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Voting for a Political Candidate Under Conditions of Minimal Information

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Until very recently, the major focus of research in the field of consumer behavior has been on the selection of products, brands and decision choices primarily in the sphere of marketing. The purpose of this paper was to modify a model developed to measure market share to account for the variables that enter into the selection of a political candidate and predict voting behavior.

In April 1971, Los Angeles and its satellite cities were treated to one if its least interesting and least publicized primary elections in years. Nothing seemed to be hotly contested. A few Los Angeles city councilmen were up for reelection as were some members of the Board of Education and the Board of Trustees of the Community Colleges. The lack of public involvement can best be measured by the fact that approximately 30 percent of the registered voters turned out at the polls—an extremely low figure by Los Angeles standards. If it were not for the election of city council, the turnout would have been even poorer. Little is known about voting behavior when the contest is of little concern, generates very little, if any, concern, and is nonpartisan (e.g. party affiliation such as republican or democrat is not designated.) Yet, city and county commissioners, judges, boards of education, and even legislators are "elected" under similar conditions each year in hundreds of localities.

The "consumer" in this type of election usually knows very little about the candidates. Available information is typically no more than can be found on the ballot, a bit of promotion and perhaps a few display cards here and there. In candidate selection of this sort, available information is relatively well represented by the variables found on the ballot (such as occupation, ballot position, sex and recognizable surname characteristics) and perhaps campaign expenditures and endorsements by various organizations. The question is, "How does the voter use this information?"

John E. Mueller (1970) studied a very similar election in 1968. In that election, 133 candidates were vying for the Los Angeles Community College Board of Trustees. The top 14 candidates were to fight it out in the run-off election. Mueller studied the influence of ballot position, endorsements, occupation, ethnic identification and name recognition by means of a multiple regression model. Mueller found that appearing last on the page ballot booklet (there were seven pages of candidates) added about 5,000 votes to a candidate's total, endorsement by the *Los Angeles Times* added some 24,000 votes, and endorsement by a conservative group added about 56,000 votes to a candidate's total. On the other hand, having the occupation of lawyer on the ballot subtracted about 2,000 votes from a candidate while not having any occupation listed subtracted some 3,000 votes.

The use of regression models to "predict" elections are quite common in the political science literature as they are in consumer behavior. However, the conclusions may often be weakened because of the inapplicability of the underlying assumptions. The regression approach of Mueller and others is based on the linear additive model which assumes the effect of an attribute (say Jewishness or endorsement by the *Los Angeles Times*) is constant regardless of (1) how many other candidates (brands) are on the market; (2) how many other candidates running for the same office share identical attributes; and (3) the interaction of an attribute with other attributes the candidate possesses.

It is easy to see why the number of candidates running for the same office is important. If there were five candidates in one election and ten in the next, the

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marginal affect of possessing an attribute would be less in the latter election simply because votes must be split among more candidates (unless, of course, the total number of voters is increased proportionately with the number of candidates). The situation will not be improved by using the percentage of total votes as the dependent variable. Other things being equal, each of five candidates would receive 20 percent of the total votes, while ten candidates can expect only 10 percent each.

The consequence of the second assumption—that of brand distinctiveness—is more serious that that of the first. In fact, it may even be questioned if relative importance of various variables can be validly measured under this assumption. A simple example will suffice to show this point. Suppose that being female has an effect of adding 5,000 votes to a candidate, if she is the only candidate with the attribute, but, if two candidates running for the same office are female, it is likely that the 5,000 votes would be split between the two, each receiving substantially less than 5,000 votes. In other words, the extent an attribute would add to or subtract from the number of votes received by a candidate is dependent on how many others possess the same attribute, that is, how *distinct* he or she is among the candidates with respect to that attribute. The linear additive model ignores this distinctiveness aspect. This is a problem particularly familiar to marketing scholars and practitioners in these days of homogeneous products.

The third assumption—that of interaction—is a minor one compared with the first two, and familiar to all who use regression analysis. This assumption can be relatively easily relaxed in the regression analysis, by adding cross-product terms to regression equations. When the number of explanatory variables is large, however, this procedure becomes cumbersome to use.

Where these three assumptions of the linear additive model cannot be met, the conclusions drawn may be of dubious validity. And yet, in consumer behavior, more sophisticated models are available that explicitly account for the number of available brands, their distinctiveness and the interaction of attributes with one another (for example, see Nakanishi, 1972). Modifications of these models can be applied to the selection of a political candidate.

AN ALTERNATIVE APPROACH

The problem encountered here is actually an old one in consumer behavior. Isolating the determinants of voting behavior under minimum information is essentially identical to finding the determinants of market shares for products which are not very salient to the consumer. Few products create much interest among consumers. Most products are purchased more or less on the basis of information given on the package (price, weights and ingredients), point-of-sales displays, and advertisements. Thus, models developed for market share determinants should be applicable for isolating determinants of voting behavior in this type of election.

The model proposed here may be called the multiplicative-competitive interaction model, in contrast with the linear additive model of the Mueller study. The basic postulate of the model may be mathematically expressed as follows.

$$\pi_i = \frac{X_{i1}^{\alpha_1} \cdot X_{i2}^{\alpha_2} \cdot \ldots \cdot X_{ik}^{\alpha_k}}{\sum_{i=1}^{m} (X_{i1}^{\alpha_1} \cdot X_{i2}^{\alpha_2} \cdot \ldots \cdot X_{ik}^{\alpha_k})} \qquad (1)$$

where: π_i = the probability that a voter chooses candidate i $(i = 1, 2, \ldots, m)$
X_{ik} = the k^{th} explanatory attribute such as sex, religion, etc. $(k = 1, 2, \ldots, q)$
α_k = coefficient relating the importance of the k^{th} variable

This formulation has its roots in the previous work of Huff (1963) and Haines, Simon and Alexis (1972) for the description of retail trading areas. It was perhaps Kotler (1965) who first used a model of this type for the description of competitive market behavior. Since then a number of authors have applied the model with varying degrees of success to other marketing problems such as determining brand share (Urban, 1969; Lambin, 1972).

Detailed properties of the model can be found elsewhere (Nakanishi and Cooper, 1974), but there are two basic advantages that distinguish this model over the linear additive approach. First, the model handles quite naturally the variations in the number of candidates over different elections. The denominator increases with the number of candidates. The probability that a voter will choose a particular candidate (π_1) is reduced as the number of candidates increases. Second, the multiplicative formulation allows it to incorporate interaction effects among explanatory variables. That is, if a candidate is the incumbent and also female and Jewish, any interaction effect caused by being both female and Jewish as well as the incumbent is accounted for. In other words, this model is able to do away with two of the three assumptions of the linear additive model which has made previous political studies such as that by Mueller of doubtful reliability.

The distinctiveness aspect of a candidate, however, is not yet accounted for. That is, if more than one candidate for an office is female, the number of votes attributable to femaleness of the candidate will be shared. This distinctiveness aspect of candidate attributes requires an additional treatment. Since candidate attributes are often codable only in (0,1) fashion, dummy variables were used in the Mueller study, but in our multiplicative formulation dummy variables are

used in a way more suited to their normal nature. The approach used here is a simple one of constructing an "index of distinctiveness" in the following manner.

$$X_{ik} = m/c_k \text{ if candidate } i \text{ possesses attribute } k,$$
$$= 1 - c_k/m \text{ otherwise,}$$

where c_k is the number of candidates who possess attribute k and m the total number of candidates. X_{ik} takes the maximum value m when candidate i is the only one who has attribute k and the minimum value $1/m$ if he is the only one without attribute k. If all candidates possess attribute k (i.e., $c_k = m$), the $X_{ik} = 1$, that is, this attribute becomes irrelevant regardless of the value of α_k.

When one combines the multiplicative-competitive interaction model with the index of distinctiveness, we have a rather reasonable model of voter response to candidate attributes.

THE STUDY

Like Mueller, we chose to study the primary election of the Board of Trustees of the Los Angeles Community Colleges—the least significant of the offices in this particular election. In the primaries, 64 candidates ran for the offices. There were five offices with vacancies to be filled. Two of the offices had seven candidates running including the incumbent. One office had twelve candidates including an incumbent. Two additional offices had no incumbent, one with fourteen candidates and one with twenty-four candidates. All candidates ran at large such that every voter could vote for one candidate in each of the five offices. Two in each office won in the primary election. Of the 64 candidates the candidate with the greatest vote received 179,000 votes while the one with the least received 2,000 votes.

The explanatory variables or attributes used in the model were as follows:

Occupation. The candidates' occupations were listed on the ballot. The occupations selected for analysis were attorney or law related; teacher, professor, or education related occupations; businessmen or engineers working for private firms such as aerospace and included real estate salesmen, business executives, etc.; and all others. In addition, incumbency was considered an occupation since all incumbents had that fact listed rather than the usual occupation.

Sex. Very few females were in the race but it was selected as a variable.

Religion. Since religion was not a variable that the voter could know other than from the name on the ballot, the single variable of Jewishness was selected for the study. To determine which surnames were in fact perceptibly Jewish, five individuals were used as judges. They were presented with a list of candidates and asked to select those that they would assume were Jewish. An amazing level of agreement, or inter-judge reliability, was found. In most cases, all five judges clearly agreed. In one case, that of Candidate Goldwater, several asked if we meant Barry Goldwater because he was not Jewish. When informed we did not mean Barry Goldwater or his son, all five agreed this was a Jewish name. In all cases, at least four of the five judges agreed that given candidates were Jewish. In two cases (Candidates Richman and Pearman) one judge claimed these may be Jewish names but the other four disagreed. These two candidates were not listed as Jewish. Hence, the variable of Jewishness is operationally defined as those individuals judged to be Jews, based only on their surname, and has nothing to do with religious beliefs.

Other ethnic variables were not used in this study either because of unidentifiability from the ballot or too small a sample size. For example, only two candidates (Washington and Hall) were Black and three were Mexican-American (Lee, Boubion, and Orozco). As can be seen, not only was the sample size unconscionably low but ethnic identification of names such as Lee, Boubion and Hall would be impossible from the surname alone.

Ballot Position. This was the obvious variable of position on the ballot. The positions recorded for the study were the first, second, third, and last on the ballot for each office and adjacency to the incumbent. It seemed reasonable that being placed adjacent to the best known brand on the shelf may have some relevance.

Campaign Effort. Heavy campaigning implied use of the mass media in paid advertisements such as spot radio and TV commercials and newspaper ads. An *average campaign* implied no use of paid advertising outside of brochures, mimeographing, and perhaps some campaign cards. The expenses of this group ranged from $200 to perhaps $3,000. A *light campaign* implied expenses under $200, few speeches and no effort for free publicity.

California election laws require that all candidates file affidavits that include all donations and all campaign expenses. Cursory examination of these data indicated, however, that the filed statements must be considered scientifically unreliable. Fortunately, one of the authors of this paper was a candidate in that election and became personally acquainted in some detail with the campaign efforts of the other candidates. Hence, this attribute consisted of the judgment of that author. Since these determinations had been made during and immediately following the campaign and long before this study was conceived, the probability of experimenter bias is extremely low. As an informal measure of reliability, several of the judgments were checked with other informed candidates in the election.

Endorsements. There were four major and one lesser endorsement in the campaign. The major newspapers—*Los Angeles Times* and *Los Angeles Herald-Exam-*

iner—endorsed candidates. Save our Community Colleges (SOCC), a moderate campaign group, also had an endorsement. Originally consisting of a group of left-leaning community college teachers, this group joined with the AFL-CIO and endorsed a moderate slate. The Taxpayers Selection Council consisted of hard-core conservatives, and a second conservative group emerged, primarily consisting of several extreme conservative candidates who had not been selected by the Taxpayer Council.

These six attributes were then broken down into 18 binary variables as follows:

Occupation = occupation listed in the ballot (lawyers, educators, business executives/engineers, incumbents)
Sex = male or female
Ethnic Surname = Jewish or non-Jewish
Ballot Position = positions on the ballot (first, second, third, last, adjacent to incumbent)
Campaign Effort = use of mass media and other forms of advertising (heavy, medium, or light)
Endorsements = *Los Angeles Times, Los Angeles Herald-Examiner,* SOCC (Moderate-Labor), Taxpayers Selection Council (Conservative), a second conservative group.

RESULTS

Table 1 summarizes the first part of the results. The first column presents the actual votes received by each of the 64 candidates for the five offices. The second column presents the predicted vote as determined by the interactive model in the form of a deviation of the expected (predicted) number of votes from the observed totals. Actually, there is no prediction in this stage of the results since all data were used to estimate the coefficients of the model. This column merely indicates the magnitude of the deviation from the observed vote.

The last six columns represent the attributes possessed by the candidates as defined in the footnote to the table. For example, the last candidate for Office Number 1, Wyman, in fact received 135,707 votes. The model overestimated her vote by 8,000 votes. Further, Wyman is female, a Business or Engineer occupation, who engaged in heavy use of campaign funds, was endorsed by the *Los Angeles Times* and the SOCC slate, was the last name on the ballot for that office, and was judged to be Jewish.

A cursory examination of the table indicates that the interactive model appears to "predict" the number of votes rather well. The true test of a model's validity, however, is not given by the R^2's for regression equations, but by the ability to make accurate predictions. Neither an experimental approach nor replication on new sets of data were possible in this case. Hence in order for the advantages of the multiplicative-competitive interaction model to be convincing, it is necessary to show that it at least predicts better than the more commonly used linear additive model. Fortunately, the present data included five offices, and it was possible to estimate the parameters of both a linear-additive model and the interactive model using data for a subset of offices and then making predictions of the results for the remaining offices. We chose to perform this "real data simulation" using three offices for parameter estimation[1] and the remaining two for checking predictive accuracy. Since there are ten distinct combinations of three offices which can be formed from five offices, ten sets of estimates of parameters and ten sets of predictions were generated. They are compared with the

[1] The estimation of the coefficients of the multiplicative-competitive interaction model has been a bottleneck for the application of this model, but Nakanishi (1972) recently has shown that formula (1) can be rewritten in a linear form as:

$$\log(\pi_i/\pi) = \sum_{k=1}^{q} \alpha_k \cdot \log(X_{ik}/X_k)$$

where π and X_k are the geometric means of π_k and X_{ik} over i, respectively. Since (2) gives the dependent variable $(\log(\pi_i/\pi))$ as a linear function on a set of explanatory variables (i.e., $\log(X_{ik}/X_k)$), the use of multiple regression analysis is suggested. Since there is more than one office, the regression equation for the study was chosen as:

$$\log(p_{ij}/p_j) = \sum_{k=1}^{q} \alpha_k \cdot \log(X_{ijk}/X_{jk}) + \epsilon_{ij}$$

where: p_{ij} = the proportion of votes received by candidate i running for office $j(j = 1, 2, \ldots, 5)$,
p_j = the geometric mean of p_{ij} for office j,
X_{ijk} = the index of distinctiveness score of the k^{th} attribute for candidate i running for office j
X_{jk} = the geometric mean of X_{ijk} over candidates running for office j,
ϵ_{ij} = the stochastic error term.

For comparison the linear additive model of the following form was tested.

$$n_{ij} = \sum_{k=1}^{q} \beta_k \cdot Z_{ijk} + \gamma_o + \gamma_j D_j + \epsilon'_{ij}$$

where n_{ij} = the number of votes received by candidate i running for office j,
Z_{ijk} = the k^{th} attribute possession score for candidate i running for office j (binary variable),
D_j = dummy variable for office $j(j = 2, 3, 4, 5)$,
$\beta_k, \gamma_o, \gamma_j$ = coefficients
ϵ'_{kj} = the stochastic error term.

This is the model used by Mueller. The dummy variables were necessary to correct for the difference in the number of candidates running for each office.

TABLE 1

OBSERVED AND EXPECTED VOTE OF EACH CANDIDATE*

Candidate	Observed Vote	Deviation of Predicted Vote from Observed Vote	Occ	Sex	Cam	End	Bal	Rel
OFFICE #1								
Annett	12,948	2,051			A		1	
Duffy	9,945	868					2	
Goldwater	15,220	3,457	B		A		3	J
Greenberg	17,570	779	A		A			J
Harper	19,318	2,102	E		A			
Henry	5,894	−2,103	B					
Lynch	48,412	7,171	A		A	E,C		
O'Dell	16,175	1,170	E					
Peterson	7,101	−1,117		F				
Richman**	62,814	−12,415			A	X		
Royce	9,844	1,847	B					
Stodel	6,046	−9,499	E					
Wolfe	9,559	−1,997	A		A			
Wyman**	135,707	7,687	B	F	H	S,T	L	J
OFFICE #2								
Aaronson	9,576	875	A		A		1	J
Barstow	4,710	548	B		A		2	
Boubion	39,053	−1,927	E		A	T	3	
Bronson**	40,060	−9,470	B		H	S		J
Buchanan	15,336	5,926	E					
Capen	3,390	−3,588						
Corey	5,516	−4,979	E		A			
Farnsworth	7,613	−2,882	E		A			
Feldman	22,335	11,267			A			J
Gallagher	7,592	1,122	A					
Grant	3,942	−2,528	A					
Hall	22,558	12,063	E		A			
Hayes	12,388	821	B		A	E		
Holm	18,820	1,523	B		A	C,E		
Hyman	2,161	−7,041	A					J
Lawrence	4,625	−2,353						
Mason	2,411	−1,966	A	F				
McHangue	3,706	−4,076			A			
Pauley	28,592	−926			H	E		
Pearman	2,032	−2,345	A	F				
Ribakoff	14,151	−775	E		A			J
Scott	11,699	3,917			A			
Slosson**	52,808	7,420	B		A	X		
Spector	4,662	−627	B		A		L	J
OFFICE #3								
Binford	21,766	69					1	
Cassity	25,242	6,701	A				2	
Miller**	77,503	3,984	B		A	X	3	
Phillips	16,631	−1,150	B					
Sigler	21,822	4,041	B					
Sisson	36,913	−11,641	B		A	C,E	N	
Washington**	178,800	−2,003	I		H	S,T	L	
OFFICE #5								
Gilboa	11,490	−4,591	E		A		1	
Grillingham	6,239	−3,867	A		A		2	
Goldberg	15,373	−2,531	B		H		3	J
Hamm	20,062	7,784						
Lee**	89,137	9,312	E		H	S		
Little	15,360	3,996					N	
Orozco**	155,510	−1,333	I		A	X,E		
Pratt	12,982	2,586	A				N	
Selesnick	5,118	−3,394	B	F	A			J
Weinstein	21,714	−4,380	E		A			J
Williams	9,963	−2,315						
Witz	7,843	−1,268	A				L	

TABLE 1 (*Continued*)

Candidate	Observed Vote	Deviation of Predicted Vote from Observed Vote	Occ	Sex	Cam	End	Bal	Rel
OFFICE #7								
Elliot	28,788	542	E		H		1	
Gold	13,975	−5,816	A		A		2	J
Kassarjian	17,286	−2,859	E		A		3,N	
LaFollette**	143,761	2,303	I	F	H	X,E		
Marcus	31,821	9,777	A		A		N	J
Recht	16,669	1,154	E	F				
Taft**	103,878	−5,101	A		H	S,T	L	

* *Occ—Occupation*
A—Attorney
E—Education
B—Business, Engineer
I—Incumbent

Sex
F—Female

Rel—Religion
J—Jewish

Cam—Campaigning
H—Use of Mass Media Adv.
A—No use of Adv. but used brochures, etc.

Bal—Ballot Position
1—First position
2—Second
3—Third
L—Last for Office
N—Adjament to Incumbent

End—Endorsement
T—L.A. Times
E—L.A. Herald-Examiner
S—SOCC (moderate/Labor)
X—Taxpayer (conservative)
C—Second conservative group

** Won in the primary election.

actual results in terms of squared correlations of predicted with actual vote.

The results of this analysis are summarized in Table 2. On the average, the interactive model had a squared correlation of .873 and the linear additive model had a squared correlation of .526. The squared correlations of the interactive model go from a high of .965 to a low of .715. The additive model produces squared correlations ranging from a high of .667 to a low of .400.

The superior performance of the interactive model can be easily explained. The estimates of the parameters of the linear additive model vary from one set of offices to the next, not only because of random variation but also because the distinctiveness of candidates changes with each slate of candidates. By explicitly identifying this aspect, parameter estimates of the multiplicative-competitive interaction model are more stable over different sets of offices.

TABLE 2

PREDICTED VS. ACTUAL RESULTS OF THE REAL-DATA SIMULATION

Offices Used to Estimate Parameters	Offices Predicted	Squared Correlation	
		Interactive Model	Regression Model
1,2,3	5,7	.965	.472
1,2,5	3,7	.844	.553
1,2,7	3,5	.943	.539
1,3,5	2,7	.715	.667
1,3,7	2,5	.944	.400
1,5,7	2,3	.788	.534
2,3,5	1,7	.912	.474
2,3,7	1,5	.943	.462
2,5,7	1,3	.910	.580
3,5,7	1,2	.759	.581
Average		.873	.526

One of the key aspects of this study was to examine the coefficients or variables relevant to voting behavior. Table 3 presents the weighting coefficients derived from the interactive model. The larger the number the more influence that attribute had in the candidate's total vote. A negative weight indicates a negative influence or fewer votes. The last row of Table 3 shows the squared multiple correlation. The model fits the data amazingly well. In general, the results indicate the importance of endorsements. The single most important variable was endorsement by the conservative Taxpayers Selection Council. Further endorsements such as the Taxpayer Council, the *Times* or the moderate-labor SOCC endorsement were critical. From a marketing point of view, these results make a great deal of sense. When little is know about a product and one cannot make attributions based on personal experience, turning to supposedly knowledgeable others such as an opinion leader, *Consumer Reports*, or an endorsement by a respected newspaper is a common characteristic.

Turning back to Table 3, it is interesting to note the relative unimportance of campaign expenditures and ballot position. Both of these findings run counter to the political myths in our country. For example, politicians strongly feel that the first ballot position is most valuable with estimates that it may account for 5 percent of the vote. Our model indicated this variable is insignificant, with the data indicating the trend that the last position is "somewhat more" valuable than the first position. Mueller's data indicated similar findings,

TABLE 3

WEIGHTS DERIVED FROM THE MULTIPLICATIVE-COMPETITIVE INTERACTION MODEL

Variables	Interactive—Maximum Likelihood Coefficient
Occupation	
Attorney	−.144
Education	.137
Business-Engineer	−.220
Incumbent	−.098
Sex	
Female	−.259*
Religion	
Jewish	.202
Campaigning	
Heavy (advertising)	.203
Average	.130
Ballot Position	
First	−.033
Second	−.066
Third	−.059
Last	−.136
Adjacent to Incumbent	.038
Endorsements	
L.A. Times	.510**
L.A. Herald-Examiner	.384*
SOCC (Moderate/Labor)	.417*
Taxpayers (conservative)	.668**
Second Conservative Group	.094
R^2	.982

* Significant at .05 level.
** Significant at .01 level.

although others (e.g., Bain and Hecock) have found opposite results. Perhaps in this type of unimportant and low involvement election some of our political beliefs need to be readjusted, or the conflicting data found in the literature accounted for in some other manner.

The relative unimportance of campaign expenditures is difficult to explain. Several candidates were estimated to have had expenditures in five figures and one in six figures. Others spent well under $200. The mode and median expenditure levels were probably under $1,000, and the data were trichotomized. A possible explanation for the unimportance of campaign funds may be that with a very few candidates spending significant amounts of money, a cumulative effect or feeling of interest and excitement just could not be generated. Also, it is possible that, with a campaign in a geographic area in excess of 800 square miles and considerably larger than the city of Los Angeles, even expenditures in five figures were just not enough to make any significant impact. Again, in marketing terms, the total advertising expenditure may have been quite insufficient either to create a demand for the product class or a selective demand for a particular brand. It would be no surprise to the marketing man when told that promotional expenditures of a few thousand dollars had no impact on brand share.

Two additional findings in the results are of some significance. Being female significantly reduced the number of votes a candidate received. This result would not be surprising either to a politician or to the Women's Liberation Movement. The fact that being an incumbent did not significantly affect the vote was somewhat surprising. Politicians seem to feel in this type of low involvement election incumbency is a most important attribute in one direction or another, depending on the political climate. The differences between the political view and the results produced by the model may well be due to differential handling of the interactive effect. That is, incumbency is related to and accounted for by other variables, such as endorsements, a possibility not immediately evident by lay examination of the data.

SUMMARY AND CONCLUSIONS

The purpose of this paper was to determine empirically if some of the tools and methodologies available in consumer behavior could be applied to other areas and to other problems. In a sense, we attempted to broaden the concept of consumer behavior—or at least concepts and a model of product and brand share research to the arena of political elections.

In comparing the interactive model to "predict" elections with the linear additive model that has been used in political studies, the results indicated that the interactive brand share type model was superior in this case. The data indicated that the critical variables in the selection of a political candidate for an unimportant office in the greater Los Angeles area were endorsements, and not having a recognizable female name. Such variables as occupation, religion, ballot position and level of campaign expenditures as defined in this study had no effect.

The relevance of this study, however, was not a finding here or a piece of data there but rather that, after several decades of borrowing theories, models and concepts from the social sciences to apply to consumer behavior issues, we may well have reached the point where our models have become sophisticated enough that they can be applied to problems other than to the selection of canned peas. If these findings are generalizable, we may well be entering an era where our concerns in consumer behavior can turn from products and brands to problems of society such as voting or other areas in which the consumer is asked to make a choice between alternative courses of action.

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