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# A Dynamic Simultaneous Equation Model of Electoral Choice

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*This article develops a simultaneous equation model of the voting decision in a form thought to mirror the main lines of cognitive decision-making processes of individual voters. The model goes beyond earlier efforts in two respects. First, it explicitly represents the causal interdependence of voter assessments in the election situation, permitting such estimations as the degree to which correlations between voter issue positions and issue positions ascribed to preferred candidates arise because of projection onto the candidate or persuasion by the candidate. Secondly, the model is truly dynamic, in the sense that it is dependent on longitudinal data for its proper estimation. The utility of the model is certified by the goodness of fit achieved when applied to 1972–76 panel data for a sample of the national electorate.*

There is no shortage of studies which focus upon the roles of candidate personalities, partisan leanings, and contemporary issues in affecting the outcomes of elections in the United States. The value of this research is obvious, but it is probably fair to say that too much attention has been paid to the relative importance of factors idiosyncratic to particular elections and not enough effort has been directed toward the development and evaluation of an integrated and generalizable behavioral model of the voter's calculus. The result has been an uncomfortable lack of fit between verbal theories of micro-level electoral dynamics and statistical models of that process.

The goal of this study is *not* simply predictive accuracy, nor the assessment of the "relative importance" of various predictors of the vote. Nor do we intend for this work to be interpreted narrowly as a study of a particular election. What follows is a self-conscious effort at developing a model which is verisimilar to the dynamic cognitive process underlying citizens' electoral decision making. To the extent that we are able to synthesize a scattered set of verbal hypotheses and pre-theories into a precise and testable quantitative structure, we shall consider the effort a success even before confronting a shred of empirical information. Should the data corroborate the hypothesized structure or provide insights into how it might be modified—so much the better.

The model to be presented and evaluated here has two major advantages over previous work: it explicitly embodies the simultaneous interdependence of perceptions and evaluations of political stimuli specific to a particular election; and it is a truly dynamic model in that it depicts how the campaign and the ultimate vote choice modify or reinforce prior orientations. The utility of the model will be assessed by examining its goodness of fit to the 1972–1976 panel data gathered by the Center for Political Studies.

## Background

**Predicting the Vote.** A formal model of the voter's calculus which is appealing on both normative and empirical grounds is derived from the idea of minimizing subjective expected loss (Shapiro, 1969; Davis et al., 1970; Riker and Ordeshook, 1973). The loss function is typically assumed to be quadratic, so that the loss associated with candidate  $j$  by an individual voter may be defined as:

$$L_j = (X - \theta_j)' A (X - \theta_j) \quad (1)$$

where  $X$  is an  $m \times 1$  vector of the voter's preferred positions on evaluation dimensions 1, 2, ...,  $m$ ;  $\theta_j$  is an  $m \times 1$  vector of the  $j$ th candidate's positions on these evaluation dimensions, as perceived by the voter;  $A$  is an  $m \times m$  matrix of weights reflecting the relative importance of the dimensions and their covariation.

Once the expected loss associated with each candidate is assessed, the model assumes that the citizen will vote for the candidate with

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the smallest expected loss, i.e., he or she will vote "rationally." It is worth noting that, from a strictly axiomatic point of view, a choice on the basis of a candidate's personal characteristics is no less rational than one founded on a careful assessment of stated policy positions. Rationality refers to the notion of minimizing expected loss, and the model is utterly indifferent to the criteria employed by the voter in calculating these losses.

Empirically, a behavioral version of the decision rule has been shown to predict individual electoral choice very well, particularly when party identification is used as a tie-breaker in instances wherein the evaluations of the opposing candidates are similar (Kelley and Mirer, 1974; Brody and Page, 1973). Despite the predictive success of this approach, its major drawback is that it says little about the origins of candidate evaluations and thus provides a limited understanding of the broader cognitive process by which an individual arrives at a vote choice. As Brody and Page (1973, p. 10) have pointed out: "Common sense says that people probably vote for the candidate they like best." What remains is to "shift the analytical task away from an explanation of the vote to an explanation of attitudes toward candidates" (Brody and Page, 1973, p. 16). To accomplish this, the decision rule must be embedded within the context of a comprehensive model of electoral choice.

**Models of Electoral Choice.** In 1966, Goldberg formulated a causal system in which party identification was posited to influence candidate choice both directly and via its impact upon evaluations of parties and issues. This first attempt at modeling voting behavior represented a significant advance over earlier work, but it was flawed by methodological errors and, more importantly, by its lack of correspondence to a well-defined theory of the calculus by which an individual arrives at a candidate preference. Goldberg's causal system was recursive in structure, ruling out feedback from "partisan attitudes" to party identification, but he was nevertheless sensitive to the need to develop more realistic models which allowed for the dynamic interdependence of political orientations.

A major step in this direction was taken by Jackson (1975) when he presented a model wherein a citizen's policy preferences, partisan attachments, and evaluations of parties' positions were simultaneously related to each other and were, therefore, "endogenous to the electoral process." Testing this model against data from the 1964 Survey Research Center Election

Study, Jackson found a triangular causal system operating across the three factors, with party identification influencing the voter's own issue positions, those policy preferences affecting evaluations of the parties and candidates, and they, in turn, impinging upon party identification. The vote itself was the result of an interaction between partisan identification and the evaluations of current political stimuli.

Jackson's work went far toward the development of a realistic and comprehensive model of electoral choice, but it was necessarily limited by the data sources available at the time. For instance, studies have shown that citizens' perceptions of candidate issue stands are correlated with their own policy preferences (Page and Brody, 1972), but neither Jackson's nor any other research to date has succeeded in untangling the causal nexus underlying this relationship. Is it because voters project their preferences onto the candidates, or alter their own positions in response to where they perceive the candidates to stand, or because of some other process? This question has confronted students of voting behavior since the earliest survey investigations (e.g., Berelson et al., 1954), but without suitable measures of the relevant variables—and a properly specified model—any answer has had to be largely speculative.

A second and related point is that models of electoral choice have thus far been almost exclusively static (Jackson, 1975; Schulman and Pomper, 1975; Declercq et al., 1975; Achen, 1976; Page and Jones, 1978). That is, even when cast in simultaneous-equation form, they have been obliged to focus solely on the relationships among determinants of the vote at a single point in time, leaving unanalyzed the possible ways in which prior orientations and behavior shape reactions to the stimuli of a new election, as well as the modifications produced in those orientations in turn by the new election circumstances. Plainly, the unavailability of sufficiently rich longitudinal data was a major factor in restricting models to static specifications.

Freed from many of the earlier data limitations, this study builds on the work of Jackson and others but offers some significant advances. First, the model incorporates recent thinking about the social psychological processes involved in policy-oriented voting. Second, the model is dynamic, explicitly taking into account not only the simultaneous interplay of political attitudes within the context of a single presidential campaign but also the longitudinal dependence of these attitudes from one election to the next. Among other advantages, a

model in this longitudinal form can be given more satisfying specification than one tailored to synchronic measurement. This is so because useful exogenous variables are at hand in states and behaviors actually measured at earlier periods, rather than dredged up by recall. Thus we can say with considerable certainty that evaluations of Carter and Ford as presidential candidates in 1976 cannot have exerted causal influence on expressions of party identification or issue positions in 1972, and hence the latter are suitably exogenous to the nexus of attitudes in 1976. When all measurements are synchronic, it can of course be claimed that certain variables are likely to be exogenous, simply as a tactic to permit the identification of a non-recursive model. However, such arguments must always remain in the final analysis more or less suspect.<sup>1</sup> Our longitudinal data base substantially liberates us from this difficulty.

### An Overview of the Model

The preeminence of the trilogy of party affiliation, issue orientations, and candidate personalities as determinants of electoral choice is firmly established in the literature, and the model to be developed here is generally in keeping with this perspective. As Figure 1 illustrates, however, we maintain that these factors are not linked directly to the vote.<sup>2</sup> Instead, their confluence yields a set of overall candidate evaluations, on the basis of which a choice is made. More specifically, the model posits that the citizen compares his or her summary evaluations of the candidates and votes for the one most preferred, provided the

preference differential is reasonably large. However, the smaller the amount by which the voters prefers one candidate over others, the greater the influence of party loyalty in determining the final choice. For a two-candidate race at time  $t$ , the equation linking the probability of a vote for candidate 1 to candidate evaluations and party affiliation is:

$$\text{Cand.}_1 \text{ Vote}_t = a + b_1 (\text{Eval.}_{1t} - \text{Eval.}_{2t}) + (b_2 - b_3 | \text{Eval.}_1 - \text{Eval.}_{2t} |) ID_t + e_t. \quad (2)$$

The first explanatory variable in Equation (2) is simply the difference in candidate evaluations, while the second term involves the absolute value of this difference and reflects the hypothesis that the impact of party ties on the individual electoral decision depends on the degree to which one candidate is preferred over the other. Note that when the evaluation differential is small, the amount by which the party identification coefficient is diminished is also small. On the other hand, if one candidate is preferred to the other by a sufficiently large margin, the coefficient for the impact of partisanship may be reduced close to zero. This aspect of the model is consonant with the spirit of the "Decision Rule" devised by Kelley and Mirer (1974) as well as with normative models of the voter's calculus. Its mathematical form is quite different, however.

It should be noted parenthetically that the model is addressed to the topic of choice among candidates and does not deal directly with the question of who votes and who does not. Implicit in this delimitation is the argument that these two concerns may indeed be fairly distinct from one another and, hence, separable for analytical purposes. This argument is made on the grounds that the decision to vote or not in a given election is determined for the most part by fairly stable attitudes toward the act of voting itself and is only secondarily affected by election-specific variables (candidates, issues, etc.). The stream of literature beginning with *The American Voter* and culminating most recently in the works of Riker and Ordeshook (1968) and Ferejohn and Fiorina (1975) supports this contention. As Campbell et al. (1960, p. 93) first put it, and as it has been demonstrated repeatedly since then, "Inquiry into the determinants of voting turnout is less a search for psychological forces that determine a decision made anew in each campaign than it is a search for the attitude correlates of voting and non-voting from which

<sup>1</sup>A common tactic with models tailored to static data is to depend on recall of earlier states for exogenous variables. Thus, for example, recall of parental partisanship may be used as an exogenous variable on grounds that current political attitudes cannot act backward causally in time to affect parental partisanship in an earlier period. When no other longitudinal information is available, such an assumption is better than nothing. However, this assumption ignores the possibility that *current* recall of earlier parental partisanship can itself be contaminated by currently evolving political attitudes.

<sup>2</sup>In Figure 1 we are adopting the convention that an arrow leading to another arrow denotes an interaction or mediating effect. In addition, when the simultaneous equation form of Figure 1 is presented, the coefficients and error term in each equation will be subscripted only with respect to that equation (i.e., the constant term for each equation is simply  $a$ , the error term is  $e_t$ , etc.). The purpose is to keep the notation simple, and it should cause no confusion to the reader.

these modes of behavior have emerged and by which they are presently supported."

**Issue Orientations.** The difficulty with assessing the impact of issues on the voting decision is that perceptions of candidate stands on issues of the day may vary significantly from voter to voter. Some of this variation will be unsystematic, arising from the casual attention most voters pay to campaign information—or arising from the ambiguous nature of the information itself. Against this background of noise, however, how voters perceive candidate policy positions may depend systematically upon their own issue preferences and overall affective orientations toward the candidates. For instance, voters may "project" their own issue stands onto candidates they like on other grounds, and by the same token they may tend to cognize the policy stances of negatively evaluated candidates in such a way as to increase the issue-related distance between themselves and these candidates (Page and Brody, 1972; Brody and Page, 1972).

In addition to the projection hypothesis, there is also the possibility of "persuasion." If a citizen were to alter his or her issue positions to coincide with those of a favorably regarded candidate, then one might say that the voter had been persuaded by the candidate (Brody and Page, 1972). A form of reverse persuasion would occur if a voter changed his or her position so as to contrast it with that of a negatively evaluated contender for office.

Lastly, the summary evaluations of the candidates are likely to be simultaneously interdependent with an individual's own policy preferences and perceptions of candidate positions. Specifically, the hypothesis is that, other things equal, the candidate thought to be most proximate to one's own position in the issue space will be favored.

The projection hypothesis is modeled as follows:

$$\begin{aligned} \text{Perceived Cand. Stand}_t &= \text{Actual Cand.} \\ \text{Stand}_t + b_1(R's \text{ Stand}_{t-1} - \text{Actual Cand.} \\ \text{Stand}_t) \text{Eval}_t + e_t. \end{aligned} \quad (3)$$

The equation implies that a voter will cognize a candidate's policy position in such a way as to decrease the issue distance between the voter and a positively evaluated candidate or to increase the distance from a negatively evaluated candidate. Since the voter may enter the campaign period with a set of policy preferences, the respondent's issue self-placements at  $t-1$  are incorporated into the equation.

The operationalization of the candidates' "actual" issue stands is problematic. One approach would involve content analysis of campaign speeches (Page and Brody, 1972). Or one might rely on the judgments of a panel of electoral experts. The method employed here is not so ambitious; we shall simply use the sample mean location of each candidate. This procedure is, of course, not without its shortcomings, and it may well be that these average placements do not correspond exactly to the candidates' "true" locations in the issue space. The mean placements nevertheless permit us to ascertain how an individual's perceived locations of the rivals for office differ from where the candidates were seen by the electorate as a whole.

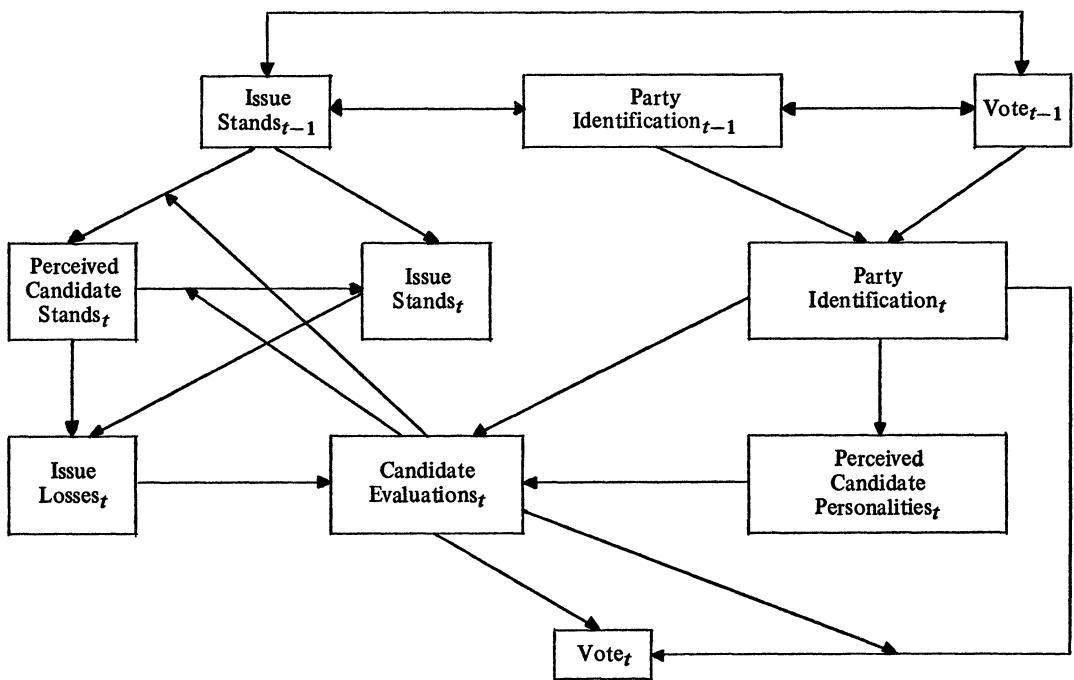
The persuasion hypothesis is modeled for a two-candidate race according to Equation (4):

$$\begin{aligned} R's \text{ Stand}_t &= a + b_1 R's \text{ Stand}_{t-1} + \\ &b_2(\text{Perceived Cand.}_1 \text{ Stand}_t - \\ &R's \text{ Stand}_{t-1}) \text{Eval}_{1t} + \\ &b_3(\text{Perceived Cand.}_2 \text{ Stand}_t - \\ &R's \text{ Stand}_{t-1}) \text{Eval}_{2t} + e_t. \end{aligned} \quad (4)$$

This equation represents the idea that a voter's issue orientations prior to the campaign may be modified as a function of the candidate's issue stands, as the voter sees them. That is, the voter will move toward a favored candidate's perceived position and/or away from that of a negatively evaluated candidate.

One might question the absence of party identification in Equation (4), particularly since some recent research has suggested an increasing alignment of issue opinions and partisan ties (RePass, 1971; Pomper, 1972). However, a closer examination of the proposed model in Figure 1 reveals that the specification does not imply a lack of relationship between partisanship and issue opinions. First, the *long-term* effect of party affiliation on policy preferences is captured in their correlation at  $t-1$ . In addition, the *endogenous* influence of party ties on issue stances is posited to flow via the effect of such ties on candidate evaluations.

This specification is supported both empirically (Markus, 1976; Converse and Markus, 1979) and by theoretical considerations. With regard to the latter, the argument is that, within the course of a presidential campaign, issues become imbued with partisan qualities insofar as the partisan rivals for office come to be identified with particular policies. The candidates form the link between partisanship and



Source: Compiled by the authors.

Figure 1. A Model of the Voting Decision

intra-campaign change in policy-related attitudes.

Equation (5) is derived from the ideas underlying the loss function model of evaluation. It posits that the net candidate evaluation differential is a function of issue-based losses and losses (or, in the positive, gains) accruing from preferences in candidate personalities and partisan identification:

$$\begin{aligned}
 (\text{Eval}_{1t} - \text{Eval}_{2t}) = & a + b_1(\text{Loss}_{1t} - \text{Loss}_{2t}) + \\
 & b_2(\text{Personality}_{1t} - \text{Personality}_{2t}) + \\
 & b_3ID_t + e_t.
 \end{aligned}
 \quad (5)$$

**Candidate Personality.** One would expect that, other things equal, Democrats will tend to prefer the personal traits of a Democratic candidate to those of a Republican office-seeker, and conversely for Republicans. The model, therefore, includes an equation which posits the difference in a citizen's ratings of the candidates' personalities to be a function of partisan ties:

$$\begin{aligned}
 (\text{Personality}_{1t} - \text{Personality}_{2t}) = \\
 a + b_1ID_t + e_t.
 \end{aligned}
 \quad (6)$$

**Party Identification.** The party identification equation is structured to reflect the possibility that while partisanship is relatively stable through time, it may nonetheless be influenced by prior voting behavior. Thus although the vote is the ultimate dependent variable within the context of a single presidential election, from a dynamic perspective it may feed forward to influence the voter's future political orientations.<sup>3</sup> The model also permits the precursors of current partisanship to interact, with voters and nonvoters differing in terms of

<sup>3</sup>It is important to keep in mind here, as elsewhere in the model equations, that we are less making an assertive assumption that prior votes *do* influence party identification, than merely building a model structure which permits such effects to be discriminated *if they exist*. Earlier recursive models of the Goldberg (1966) type were obliged to proclaim by assumption that these reverse effects of vote on party identification did not exist, at least within the time frame of the model. We do not make a contrary proclamation that such effects *do* exist, since a given testing of the model in a special case might show the relevant coefficients to be zero.

the relative stability of party identification through time:

$$ID_t = a + b_1 \text{Demo. Vote}_{t-1} + b_2 \text{Repub. Vote}_{t-1} + (b_3 + b_4 \text{Voted}_{t-1})ID_{t-1} + e_t. \quad (7)$$

### Results

As mentioned earlier, the model of electoral choice was fitted against the CPS 1972–1976 panel data. These data contain information on a national sample of 1286 adult respondents interviewed in the periods immediately following the two presidential elections (see Miller et al., 1976; Miller and Miller, 1977; Converse and Markus, 1979).

Before detailing the results, we should make a few technical comments about our analytical methods. Because of the simultaneous nature of the system of equations, we employed two-stage least squares as an estimator, except in those instances where ordinary least squares estimation appeared justified. Lagged dependent variables were treated as predetermined with respect to the 1976 data, implying a lack of autocorrelation in the disturbances. Although this assumption is perhaps not fully warranted, it is not unreasonable, given the fairly long time lag between waves (cf. Hibbs, 1972). The assumption also finds support in some of our earlier analyses (Converse and Markus, 1979). Finally, the estimation proceeded in modular fashion from equation to equation, rather than being carried out initially for the structure as a whole, and thereby avoids the considerable attrition of case numbers that occurs when cases with missing data on as little as one of the totality of variables in the

structure are deleted from any role in the estimation.

**Party Identification.** The party identification variable ranges in seven integer steps from –3 (Strong Democrat) to +3 (Strong Republican). For purposes of operationalization, the other variables in Equation (7) are coded in a binary fashion, denoting whether the respondent voted in 1972 and, if so, for the candidate of which party. Nonvoters are coded zero on all three binary variables.

Estimation of Equation (7) by ordinary least squares yields the following results (standard errors in parentheses):

$$ID_t = -.37 - .20 \text{Demo. Vote}_{t-1} + (.07) (.10) \\ .49 \text{Repub. Vote}_{t-1} + (.09) \\ (.63 + .10 \text{Voted}_{t-1})ID_{t-1} + e_t. \\ (.04) (.05)$$

$$R^2 = .64; N = 1252.$$

Party identification is found to be very durable from one election to the next, a result consistent with work on these and other data. Also, as hypothesized, the relationship between prior and current partisanship is somewhat stronger among voters than among nonvoters (with an estimated coefficient of  $.63 + .10 = .73$  for voters versus  $.63$  for nonvoters in 1972). But while partisan attachments move relatively little from one election to the next, they are not completely immune to electoral forces, as demonstrated by the significant coefficients attached to the partisan voting variables.

The feedforward effect of electoral choice on party identification is displayed in Table 1,

Table 1. Predictions of Party Identification<sub>t</sub>, by Prior Partisanship and Voting\*

Vote <sub>t-1</sub>	Party ID <sub>t-1</sub>						
	Strong Democrat	Democrat	Independent Democrat	Independent	Independent Republican	Republican	Strong Republican
Nixon	–2.07 (D)	–1.34 (ID)	–.61 (ID)	.12 (I)	.85 (IR)	1.58 (R)	2.31 (R)
None	–2.25 (D)	–1.63 (D)	–1.00 (ID)	–.37 (I)	.26 (I)	.88 (IR)	1.51 (R)
McGovern	–2.76 (SD)	–2.04 (D)	–1.31 (ID)	–.58 (ID)	.15 (I)	.88 (IR)	1.61 (R)

Source: Equation (7), as estimated using data from the 1972–76 Center for Political Studies National Election Panel Study.

\*Mid-points between scale values were used as cut-points to generate the parenthesized category predictions.

in which the coefficient estimates have been used to generate predictions of party identification at time  $t$  for different combinations of past identification and vote. The table shows that when partisanship is not reinforced by consistent electoral behavior, it may weaken. The predicted effect of a deviating vote in a single election is hardly dramatic; indeed, if it were, there would be reason to doubt the analysis. Nevertheless, the cumulative effects of a series of votes running counter to an individual's prior party ties might well lead to a conversion of partisan orientations at the individual level.

**Issue Opinions.** Five policy domains were selected for study here: social welfare, busing, government assistance to minority groups, tax reform, and women's rights. These issues were chosen because comparable items dealing with them were included in both the 1972 and 1976 Election Studies and because they were issues which were salient to many voters in 1976, as will be illustrated in a moment. For each policy domain, respondents were asked to place themselves and the major party candidates along a seven-point continuum with labeled end-points.<sup>4</sup>

It is, of course, possible that the inclusion of other issues to the set of five might have altered the results of the analysis significantly, but we deem this unlikely. For one thing, the five issue domains appear to cover most of the public's major policy concerns in 1976. Our evidence for this statement is derived from an open-ended query in the 1976 interview regarding "the most important problem the country faces." Some degree of ambiguity is always inherent in mapping open-ended responses into fixed categories, but by our count over three-quarters of the answers directly concerned one or more of the five issues under study.

Perceptions of where the presidential candidates stood on the issues in 1976 varied with an individual's own policy preferences and affective orientations toward the contenders (see Table 2). Generally, a citizen's placement of a favorably evaluated candidate along an issue continuum is positively associated with the individual's own preferred position on the seven-point scale. At the same time, the perceived location of a negatively evaluated candi-

date is inversely correlated with self-placement. This relationship is by no means invariant across issue domains and candidates, nor do average perceptions of candidate positions float unanchored across the entire seven-point range. Nevertheless, the tabular results display an unmistakable regularity. Table 2 does not, however, enable one to gauge the extent of persuasion or projection, since the pattern of association is consistent with either of these hypotheses—or a combination of them. We must turn to the simultaneous equation model for further explanation of the interdependencies exhibited above.

Table 3 presents the two-stage least squares estimates of the ten (two candidates  $\times$  five issues) "projection" equations. The  $R^2$  values associated with these equations are fairly low, but then this is not unexpected: probably most of the variation in perceptions of candidate stands is simply noise arising from the presidential office-seekers' strategy of obscuring their positions on specific issues—especially in 1976.<sup>5</sup> Nevertheless, in all instances save one, the regression coefficient reflecting the extent of projection is significant, hovering around an estimated value of .005. One way of interpreting this value is that it implies that for a very favorably evaluated candidate (i.e., one receiving a translated thermometer score near +50), up to 25 percent of any difference between the candidate's objective issue position and the respondent's favored position would be "projected away."<sup>6</sup> Another way of interpreting these estimates is illustrated in Table 4. In that table, predicted candidate placements have been calculated for various combinations of self-placements on the first two issues and feelings toward the candidates. By comparing these predictions with the actual mean scores in Table 2, one can see that the mathematically parsimonious projection equations yield aggregate profiles that are consistent with the observed findings.

The two-stage least squares estimates of the equations for voters' preferences on the five

<sup>5</sup>Correlations are also probably depressed by the presence of error arising from imprecise instrumentation and the stochastic nature of the latent attitudes being measured (Converse, 1970; Achen, 1975; Converse and Markus, 1979).

<sup>6</sup>Multiplication of the .005 average coefficient estimate by the thermometer score of 50 yields the 25 percent figure. The translated thermometer used in estimating Equations (3) and (4) ranges from -50 to +50 degrees.

<sup>4</sup>The text of the issue items may be found in the CPS 1976 National Election Study codebook, available from the Inter-University Consortium for Political and Social Research.



Table 2. Mean Candidate Issue Placement, by Self-Placement and Candidate Feeling Thermometer Score\*

Social Welfare				
R's Location	Carter		Ford	
	Warm	Cool	Warm	Cool
1 (Liberal)	2.2 ( 77)	4.8 ( 4)	3.4 ( 31)	6.2 ( 40)
2	2.5 ( 48)	3.9 ( 7)	3.6 ( 35)	5.9 ( 21)
3	2.8 ( 96)	3.4 ( 18)	3.9 ( 81)	5.4 ( 34)
4	3.2 (137)	3.0 ( 42)	4.1 (149)	5.3 ( 36)
5	3.8 (103)	2.5 ( 56)	4.4 (123)	5.0 ( 32)
6	3.5 ( 77)	2.2 ( 48)	4.5 (105)	4.2 ( 15)
7 (Conservative)	3.7 ( 87)	2.6 ( 77)	4.7 (142)	3.7 ( 28)
Grand Mean	3.2 (625)	2.6 (252)	4.3 (666)	5.2 (206)
eta-squared	.15	.13	.07	.27

Busing				
R's Location	Carter		Ford	
	Warm	Cool	Warm	Cool
1 (Favor)	3.3 ( 28)	5.0 ( 3)	2.5 ( 10)	6.0 ( 20)
2	2.7 ( 27)	5.0 ( 2)	4.1 ( 21)	6.1 ( 8)
3	3.4 ( 18)	5.0 ( 2)	4.0 ( 16)	5.7 ( 6)
4	3.8 ( 44)	5.2 ( 12)	4.1 ( 39)	5.1 ( 19)
5	4.1 ( 32)	3.0 ( 11)	4.4 ( 36)	4.4 ( 14)
6	4.2 ( 79)	3.5 ( 35)	4.2 (105)	3.8 ( 22)
7 (Oppose)	4.2 (318)	3.3 (137)	4.5 (441)	3.3 (120)
Grand Mean	4.0 (546)	3.4 (202)	4.4 (668)	4.0 (209)
eta-squared	.06	.05	.03	.21

Tax Reform				
R's Location	Carter		Ford	
	Warm	Cool	Warm	Cool
1 (Progressive)	2.6 (109)	3.9 ( 17)	4.0 ( 70)	5.3 ( 44)
2	2.8 ( 64)	2.9 ( 20)	3.6 ( 58)	5.0 ( 23)
3	3.1 ( 78)	3.0 ( 25)	3.9 ( 77)	4.5 ( 18)
4	3.3 ( 96)	2.8 ( 36)	4.2 (110)	4.4 ( 25)
5	3.5 ( 44)	2.8 ( 18)	4.6 ( 60)	3.9 ( 9)
6	4.0 ( 36)	3.0 ( 26)	4.5 ( 46)	4.9 ( 14)
7 (Same Rate)	4.3 ( 13)	3.4 ( 51)	5.0 (133)	4.2 ( 39)
Grand Mean	3.4 (557)	3.1 (193)	4.3 (554)	4.7 (172)
eta-squared	.17	.04	.10	.07

Minority Groups				
R's Location	Carter		Ford	
	Warm	Cool	Warm	Cool
1 (Government Help)	2.3 ( 69)	4.0 ( 7)	2.9 ( 44)	5.8 ( 35)
2	2.5 ( 52)	3.0 ( 10)	3.3 ( 45)	4.8 ( 18)
3	2.9 (102)	3.0 ( 34)	3.4 (116)	4.6 ( 22)
4	3.4 (128)	3.0 ( 41)	3.8 (138)	4.4 ( 41)
5	3.6 ( 77)	3.3 ( 51)	4.3 (112)	4.5 ( 22)
6	3.8 ( 73)	3.1 ( 41)	4.1 ( 92)	3.3 ( 22)
7	4.2 ( 81)	2.4 ( 60)	4.5 (110)	3.0 ( 35)
Grand Mean	3.3 (582)	3.0 (244)	3.9 (657)	4.3 (195)
eta-squared	.20	.06	.12	.29

Table 2 (continued)

R's Location	Women's Rights			
	Carter		Ford	
	Warm	Cool	Warm	Cool
1 (Equal Rights)	2.6 (194)	2.5 ( 58)	2.3 (181)	3.6 ( 77)
2	3.0 ( 83)	3.2 ( 27)	3.0 ( 95)	4.1 ( 21)
3	3.3 ( 51)	3.6 ( 18)	3.5 ( 60)	4.1 ( 15)
4	3.5 (103)	3.5 ( 38)	3.7 (122)	4.5 ( 28)
5	3.9 ( 43)	3.5 ( 21)	4.0 ( 54)	3.6 ( 14)
6	4.1 ( 34)	3.0 ( 11)	4.0 ( 37)	2.8 ( 6)
7	4.1 ( 59)	3.7 ( 7)	4.0 ( 48)	2.9 ( 14)
Grand Mean	3.2 (567)	3.1 (180)	3.2 (597)	3.8 (175)
eta-squared	.16	.12	.23	.09

Source: 1976 Center for Political Studies National Election Panel Study.

\*Cool feelings include feeling thermometer scores of 0–49 degrees. Warm feelings are scores of 51–100 degrees.

issues are presented in Table 5. The analysis indicates that issue opinions possess a durability which, although much less than that of party identification, is nonetheless quite significant.<sup>7</sup> There is also evidence of the persuasion or leadership effect with regard to three policy domains: welfare, minority groups, and tax reform. The presidential candidates apparently exerted very little influence upon public sentiments towards busing and women's rights, however.

These findings recall a pattern that emerged in our first cut at these data (Converse and Markus, 1979). In that study, the stability of opinion on various issues was found to be

arrayed hierarchically, with attitudes on issues of a moral nature displaying a distinctively higher degree of temporal stability and hence apparently greater crystallization than did opinions on civil rights, domestic policy, and foreign affairs. It stands to reason that attitudes tied closely to one's sense of morality would not be very susceptible to the influence of campaign debate, and that is precisely what we find here.

Lastly, since the dependent and persuasion variables from Table 5 are expressed in the same currencies as the dependent and regressor variables, respectively, in the preceding set of equations, the relative effects of projection and persuasion may be compared.<sup>8</sup> Upon doing so,

<sup>7</sup>See Converse and Markus (1979) for a further discussion of the relative stabilities of political outlooks.

<sup>8</sup>We prefer the unstandardized coefficients to standardized ones for two reasons. First, the equations are nonlinear in the variables, rendering the usual

Table 3. Two-Stage Least Square Estimates for the Perceived Candidate Issue Position Equations

Issue	Candidate	Mean	Coefficient	Standard Error	N	R <sup>2</sup>
Welfare	Carter	3.01	.007	.001	854	.08
	Ford	4.51	.006	.001	869	.02
Busing	Carter	3.84	.005	.001	701	.06
	Ford	4.26	.007	.001	848	.06
Minorities	Carter	3.18	.005	.001	773	.04
	Ford	4.00	.005	.001	813	.04
Tax Reform	Carter	3.32	.000	.000	735	.00
	Ford	4.40	.003	.001	685	.01
Women	Carter	3.20	.002	.001	711	.01
	Ford	3.37	.005	.001	748	.03

Source: 1972–76 Center for Political Studies Election Panel Study.

**Table 4. Predicted Perceived Candidate Location for Various Combinations of Self-Placement and Candidate Feeling Thermometer Score\***

Respondent Position	Social Welfare			
	Carter		Ford	
	Warm	Cool	Warm	Cool
1 (Liberal)	2.7	3.4	4.0	5.0
3	3.0	3.0	4.3	4.7
5	3.4	2.7	4.6	4.4
7 (Conservative)	3.7	2.3	4.9	4.1

Respondent Position	Busing			
	Carter		Ford	
	Warm	Cool	Warm	Cool
1 (Favor)	3.5	4.2	3.7	4.8
3	3.7	3.9	4.0	4.5
5	4.0	3.7	4.4	4.1
7 (Oppose)	4.2	3.5	4.7	3.8

Source: Equation (3), as estimated using data from the 1972–76 Center for Political Studies National Election Panel Study.

\*Scores of –25 and +25 degrees were used to represent cool and warm feelings, respectively, on a translated feeling thermometer ranging from –50 to +50 degrees. The former values are virtually identical to the observed mean feeling scores for the two sets of respondents.

one finds that with respect to both Carter and Ford the projection coefficients are larger than the corresponding persuasion values for all issues but one. The differences are by no means staggering, but they do suggest that projection is about 20 percent stronger than persuasion, on the average. One should bear in mind, however, that under certain circumstances—e.g., a new issue for which public opinion has not yet jelled—the influence of political leaders upon the electorate's policy preferences might be substantial.

**Candidate Personalities.** In 1976, respondents were asked to rate on a seven-point scale the degree to which each of the major candidates had "the kind of personality a President ought to have." The estimated equation linking the difference in ratings of Ford's and Carter's personalities to partisanship is (standard errors in parentheses):<sup>9</sup>

$$\begin{aligned}
 (\text{Ford Personality} - \text{Carter Personality}) &= \\
 .20 + .60 ID_t + e_t & \\
 (.07) (.04) &
 \end{aligned}$$

The equation accounts for 20 percent of the variation in the dependent variable ( $N = 1193$ ), equivalent to a standardized regression coefficient of .44 for party identification. On the average, the personalities of both candidates were scored at about 1.4 on a –3 to +3 scale. The unstandardized coefficient estimates show Ford receiving a score about two points higher than Carter among Strong Republicans, however, and about 1.6 points below Carter among Strong Democrats.<sup>10</sup>

**Evaluations of the Candidates.** Equation (5) posits that a citizen's overall evaluations of the presidential candidates are formed from a mix of policy considerations, partisan predisposi-

interpretation of standardized coefficients may be arbitrarily altered by rescaling the original variables (Allison, 1977). Moreover, since standardized coefficients are by definition variance-sensitive, comparisons of their values across equations—even linear ones—can lead to misinterpretations.

<sup>9</sup>The equation was estimated by ordinary least squares, which assumes a lack of correlation between the disturbances in the party identification and per-

sonality differential equations. The consequence of this assumption being incorrect would be to overstate the impact of the independent variable. Given the plausibly moderate value of the coefficient estimate, the assumption appears not to have been grossly unreasonable.

<sup>10</sup>The predicted dependent variable value is  $.20 + .60(+3) = 2.0$  for Strong Republicans and  $.20 + .60(-3) = 1.6$  for Strong Democrats.

**Table 5. Two-Stage Least Squares Estimates for the Voter Issue Position Equation**

	Coefficient	Standard Error
<b>Social Welfare</b>		
Constant	2.59	.14
Issue Position <sub>t-1</sub>	.47	.03
Carter Persuasion	.006	.001
Ford Persuasion	.006	.002
$R^2 = .29$ $N = 883$		
<b>Busing</b>		
Constant	2.35	.19
Issue Position <sub>t-1</sub>	.61	.03
Carter Persuasion	.002	.001
Ford Persuasion	.003	.001
$R^2 = .40$ $N = 685$		
<b>Minority Groups</b>		
Constant	2.25	.14
Issue Position <sub>t-1</sub>	.52	.03
Carter Persuasion	.004	.001
Ford Persuasion	.004	.002
$R^2 = .33$ $N = 764$		
<b>Tax Reform</b>		
Constant	2.54	.22
Issue Position <sub>t-1</sub>	.40	.05
Carter Persuasion	.007	.002
Ford Persuasion	.004	.002
$R^2 = .16$ $N = 657$		
<b>Women's Rights</b>		
Constant	1.67	.16
Issue Position <sub>t-1</sub>	.41	.05
Carter Persuasion	-.001	.002
Ford Persuasion	.001	.003
$R^2 = .21$ $N = 689$		

Source: Data from the 1972-76 Center for Political Studies National Election Panel Study.

tions, and beliefs about the personalities of the rivals for office. The operationalizations of the regressors in that equation are by now familiar, with the exception of the issue-loss component. The issue loss associated with each candidate was constructed as the average squared difference between the respondent's self-placement on each issue and his or her perceived location of the candidate. We used an average rather than a simple sum of squares because not all respondents could provide both a preferred policy and a candidate location for all five issues.

This method weights each included issue equally, a procedure which appears to conflict with the notion that all issues may not be

equally salient to the voter. A number of considerations render this approach less objectionable than it might seem, however. First, taken as a whole the five issues are salient ones, and the majority of respondents were able to locate themselves and the candidates on each of the issue continua. Moreover, issues that are utterly non-salient to a respondent are given a weight of zero, since both self and candidate placements are required for the issue to be included in the loss calculus. Third, preliminary attempts to devise a weighting scheme based on open-ended and other responses actually led to a slight decrease in explanatory power for the regression equation. This came as little surprise, since a number of recent psychological studies have demonstrated that people are generally quite unreliable in assessing the relative importance of factors in determining their decisions (Nisbett and Wilson, 1977). Moreover, other work indicates that the choice of weights tends to make little difference in the ultimate predictions (Wainer, 1976; Dawes and Corrigan, 1974).

The two-stage least squares estimates for the candidate evaluation equation are displayed in Table 6. The analysis indicates that all three elements—issues, party, and personalities—were important determinants of feelings toward Ford and Carter. Taken together, these three variables account for two-thirds of the variation in the feeling thermometer differential for the presidential rivals.

The results suggest that the perceived personal qualities of the candidates weighed most heavily, at least in the direct-effect sense, in determining the public's overall evaluations of Ford and Carter. The standardized coefficient for the personality differential variable equals .43, and the unstandardized coefficient implies nearly a 40-point difference ( $6.26 \times 6$ ) in the thermometer scores of candidates rated at opposite extremes of the presidential personality scale.

Issues and party ties were about equally important in terms of their direct effect on candidate evaluations, with standardized coefficients of  $-.30$  and  $.29$ , respectively. Keeping in mind that the issue loss differential can range from  $+36$  (favoring Carter) to  $-36$  (favoring Ford), note that the unstandardized coefficient for that variable implies that for each unit increase in Ford's loss value relative to Carter's, the voter's thermometer difference (Ford-Carter) decreased by a little more than one degree, other variables held constant. At the same time, the coefficient for party identification indicates a 20-degree differential favoring Ford among Strong Republicans and a 14-degree contrast

Table 6. Two-Stage Least Squares Estimates for the Evaluation Differential Equation

	Unstandardized Coefficient	Standard Error	Standardized Coefficient
Constant	2.72	.77	
Ford-Carter Issue Loss	-1.34	.38	-.30
Ford-Carter Personality	6.26	.51	.43
$ID_t$	5.66	.64	.29
$R^2 = .67 \quad N = 1013$			

Source: Data from the 1972-76 Center for Political Studies National Election Panel Study.

favoring Carter among Strong Democrats, *ceteris paribus*.<sup>11</sup>

The fairly modest standardized coefficient for party identification might be somewhat puzzling, given the crucial role that partisanship has been assumed to play in electoral behavior. It is important to remember, however, that in addition to its direct impact on candidate evaluations, party affiliation also exerts a substantial *indirect* influence via its effect upon perceptions of candidate personalities. When this indirect influence is combined with the direct effect, it yields an "effects" coefficient of  $.29 + .43(.44) = .48$ , larger than the standardized coefficient for either candidate personalities or issue proximities (see Figure 2). This latter value may be more in line with intuitive judgments—and prior evidence—about the impact of partisanship on candidate evaluations. Moreover, under some circumstances party identification may play a significant role in determining the electoral decision quite apart from its influence on feelings toward the candidates, as we shall see in a moment.

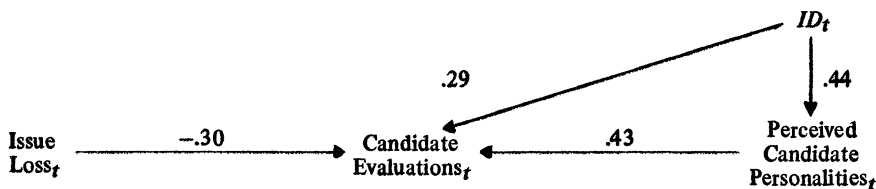
<sup>11</sup>For Strong Republicans, the expected thermometer differential is  $2.72 + 5.66(+3) = 19.70$ ; for Strong Democrats it is  $2.72 + 5.66(-3) = -14.26$ .

The Vote Decision. Least squares estimation of the vote choice equation generates the following results (standard errors in parentheses):<sup>12</sup>

$$\begin{aligned} \text{Ford Vote} = & .506 + .009 (\text{Ford Eval.} - \\ & (.010) (.0004) \\ & \text{Carter Eval.}) + (.141 - .0025 | \\ & (.009) (.0002) \\ & \text{Ford Eval.} - \text{Carter Eval.}) ID_t + e_t. \end{aligned}$$

<sup>12</sup>Both two-stage least squares (2SLS) and ordinary least squares (OLS) estimators were originally employed. Although the methods yielded similar coefficient estimates, the OLS values are preferred here because they yield fewer predictions outside of the allowable 0-1 range and because the 2SLS residuals were only modestly correlated with residuals elsewhere in the system, thus permitting the more efficient OLS estimation. The 2SLS estimates (with standard errors parenthesized) are:

$$\begin{aligned} \text{Ford Vote} = & .503 + .011 (\text{Ford Eval.} - \\ & (.012) (.001) \\ & \text{Carter Eval.}) + (.157 - .0036 | \text{Ford Eval.} - \\ & (.019) (.0007) \\ & \text{Carter Eval.}) ID_t + e_t. \\ R^2 = & .65; N = 753. \end{aligned}$$



Source: Based on the regression estimates outlined in the text.

Figure 2. Candidate Evaluations Segment of the Model of Electoral Choice

The regression analysis lends clear support to the hypothesized vote choice equation. All coefficients have the expected signs and are many times larger than their associated standard errors. The  $R^2$  value for the equation equals .64 ( $N = 884$ ), but because of the dichotomous nature of the dependent variable, the best measure of goodness of fit is provided by the fact that the equation correctly predicts respondents' votes 90 percent of the time.<sup>13</sup>

Moreover, it can be shown that the direct intrusion of party identification in influencing the vote choice when there is relative indifference in candidate evaluations is the only case in which prior variables in the model affect the vote, save indirectly through the comparative candidate evaluations. That is, the addition of other model variables, including most notably the issue losses and personality ratings, to the simple vote choice regression equation based on differential candidate evaluations and party identification, leads to virtually no increase in predictive accuracy. As a further test, we applied the estimated equation to the data from the 1972 wave of the panel to ascertain its predictive accuracy with regard to the Nixon-McGovern contest.<sup>14</sup> The result was that 97 percent of the voters were correctly classified, a very satisfactory result given that the coefficient estimates are based on an entirely different set of data. Indeed, the predictive accuracy might seem to be *too* good, but the explanation is simply that evaluations of Nixon and McGovern tended to be more disparate than those for Ford and Carter, and hence electoral choice was more predictable than in 1976.

The values of the coefficient estimates possess some charming qualities. For instance, the constant term implies a virtual 50–50 split in the vote of Independents who evaluated the two candidates equally. Furthermore, if one simulates an election wherein net short-term partisan forces (i.e., the evaluation differential) are zero and inserts the sample mean for the party identification variable, the prediction (interpreting the result in aggregate terms) is a 46 percent vote for the Republican candidate—

precisely the value of the normal vote (Converse, 1966).

Note that the direct impact of party identification upon the vote decision depends upon the size of the candidate evaluation differential. When both candidates are evaluated identically, each step toward the Republican end of the partisan continuum increases the predicted dependent score (roughly, the probability of voting for Ford) by .14. Once the difference in candidate evaluations reaches about 55 degrees, however, the predicted direct effect is partisanship on the vote is virtually nil, as indicated by its small coefficient:  $.141 - .0025(55) = .003$ .<sup>15</sup> Although the direct influence of party ties on the vote decision would be negligible under these circumstances, their indirect effect, i.e., their prior impact on the candidate evaluations themselves, nevertheless remains appreciable.

The relative effects of candidate evaluations and party identification on the choice between presidential contenders is illustrated in Table 7. As displayed there, the predicted probability of a Ford vote ranges from .00 for Strong Democrats, with a 50 degree evaluation differential favoring Carter, to 1.00 for Strong Republicans, with an equally large pro-Ford difference. The table also illustrates the varying impact of party identification, depending on the contrast in candidate evaluations: when the differential is large, the probability entries do not vary much across partisan categories; if the evaluation differential is within the bounds  $\pm 20$  degrees, however, the residual impact of partisanship on electoral choice is more potent.

## Conclusions

From a substantive point of view, a model is something more than the sum of its parts. We may therefore conclude by moving from an examination of the separate equations comprising the model to a brief summary and discussion of its broader implications.

Perhaps most importantly, the hypothesized model of electoral choice has fared rather well against the 1972–1976 panel data. No alterations in the posited specification were indicated. To the contrary, a number of  $R^2$  values approach what must be their upper bounds,

<sup>13</sup>Respondents with estimated dependent variable scores  $>.50$  were predicted to have voted for Ford, while those with estimated values  $\leq .50$  were classed as Carter voters.

<sup>14</sup>This prediction to the 1972 presidential vote refers, of course, to the vote choice equation taken alone. The full model being presented could not be estimated for 1972 separately, for lack of prior panel data in that year.

<sup>15</sup>In 1976, 15 percent of all respondents saw no difference in their overall evaluations of the candidates. One half of the sample had evaluation differentials of 25 degrees or less, and nearly 90 percent are included in the  $\pm 55$  degree span.

Table 7. Predicted Probability of a Ford Vote, by Party Identification and Candidate Evaluation Difference

Differential	Party Identification						
	Strong Democrat	Democrat	Independent Democrat	Independent	Independent Republican	Republican	Strong Republican
(Pro-Carter) -50	.00	.02	.04	.06	.07	.09	.10
-40	.02	.06	.11	.15	.19	.23	.27
-20	.05	.14	.24	.33	.42	.51	.60
-10	.07	.18	.30	.42	.53	.65	.76
0	.08	.22	.37	.51	.65	.79	.93
10	.25	.36	.48	.60	.71	.83	.94
20	.41	.50	.60	.69	.78	.87	.96
40	.74	.78	.83	.87	.91	.95	.99
(Pro-Ford) 50	.91	.92	.94	.96	.97	.99	1.00

Source: Equation (2), as estimated using the 1972-76 Center for Political Studies National Election Panel Study.

given normal sampling error and other idiosyncratic sources of noise.

The analysis affirms the crucial role of candidates in the dynamics of electoral choice. Candidate evaluations have been shown to be a primary determinant of the vote, with policy considerations and even partisan orientations affecting the vote either exclusively or largely through the way they help to shape feelings toward the presidential rivals. The candidates also mediate the flow of campaign stimuli toward the cognitive predispositions comprising the citizen's network of political beliefs: they serve as the primary vehicle through which policy debate takes on partisan coloration, and through their determining influence on the vote, feelings toward the candidates even act dynamically in at least a small degree to modify or reinforce standing party ties. In the American system of elections, the choice is ultimately between competing candidates.

The fact that comparative candidate assessments are the most potent proximal determinant of the vote decision should not, however, lead us to overlook the causally prior impacts of issues and parties on these assessments. Policy considerations were shown to be significant in determining voters' evaluations of the 1976 presidential candidates. Some of these manifest linkages between issues and candidates turned out to be modestly circular in one sense or another. Thus, for example, a degree of "projection" was uncovered, whereby voters reporting issue positions of candidates they already liked would shade these perceptions toward the issue positions the voter already preferred, while assuming that disliked candidates must have more sharply dissimilar positions. In the same causal nexus it was possible to isolate a persuasion effect as well, whereby

the voter appeared to be shifting his or her own reported issue position to conform more closely with that of a preferred candidate, or to distinguish it more sharply from that perceived for a disliked candidate. The persuasion effect was less strong in these data than the projection effect, and furthermore showed signs of variation by type of issue. For issues like school busing or women's rights, where there is independent evidence of sharp crystallization of public feeling, any persuasion effect is negligible. It is chiefly on issues where voters are less personally exercised that the policy position of candidates can sway their admirers' views of the issue.

However intriguing and plausible these side effects may be, the estimates we have derived from the model make clear that they remained no more than side effects in 1976. The policy differences consensually perceived to exist between the candidates, coupled with prior differences in voter positions on these issues, had a noteworthy effect on voters' comparative assessments of the candidates, and through these invidious assessments, the policy terms ultimately left their mark on final voting decisions.

Similarly, the model helps to delineate more clearly than did prior work the important function of partisan predispositions in the processes leading to a voting choice. Earlier investigations limited to static data bases have often tried to assess the relative role of parties, issues and candidates by assigning each a single ultimate regression weight, leading to comparisons which take on the flavor of a simplistic horse race. Viewing the formulation of a voting decision in terms which are more explicitly processual may rob us of such a simple "final score," but may yield redeeming satisfactions due to greater verisimilitude.

In such process terms, the causal role of partisanship appears to be particularly important for two reasons. First, party identifications are much more stable in the intermediate term than other elements in the model. If the game were redefined as one of predicting a voting decision on the basis of political attitudes examined eight years before election day, there would be little contest: the identity of the candidates would be utterly unknown at such remove, some issues to become important later would also be unknown, and voter attitudes on other more abiding issues would be subject to considerably greater flux in the interim.

The second reason shows up clearly in the structure of the model and hinges on the fact that the party component is unique in the way it intrudes at multiple points in the process. Partisan predispositions may be outweighed by other model terms at particular stages, as other research on a static base has shown, but these loyalties keep coming back as determinants while the vote decision process unrolls. For example, Figure 2 suggested that neither issues nor partisanship were as important in their direct effects upon ultimate comparisons between the candidates as were simple judgments of their personalities. However, the very same figure makes clear that reactions to candidate personalities have already been shaped by prior partisan predispositions, so that there is an indirect path from party to candidate evaluations which is of imposing proportions in itself, quite apart from the direct path also depicted. Or at a later point, partisanship again enters the model significantly in influencing the final vote when the voter has trouble making sharp affective discriminations between the candidates.

In the same vein, given the durable nature of these loyalties over lengthy periods of time (Converse and Markus, 1979), it may well be that prior partisanship has also intruded at stages too early for adequate representation in our model. Thus, for example, we located an edge of "persuasion" whereby the voters' issue locations were mildly affected by the issue positions perceived for liked and disliked candidates. If such candidate persuasion exists, then it would not be at all surprising if there were an earlier *party* persuasion term of entirely parallel structure, accounting for some of the party-relatedness of issue positions at our first time point, yet which is exogenous to our model as presented. Such party persuasion would presumably be operative in the first stages of issue emergence, and hence likely to have more impact on the distribution of attitudes in the electorate than do candidates who arrive on the

scene after such issue positions have become at least modestly crystallized.

In short, then, while partisan predispositions are unlikely to dominate the process completely at given stages where the candidates are being assessed, these loyalties appear to make repeated inputs of substantial magnitude throughout the process.

We believe that the model as presented is an integrated and generalizable one that captures most of what is important as voters face elections involving candidate competition. The model could be enlarged to become more general still. It could, for example, add considerations of turnout, representing the fact that voting and nonvoting are for the most part habitual differences, but capturing those margins of turnout variance that are in fact current and dynamic responses to the specific election configuration, such as the likely diminution in turnout that may accompany feelings of sheer disgust about *both* candidates. The model could also be extended more deeply in time, explicating the genesis of the relationships between prior issue positions, prior party loyalties, and prior votes.

Perhaps the most important consideration to keep in mind is that whereas we have used data from the specific period 1972–76 for estimation of model parameters and assessment of general fit, the model *per se* should be seen as a shell, or a vessel, designed to apply to a wide range of specific elections. Estimates of specific parameters would naturally vary across types of elections, or for specific elections of the same series over time. To seize an example which is too obvious, for candidate elections which are truly non-partisan in fact as well as intent, the coefficients representing the various points of impact of the party term in the model would by definition fall to zero.

It is this conditional variation from one election to another that becomes of subsequent interest to understand. The present model is thus a satisfying vehicle for providing the kinds of parameter estimates that seem to express the voting calculus well in any special case.

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