

Expanding direction-of-comparison theory and its applications for political advertising practitioners

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Abstract

The authors expand direction-of-comparison theory by exploring the cancellation and focus model of decision choice in new media environments. The findings in these environments are then compared with existing findings from previous studies that utilized print media stimuli. The similarities and differences are then discussed. The implications of this study on comparative political advertising campaigns are given, with specific suggestions on how political advertising practitioners can utilize this new decision-making information. This can result in creation of better and more productive comparative advertisements within their campaigns. Past research has shown the effectiveness of comparative political advertising on an audience that currently supports a specific candidate. This study expands knowledge in this area by offering research findings that suggest these comparative ads, if set up correctly, can be effective on those audience members who have not yet made up their mind, or who see the political candidates as essentially equal.

Keywords: Political Advertising, Comparative Advertising, Decision Making, Direction-of-Comparison

INTRODUCTION

In today's political arena, name-calling may in fact harm both the recipient and the attacker. Much of the literature on negative political advertising focuses on its effectiveness, the change in voter intent, and negative sponsor and target candidate effects (Ansolabehere and Iyengar 1996; Faber, Tims and Schmitt, 1993; Gans, 1985; Pinkleton, 1997).

Negative advertisements have become a mainstay within the political scene over recent history. Research has revealed that close to half of all political advertising mentions both candidates names, and 22% of these advertisements contained direct comparisons between the candidates (Boiney and Paletz, 1991). Furthermore, upwards of 30 to 50% of a candidates campaign advertising budget is devoted to negative advertising (Colford, 1986; Johnson-Cartee and Copeland, 1991). This represents the trend of political campaigns becoming more negative, with an increased utilization of negative advertisements (Sonner, 1998).

Within negative advertising are varying forms of conveying negative information about the target. These include attack advertising, direct and implied comparative advertising, negative issue and negative image advertising (Pinkleton, 1997). Attack advertising is designed to be a single-sided strike, which tries to bring attention to the weaknesses of the opponent, either on an issue or a character-based position (Johnson-Cartee and Copeland, 1991; Merritt, 1984; Pinkleton, 1997). Negative advertising generally appears in two forms, issue and image based (Johnson-Cartee and Copeland, 1989). Negative issue advertisements tend to cite specific actions and beliefs of a candidate that might be seen in a negative light, for example, criminal records or absentee levels. Negative image advertising focuses more on the candidates' personal traits such as personal life, religion or medical history. (Johnson-Cartee and Copeland, 1989; Pinkleton, 1997).

Another type of negative political advertising is that of comparative ads. These ads tend to try and sway public opinion and perceptions by showing the advantage of the sponsoring candidate, or by showing the disadvantage of the target candidate. Generally this is done by showing candidate's records, positions on popular issues, and experience levels, in order to project negative information about the opponent to the public (Gronbeck, 1985; Pfau and Kenski, 1990; Salmore and Salmore, 1989).

It has been argued that political campaigns should be evaluated as paired alternatives, and not solely in isolation. This is due to the candidates' images being constructed by the interaction of both campaigns, and the publics' perception of these images being built based upon this interaction (Johnson-Cartee and Copeland, 1991).

This study will specifically look at the feature mapping and valence based literature, and how it can help political advertising practitioners. It identifies how respondents react to positive and negatively valenced information, and how this information is used to identify similarities and differences in objects. This literature base is expanded into two new media contexts, verbal and multimedia, and implications for comparative political advertisements in a paired alternative manner are given. The effect of such ad campaigns on the intended targets will be addressed, and suggestions will be offered to the ad sponsors on how to maximize the usefulness of these comparative ads.

FEATURE MAPPING AND DECISION CHOICE

Everyday life is filled with situations in which people willingly or unwillingly make choices between alternatives. These choices determine what actions are taken, and in doing so, direct the path our everyday lives take. This can be in the form of mundane choices such as whether to put on our right or left shoe first, all the way to life altering choices such as which job to take, who we marry, and which political candidate we vote for. One thing common to any of these situations in which a choice is made is that information is used to facilitate the decision-making process. We use this information to make judgments about objects, products available for purchase, and even about people we meet. To help deal with the vast amounts of information that is constantly provided by our environment, comparisons between objects are conducted to help classify both similarities and differences between two items (Houston, Sherman and Baker, 1989). This also occurs with political advertisements. Specific information is given to the audience by the advertiser, and the audience is then left to accumulate additional knowledge or make a voting decision based upon the knowledge they currently have.

The comparison process used in any situation is an important and fundamental social and psychological process (Houston et al., 1989). Most of our judgments about objects come from determining the differences and similarities between them by means of the comparison process. Tversky (1977) characterized objects as consisting of a set of attributes or features. These attributes correspond to specific components of that object, for example a candidate's stance on abortion or gun control legislation. In the case of political opponents, these features or attributes are what make up the candidate. These attributes can be abstract in nature such as the candidate's level of charisma, or they can be more concrete properties such as criminal record and political party affiliation. Tversky (1977) suggested that it would be reasonable to assume that when we encounter items that we feel can be compared, then comparison is done by mapping the attributes of one object onto the other. It is through this mapping process that he believed similarities and differences between the characteristics of these objects would emerge. In the case of political comparative ads, features of one candidate are mapped onto the features of the other candidate.

Since we are mapping the features and attributes of one item onto another, it would seem acceptable to assume that the order in which items were compared to each other would not affect the outcome of our comparison. This is due to the fact that the items used in comparison do not change based upon the order in which they are seen. Again going back to a political campaign example we would expect that, since the features of the candidates are consistent regardless of which candidate we look at first, there should then be no difference in results based upon the position of examination. However Tversky (1977) predicted and found asymmetries in judgments that respondents made, and these asymmetries depended upon which direction the comparison was made. This feature-mapping model pointed out the importance of making a clear statement of which person, item or object is to be made the starting point of the comparison. This starting point, he suggested, should be called the Subject. The object that is the target of the comparison was called the Referent. Many authors have followed this labeling system (Houston and Sherman, 1995; Houston et al., 1989, 1991; Kardes and Sanbonmatsu, 1993; Mantel and Kardes, 1999; Sanbonmatsu, Kardes and Gibson, 1991). However in order to increase the readability of the paper the terminology of Starting Point to mean the Subject, and Target to indicate the Referent will be used. Specific manipulations in the current experiment have led the Starting Point to be the second of the two objects described in each category, while the first object being described was the Target. This may initially seem counter intuitive,

however a comparison cannot actually be made until the second unit of the pair is evaluated, and therefore that object is the “starting point” of the comparison.

Tversky (1977) believed that making this distinction between the Starting Point and the Target was necessary due to the idea that when people compare objects (or map features of one item onto another), they do so by mapping the features of the Starting Point onto those of the Target. By beginning with the object that is considered the Starting Point of the comparison the respondents making the comparison pay more attention to the features of that object. Going back to the notion of our judgments of objects coming mostly from determining the similarities and differences between them, the comparison process will thus highlight those features of the Target that are also present in the Starting Point. This provides us with information about which features are common to both objects. It is important to note that the unique features of the Target are not noticed during this comparison. This is due to the features of the Starting Point being used as a “checklist” to which the features of the Target are compared. Although the unique features of the Target do not readily appear, the unique features of the Starting Point will be especially noticed due to the person observing that the Starting Point has a particular feature, while the Target does not. Past work in the area of similarity judgments (Srull and Gaelick, 1983; Tversky, 1977), the use of analogies (Read, 1987), and the detection of change (Agostinelli, Sherman, Gazio and Hearst, 1986), have all shown the importance of identifying the unique features of the Starting Point.

As earlier identified, Tversky (1977) predicted asymmetry in judgments depending on which object was considered the Starting Point, and which object was made the Target. Srull and Gaelick (1983) also examined the importance of the unique features of a Starting Point, by observing asymmetries when participants were asked to make similarity judgments based on themselves. The participants were told to judge the similarity between themselves and another person, and by judging the similarity between the other person and themselves. In effect what they were doing was making the respondent use themselves as the Starting Point and the other person the Target in one case, and use the other person as the Starting Point and themselves the Target in another case. They found that this manipulation resulted in a significantly greater sense of similarity when the other person was compared to them, than when they compared themselves to the other person. Similar direction-of-comparison asymmetries were also found in studies by Holyoak and Gordon (1983) and Read (1987).

Agostinelli et al. (1986) conducted an experiment that went beyond looking at similarities, and looked at detection of differences when using Starting Points and Targets. They found that by changing the object they made the Starting Point, they could affect the ability of the respondent to detect specific differences between the two objects. This was accomplished by showing a group of respondents' line drawings of ordinary items. At a later time, the respondents were again shown these line drawings, except this time they were shown the original picture with either a feature added to it, or a feature having been deleted from it. The respondents were then told to detect if a change had actually occurred, and if a change had indeed occurred, what specifically was that change. They hypothesized that if the second viewing of the drawing was used as the Starting Point of the comparison, and the respondents were making their comparisons by using a feature matching approach, then additions should be better detected than deletions. Additions were situations in which features appeared in the second viewing that were not in the original drawing. Deletions were situations in which a specific feature was deleted from the first viewing to the second viewing. The authors found

support for their hypotheses when in fact respondents were better at detecting additions than they were at detecting deletions.

Agostinelli et al. (1986) followed up with another experiment that reversed the order of the first experiment, and made the first stimulus or drawing the Starting Point of the comparison, and the second drawing the Target. As expected, they found that when people were focused on the Starting Point (first stimuli), they were better able to detect deletions (features only present in the first stimuli) than additions. These findings help support the idea that the features of the Starting Point, and especially the unique features, carry a great deal of weight in the actual comparison process. In both of the Agostinelli et al. (1986) experiments, the unique features of the Starting Point were the features that had the advantage in the detection of change. This suggests that respondents would be better at detecting when new information arises about a candidate than when specific information is no longer mentioned. An example could be that people are more readily able to detect when a candidate is newly reported to have a criminal record, than when a candidate's criminal record is no longer highly reported. These findings help support the idea that the features of the Starting Point, and especially the unique features, carry a great deal of weight in the actual comparison process.

THE CANCELLATION AND FOCUS MODEL

The cancellation and focus model of comparison that arose from the previously mentioned experiments was proposed by Houston, Sherman and Baker (1991), and Houston and Sherman (1995) as a model that looked at enhancement of the unique rather than the shared features of paired alternatives. The model also incorporated looking at the unique features of the Starting Point relative to the unique features of the Target (Houston, Sherman and Baker, 1989).

Specifically stated, cancellation of features occurs when both the Starting Point and the Target have some of the same features. These common features will be cancelled and not used to help facilitate a decision. Once these common features have been cancelled, the unique features that remain, especially those of the alternative that acts as the Starting Point of the comparison (starting point), will be focused upon. The focus component of the model is created from a combination of the nature of the choice tasks themselves, and in part from the emphasis placed upon the unique features of the Starting Point (Houston et al., 1989; Agostinelli et al., 1986). The cancellation section of the model was derived from the nature of a choice task itself (Houston et al., 1989; Tversky, 1977).

Since the model looks at enhancing the unique features of a pair of alternatives, while at the same time removing the influence of the shared features (cancellation), they then suggested that the valence of the features that were unique is also important. Pairs of items could thus have unique-good features, or unique-bad features. Unique-good pairs are ones that have the same bad features common to the pair, while having unique-good features. Unique-bad pairs are those that have the same good features common to the pair, while having unique-bad features. This overall valence of the paired objects' unique features was shown to have an effect on the number of stages in the choice process, and also had an effect on perceptions of both systematic choice reversals (Houston et al., 1989), and a respondent's perception of choice conflict (Houston and Doan, 1996; Houston and Sherman, 1995).

Systematic choice reversals were shown to occur dependent upon which item the researcher presented as the Starting Point, and which one was presented as the Target. The model further suggests that when people are making comparisons between approximately

equivalent items, they will be less likely to focus on the unique features of the Target, and more likely to focus on the unique features of the Starting Point. The authors furthered this by suggesting that in the case of unique-good features, the enhanced salience of the Starting Point's unique-good features and the subsequent neglect of the unique-good features of the Target should create a situation in which the Starting Point is preferred over the Target. It is expected that the reverse is also true. As mentioned earlier, these results are called direction-of-comparison effects.

Other research in the area of direction-of-comparison has suggested that differences in communication methods can highlight and make salient different features between the objects being compared (Dhar, Nowlis and Sherman, 1999). Beyond situational differences that might affect direction-of-comparison results, other authors have suggested that individual characteristics might interact with situational variables resulting in explanations of why every respondent does not demonstrate the effect (Mantel and Kardes, 1999). Specifically, Mantel and Kardes (1999) demonstrated that individuals who are high in need for cognition are more likely to be influenced by the direction-of-comparison effect. However none of the research in the area of direction-of-comparison has, to the author's knowledge, been conducted using any presentation style other than visual stimuli. By moving the research from this area into new media settings, the domain of the effects can be better determined, and allow researchers and practitioners to be better equipped to predict and take advantage of these effects.

The cancellation and focus model and direction-of-comparison research has found robust results when using written descriptions of items that make up the features of an object. However we do not only have visual information available to us when making choices. We are constantly receiving and processing visual, verbal, and multimedia stimuli that are present in our environment. Many forms of media use sound as either the primary conduit or as a peripheral method for information transfer. Examples of the use of verbal presentation would be radio advertisements or a salesperson's pitch. Since its advent, the radio has been used by companies to advertise their products and services to the listening public. News, music, dramas and commercials are presented to the listening audience. This suggested that verbal cues could be presented to the target audience, providing them with information that can be used to facilitate the decision-making process.

PRESENTATION STYLE DIFFERENCES

There is a vast research base that suggests that information, which is obtained through verbal means, is processed and remembered differently than information obtained through visual presentations. For example, Goolkasian (2000) found that reaction times and accuracy rates were better for spoken information than for printed information. These results were consistent with Sweller, Chandler, Tierney and Cooper (1990), who also found a recognition advantage for verbal over printed material. When participants were reasoning from material stored in memory, verbal presentation materials provided a performance advantage over printed presentations (Goolkasian, 2000).

Baddeley (1992) offered a description of working memory that included two separate and independent processors. The first (in no particular order) is what he called a visual sketchpad, and the second being a phonological loop. The visual sketchpad is what printed material is processed through, while verbal information is processed through the phonological loop. These have also been called the articulatory loop used for spoken words (Baddeley, 1986) and the

grapheme buffer, used for written words (Caramazza, Miceli, Villa and Romani, 1987). The existence of two distinct memory processors suggests that there could be differences between print and verbal presentations (Frick, 1984; Kalyauga, Chandler and Sweller, 1999; Moreno and Mayer, 1999; Penney, 1989; Tavassoli, 1998; Unnava, Agarwal and Haugtvedt, 1996). With respect to multimedia environments, past research has indicated that memory advantages exist with multimedia versus single medium presentations (e.g. Broadbent, 1956; Glenberg and Fernandez, 1988; Hede, 1980). By having more attributes in memory at the time of a decision, respondents should be better able to cancel the common features of the pair and focus on the unique features, thus demonstrating the direction-of-comparison effect.

The rationale for expecting direction-of-comparison effects to occur for verbal and multimedia presentations is the same as for print presentations. However, since the stimulus materials are being given in differing presentation formats which have been shown in past research to be processed using different memory systems, there remains the question of whether or not direction-of-comparison theory will hold within these additional presentation environments.

HYPOTHESES

Based on the above literature, the following hypotheses are offered.

Experiment 1.

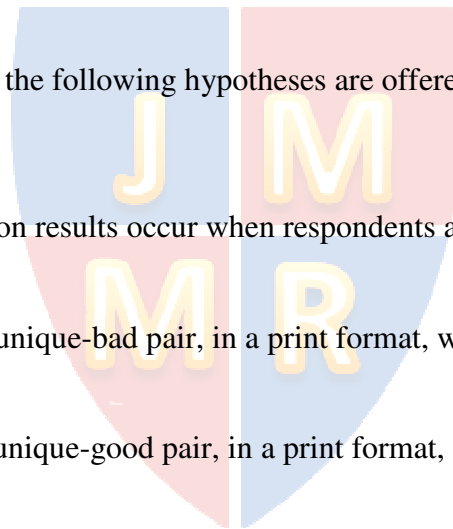
- H1a. Direction-of-comparison results occur when respondents are given information in print format.
- H1b. Respondents seeing a unique-bad pair, in a print format, will prefer the Target over the Starting Point.
- H1c. Respondents seeing a unique-good pair, in a print format, will prefer the Starting Point over the Target.

Experiment 2.

- H2a. Direction-of-comparison results occur when respondents are given information in a verbal format.
- H2b. Respondents seeing a unique-bad pair, in a verbal format, will prefer the Target over the Starting Point.
- H2c. Respondents seeing a unique-good pair, in a verbal format, will prefer the Starting Point over the Target.

Experiment 3.

- H3a. Direction-of-comparison results occur when respondents are given information in a multimedia format.



- H3b. Respondents seeing a unique-bad pair, in a multimedia format, will prefer the Target over the Starting Point.
- H3c. Respondents seeing a unique-good pair, in a multimedia format, will prefer the Starting Point over the Target.

Support for H1a, H2a and H3a will come in the form of significant differences between the mean unique-good scores and the mean unique-bad scores. Support for H1b, H2b and H3b will be demonstrated by a unique-bad score being significantly lower than the scale median point of 6.5. Support for H1c, H2c and H3c will be demonstrated by a unique-good score being significantly higher than the scale median point of 6.5.

METHOD

Subjects:

Participants were 107 students from introductory psychology classes at a large State University. Respondents were randomly assigned to one of the three media environments, with none of the subjects participating in more than one experiment. Experiment 1 was created to test for direction-of-comparison effects in print format, Experiment 2 was created to test for effects in a verbal format, and Experiment 3 was created to test for effects in a multimedia format.

Stimulus Materials:

Descriptive feature lists were constructed for four categories of objects (automobiles, apartments, a college course in the participant's major, and vacation spots). These categories were patterned after an experiment by Houston, Sherman and Baker (1989).

Each description shared its good features but not its bad features with one other description, while sharing its bad features but not its good features with another different description. By pairing each description with the other two descriptions with which it shared some features, four pairs of descriptions were constructed for each category: two pairs containing descriptions with the same good features and unique-bad features (unique-bad pairs) and two pairs of descriptions with unique-good features and the same bad features (unique-good pairs).

All three experimental groups received identical information. The only difference being the way the information was presented to them. Respondents in Experiment 1 read the information from a prepared booklet. Respondents in Experiment 2 listened to the information read to them from a compact disc (CD). Respondents in Experiment 3 both listened and read the information simultaneously.

EXPERIMENT 1 (Print Environment)

Subjects:

Participants were 41 students from introductory psychology classes at a large State University. Students participated in this study for extra-credit.

Procedures:

The procedure for administration of the experiment was partially patterned after that used by Houston, Sherman and Baker (1989), and Agostinelli et al. (1986). Each participant made preference choices for all four categories of objects: two categories containing descriptions of unique-bad pairs (unique-bad categories) and two categories containing unique-good pairs (unique-good categories). The assignment of the category to be either being a unique-good or unique-bad comparison was randomly determined by the researcher a priori of the experiment. The order of the categories was held constant for each respondent, but with the provision that categories containing the same unique types would not appear consecutively.

A booklet was prepared for each participant within a group. Each group was randomly assigned one of the differing booklet versions. All experimental groups were played verbal instructions that had been prepared in advance, with the subjects having a written copy of the instructions to follow. Participants then read the descriptions from the first category (Target). They were then instructed to turn the page and read the description of the corresponding object (Starting Point). On the next page respondents were asked to indicate their preference within this category, using a 12 point scale ranging from strongly favor the first item (1) to strongly favor the second item (12). This scale is the most commonly used scale for this type of research. For an example of the measure see Figure 1. This was continued for the next three categories. Respondents were instructed not to flip back and forth between pages, as doing so would change which object was perceived as the Target, and which one the Starting Point.

If the respondents use the second item in the category as the Starting Point of comparison, and comparisons are made by means of a feature matching process, then the unique features of the Starting Point should exert a strong influence on preference judgments. In the case of unique-bad pairs, the bad features of the Starting Point should be especially salient to the preference judgment, while the bad features of the Target should be less important. Based on this, we would expect the Target to be preferred, which is demonstrated by low observed scores on the preference scale. Conversely, for unique-good pairs, the good features of the Starting Point should be more salient, while the good features of the Target would be less influential. In this case, the Starting Point of comparison should be favored, resulting in higher scores recorded on the preference scale.

RESULTS

To examine whether there were any effects attributable to pair version, or the order of the descriptions within each pair version, t-tests were conducted for each pair type and within each category. No significant effects for any of these factors were observed, and therefore scores were combined across versions and order of descriptions.

Each participant had made choices in two unique-good situations and two unique-bad situations. Since no order effects were found, average unique-bad and unique-good scores were calculated for each respondent. By averaging these scores across all respondents, mean unique-good and unique-bad scores were obtained. The unique-good and unique-bad scores were then compared to each other by means of a paired sample, within subjects t-test. Consistent with past findings, the overall mean for the unique-bad categories ($M=5.43$) was significantly lower than the overall mean for the unique-good categories ($M=7.10$), $t(40) = 3.76$, $p < 0.001$, thus finding support for H1a.

As mentioned earlier each of the pairs were created so as to be objectively equal in desirability and were counterbalanced for position across respondents. Given this, the expected mean for both the unique-good and unique-bad scores would be 6.5, which is the midpoint of the twelve-point scale used.

Therefore t-tests were also conducted to compare mean scores for both unique-good and unique-bad, to the midpoint of 6.5. Both the mean for unique-good and unique-bad scores differed significantly from the midpoint of the scale, with unique-bad results of $M=5.43$, $t(41) = -3.13$, $p < 0.003$, and unique-good results of $M=7.10$, $t(41) = 1.99$, $p < 0.05$, thus showing support for both H1b and H1c respectively. These results differ slightly from past research. Some earlier studies found that only unique-bad scores differed significantly from the mean of 6.5. In this case both good and bad scores were significantly different from the mean. This suggests that the respondents' may not have a general tendency to exhibit a primacy effect as reported in Houston et al. (1989, Experiment 1). Further research in the area of primacy and recency effects with respect to the cancellation and focus model is suggested.

If the order of comparison effect is working at the level of the individual participant, each respondent's mean unique-bad score should be lower than his or her unique-good score. This would indicate a preference for the Starting Point in unique-good cases, and a preference for the Target in unique-bad situations. To test this, each respondent's unique-good score was subtracted from his or her unique-bad score. Approximately three-quarters of the respondents showed differences between their mean unique-good and their unique-bad scores in the predicted direction (i.e. producing "minus" differences; 30 "minuses", 9 "pluses", and 2 ties), $z = -3.20$, $p < 0.001$ by a sign test.

Overall, the results of Experiment 1 come to similar conclusions and replicate previous research in this area (Houston et al., 1989, 1991; Houston and Sherman, 1995). Also, the results of this experiment actually found a stronger effect than some previous studies (e.g. Houston et al., 1989 Experiment 1), by showing the unique-good mean scores being significantly higher than the mean point of 6.5 (Which is consistent with the findings in Houston et al., 1989 Experiment 2).

EXPERIMENT 2 (Verbal Environment)

Experiment 2 was designed to show whether or not the cancellation and focus theory could be extended into another type of media exposure, and to examine whether or not respondents used a feature mapping process when given information in a verbal presentation format, and therefore whether direction-of-comparison effects will be found.

METHOD

Subjects: Participants were 34 students from introductory psychology classes at a large State University. Students participated in this study for extra-credit.

Procedures: Same as experiment 1, except respondents listened to the information given to them on CD's rather than reading the material from booklets.

RESULTS

To examine whether there were any effects attributable to pair version, or the order of the descriptions within each pair version, t-tests were conducted for each pair type and within each category. No significant effects for any of these factors were observed, and therefore scores were combined across versions and order of descriptions.

Each participant had made choices in two unique-good situations and two unique-bad situations. Since no order effects were found, average unique-bad and unique-good scores were calculated for each respondent. By averaging these scores across all respondents, mean unique-good and unique-bad scores were obtained. The unique-good and unique-bad scores were then compared to each other by means of a paired sample, within subjects t-test. The overall mean for the unique-bad categories ($M=5.56$) was significantly lower than the overall mean for the unique-good categories ($M=6.96$), $t(33) = 3.01$, $p < 0.005$, thus showing support for Hypothesis 2a.

As was the case in Experiment one, each of the pairs was created so as to be objectively equal in desirability, and were counterbalanced for position across respondents. Given this, the expected mean for both the unique-good and unique-bad scores would be 6.5, which is the midpoint of the twelve-point scale used.

Therefore t-tests were also conducted to compare mean scores for both unique-good and unique-bad, to the midpoint of 6.5. Contrary to the findings in experiment one, but consistent with the findings of Houston et al. (1989, Experiment 1), the mean for unique-good scores did not differ significantly from the midpoint of the scale [$M=6.96$, $t(33) = 1.344$, $p < 0.19$], therefore not supporting Hypothesis 2c. However the results for the unique-bad scores showed a significant difference of $t(33) = -2.50$, $p < 0.018$, therefore showing support for Hypothesis 2b. Although the mean scores for unique-good pairs were not significantly different than the scale mean of 6.5, the overall mean for unique-good is greater than the scale mean of 6.5. This again suggests that the respondents may not have a general tendency to exhibit a primacy effect as reported in Houston et al. (1989).

Approximately two-thirds of the respondents showed differences between their mean unique-good and their unique-bad scores in the predicted direction (i.e. producing “minus” differences; 21 “minuses”, 12 “pluses”, and 1 ties), $z = -1.39$, $p < 0.164$ by a sign test. Unlike experiment one, results of the sign test were not found to be significant. This would suggest that although approximately two-thirds of the respondents in each experiment showed differences between their mean unique-good and their unique-bad scores in the predicted direction, the effect was not as strong for the participants given information through the verbal presentation as they were for those given the print presentation.

EXPERIMENT 3 (Multimedia Environment)

Experiment 3 was designed to show whether or not the cancellation and focus theory could be extended into another type of media exposure, and to examine whether or not respondents used a feature mapping process when given information in a multimedia presentation format, and therefore whether direction-of-comparison effects will be found.

METHOD

Subjects:

Participants were 32 students from introductory psychology classes at a large State University. Students participated in this study for extra-credit.

Procedures:

Procedures were the same as for the other two experiments except that respondents were given the information in a multimedia format, in which they both read (from booklets) and heard (on CD's) the information simultaneously.

RESULTS

To examine whether there were any effects attributable to pair version, or the order of the descriptions within each pair version, t-tests were conducted for each pair type and within each category. No significant effects for any of these factors were observed, and therefore scores were combined across versions and order of descriptions.

Each participant made choices in two unique-good situations and two unique-bad situations. Since no order effects were found, average unique-bad and unique-good scores were calculated for each respondent. By averaging these scores across all subjects, mean unique-good and unique-bad scores were obtained. The unique-bad and unique-good scores were then compared to each other by means of a paired sample, within subjects t-test. Consistent with the findings of Experiment 1 and 2, the overall mean for the unique-bad categories ($M=5.36$) was significantly lower than the overall mean for the unique-good categories ($M=7.70$), $t(31) = 4.09$, $p < 0.0002$. This indicates support for Hypothesis 3a.

As with Experiment 1 and 2, each of the pairs were created so as to be objectively equal in desirability, and were counterbalanced for position across subjects. Given this, the expected mean for both the unique-good and unique-bad scores would be 6.5, which is the midpoint of the twelve-point scale used.

Therefore t-tests were conducted to compare mean scores for both unique-good and unique-bad pairs to the midpoint of 6.5. Both the mean for unique-good and unique-bad scores differed significantly from the midpoint of the scale, with unique-good results of $M=7.70$, $t(31) = 3.203$, $p < 0.003$, and unique-bad results of $M=5.36$, $t(31) = -3.46$, $p < 0.002$. This analysis shows support for both H3b and H3c.

If the order of comparison effect is working at the level of the individual participant, each respondent's mean unique-bad score should be lower than his or her unique-good score. This would indicate a preference for the Target in unique-bad cases, and a preference for the Starting Point in unique-good situations. To test this, each respondent's unique-good score was subtracted from his or her unique-bad score. Approximately 70% of the respondents showed differences between their mean unique-good and their unique-bad scores in the predicted direction (i.e. producing "minus" differences; 23 "minuses", 7 "pluses", and 2 ties), $z = -2.74$, $p < 0.006$ by a sign test. Overall, the results show the same conclusions as previous research in this area based on print media (Houston et al. 1989, 1991; Houston and Sherman 1995).

As political ads are not limited to only one media format such as the magazines, it is important to look at potential differences between media types. A Oneway ANOVA was conducted to determine whether or not differences existed between the print only group (visual), the echoic group (acoustic), and the multimedia group (visual and acoustic), with respect to the respondent's unique-bad and unique-good scores. The difference between each respondent's unique-good and unique-bad scores was calculated. The print media group (Experiment 1) had a mean of ($n=41$, $M=1.95$), the echoic media group (Experiment 2) had a mean of ($n=34$, $M=0.90$), and the multimedia group (Experiment 3) had a mean of ($n=32$, $M= 2.52$). Results of an ANOVA, $F(104) = 2.716$, $p < 0.071$, show that there are in fact no significant overall differences between the media types with respect to unique-good and unique-bad mean difference scores, however respondents in the multimedia group had higher mean difference scores than those in either the print or verbal groups. (See table 1.)

DISCUSSION AND IMPLICATIONS

As this study shows, within advertisements it is important to recognize who the respondent perceives the Starting Point and Target to be. By manipulating this position practitioners can predict the direction in which choice will be made. Comparative political ads have previously been shown to be "particularly effective for audiences who are highly involved, knowledgeable, and already supportive of the sponsoring candidate" (Pinkleton, 1997, p. 21). This study utilized choice examples that had been previously used by other researchers (automobiles, apartments etc.), in order to be able to compare the results from the three media types. Although it did not use political ads specifically, the general decision-making process, along with the valence and position effects should still emerge in a political advertising environment. The results suggest that if the audience sees the candidates as virtually equal in stature, comparative ads can be effective nonetheless. When the advertisements are created correctly, the cancellation and focus model shows that prediction of voting direction could be made based upon the presentation of unique good and bad features in the advertisement. Specifically, when employing a negative ad, the sponsor of the ad will be best served by making their opponent the Starting Point of the comparison, and themselves the Target. By using a negative comparative ad in this way the negative features of the opponent (Starting Point) become especially salient to the audience, and the negative features of the sponsor (Target) are neglected. This leads to the Target or sponsor being preferred and therefore voted for.

Negative comparative ads are only part of a mix of strategies that can be employed in a political campaign (Pinkleton, 1997). Other types of advertising may focus on each candidate's unique-good features instead of bringing the negative features of their opponents to light. In this case, where unique-good features are present, the strategy listed earlier for negative comparative ads would need to be changed. In this new scenario the sponsors would want to make themselves the Starting Point of comparison. This is due to the fact that past and current research shows when dealing with unique-good pairs, and when keeping the two items of a choice dilemma constant, the Starting Point should be favored no matter which of the two items is made the Starting Point. By making themselves the Starting Point, and by making their opponent the Target in these situations, the sponsor is able to create a situation in which the audience will neglect the good features of the opponent and generally prefer the Starting Point or sponsor.

Another important contribution of this research is the finding that multimedia presentations of information tend to show a greater affect on the respondents in the predicted directions than purely echoic messages such as radio advertisements. This suggests that although the wanted results can be achieved through any of the media types tested here, utilizing a format which gives the audience the same information in multiple formats will result in a better outcome. A multi-front media approach would seem to be more effective in this type of advertising than a single media approach.

The findings do not suggest however that simple adjustments of Target and Starting Point can persuade a person to change their vote if they are heavily entrenched in their beliefs about a certain candidate. What it does show is the importance of setting up advertisements that were likely to be used anyway, in a manner that will be most productive for the sponsoring candidate. Analysis of the ad content, creation and utilization of unique-good and unique-bad features of the candidates, and along with positioning of Target and Starting Point, can lead to increases in votes in a predicted direction.

LIMITATIONS AND FUTURE RESEARCH

Some specific limitations of the research findings are quite obvious. Although theory suggests the cancellation and focus model will work in a political setting, this particular study did not use political examples. Instead it was designed to explore the general predictive ability of the model in new media environments, and to compare the results of 3 different media types. Although nothing in the literature would suggest that political advertisements set up in this manner should cause different reactions with respondents than were found in previous studies, further tests of this theory specifically in a political advertising context would be warranted. Future research should also include measures of political affiliation, and thus examine if this specific decision making theory is applicable to those with strong ties to or biases towards one of the two alternatives. The ANOVA results indicated a slightly significant result (sig. = .071). This suggests further research be conducted on specific differences in direction-of-comparison effect strength between media types.

This study was designed to tackle suggestions that the role media types and modality of communication in comparative political advertisement effects be addressed (Pinkleton, 1997). Also, this study looked at paired comparisons that were suggested in past research by Johnson-Cartee and Copeland (1991). However it is not assumed that by utilizing the strategies suggested in this study great gains will be realized by individual political candidates. What we do show is that when voters are undecided, or see the candidates as virtually equal, specific changes in the way the comparative ads are created could result in voters reacting in a specific and predicted manner. As was seen in the 2000, 2004 and 2008 United States Presidential elections, even a small increase in votes can make a difference to the outcome of an election, and thus every advantage available to a candidate should be utilized.

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Figure 1.

For each pair of items, your task will be to **select which member of the pair you would prefer**, using a scale like the one shown below.

CHOOSE FIRST ITEM						CHOOSE SECOND ITEM					
1	2	3	4	5	6	7	8	9	10	11	12
Strongly Prefer The FIRST ITEM		Moderately Prefer the FIRST ITEM		Slightly Prefer the FIRST ITEM		Slightly Prefer the SECOND ITEM		Moderately Prefer the SECOND ITEM		Strongly Prefer the SECOND ITEM	

Table 1.

ANOVA Results for Print Vs. Echoic Vs. Multimedia groups.

	Sum of Squares	df	Mean Square	F value	Significance
Between	45.022	2	22.511	2.716	0.071
Within	862.034	104	8.289		
Total	907.056	106			