
9	Non-linguistic 4	3	3.00
10	Repetition	3	2.93
11	Non-linguistic 7	3	2.37
12	Non-linguistic 2	2	3.00
13	Non-linguistic 3	2	2.73
14	Paronomasia	2	2.63
15	Metaphor	2	2.33
16	Non-linguistic 6	2	2.30
17	Non-linguistic 8	2	2.23
18	Alliteration	2	1.73

Table 9: Linguistic Vs. Non-linguistic Interest Ranking

The interest mode ratings for the 10 linguistic advertisements and the mode ratings for the 8 non-linguistic advertisements can be seen in the figures below.
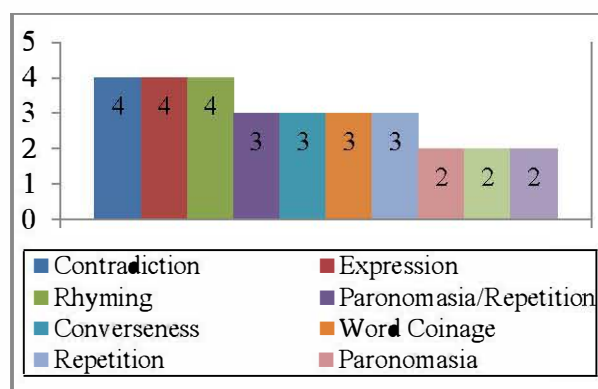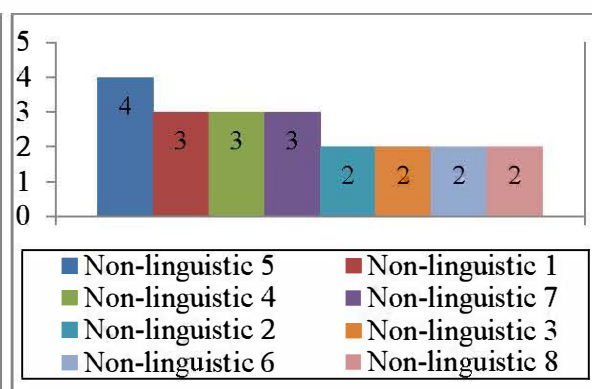
Figure 11: Mode Ratings for Linguistic Ads   Figure 12: Mode Rating for Non-linguistic Ads

The interest ranking showed a similar distinction between high ranking linguistic and non-linguistic ads. Seven of the top 10 "interesting" advertisements were linguistic; these included the features of Contradiction, Expression, Rhyming, Paronomasia/Repetition, Converseness, Word Coinage, and Repetition. There were only three non-linguistic advertisements that ranked in the top 10 for interest, which included non-linguistic ads 1, 5, and 4. The linguistic features of Paronomasia, Metaphor, and Alliteration fell in the lower ranking advertisements as well as five of the eight non-linguistic ads.

5.3   Discussion

The overall results of the perception stage show little to no variation between linguistic and non-linguistic advertisements in terms of catchiness, memorability, and interest. Taken alone, these results would indicate that linguistic strategies are no more effective than non-linguistic strategies at increasing consumer attraction to and interest in an ad. However, looking at the advertisements on an individual level provides a number of interesting and significant findings.

The ranking results across the three separate perception scales demonstrate that advertisements using specific linguistic devices are, in general, perceived to be more catchy, memorable, and interesting than non-linguistic advertisements. Interesting patterns can be found when comparing the highly ranked advertisements on each of the three scales; these patterns will be further described in this section.

When looking at the rankings for catchiness and memorability, it is clear that six of the linguistic features appear in the top 10 highly ranked advertisements on both scales; these include Paronomasia/Repetition, which was ranked first on both scales with a mode rating of 5, Contradiction, Converseness, Rhyming, Expression and Word Coinage. This shows that subjects found these devices to be highly attractive and believed that they would be likely to remember the ads featuring these devices in the future.

Comparing the rankings for catchiness and interest, the same seven linguistic features can be found on the top 10 list for both scales. However, the individual mode ratings for each linguistic feature included in the top 10 interesting ads are much lower than the ratings for those same linguistic features in the top 10 catchiest ads. Specifically in the case of the combination of Paronomasia and Repetition, which is ranked first on the catchiness scale with a mode rating of 5, this feature appears fourth on the interest scale with a mode rating of 3. This shows that the seven linguistic strategies may be very likely to catch a consumer's attention; however, the consumer may be less interested in the ads that feature those devices.

An overall pattern arises between linguistic and non-linguistic ads when considering all three scales. As a whole, the rankings suggest that the linguistic devices are overall more effective at increasing consumer attraction to and interest in an advertisement than non-linguistic ads. Moreover six specific linguistic devices are particularly effective as they ranked in the top 10 across all three scales; these include Paronomasia/Repetition, Rhyming, Contradiction, Converseness, Expression and Word Coinage. Three of those six devices, Contradiction, Rhyming and Expression, received mode ratings of 4 on all three scales, while Paronomasia/Repetition was the sole device to receive a mode rating of 5 (for both catchiness and memorability) on any of the three scales. These findings, based on the individual advertisements, suggest that linguistic devices are highly effective advertising strategies. Thus, it may be beneficial for advertisers to incorporate linguistic devices in their strategies and to employ any of the six high ranking devices identified in this stage to increase an advertisement's appeal.

6   Stage 3: Recall of Linguistic and Non-linguistic Ads

The third phase of the study addresses how advertisements are remembered and recalled by consumers. In the first stage of the study, the current strategies used in print advertising were identified; this third stage is aimed at determining which strategies are effective at increasing a consumer's memory of and ability to recall an ad. It is important that advertisers create ads that will remain in a consumer's memory, therefore increasing the chance that the consumer will buy the advertised product in the future. This analysis could prove useful for advertisers seeking to understand which strategies are more easily remembered and recalled than others.

6.1   Method

For this stage, the 36 advertisements created for the study were divided into two sets of 18. One set of 18 is considered the "original" advertisements; this set is identical to the set of ads shown to the perception group. The second set of 18 is considered "alternate" advertisements, meaning ads that would replace some of the original ads in a second round of testing. Both original and alternate sets of advertisements consist of 10 linguistic and 8 non-linguistic ads. The 10 linguistic ads in both sets each used one of the top 10 linguistic features. The complete list of 36 original and alternate advertisements can be found in Appendix B.

6.2   Subjects

Of the 71 total subjects recruited for this study, 41 composed the overall recall group. The subjects in this stage were also randomly selected from the Care.com and Northeastern University subject pools. The recall group was subdivided into two groups, recall Group A and recall Group B. Group A was made up of 20 subjects who were randomly selected from the recall group and Group B was made up of the other 21 recall subjects. The data was collected from all 41 subjects.

6.3   Procedure

Subjects in the recall groups A and B were asked to participate in two separate rounds of testing. In the first round of testing subjects were presented with the 18 original advertisements with no follow-up questions. The subjects were told that they would see 18 print advertisements, all of which would have the same brand name ACME; they were instructed to view each ad for as long as they wanted and to move on to the next ad once they were finished. They were told that they

would not have to answer any questions and if they asked the investigator whether or not they would have to remember the ads for the second round, the investigator told them not to worry about the second round and to treat this round as if they were browsing through a magazine. This first round was used as a means of exposing the subjects to all of the original advertisements without prompting them to truly analyze or memorize any of the ads.

The second round of testing was conducted exactly one week after the first in order to give the subjects separation from the advertisements. For the second round of testing, the recall subjects were divided into two groups, A and B. All 10 linguistic features were tested in the second round, five of which went to Group A and five to Group B to extend the testing over a larger number of subjects. The set of advertisements presented to Group A included the five original linguistic ads, four of the original non-linguistic ads, five of the alternate linguistic ads, and four of the alternate non-linguistic ads. The complete list of ads shown to Group A in the second round of testing can be seen in Appendix C.

Group B was presented with all 18 advertisements that were not shown to Group A during the second round of testing, these included five original linguistic ads, four original non-linguistic ads, five alternate linguistic ads, and four alternate non-linguistic ads. The complete list of ads shown to Group B in the second round of testing can be seen in Appendix D.

During the second round of testing, the recall subjects were asked whether they remembered each ad from the previous round on a scale of 1-5, (1 meaning they were absolutely certain that they did not remember the ad and 5 meaning they were absolutely certain that they did remember the ad). If a participant rated an ad as a 4 or 5, they were asked to describe why they remembered the ad in a written section where they were free to answer however they pleased. These two questions were given as a means of both quantifying and qualifying how memorable each advertisement was.

6.4 Results

The findings of this portion of the study provide some interesting insight into how consumers remember advertisements. All data were analyzed in terms of average and mode due to the small size of the subject pool which was unlikely to yield any significant statistical analyses. The analysis of the recall results had three parts which will be described further in this section.

Subjects were asked to rate (on a scale from 1-5) how certain they were that they had seen each ad in the previous round of testing. These individual ratings are referred to as "perceived memory scores", meaning what the subjects thought they remembered. These scores were averaged across Group A and Group B to calculate the overall perceived memory score for all original linguistic, original non-linguistic, alternate linguistic, and alternate non-linguistic ads.

How often an ad was recalled out of the total number of times it was shown in the second round of testing is referred to as the "actual recall score". A rating of 4 or 5 on the Likert scale, qualified as an instance of recall, while a rating or 3, 2, or 1 did not qualify as an instance of recall. Therefore if a subject rated an ad as a 4 or a 5, it was counted towards the actual recall score and if a subject rated an ad as a 3, 2, or 1, it was not counted. The actual recall score was also averaged across Group A and Group B for all original linguistic, original non-linguistic, alternate linguistic, and alternate non-linguistic ads and is referred.

Finally, subjects were asked to explain why they recalled an ad that they rated as a 4 or 5; these responses were categorized and the categories are referred to as "reason for remembering". A percentage was then found for the number of times each reason for remembering category appeared out of the total responses given by the recall group. The percentages were calculated

across Group A and Group B for all original linguistic, original non-linguistic, alternate linguistic and alternate non-linguistic ads and are referred to as the "overall reason for remembering".

6.4.1   Overall Recall Results

The perceived memory scores and actual recall scores were calculated for all of the original linguistic and original non-linguistic advertisements shown to Group B and can be seen in Table (10). There were several instances when subjects in the recall groups rated an alternate ad as a 4 or a 5 despite the fact that they had not seen the ad in the first round of testing. These instances were recorded as recalls and were counted towards the actual recall scores for the alternate ads. Thus an overall actual recall score was calculated for all alternate linguistic and non-linguistic advertisements and can also be seen in Table (10) along with the overall perceived memory scores for all alternate ads.

Ad Type	Overall Perceived Memory Score	Overall Actual Recall Score
Original Linguistic Ads	4.03	67.3%
Original Non-linguistic Ads	3.97	67.1%
Alternate Linguistic Ads	2.08	5.85%
Alternate Non-linguistic Ads	2.13	9.75%

Table 10: Linguistic and Non-linguistic Perceived Memory Scores and Actual Recall Scores

The overall perceived memory scores and overall actual recall scores for all linguistic and non-linguistic ads are further displayed in the figures below.
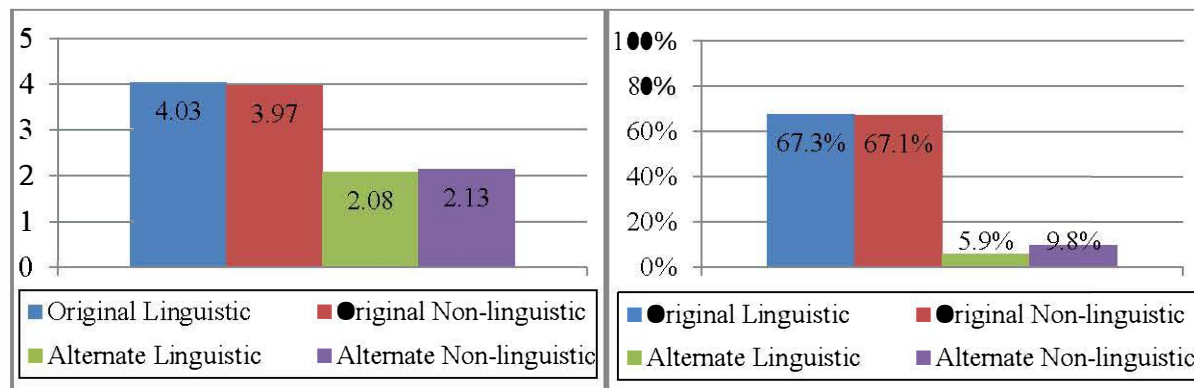

Figure 13: Overall Perceived Memory Scores   Figure 14: Overall Actual Recall Scores

6.4.2   Overall Reason for Remembering Results

For each advertisement that was remembered, subjects were asked to explain what had caused them to remember the ad. The typical responses were divided into seven categories, which included Linguistic Feature, Meaning, Personal Experience, Catchiness, Confusion, Humor, and Other.

The subjects were able to write anything that they felt described why they remembered certain ads. The responses were then interpreted and categorized by the investigator. Responses that were categorized as Linguistic Feature where those where the subject wrote "word play", "something linguistic is happening" or when the subject named the actual feature such as "rhymes" or "repetition of the word". A response was categorized as Meaning if the subject

wrote anything along the lines of "I liked what it stood for" or "I don't like what this is saying". Personal Experience responses were those where the subject wrote things such as, "I've been using one of those" or "I have wanted something like that". Responses were placed in the Catchiness category if the subject wrote anything along the lines of "I like how this sounds" or "this is catchy". The confusion category was used for responses such as "I don't understand what this means" or "This was unclear", usually these responses dealt with confusion over spelling, punctuation, or meaning. Responses were placed in the humor category if the subject wrote, "This is funny" or "I laughed at this". Finally, the Other category was created for responses that were not numerous enough to have their own separate categories, these included comments about the length of the ad, the product name, or the brand.

The overall number of times that each response type was given out of the total responses was calculated for each category and is provided in the table below for all original linguistic and original non-linguistic advertisements. Even though the alternate ads were not actually in the first round of testing, subjects who had rated an alternate ad as a 4 or 5 also gave reason for remembering responses for those ads; the overall reason for remembering was therefore calculated for all alternate linguistic and alternate non-linguistic ads which are provided in the table below.

Category	Original Linguistic	Original Non-linguistic	Alternate Linguistic	Alternate Non-linguistic
Linguistic Feature	56%	10%	17%	0%
Meaning	18%	37%	25%	82%
Personal Experience	9%	15%	17%	9%
Catchiness	7%	12%	17%	9%
Confusion	3%	10%	0%	0%
Humor	3%	8%	0%	9%
Other	4%	8%	0%	36%

Table 11: Overall Reason for Remembering Category Distribution for Original and Alternate Linguistic and Non-linguistic ads

The distribution of the overall reason for remembering categories for the original linguistic and non-linguistic ads are further displayed in the figures below.
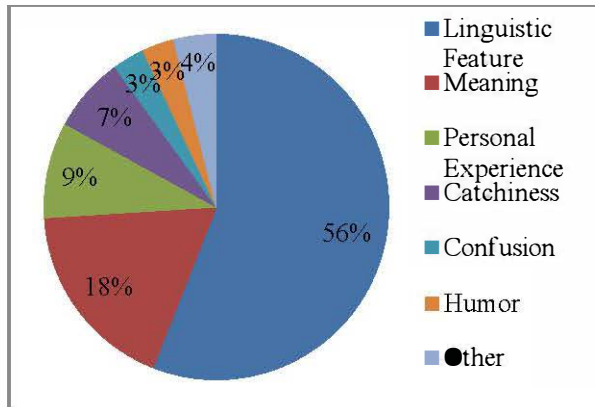
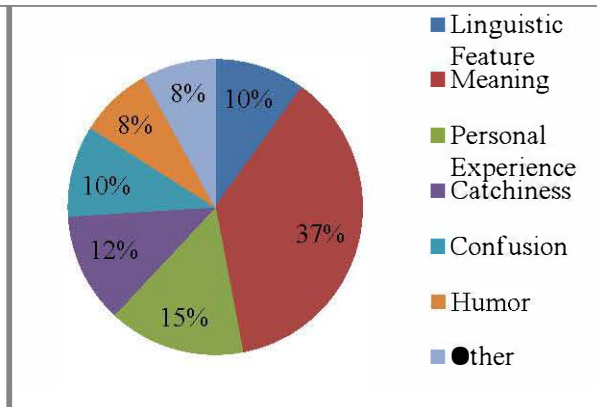Figure 15: Original Linguistic Reason for Remembering

Figure 16: Original Non-linguistic Reason for Remembering

Figure (16) shows that, according to the subjects' reason for remembering, the original non-linguistic ads, were thought to contain linguistic devices by subjects 10% of the time, despite the fact that they were designed without any specific linguistic features.

The distribution of the overall reason for remembering categories for the alternate linguistic and non-linguistic ads are further displayed in the figures below.
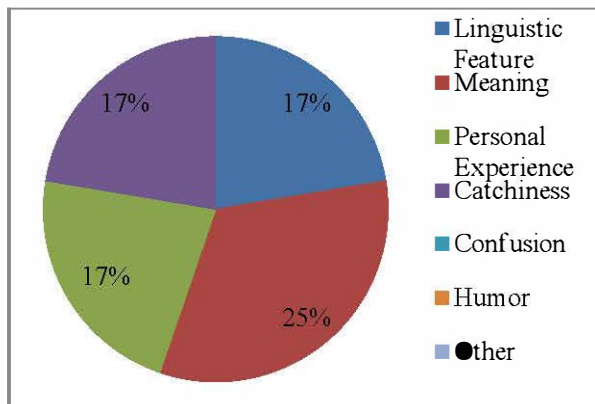

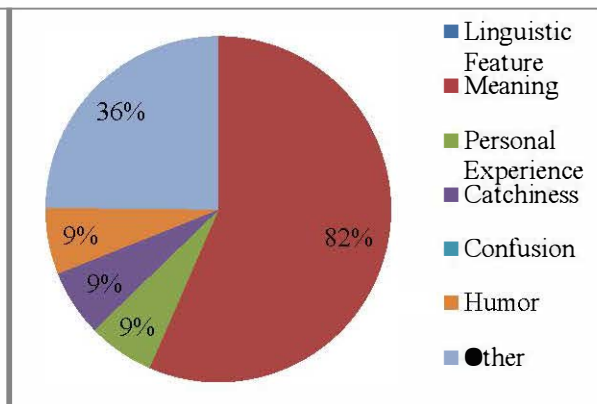Figure 17: Alternate Linguistic Reason for Remembering

Figure 18: Alternate Non-linguistic Reason for Remembering

6.4.3   Group A Results

The perceived memory score was calculated for all original linguistic advertisements shown to Group A as well as the perceived memory score for all original non-linguistic advertisements shown to Group A. Furthermore, the actual recall scores were calculated to determine how often the original linguistic ads were recalled as a group and how often the original non-linguistic ads were recalled as a group. The results are shown in the table below.

Ad Type	Perceived Memory Score	Actual Recall Score
Original Linguistic Ads	3.69	61%
Original Non-linguistic Ads	3.69	63%

Table 12: Perceived Memory Scores and Actual Recall Scores for Original Linguistic and Non-linguistic Ads

The perceived memory scores for Group A's original linguistic and non-linguistic ads can be further seen in Figure (19), and the actual recall scores can be seen in Figure (20).
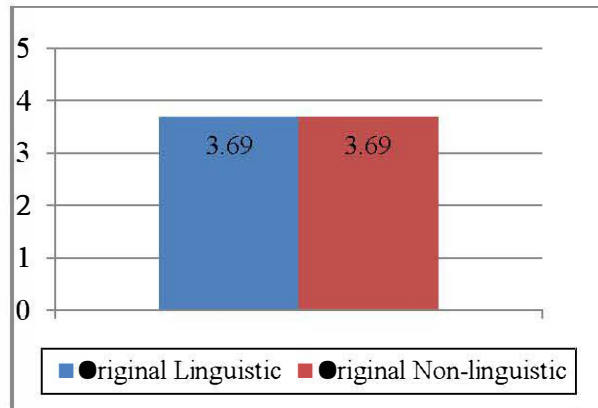

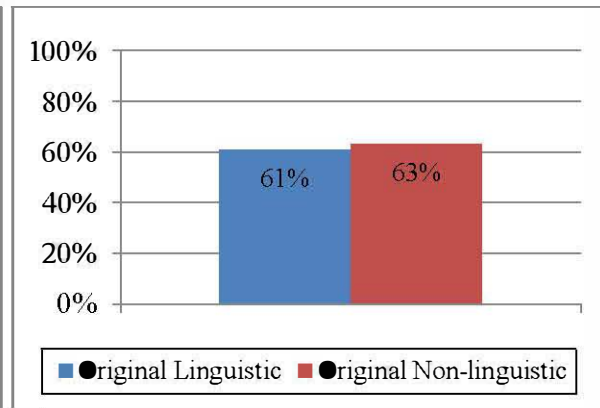Figure 19: Original Linguistic and Non-linguistic Perceived Memory Score

Figure 20: Original Linguistic and Non-linguistic Actual Recall Score

The perceived memory score was then calculated for all alternate linguistic and alternate non-linguistic advertisements shown to Group A. Furthermore, the actual recall score was calculated for all alternate linguistic and non-linguistic ads. The results are shown in the table below.

Ad Type	Perceived Memory Score	Actual Recall Score
Alternate Linguistic Ads	2.14	6%
Alternate Non-linguistic Ads	1.98	6%

Table 13: Perceived Memory Scores and Actual Recall Scores for Alternate Linguistic and Non-linguistic Ads

These actual recall scores indicate that subjects were wrong about seeing the alternate linguistic and alternate non-linguistic ads in the first round of testing 6% of the time, meaning they thought they had seen the alternate ads in the first round of testing when in reality they did not.

The perceived memory scores for Group A's alternate linguistic and non-linguistic ads can be further seen in Figure (21), and the actual recall scores can be seen in Figure (22).
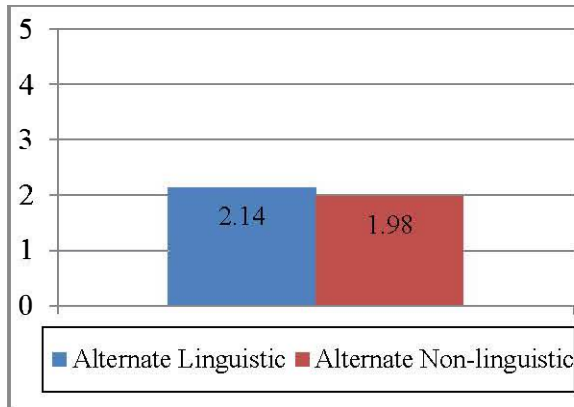
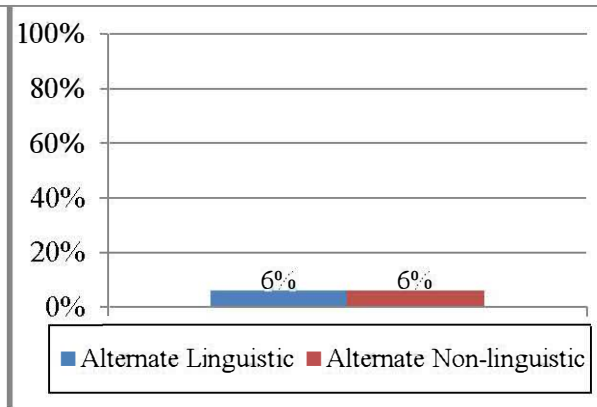Figure 21: Alternate Linguistic and Non-linguistic Perceived Memory Score

Figure 22: Alternate Linguistic and Non-linguistic Actual Recall Score

6.4.4 Group B Results

The perceived memory score was also calculated for all original linguistic and non-linguistic advertisements shown to Group B. Furthermore, the actual recall scores were calculated to determine how often the original linguistic ads were recalled and how often the original non-linguistic ads were recalled by Group B. The results are shown in the table below.

Ad Type	Perceived Memory Score	Actual Recall Score
Linguistic Ads	4.73	73%
Non-linguistic Ads	4.25	71%

Table 14: Perceived Memory Score and Actual Recall Score for Original Linguistic and Non-linguistic Ads

The perceived memory scores for Group B's original linguistic and non-linguistic ads can be further seen in Figure (23), and the actual recall scores can be seen in Figure (24).

Figure 23: Original Linguistic and Non-linguistic Perceived Memory Score

Figure 24: Original Linguistic and Non-linguistic Actual Recall Score

The perceived memory score was then calculated for all alternate linguistic and alternate non-linguistic advertisements shown to Group B. Furthermore, the actual recall score was calculated for all alternate linguistic and non-linguistic ads. The results are shown in the table below.

Ad Type	Perceived Memory Score	Actual Recall Score
Alternate Linguistic	2.02	6%
Alternate Non-linguistic	2.28	14%

Table 15: Perceived Memory Score and Actual Recall Score for Alternate Linguistic and Non-linguistic Ads

These actual recall scores indicate that subjects were wrong about seeing the alternate linguistic ads in the first round of testing 6% of the time, and the subjects were wrong about seeing the alternate non-linguistic ads 14% of the time.

The perceived memory scores for Group B's alternate linguistic and non-linguistic ads can be further seen in Figure (25), and the actual recall scores can be seen in Figure (26).
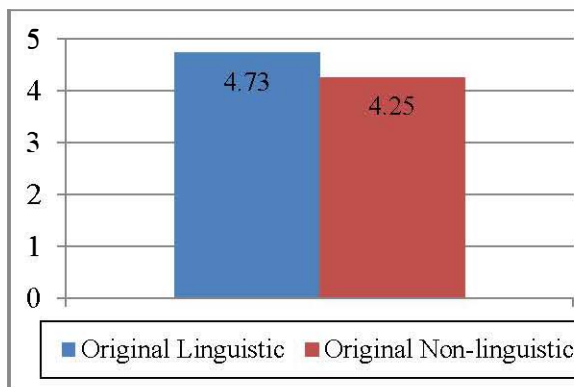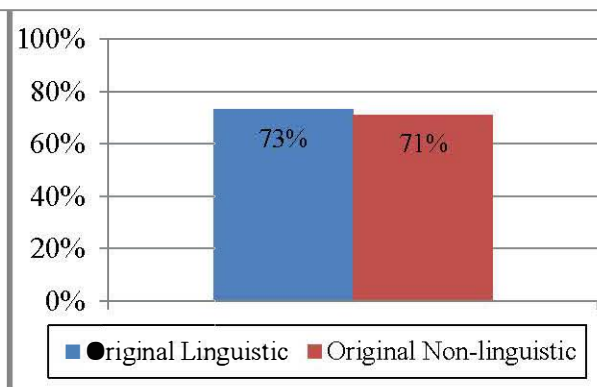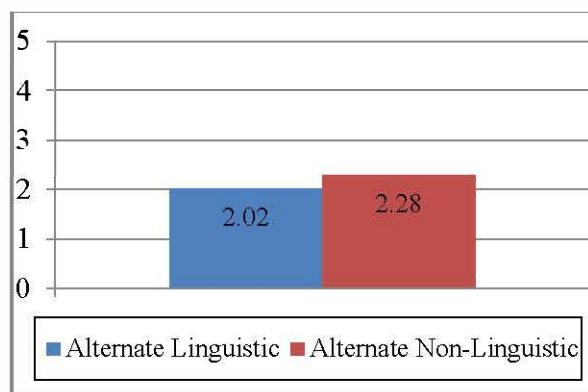

Figure 25: Alternate Linguistic and Non-linguistic Perceived Memory Score
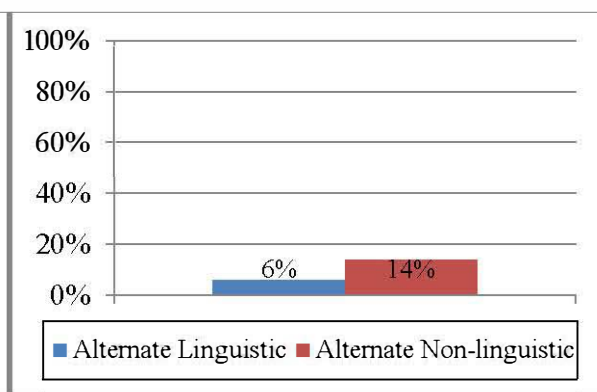
Figure 26: Alternate Linguistic and Non-linguistic Actual Recall Score

6.4.5   Individual Linguistic and Non-linguistic Perceived Memory Score Rankings

Parallel to the perception data analysis, the average and mode perceived memory scores were calculated for each of the original 18 individual advertisements, linguistic and non-linguistic, shown to the recall group. Once the averages and modes were calculated, the 10 original linguistic ads were ranked according to their mode perceived memory scores. The 8 original non-linguistic ads were also ranked according to their mode perceived memory scores. If multiple ads had the same mode perceived memory score, their average perceived memory scores were then used to create a distinction between the ads and determine their relative ranking.

The perceived memory score ranking of the 10 original linguistic advertisements (represented by their linguistic features) and the 8 original non-linguistic advertisements (represented by an assigned number label) is provided in the Table (16). The same number labels assigned to each original non-linguistic advertisement in the perception results were used for the recall results; these labels can be found in Appendix E.

Ranking	Feature/Number	Mode Rating	Average Rating
1	Paronomasia/Repetition	5	4.90
2	Non-linguistic 5	5	4.52
3	Contradiction	5	4.30
4	Expression	5	4.05
5	Non-linguistic 1	5	4.15
6	Alliteration	5	4.00
7	Non-linguistic 2	5	4.00
8	Non-linguistic 7	5	3.86
9	Repetition	5	3.86
10	Converseness	5	3.80
11	Metaphor	5	3.50
12	Word Coinage	5	3.45
13	Rhyming	4	4.00
14	Non-linguistic 3	4	3.70
15	Non-linguistic 6	4	3.62
16	Non-linguistic 4	4	3.60
17	Paronomasia	3	3.40
18	Non-linguistic 8	3	3.30

Table 16: Linguistic and Non-linguistic Advertisement Perceived Memory Score Ranking

The mode perceived memory scores for the 10 original linguistic advertisements is further displayed in Figure (27), and the mode perceived memory scores for the 8 original non-linguistic advertisements is further displayed in Figure (28).
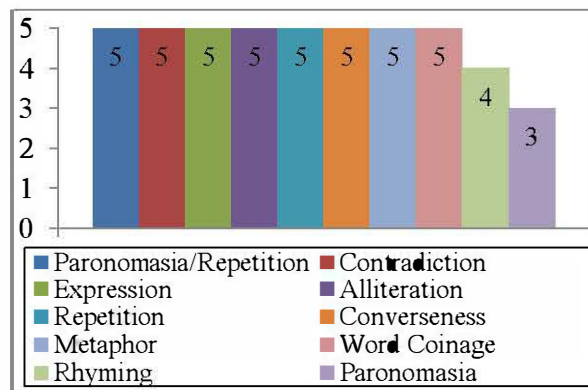
Figure 27: Mode Perceived Memory Scores for Original Linguistic Ads
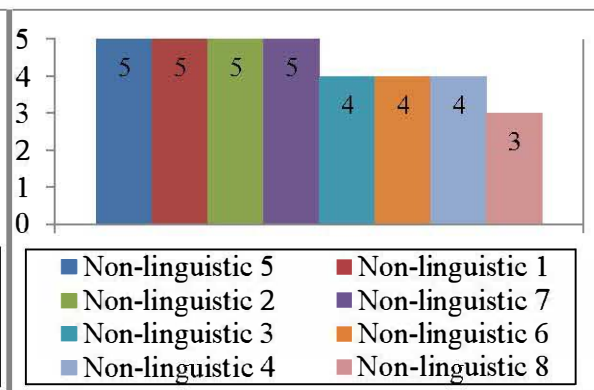
Figure 28: Mode Perceived Memory Scores for Original Non-linguistic Ads

Of the advertisements that had the highest perceived memory scores in the recall stage, the majority were linguistic. Specifically, six of the top 10 advertisements with high perceived memory scores were linguistic and included the features of Paronomasia/Repetition, Contradiction, Expression, Repetition, Alliteration and Converseness. There were only four non-linguistic advertisements that ranked in the top 10 for perceived memory score, which included non-linguistic ads 1, 2, 5, and 7. The linguistic strategies of Metaphor, Word Coinage, Rhyming,

and Paronomasia were ranked lower than the other linguistic features, and fell in the bottom eight rankings, along with the lower four of the eight non-linguistic ads.

6.4.6   Individual Linguistic and Non-linguistic Actual Recall Score Rankings

The actual recall score was calculated for each of the original 18 advertisements, both linguistic and non-linguistic, shown to the recall group. Based on these individual scores, the 10 original linguistic and 8 original non-linguistic ads were ranked from highest to lowest.

The actual recall score ranking of the 10 original linguistic advertisements (represented by their linguistic features) and the 8 original non-linguistic advertisements (represented by their assigned number label) is provided in the Table (17).

Ranking	Feature/Number	Actual Recall Score
1	Paronomasia/Repetition	95%
2	Non-linguistic 5	90%
3	Contradiction	85%
3	Non-linguistic 1	85%
4	Non-linguistic 2	71%
4	Rhyming	71%
5	Expression	67%
5	Alliteration	67%
5	Repetition	67%
5	Non-linguistic 7	67%
6	Converseness	65%
6	Non-linguistic 3	65%
7	Word Coinage	60%
7	Non-linguistic 4	60%
8	Non-linguistic 6	57%
9	Metaphor	50%
10	Paronomasia	45%
11	Non-linguistic 8	40%

Table 17: Linguistic and Non-linguistic Advertisement Actual Recall Score Ranking

The actual recall scores for the 10 original linguistic advertisements is further displayed in Figure (29), with the actual recall scores for the 8 original non-linguistic advertisements shown in Figure (30).

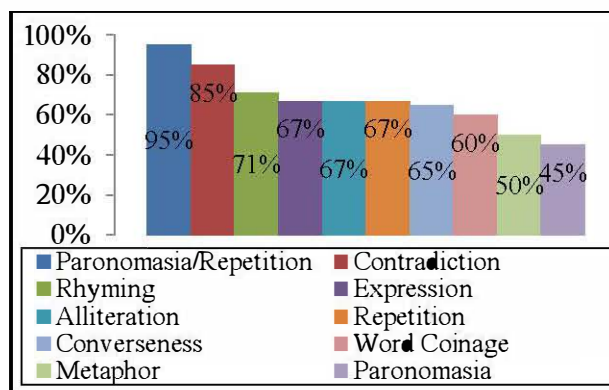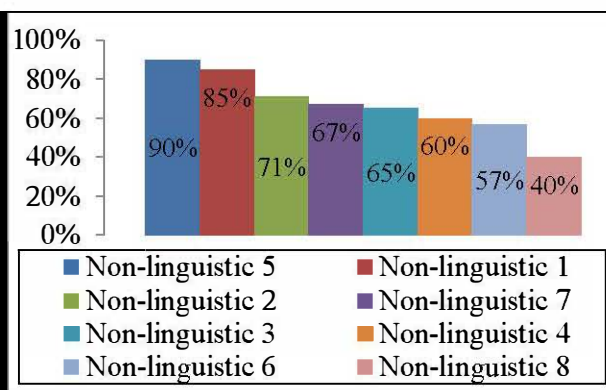Figure 29: Linguistic Advertisement Actual Recall Score

Figure 30: Non-linguistic Advertisement Actual Recall Score

The actual recall scores for the 18 individual linguistic and non-linguistic original ads were consistently above 40%, with multiple sets of identical scores across both types of ads; thus causing there to be only 11 ranking positions as opposed to 18. The 10 advertisements with the highest actual recall scores therefore only fell within the rankings of 1-5. The majority of these top ranked ads were linguistic; the six features of Paronomasia/Repetition, Contradiction, Rhyming, Expression, Alliteration, and Repetition were ranked in the top 5 positions along with four of the non-linguistics ads, including non-linguistic ads 1, 2, 5, and 7. The linguistic features of Converseness, Word Coinage, Metaphor and Paronomasia were among the lower ranked ads along with non-linguistic ads 3, 4, 6, and 8.

6.5   Discussion

The overall recall results indicate that advertisements using linguistic devices are equally as effective at attaining consumer memory and recall as non-linguistic advertisements. The linguistic and non-linguistic ads had almost identical perceived memory scores and actual recall scores. This would imply that consumers are equally as apt to recall an ad with or without linguistic features. However, a further look at Sections 6.4.5 and 6.4.6 shows that a distinction does exist between linguistic and non-linguistic advertisements when looking at the ads and specific strategies individually.

The findings for Group A and Group B in terms of overall perceived memory score and actual recall score also indicate that linguistic ads are equally as effective as non-linguistic ads at attaining consumer memory and recall of an ad. This is especially the case for Group A in that the non-linguistic ads had an identical perceived memory score to the linguistic ads and an actual recall score that was 2% higher than the linguistic ads. This further implies that there is little to no variance between linguistic and non-linguistic ads in terms of memory and recall effectiveness. However, it is important to consider the perceived memory scores and actual recall scores of the individual features in order to expose more significant variances.

The perceived memory score ranking and the actual recall score ranking demonstrate that linguistic ads were rated higher on the Likert scale, from 1-5, than non-linguistic ads, and were recalled more often than non-linguistic ads. This indicates that subjects felt more certain that they had seen the linguistic ads previously than the non-linguistic ads and were better at recalling the linguistic ads. Furthermore, the specific linguistic features of Paronomasia/Repetition, Contradiction, Expression, Alliteration, Repetition, and Converseness were most effective at increasing consumer memory of an ad. Similarly, the features of Paronomasia/Repetition,

Contradiction, Expression, Alliteration, and Repetition were most effective at increasing consumer recall of an ad along with the linguistic feature of Rhyming. These findings suggests that it may be beneficial for advertisers to employ these specific advertising strategies in order to create truly memorable ads that consumers will be more likely to recall in the future.

It may also be beneficial for advertisers to recognize the top reasons the subjects of this study gave for remembering both linguistic and non-linguistic advertisements. The results indicate that consumers are more likely to remember an ad that either uses a linguistic feature or demonstrates a thought-provoking, coherent meaning associated with it. The meaning of the advertisement appeared to be especially important to a subject's ability to remember an ad when the ad did not contain any specific linguistic features. Furthermore, although Personal Experience and Catchiness were less influential than both Linguistic Feature and Meaning at creating a lasting impression, both reasoning categories would still be valuable aspects for marketers and advertisers to consider when creating their campaigns.

6.5.1   Comparing Recall Groups A and B Results

The data collected from the two recall groups, Group A and Group B, shows that Group B had higher average memory ratings and higher correct remembrance percentages than Group A. This implies that the subjects in Group B were better at correctly recalling the original advertisements than the subjects in Group A. Both Group A and Group B were evenly distributed across the subject pool, thus one might assume that this variance could be due to the specific advertisements shown to each group and how the ads ranked on the three perception scales. The distribution of advertisements between Group A and Group B is described below.

The original linguistic advertisements presented to Group A included the features of Contradiction, Word Coinage, Converseness, Metaphor, and Paronomasia. Three of these features, Contradiction, Word Coinage, and Converseness, were some of the highest ranked features in terms of catchiness, memorability, and interest. Furthermore, Contradiction and Converseness were high ranking features across all three scales. The original non-linguistic advertisements presented to Group A included non-linguistic ads 1, 3, 4, and 8. Of these four ads, non-linguistic ads 1 and 3 were highly ranked on at least one of the three perception scales; specifically non-linguistic ad 1 was ranked highly across all three perception scales.

The original linguistic advertisements presented to Group B included the features of Paronomasia/Repetition, Rhyming, Expression, Repetition, and Alliteration. Three of these features, Paronomasia/Repetition, Rhyming, and Expression, were ranked highly across each of the three scales consistently. The original non-linguistic advertisements presented to Group B included non-linguistic ads 2, 5, 6, and 7. Two of those advertisements, non-linguistic ads 2, and 5 were highly ranked on at least one of the three perception scales.

Based on this information, it does not appear to be the case that the specific advertisements had any significant effect on Group B's ability to recall the original advertisements better than Group A. Group A was given three linguistic ads that were ranked highly on at least one of the three perception scales, two of which were ranked highly across all three scales, and two highly ranked non-linguistic ads. Group B was also given three highly ranked linguistic ads which had high rankings across all three scales, and two highly ranked non-linguistic ads. Thus the distribution of linguistic and non-linguistic ads between the two recall groups does not appear to have affected the participant's ability to correctly recall the ads.

7 Synthesis of Results

Although the overall recall results did not indicate a significant variance between linguistic and non-linguistic ads in terms of increasing consumer memory of an ad, the individual results do show some interesting trends. When compared to the individual results found for the perception group, the individual recall results indicate that there is a strong correlation between how an ad is perceived and how likely it is to be remembered or recalled. The table below provides a side-by-side comparison of the catchiness, memorability, interest, perceived memory score, and actual recall score rankings for all high-ranking original linguistic advertisements.

Catchiness		Memorability		Interest	
Ranking	**Feature**	**Rank**	**Feature**	**Rank**	**Feature**
1	Paronomasia/ Repetition	1	Paronomasia/ Repetition	1	Contradiction
2	Rhyming	2	Contradiction	2	Expression
3	Contradiction	4	Converseness	3	Rhyming
5	Converseness	5	Rhyming	6	Paronomasia/ Repetition
6	Expression	6	Expression	7	Converseness
8	Repetition	7	Word Coinage	8	Word Coinage
9	Word Coinage			10	Repetition

Perceived Memory Score		Actual Recall Score	
Rank	**Feature**	**Rank**	**Feature**
1	Paronomasia /Repetition	1	Paronomasia/ repetition
3	Contradiction	3	Contradiction
4	Expression	4	Rhyming
6	Alliteration	5	Expression
9	Repetition	5	Alliteration
10	Converseness	5	Repetition

Table18: Perception and Recall Scale Rankings

As discussed in Section 5.3, an overall pattern arises when considering the high ranking linguistic features across all three perception scales. The catchiness and interest scales show the same seven features of Paronomasia/Repetition, Rhyming, Contradiction, Converseness, Expression, Repetition, and Word Coinage as the top high ranking linguistic features. These findings indicate that though in different ranking orders, all seven features were considered both catchy and interesting by consumers. The third scale of memorability exhibits only six of the seven features found on the catchiness and interest scales, including Paronomasia/Repetition, Contradiction, Converseness, Rhyming, Expression, and Word Coinage. The sole feature that is found on both catchiness and interest scales, but not on the high ranking memorability scale is the feature of Repetition.

While the catchiness and interest scales contain all of the same linguistic features, the catchiness and memorability scales exhibit similar linguistic feature rankings, where each feature's ranking only varies by one to two positions across both scales. These findings indicate that the top ranking linguistic features are consistently well-perceived by consumers in the sense of how catchy, memorable, and interesting they are considered to be.

Furthermore, the individual linguistic recall results correlate to the three findings of the perception group in that similar linguistic features appeared as the top ranked features for both

perceived memory and actual recall scores. In terms of perceived memory scores, six features had the highest rankings; these included Paronomasia/Repetition, Contradiction, Expression, Alliteration, Repetition, and Converseness. Five of those six highly ranked features also fell in the top 10 ranking positions for actual recall scores, these included Paronomasia/Repetition, Contradiction, Expression, Alliteration , and Repetition; the sixth high ranking feature on this scale was Rhyming which outranked Converseness. These results indicate that not only is there a strong correlation between a memory and recall, but also that those high ranking features are highly effective at increasing both a consumer's memory and recall of an ad.

Finally, considering the ranking of linguistic features across all three perception scales as well as both recall scales, certain features appear to be consistently high ranking. The three features of Paronomasia/Repetition, Contradiction, and Expression are highly ranked across all five scales. Additionally, the features of Converseness and Rhyming appear in high ranking positions across four out of the five total scales. These findings demonstrate that there is a strong connection between how an ad is perceived, how it is remembered, and how likely it is to be recalled by a consumer. Also, the similarities across all five scales emphasize the effectiveness of using linguistic features in advertising, especially in the case of the features mentioned above.

To understand how these findings can be of use to advertisers, it is important to relate them to the findings of this study's first stage which identified the current strategies used in print advertising. It was found that the most commonly used features in the corpus of 102 TIME Magazine advertisements were Alliteration, Paronomasia, Expression, and Repetition. Of those four most commonly used features, Expression appears to be the most effective at increasing a consumer's attraction to, interest in, and memory of an advertisement, while Alliteration and Repetition may only be highly effective at increasing consumer memory of, but not attraction to or interest in an ad. Furthermore, advertisers may find it beneficial to combine Paronomasia with Repetition in order to create a well-rounded ad as this combination ranked highly across four of the five perception and recall scales.

8   Discussion

The findings of all three stages of this study provide an overarching view of various linguistic and non-linguistic strategies that are used in print advertising and their effectiveness at increasing consumer perception, memory and recall of an advertisement. The findings of each stage as well as the overall findings of the study are discussed in the following sections.

8.1   Summary of Findings

The research stage of the study revealed that 14 linguistic devices are often used in current print advertisements. The 14 features can appear alone or in combination with one another in an ad, but the findings show that the majority of linguistic advertisements tend to use only a single feature over a combination of features, implying that advertisers believe individual features are more effective than combinations of features. A list of top 10 most frequently used features was identified from the features found in the *TIME Magazine* corpus and these included Alliteration, Paronomasia, Repetition, Metaphor, Expression, Converseness, Rhyming, Word Coinage, Contradiction, and the combination of Paronomasia and Repetition. There were four individual linguistic categories exhibited by the 14 features identified in the corpus, including semantics, phonetics, phonology and morphology. As a result of multiple features combining within certain advertisements, multiple categories were combined as well. The most common categories from which features were used included semantics, phonetics and the combination of semantics and

morphology. This suggests that features that focus on meaning, sound, and word formation are thought to be highly attractive and effective by advertisers.

The perception and recall findings demonstrate that while linguistic advertisements as a whole may not be any more effective at increasing consumer memory of an ad than non-linguistic advertisements, several individual linguistic devices can prove to be highly effective at increasing not only consumer memory, but also positive consumer perception of an ad. Consumers do appear to show an attraction to and interest in advertisements using the features of Paronomasia/Repetition, Contradiction, and Expression which were the three features that ranked highly across all three perception scales as well as both recall scales. Consumers also appear to show an attraction to and interest in the features of Converseness, Word Coinage, and Rhyming which were ranked highly on all three of the perception scales. Furthermore, consumers show an inclination to remember advertisements that use the linguistic feature of Alliteration, despite the fact that it is not a high-ranking feature in terms of perception.

The findings of the perception stage and recall stage, especially in the comparison of the two, provide insight into the actual effectiveness, or lack thereof, of the current strategies employed in print advertising. While it does appear worthwhile to include linguistic features in print advertisements in order to increase consumer attraction to, interest in, and memory of an ad, only two of the most commonly used devices in current advertising strategies have proven to be highly effective, including Expression and Repetition. Other linguistic features that would be useful for advertisers to focus on using in advertisements include Contradiction, Converseness, Rhyming, Word Coinage, and the combination of Paronomasia and Repetition.

Finally, all subjects in both recall groups A and B showed a great capacity for remembering the original ads seen in the previous round of testing and were quite capable of recognizing that the alternate ads were newly added to the second round, especially in the case of Group B. This shows that the strategies employed in the original advertisements were so effective that subjects were able to clearly recognize when they were seeing a completely new ad.

8.2   Issues and Possibilities for Future Research

There were a number of issues that have now been raised following the research that we believe could be improved in order to construct a more influential analysis. The sample size of subjects is one of the aspects that could be adjusted to increase the possibility of finding more significant results. With more subjects, there would be more data and a greater chance of interesting results appearing.

One area of this study that could have affected the results is the amount of time that was allotted between the first and second round of recall testing. Providing a more extensive amount of time between rounds would be a way to improve the methodology of the study and could result in a greater variation between linguistic and non-linguistic memory data. It is quite possible that a significant variance between linguistic and non-linguistic advertisements could have resulted from additional time separating this study's two rounds of testing.

Another aspect that could have affected the results of this study concerns the directions given to the recall group. Recall group subjects were told from the beginning of the study that they would be asked to participate in two rounds of testing, the second round occurring the week following the first round. When the subjects were handed their test materials for the first round, they were told to read through each advertisement as if they were browsing through a magazine. Often the subjects would ask the investigator if they would be required to remember the

advertisements for the second round of testing to which the investigator responded that they should not worry about remembering any ads and reiterated that they should look at the ads as normally as they would look at any regular print ads. However, the fact that the subjects were already thinking that they would need to remember each ad for the second round of testing could have caused them to spend more time viewing the ads than usual. This could have created a less natural environment which does not reflect that of a typical consumer.

A possible means of eliminating this unwanted variable would be to refrain from telling the recall subjects that they will be asked to participate in a second round of testing. In this way, the subjects would be less likely to speculate as to what they will be required to do in the second round. Furthermore, it might be pertinent to only select certain subjects to take part in the second round of testing in order to randomize the selection process.

In essence all print advertisements are linguistic in that they use words and sounds of the language to portray an idea. The difference that existed between the so called "linguistic" and "non-linguistic" advertisements was the presence or lack of a linguistic device. However, a different approach could also be taken where print advertisements are compared to advertisements that are purely image-based. The same general design concept from this study could be applied and a substitution could be made by replacing the non-linguistic advertisements with image-based ads. This would allow for the linguistic aspects of each ad to be further highlighted.

This would also help eliminate the issue that arose when creating non-linguistic advertisements for the study. It was important to create non-linguistic ads that were just as likely to be considered catchy, memorable, and interesting as the linguistic ads in order to avoid skewing the results. However, that necessity also made it difficult to create non-linguistic ads that did not contain even the slightest hint of a linguistic feature. While none of the non-linguistic advertisements used in the study exhibited any specific linguistic features, one might argue that the tactical positioning of the words in combination with their implied meaning created a distinct "linguistic" feel in many instances.

Finally, another relevant question that arises from this research is the effectiveness of negative advertising, meaning ads that consumers dislike or consider annoying or affronting. The "meaning" category of reasoning for remembering an advertisement included both positive and negative responses. While many subjects stated that they remembered an ad because they enjoyed what it stood for or the general idea it portrayed, others stated that they remembered the ad because they disliked what it represented. It would make for interesting future research to examine whether negative ads are more or less effective at increasing consumer memory than positive ads using a similar testing design as that used in this study.

9   Conclusion

The world of advertising is constantly shifting and evolving and there are many different factors to consider when creating an ad campaign. No one consumer is the same as another and therefore it is difficult to identify what makes an advertising best practice. This research helps elucidate the difference of effectiveness, between advertisements that use linguistic devices and those that do not.

The individual findings of this study support the hypotheses and predictions in that advertisements exhibiting linguistic features appear to be more effective at increasing consumer perception and recall of an ad than advertisements not exhibiting specific linguistic features. The individual linguistic advertisements were mostly ranked higher in terms of catchiness,

memorability, and interest than the non-linguistic advertisements. Furthermore, the individual linguistic advertisements were mostly ranked higher in terms of memory and were recalled more often by subjects than the non-linguistic advertisements. Finally, the top reason subjects gave for remembering the linguistic advertisements was in fact the feature itself, followed by the overall meaning of the advertisement.

The research of current strategies employed by advertisers shows that 10 linguistic features are commonly used in print ad campaigns. Of the 10 common linguistic strategies Alliteration, Expression, Repetition, and Paronomasia appeared as the top occurring features. These four top features fall under the linguistic categories of semantics, phonetics, and the combination of semantics and morphology.

After testing, only one of the four top occurring linguistic features, Expression, appeared as an effective strategy at increasing and ad's catchiness, memorability and interest as well as increasing consumer memory and recall of an ad. Two other features that also appeared as most effective across all five scales include Contradiction and the combination of Paronomasia and Repetition. Other high ranking features across the perception and recall scales include Rhyming, Converseness, and Word Coinage. These six features all fall under the linguistic categories of semantics, phonology, and the combination of semantics and morphology.

These findings suggest that advertisers are correct in their assumption that features belonging to the linguistic categories of semantics and morphology make for effective print advertising strategies. However, advertisers may benefit from using other linguistic features such as Converseness, Rhyming, and Word Coinage as well as combining the two features of Paronomasia and Repetition.

Although it is difficult to identify what makes an advertising strategy that will appeal to all consumers, the findings of this study suggest that the use of linguistic features is an effective strategy in print advertising. Furthermore, several specific devices, acting either alone or in combination with one another, have proven to be particularly effective at increasing consumer attraction to, interest in, and recall of an ad and could help advertisers develop more successful ad campaigns.

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11 Appendices

Appendix A: Perception Stage 18 Advertisements

Product	Advertisement	Linguistic/ Non-linguistic
Acme Carpet Cleaner	Say goodbye to dust dirt and dander	Linguistic: Alliteration
Acme Nourishing Conditioner	The cool drink of water your hair has been craving	Linguistic: Metaphor
Acme Airlines	A mile-high staff that's down-to-earth	Linguistic: Converseness
Acme Foundation with SPF	Make-up for all those years you tortured your skin	Linguistic: Paronomasia
Acme Skydiving	The best worst idea you've ever had	Linguistic: Contradiction
Acme Boxing Gym	It's about time you learned to roll with the punches	Linguistic: Expression
Acme Fitness Center	Sign up today, work-out any day, have the body you want every day	Linguistic: Repetition
Acme Running Shoes	Have pride in your stride	Linguistic: Rhyming
Acme Digital Alarm Clock	More clock than Big Ben	Linguistic: Word Coinage
Acme Cereals	Can't stop at one box, can't stop at two...before you know it you're a regular cereal-killer	Linguistic: Repetition and Paronomasia
Acme Weight Loss Program	Eat well and lose weight, what more could you ask for?	Non-linguistic
Acme Travel Agency	Here to support all of your life's big adventures	Non-linguistic
Acme Red Wine	For the perfect end to a long day	Non-linguistic
Acme Laundry Detergent	Give your clothes a deeper clean that you can see and feel	Non-linguistic
Acme Luxury Two-Door Refrigerator	So big, you might have to eat your way out	Non-linguistic
Acme Smart Phone	So smart, it might make you look dumb in front of your friends	Non-linguistic
Acme Affordable Luxury Vehicle	Who said you have to be rich to have it all?	Non-linguistic
Acme Easy Pass	In case taking your time, just isn't an option	Non-Linguistic

Appendix B: Recall Stage 36 Original and Alternate Advertisements

Product	Advertisement	Linguistic/ Non-linguistic	Original/ Alternate
Acme Carpet Cleaner	Say goodbye to dust dirt and dander	Linguistic: Alliteration	Original
Acme Nourishing Conditioner	The cool drink of water your hair has been craving	Linguistic: Metaphor	Original
Acme Airlines	A mile-high staff that's down-to-earth	Linguistic: Converseness	Original
Acme Foundation with SPF	Make-up for all those years you tortured your skin	Linguistic: Paronomasia	Original
Acme Skydiving	The best worst idea you've ever had	Linguistic: Contradiction	Original
Acme Boxing Gym	It's about time you learned to roll with the punches	Linguistic: Expression	Original
Acme Fitness Center	Sign up today, work-out any day, have the body you want every day	Linguistic: Repetition	Original
Acme Running Shoes	Have pride in your stride	Linguistic: Rhyming	Original
Acme Digital Alarm Clock	More clock than Big Ben	Linguistic: Word Coinage	Original
Acme Cereals	Can't stop at one box, can't stop at two...before you know it you're a regular cereal-killer	Linguistic: Repetition and Paronomasia	Original
Acme Weight Loss Program	Eat well and lose weight, what more could you ask for?	Non-linguistic	Original
Acme Travel Agency	Here to support all of your life's big adventures	Non-linguistic	Original
Acme Red Wine	For the perfect end to a long day	Non-linguistic	Original
Acme Laundry Detergent	Give your clothes a deeper clean that you can see and feel	Non-linguistic	Original
Acme Luxury Two-Door Refrigerator	So big, you might have to eat your way out	Non-linguistic	Original
Acme Smart Phone	So smart, it might make you look dumb in front of your friends	Non-linguistic	Original
Acme Affordable Luxury Vehicle	Who said you have to be rich to have it all?	Non-linguistic	Original
Acme Easy Pass	In case taking your time, just isn't an option	Non-Linguistic	Original
Acme Moisturizing Body Wash	Get smoother skin in seconds	Linguistic: Alliteration	Alternate
Acme Credit Card	A card you can depend on to support your independence	Linguistic: Contradiction	Alternate

Acme Cloth Carry-on Luggage	No room over head? Put it under your seat!	Linguistic: Converseness	Alternate
Acme Surround Sound Theater System	Providing in-home theaters for the not so rich or famous	Linguistic: Expression	Alternate
Acme E-reader	Your own personal library that fits in your purse	Linguistic: Metaphor	Alternate
Acme Seltzer Water	Great taste and zero calories to help keep you fizzically fit	Linguistic: Paronomasia	Alternate
Acme Dog Food	Only the best for man's best friend	Linguistic: Repetition	Alternate
Acme Cruise Line	Start enjoying your vacation on the way to your destination	Linguistic: Rhyming	Alternate
Acme Self Tanner	New and improved spray on self-tanner. Get your spran on!	Linguistic: Word Coinage	Alternate
Acme Multi-purpose Furniture	Furniture that's fun and easy to stage, some might even say its multi-fun-ctional	Linguistic: Repetition and Paronomasia	Alternate
Acme Noise Cancelling Headphones	Escape life's everyday stresses. What's your happy place?	Non-Linguistic	Alternate
Acme Extra-ply Paper Towel	Clean up the same mess in half the time	Non-linguistic	Alternate
Acme Game System	Real life action with in your face graphics…it's time to take control	Non-Linguistic	Alternate
Acme Ballpoint Pen	Imagine what else Shakespeare could have written if he didn't have to keep dipping his quill	Non-linguistic	Alternate
Acme Fashion UV Sunglasses	Protect your eyes and look good doing it	Non-linguistic	Alternate
Acme Multi-style Hair Straightener	Want luscious curls, after-beach waves, or bone straight strands? We've got you covered!	Non-Linguistic	Alternate
Acme Coffee	Let us be the reason you get up in the morning	Non-linguistic	Alternate
Acme Breath Mints	You'll never have to play the "guess what I had for lunch today?" game again	Non-linguistic	Alternate

Appendix C: Recall Group A 18 Advertisements

Product	Advertisement	Linguistic/ Non-linguistic	Original/ Alternate
Acme Skydiving	The best worst idea you've ever had	Linguistic: Contradiction	Original
Acme Digital Alarm Clock	More clock than Big Ben	Linguistic: Word Coinage	Original
Acme Airlines	A mile-high staff that's down-to-earth	Linguistic: Converseness	Original
Acme Nourishing Conditioner	The cool drink of water your hair has been craving	Linguistic: Metaphor	Original
Acme Foundation with SPF	Make-up for all those years you tortured your skin	Linguistic: Paronomasia	Original
Acme Multi-purpose Furniture	Furniture that's fun and easy to stage, some might even say its multi-fun-ctional	Linguistic: Repetition and Paronomasia	Alternate
Acme Cruise Line	Start enjoying your vacation on the way to your destination	Linguistic: Rhyming	Alternate
Acme Surround Sound Theater System	Providing in-home theaters for the not so rich or famous	Linguistic: Expression	Alternate
Acme Dog Food	Only the best for man's best friend	Linguistic: Repetition	Alternate
Acme Moisturizing Body Wash	Get smoother skin in seconds	Linguistic: Alliteration	Alternate
Acme Affordable Luxury Vehicle	Who said you have to be rich to have it all?	Non-linguistic	Original
Acme Travel Agency	Here to support all of your life's big adventures	Non-linguistic	Original
Acme Luxury Two-Door Refrigerator	So big, you might have to eat your way out	Non-linguistic	Original
Acme Weight Loss Program	Eat well and lose weight, what more could you ask for?	Non-linguistic	Original
Acme Fashion UV Sunglasses	Protect your eyes and look good doing it	Non-linguistic	Alternate
Acme Multi-style Hair Straightener	Want luscious curls, after-beach waves, or bone straight strands? We've got you covered!	Non-linguistic	Alternate
Acme Coffee	Let us be the reason you get up in the morning	Non-linguistic	Alternate
Acme Breath Mints	You'll never have to play the "guess what I had for lunch today?" game again	Non-linguistic	Alternate

Appendix D: Recall Group B 18 Advertisements

Product	Advertisement	Linguistic/ Non-linguistic	Original/ Alternate
Acme Cereals	Cereals you won't want to stop eating…become a real cereal-killer	Linguistic: Repetition and Paronomasia	Original
Acme Running Shoes	Have pride in your stride	Linguistic: Rhyming	Original
Acme Boxing Gym	It's about time you learned to roll with the punches	Linguistic: Expression	Original
Acme Fitness Center	Sign up today, work-out any day, have the body you want every day	Linguistic: Repetition	Original
Acme Carpet Cleaner	Say goodbye to dust dirt and dander	Linguistic: Alliteration	Original
Acme Credit Card	A card you can depend on to support your independence	Linguistic: Contradiction	Alternate
Acme Self Tanner	New and improved spray on self-tanner. Get your spran on!	Linguistic: Word Coinage	Alternate
Acme Cloth Carry-on Luggage	No room over head? Put it under your seat!	Linguistic: Converseness	Alternate
Acme E-reader	Your own personal library that fits in your purse	Linguistic: Metaphor	Alternate
Acme Seltzer Water	Great taste and zero calories to help keep you fizzically fit	Linguistic: Paronomasia	Alternate
Acme Red Wine	For the perfect end to a long day	Non-Linguistic	Original
Acme Laundry Detergent	Give your clothes a deeper clean that you can see and feel	Non-linguistic	Original
Acme Smart Phone	If you're not careful, it might make you look dumb in front of your friends.	Non-linguistic	Original
Acme Easy Pass	When taking your time just isn't an option.	Non-linguistic	Original
Acme Noise Cancelling Headphones	Escape life's everyday stresses. What's your happy place?	Non-linguistic	Alternate
Acme Extra-ply Paper Towel	Clean up the same mess in half the time	Non-linguistic	Alternate
Acme Game System	Real life action with in your face graphics…it's time to take control	Non-linguistic	Alternate
Acme Ballpoint Pen	Imagine what else Shakespeare could have written if he didn't have to keep dipping his quill	Non-linguistic	Alternate

Appendix E: Perception Stage Assigned Number Labels for 8 Non-linguistic Advertisements

Non-linguistic Advertisement	Assigned Number Label
So big, you might have to eat your way out	Non-linguistic 1
For the perfect end to a long day	Non-linguistic 2
Who said you have to be rich to have it all?	Non-linguistic 3
Here to support all of your life's big adventures	Non-linguistic 4
If you're not careful, it might make you look dumb in front of your friends	Non-linguistic 5
Give your clothes a deeper clean that you can see and feel	Non-linguistic 6
When taking your time just isn't an option	Non-linguistic 7
Eat well and lose weight, what more could you ask for?	Non-linguistic 8