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RECONSIDERING POCKETBOOK VOTING: An Experimental Approach

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Despite its deep theoretical roots, the idea that voters reward or punish incumbents in national elections for trends in their personal financial circumstances has not fared well when subjected to empirical test. This paper poses an experimental test of the leading explanations for the surprisingly weak showing of pocketbook influences on vote choice. According to certain of these explanations, the answer lies in distinguishing between sociotropic and self-interested economic voting, or between retrospective and prospective economic voting, or between perceptions of economic trends in general and perceptions of the electorally relevant component of these trends. However, expectations based on these explanations are generally not borne out in the laboratory setting. Consistent with the observed pattern of effects, however, is the idea that pocketbook voting displays little independent impact because economic perceptions and attributions are epiphenomena—strongly biased by the voter's preexisting political commitments.

Few topics in modern social science have attracted attention rivaling that recently showered on economic influences on vote choice. The simple idea that voters decide on the basis of the candidates' likely contributions to their "utility income" has provided the intellectual foundation for treatments of "rational" voting behavior (Downs, 1957). Conceptually, "utility income" means more than dollars and cents, but in practice the rational self-interest approach has reintroduced into the voting behavior literature the practical politician's dictum that in most elections the "pocketbook" issue is paramount.

Early researchers approached pocketbook voting with high expectations, but were unable to isolate any solid connection between voting for or against the incumbent in national elections and perceiving progress or decline in the way things are going financially (see, e.g., Fiorina, 1981; Klorman, 1978; Sigelman and Tsai, 1981; Wides, 1976; for contrary findings, see Tufte, 1978, and Markus, 1988). As Kinder and Mebane (1983, p. 142)

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put it, even though the "pocketbook logic can be traced back at least to Hobbes [and] . . . is insinuated throughout contemporary political analysis," there is a problem: "While the economic circumstances of personal life do occasionally influence political choice, the effects are never very strong and usually they are utterly trivial." Even so, in the wake of these disappointing findings, interest in pocketbook voting has redoubled, with the new challenge becoming how to account for the seemingly anomalous lack of any strong linkage between personal economic trends and vote choice. There is no shortage of such accounts, of which the following rank among the most important.

Since voters perceive economic change through the cognitive lens of their longstanding predispositions toward the parties and their short-term feelings about particular officeholders, economic assessments display a pronounced partisan bias (Conover, Feldman, and Knight, 1986, 1987; Peffley, Feldman, and Sigelman, 1987). Given this bias, these assessments may, to a considerable degree, be epiphenomena rather than independently affecting vote decisions (Feldman, 1985; Fiorina, 1981), whereas in the absence of this bias the "true" impact of economic assessments would be felt.

A very different possibility is that voters respond to economic trends "sociotropically" rather than self-interestedly. If this is so, then what count politically are voters' judgments about how well the national economy is performing, rather than—or at least much more than—their appraisals of how well they themselves are faring (Kiewiet, 1983; Kinder, Adams, and Gronke, 1989; Kinder and Kiewiet, 1979).

Or perhaps personal economic assessments *are* electorally important, but only for the relative few who are not steeped in the individualistic ethic of self-responsibility for economic success or failure that permeates the American political culture (Brody and Sniderman, 1977; Feldman, 1982; Sniderman and Brody, 1977). If people hold themselves responsible for their own economic successes or failures, then the credit or blame for these successes or failures should not be displaced on external agents and their political effects should be muted. Indeed, people who suffer severe economic reversals may focus their attention so intensively on coping with their personal financial problems that they have little time or energy left over for even such minimal forms of political involvement as voting (Brody and Sniderman, 1977).

Closely related to the individualism interpretation is the idea that many voters do not blame the incumbent when their own finances turn sour and/or do not credit the incumbent when things go well (Kiecolt, 1987;

Peffley, 1985; Peffley and Williams, 1985; Sigelman and Knight, 1985). One reason for this could be that while voters perceive a portion of the changes they observe in their personal finances as governmentally induced, and therefore as electorally relevant, they see the greater portion of such changes as personally caused, and therefore as electorally irrelevant. Another possiblity, of course, is that they could attribute personal financial upturns and downturns to factors beyond either their own or the government's control. Findings reported in the literature are moot, it is argued, since what has been measured—perceived change in personal economic circumstances—is broader than perceived change in personal economic circumstances attributable to governmental action, and it is the latter, not the former, that is supposed to affect evaluations of the incumbent (Kramer, 1983).

The key factor affecting vote choice may not be voters' perceptions of how well things have been going economically, but rather their expectations about how well things are likely to go in the future, that is, their prospective rather than retrospective economic assessments (Kuklinski and West, 1981).

As of now, then, there are many plausible accounts of why the link between personal economic circumstances and vote choice has so seldom materialized, an embarrassment of riches that in many ways leaves students of voting behavior no better off than they would be if too few such accounts were available. Which of these accounts, or which combinations of them, are really the best explanations of the poor empirical showing of pocketbook voting? It is difficult, perhaps even impossible, to answer this question if we continue to rely exclusively on data from opinion surveys, since the conceptual distinctions central to these sometimes overlapping, sometimes contradictory, accounts tend to be much sharper in the abstract than they are in practice.

On the basis of survey data, it is difficult to disentangle economic from noneconomic influences on vote choice, let alone to draw fine distinctions between judgments of past versus future economic trends, of personal versus national changes in economic welfare, or of economic trends attributed to the incumbent versus economic trends attributed to other causal forces. In the real world, such factors tend to be highly interrelated, difficult to measure, or both. For example, compared to members of the president's party, opposition party members are more likely to blame the incumbent when the nation's economy performs poorly, but they are less likely to give him credit when it is booming. So is it party identification or evaluations of the president's handling of the economy that affect vote choice? By the same token, people whose fortunes have been on the rise

tend to be optimistic about the future. So can the effects of retrospective economic assessments really be empirically separated from the effects of prospective economic assessments?

As a means of coping with these specification and measurement problems, we chose to employ an alternative to the standard survey approach, an experiment.[1] Our approach melds the control and factorial orthogonality of the classical experiment with the detail and complexity of the opinion survey. It centers on a series of hypothetical presidential election vignettes in which "voters"—actually experimental subjects playing the role of voters—decide which candidate they prefer, based on information we provide. In a *factorial survey* like this one (Rossi and Anderson, 1982), the decision factors are manipulated independently of one another, just as they would be in a classical experiment.

A vote choice vignette consists of an overall shell or script, within which are embedded several decision elements, each of which can assume two or more alternative values. A certain combination of these values, when inserted into the shell, tells a particular story about the candidates, while a different combination, when inserted into the same shell, tells a different story.[2] For a vignette to convey the complexity of the task facing a real voter, it must include more decision elements than could be accommodated within the framework of a classical experiment. The vote choice vignette used here contains ten such elements, six with two alternatives and four with four. From these elements a total of 16,384 vignettes ($2^6 \times 4^4$) could be constructed. With a bare minimum of ten subjects per cell, more than 160,000 subjects would be required to carry out such an experiment—obviously not a realistic possibility.

The factorial survey sidesteps this problem by presenting each "voter" with an independently drawn *random* combination of values on the ten decision elements. That is, each participant in the factorial survey votes after reading a vignette composed of a particular randomly determined set of decision alternatives fitted into the overall script. Then each voter considers another vignette with a new random set of alternatives, and votes again. This process is repeated several more times, with all the ballots ultimately being pooled—an acceptable strategy, in that adding random samples to random samples simply produces larger random samples (Rossi and Anderson, 1982, p. 32). The random assignment of decision alternatives ensures approximate orthogonality among the factors being manipulated. Just as it is the intercorrelations among these decision elements in the "real world" that help make it impossible to disentangle their effects, it is their approximate orthogonality in the factorial survey that enables us to assess their separate and joint impacts (Rossi and Anderson, 1982, p. 30).

TABLE 1. Vote Choice Shell and Decision Alternatives

You are a voter trying to make up your mind about which candidate to cast your ballot for in the upcoming presidential election. One of the candidates is the incumbent president, who is now seeking a second term. The other candidate is a senator from (1) *[a] your home state. [b] a state in another part of the country.*
The (2) *[a] senator [b] president* is the nominee of the party with which you are registered. Opinion polls indicate that most people have (3) *[a] doubts about [b] faith in* the president's ability to provide strong, competent leadership. According to the polls, the president is also widely viewed as a person of (4) *[a] questionable [b] unquestionable* integrity.
On domestic issues like civil rights and education, the (5) *[a] senator's [b] president's* position are closer to your own. On international issues like defense spending and relations with the Soviet Union, you agree more with the (6) *[a] senator's [b] president's* stands.
During the last few years, the nation's economy has performed (7) *[a] well, which most Americans credit to the president's economic policies. [b] well, which most Americans credit to the Middle East oil situation. [c] poorly, which most Americans blame on the president's economic policies, [d] poorly, which most Americans blame on the Middle East oil situation.* At the same time, your family's financial situation has (8) *[a] improved, due, in part, to some profitable investments you made. [b] improved, due, in part, to the president's new tax policy. [c] worsened, due, in part, to some unprofitable investments you made. [d] worsened, due, in part, to the president's new tax policy.* In the future, you expect the economic pressure on your family to (9) *[a] increase as a result of the anticipated closing of the company where your spouse works. [b] increase as a result of the anticipated second phase of the president's new tax policy. [c] decrease as a result of the new job your spouse is likely to get in a few months. [d] decrease as a result of the anticipated second phase of the president's new tax policy.* For the nation, most experts are predicting an economic (10) *[a] upturn as a result of the president's new trade policy. [b] upturn as a result of high demand for American products abroad. [c] downturn as a result of the president's new trade policy. [d] downturn as a result of low demand for American products abroad.*
Now, please take some time to consider the information you have just read. Then, on the scale below, circle the one number that comes closest to the probability that you would vote FOR THE PRESIDENT rather than the senator.

DATA AND METHODS

The shell and decision alternatives that comprise the vote choice vignettes are presented in Table 1. Each participant was asked to assume the perspective of a voter in an upcoming presidential election between the incumbent president and a senator, a casting of characters designed (1) to ensure that those who were so inclined would have an incumbent to reward or blame, rather than merely a member of the "lame duck" incumbent's party, and (2) to minimize similarity to the then ongoing Bush-Du-

kakis campaign. The factors customarily considered to be the primary determinants of vote choice—party identification, candidate-voter issue compatibility, and candidate personality—were represented in the vignettes by a series of five decision elements, along with one lesser factor (the senator's home state), which was included to personalize the senator and to acknowledge another potential influence on the vote (see Rosenstone, 1983, pp. 87–88). The selection of positive and negative personality traits was guided by indications that competence and trustworthiness are the two qualities Americans value most in a president (Kinder, Peters, Abelson, and Fiske, 1980). Since voters apparently weight these traits much more heavily in their evaluations of the incumbent president than in their evaluations of presidential hopefuls (Kinder et al., 1980), we used them to describe the president but not the challenger.

The four remaining decision elements tap the potential economic bases of vote choice by presenting retrospective and prospective information about trends in the national economy and the voter's own financial situation. Moreover, favorable or unfavorable trends of each sort were described as consequences of either the president's actions or forces wholly beyond the president's control.

If pocketbook voting has so seldom surfaced in survey-based studies because voters' assessments of economic trends are biased by their identification with one or the other of the parties or by their preexisting feelings about the president, then stripping away such "interference" from the economic information presented to voters should produce pronounced economic effects on the vote. If such economic effects are not uncovered even with political predispositions and economic assessments rendered independent of one another via experimental control, then the argument that economic assessments are only epiphenomena without any direct impact on voting should be weakened. If, as others have argued, economic effects are purely or primarily sociotropic, then national economic trends should strongly influence vote choice, but personal economic circumstances should not.

Or if, to lump together several other hypotheses, the tendency to engage in pocketbook voting is overridden by (a) the belief that the president is not responsible for perturbations in the American economy or one's own finances, or (b) the sense that federal policies have little or no bearing on one's personal economic welfare, then we should observe *contingent* pocketbook effects on vote choice. That is, pocketbook voting should be fairly common when voters are given information explicitly attributing national or personal economic developments to the president's actions, since such information should counteract any tendency not to hold the president accountable. Finally, if voters pay relatively little heed to past economic

trends but are highly attuned to forecasts for the future, then responses to the vote choice vignettes should be highly responsive to prospective economic information but not to retrospective economic information.

The participants in the factorial survey were 288 undergraduate students (median age = 18) at a large public university, each of whom was presented with twelve different randomly selected vote choice vignettes and encouraged to put himself or herself in the role of the voter described in the scenario. These participants, all members of the introductory psychology subject pool, volunteered to take part in what was described to them as a study of factors affecting voter decision-making in presidential elections. The factorial surveys were administered in groups of 15 to 25 participants. In this heavily Republican state, 51% described themselves as Republicans and 28% as Democrats; 36% called themselves conservatives, and 30% liberals.

Before being asked to consider the initial vote choice vignette, participants completed a practice exercise on an unrelated topic in order to familiarize themselves with the task at hand and with the 0–100 scale on which they were to designate the probability of making a particular choice. They were then told that they would be asked to perform twelve decision tasks that would be similar in many respects but not identical. Then they read the first of their set of twelve vignettes, at the end of which they were asked to circle the probability that they would vote for the president under the conditions described in the vignette, using a 0–100 scale with five-point increments. After responding to the initial vignette, they considered eleven more, always recording their probability of voting for the president before moving on to the next one. Each participant received a different set of twelve vignettes from among the 16,384-vignette universe for these ten decision elements.

Before we proceed any further, it seems appropriate to consider the logic of searching for pocketbook voting in an experiment involving college students. David Sears (1986, p. 524) has argued that social psychologists, whose research tends to focus heavily on college students, often overlook material self-interest as a force motivating behavior because material self-interest generally plays an unusually minor role when college students consider political and social issues. If this is so, then it may seem odd to look for self-interest effects in the political calculations of college students, who would presumably be indisposed to think like pocketbook voters.

We are not certain that most college students are quite as lacking in materialistic motivations as Sears paints them, but let us lay this objection aside and assume that they are. It then follows that using college students as subjects constitutes a built-in bias *against* uncovering pocketbook effects on vote choice. So if the factorial survey produces few indications of pock-

etbook voting, we will have to concede that this evidence could merely be a methodological artifact of relying on college student subjects rather than a more representative cross-section of the voting-age public. However, since college students should, by Sears's logic, pose a hard test of pocketbook voting, if we do observe pocketbook voting in the face of this apparent bias, we would have all the more reason to take seriously the possibility that such a tendency really does exist in the broader population as well.

FINDINGS

Preliminary Analyses

Across the 3,456 cases (288 participants responding to twelve vignettes apiece), the highest correlation between any pair of decision elements was only .05,[3] so randomizing the values of the decision elements achieved the intended effect of imposing near-orthogonality. Nor did the participants betray any particular leaning in the direction of either pro- or anti-incumbent voting; in fact, the median probability of voting for the president was exactly 50%, with the mean only a percentage point or two lower.

Before turning to the main analyses, let us pause briefly to consider a methodological issue posed by "recycling" the experimental subjects in our design, that is, the fact that each of the 288 subjects responded to twelve different vignettes. On the one hand, it seems possible that the subjects might have experienced some learning from the first vignette they considered to the last. Perhaps, for example, they were initially confused by the welter of factors they were asked to consider, but eventually sorted out the important stimuli from those they considered less important. On the other hand, it also seems possible that after considering several choices within the repetitive framework of the decision shell, they lost their motivation to perform the task and began responding mechanically, or perhaps randomly.

In order to investigate these possibilities, we undertook a series of analyses that took into account the order in which a subject considered a given vignette. More specifically, we separated the first four vignettes a given subject considered from the last four and examined the probability of voting for the incumbent president in these "early" and "late" vignettes.[4] We found, first, that the mean estimated probability of voting for the incumbent was virtually identical in the early and late vignettes (means of .487 and .477, respectively). Perhaps more importantly, the variability of the subjects' responses held virtually constant from the early to the late vignettes, with within-subject standard deviations averaging .225 in early vignettes and .208 in late ones. This latter finding means that as they encountered more and more vignettes the subjects did become slightly less

likely to make adjustments in the probability that they would vote for the incumbent president, but this difference is hardly of a worrisome magnitude.

Most tellingly, we undertook matched mutliple regression analyses of the predictors of vote choice in the partitioned sets of early and late vignettes. These analyses revealed, first, that the overall explanatory power of the model was unaffected by whether a vignette was considered early or late (adjusted $R^2 = .309$ for both the early and late vignettes). Therefore, there is no warrant for seeing responses in the latter stages of the experiment as either more mechanical, more random, or more sophisticated than early responses were. Moreover, we observed overriding continuity in the relative impacts of the various predictors in the model, so the respondents did not eventually home in on certain decision elements and disregard others. Indeed, the findings reported below in the main analyses pertain equally well when attention is restricted to only early vignettes or only late ones. Based on these findings, we believe that the possibility of order-based methodological artifacts such as loss of motivation can safely be dismissed, and having done so we can now consider the main analyses.

Main Analyses

Table 2 presents the results of a multiple regression analysis conducted to determine the independent and cumulative impacts on vote choice of the economic and noneconomic factors in our model.[5] The model fits reasonably well, as evidenced by the summary statistics at the bottom of the table, but the real question concerns the effect of each of the decision elements, especially the economic ones.

Before we turn to pocketbook voting, though, let us briefly consider the noneconomic elements in the model. According to Table 2, identifying the challenger as a resident of the voter's home state significantly increased the probability of voting for the incumbent. Even so, it is well to bear in mind that in an analysis with 3,456 cases statistical significance is not a discriminating criterion, and that, as indicated by the unstandardized regression coefficient, the home state advantage amounted to less than two percentage points—hardly enough to warrant great attention. The effects of party identification and of the incumbent's personality traits were more substantial. Controlling for the other decision elements, the incumbent ran almost seven percentage points better when he was presented as a member of the voter's own party than when the partisan tables were turned, and our manipulations of the president's reputed competence and integrity yielded gaps of a like magnitude.

Even more telling was the congruence or incongruence between the vo-

TABLE 2. Regression Summary: Pocketbook and Other Effects on Vote Choice

Predictor (Mean)	b	s.e.	β
Noneconomic decision elements			
Senator's home state (.50)	1.81*	.80	.03
President-voter party match (.50)	6.80***	.80	.12
President's competence (.49)	7.62***	.80	.13
President's integrity (.51)	5.22***	.80	.09
President-voter domestic policy match (.51)	9.95***	.80	.17
President-voter foreign policy match (.49)	13.25***	.80	.23
Economic decision elements			
Retrospective national economic performance			.22
Good, due to president's actions (.25)	15.45***	1.12	
Good, due to other factors (.25)	11.83***	1.13	
Poor, due to other factors (.24)	4.80***	1.14	
Retrospective personal economic performance			.23
Good, due to president's actions (.26)	17.08***	1.14	
Good, due to other factors (.25)	12.95***	1.15	
Poor, due to other factors (.25)	5.58***	1.14	
Prospective national economic performance			.20
Good, due to president's actions (.24)	14.20***	1.15	
Good, due to other factors (.25)	11.48***	1.13	
Poor, due to other factors (.26)	3.00**	1.12	
Prospective personal economic performance			.21
Good, due to president's actions (.24)	14.25***	1.13	
Good, due to other factors (.26)	10.52***	1.11	
Poor, due to other factors (.24)	2.13	1.14	
Constant	−4.81**	1.76	
Multiple R	.57		
Adjusted R^2	.32		
Standard error of the regression	23.51		
F-ratio (df = 18, 3437)	89.58***		
Number of cases	3456		

ter and the candidates on domestic and foreign policy issues, particularly the latter. If one candidate was presented as being closer to the voter on domestic policy issues but farther away on foreign policy, then these two factors more or less canceled one another out, but their joint effect when both pulled in the same direction accounted for a swing of almost 25% in the probability of supporting the incumbent—obviously a difference large enough to matter.

Now, what about pocketbook voting? On all four economic decision elements, the very same progression of effects emerged. When the voter's finances or the nation's economy were presented as having gone poorly or as promising to do so in the future, and the president was said to be culpable (the circumstance associated with the omitted category in the regres-

sion model), the probability of voting for the president was at its lowest, as evidenced by the positive signs of all the coefficients for the economic dummy variables. Support for the president rose when the president did not bear the blame for unfavorable economic trends, but not by very much; as the unstandardized regression coefficients for the four "poor, due to other factors" dummy variables indicate, in no case did these effects reach as high as six percentage points, and in one case the coefficient was not even statistically significant. So when the economic news was bad, support for reelecting the president was affected only modestly by whether or not the president was presented as being responsible for these unfavorable developments. However, when past or future trends in the nation's economy or in the voter's own financial situation were presented as favorable, the probability of voting for the incumbent rose substantially, even when the president was depicted as not being responsible for these trends.

Voters in the "good, due to other factors" conditions of the four economic decision elements rewarded the incumbent with seven or eight extra percentage points in the support column over what he received in the four "poor, due to other factors" conditions. After that, however, support for the president leveled off again, increasing by only three or four additional percentage points when the economic news was not only good but was attributed to the president's actions. As was also the case for bad economic news, whether or not the president was presented as responsible for favorable economic developments had some, but relatively little, bearing on his prospects for reelection. The crucial distinction was between positive and negative economic trends per se, with presidential responsibility for these trends being a far less decisive consideration.

Nor did any one of the four economic decision elements stand out either above or below the rest in terms of its overall impact on support for the incumbent. According to Table 2, there was very little difference between the effects of retrospective and prospective economic trends, or between the effects of personal and national economic trends. The four sets of economic effects were roughly equal to one another, and all were of an impressive magnitude.

DISCUSSION

This study was motivated by a simple question: Why, in defiance of well-founded theoretical expectations, has pocketbook voting so seldom been observed in individual-level analyses of vote choice in national elections? In order to address this question and to shed light on which of the proposed explanations might be most worth pursuing, we retreated to the laboratory to conduct an experiment. Like most experiments, ours greatly simplified a

complicated situation, though the amount and complexity of the information provided to our "voters" were fairly substantial. Our experimental approach was prompted by the need to exert control over a set of factors that are impossible to disentangle or difficult to measure in natural election settings.

According to Sears (1986, p. 520), "A test conducted under artificial circumstances is best at telling us whether or not x can cause y under favorable circumstances. Having established that it can, the criterion of success shifts to the validity of the proposition in everyday life." Pocketbook voting was very much in evidence in our factorial survey—extraordinarily in evidence, when it is considered that our experimental subjects were given only hypothetical economic motivations to vote for one candidate or the other, and were also provided with legitimate noneconomic bases for choosing between the two candidates. In some prior experimental studies, subjects have been offered actual monetary incentives for different voting decisions (e.g., Collier, McKelvey, Ordeshook, and Williams, 1987; McKelvey and Ordeshook, 1985). The participants in our factorial survey had no material stake in voting by the pocketbook, but they did so anyway.

Accordingly, it seems fair to conclude that under carefully controlled circumstances like those imposed here (as in experimental studies in which subjects are actually paid for voting in certain ways), vote choices *can* be guided by the very types of economic considerations that have consistently failed to emerge in studies of voting behavior in actual elections. The question, then, becomes this: What is there about voting in real elections that overrides the tendencies toward pocketbook voting that came through so strongly in response to our vote choice vignettes? We believe that the specific pattern of findings observed here helps clarify this issue.

If there is an underlying tendency for voters to regard their personal finances as electorally irrelevant and to focus instead on national economic trends, then the participants in the factorial survey should have been influenced by the national economy but not by personal economic considerations; that is, they should have voted sociotropically and not self-interestedly. To be sure, our experimental subjects did adjust their support for the incumbent significantly upward or downward depending on whether the news they read about the nation's economy was good or bad. But their choice of candidates was influenced no less decisively by personal financial circumstances than it was by trends in the national economy. That is, sociotropic and self-interested voting operated side by side. These findings lend little support to the idea that sociotropic considerations are uniquely influential and personal financial considerations inconsequential in shaping vote choice. Rather, the implication is that both types of economic effects, personal as well as sociotropic, continue to be worth investigating.

According to another interpretation, pocketbook effects have failed to emerge because the search for them has been conducted in the wrong temporal setting—in the past rather than the future. However, our findings contain no hint of any tendency for voters to concentrate on economic forecasts while disregarding what has already occurred economically. Again, as was the case for micro- and macro-level economic effects, both retrospective and prospective effects were in evidence in our experiment. In fact, according to Table 2, retrospective information about the voter's own finances and the nation's economic situation affected vote choice every bit as much as prospective information did—if anything, a bit more. Perhaps, as Fiorina (1981) has argued, voters are at least as attuned to a candidate's past as they are to his or her promised performance. And perhaps, since the past is often regarded as the most reliable guide to the future, retrospective and prospective judgments are so intertwined in election surveys that attempts to disentangle their independent impacts on vote choice, even with appropriate statistical controls, are fated to yield ambiguous, inconsistent results.

The findings reported above also bear on the idea that pocketbook voting is rare because, for one reason or another, people tend not to blame the president when something goes wrong economically and not to give him credit when things go well. If this is so, then our experimental manipulation of responsibility for the economic trends in the vote choice vignettes should have produced a particular pattern of effects and noneffects. When favorable or unfavorable personal or national economic trends were explicitly presented as due to forces beyond the president's control, pocketbook voting should not have come into play. Only when these trends were clearly consequences of the president's actions should voters have used their ballots to reward or punish the incumbent. Yet what really mattered to our experimental subjects was not whether good or bad economic news was attributable to the president's actions, but simply whether the economic news was good or bad. To be sure, presidential responsibility did accentuate both the positive effect of good economic news and the negative effect of bad economic news. But these economic effects were by no means restricted to situations in which the president was held responsible, as the coefficients for the eight " . . . due to other factors" coefficients in Table 2 make clear. So evaluations were shaped at least as much by whether outcomes were favorable or unfavorable as by the reasons underlying these outcomes.

In sum, these experimental data do little to enhance the status of several accounts for the failure of pocketbook considerations to shape electoral decision-making in a decisive manner. The possibility that pocketbook voting might be more evident if attention were shifted from self-interest and per-

sonal finances to sociotropic concerns and assessments of the national economy is not borne out by our data, since both socioeconomic and personal assessments affected vote choice. Nor is the notion supported that prospective assessments of individual and collective economic trends are more critical than retrospective assessments when the two are experimentally disentangled—just as with sociotropic and personal assessments—both retrospective and prospective assessments shaped vote choice in our experiment.

We did find a modicum of support for the view that pocketbook voting may be most evident under what seem to be atypical circumstances: those in which voters actually attribute what happens in their own lives to the actions of political leaders rather than to themselves or to other electorally irrelevant factors (e.g., Feldman, 1982; Sniderman and Brody, 1977). Although the effects of our manipulation of presidential responsibility for favorable or unfavorable economic changes were modest, they were perceptible. Interestingly, though, the effect of attributing responsibility to the president was only barely more noticeable when personal economic fortunes were at issue than when national economic trends were being assessed.

This lack of differentiation between macro- and micro-economic effects does not fit well with the idea that the prevalence of self-reliance and individualism in the American political culture accounts for the infrequency of pocketbook voting, since one really would not expect a voter to take as much personal credit or blame for national economic trends as he or she does for personal financial ups and downs. Thus the self-attribution argument would have been more strongly supported in our experiment if explicitly attributing personal financial changes to the self rather than to the president had done more to dampen pocketbook voting than occurred when national economic trends were attributed to factors other than the president.

Moreover, if the notion that people generally attribute their economic fates to their own actions is evaluated in the light of attributional research, one would also expect to find evidence of self-serving attributional biases (see, e.g., Bradley, 1978). That is, in the interests of maintaining self-esteem, people would be expected to take personal credit for their economic successes but to blame external factors, including the president, for their failures. Indeed, unemployed and poor people tend to favor societal explanations of economic disadvantage more and individualistic explanations less than more advantaged individuals do (see, e.g., Furnham, 1988; Kluegel, 1990). Although the strongest effect of attributing economic trends to the president (a six-point drop in the likelihood of voting for the incumbent) did indeed occur when subjects were told that their personal economic

situation had worsened, the four-point increment in support for the incumbent when the personal economic news was good was not much smaller.

It remains possible that people typically attribute both personal and national economic trends to a variety of factors other than the president (such as labor unions, big business, oil-producing countries, or perturbations in the local economy) and therefore do not often hold the president accountable. As a result, there may be merit in pursuing a more broadly framed attributional hypothesis (i.e., one not focused exclusively on the president), ideally through more extensive study of voters' attributions for both personal and national economic trends. Similarly, it might be worthwhile to pursue the hypothesis that political consequences for the president are most likely to emerge when economic trends are negative and affect the voter personally, prompting the voter to search for scapegoats in the interests of avoiding self-blame.

Why, then, did trends in voters' personal economic situations exert a strong influence on candidate choice in our experiment, even though their impact appears to have been so weak and inconsistent in actual presidential elections? We suspect that the answer lies in the most fundamental difference between our voting experiment and vote choice in an actual election. In the real world, the factors that influence vote choice, which we carefully kept independent of one another in our experiment, do not operate independently of one another. They shape, constrain, trigger, deter, or reinforce each other in ways far more complex than could possibly be captured in an experimental setting. Indeed, the very complexity of these interrelationships provided us with a rationale for resorting to a vote choice experiment in the first place, since we hoped that an experiment would enable us to determine whether pocketbook effects on voting would emerge if we could somehow purge the electoral context of all this complexity. These effects *did* emerge in our simplified election scenarios. This, in a very general way, gives us the answer we were seeking. There is, our experimental data suggest, an underlying tendency for people to reward or punish the incumbent president when things have been going well or badly for them financially. However, this underlying tendency can be—and, so it would seem based on a host of empirical studies, usually is—overridden by the very complexity and interrelatedness of the electoral setting in the real world.

Consider, for example, the abundant evidence that in the real world sociotropic voting is more prominent than personal pocketbook voting. Explanations of this difference differ in various particulars, but most boil down to the relative ease, from the voter's perspective, of perceiving a linkage between developments in the national economy and the actions of the president, as compared to the relative difficulty of perceiving a linkage

between one's personal finances and the actions of the president. Because Americans look to the president for management of the nation's economy, many (but not all, for reasons we will discuss momentarily) interpret national economic downturns as direct evidence of presidential incompetence.

For downturns in one's personal financial situations to be held against the president, though, a long chain of forces must be present. One's personal economic misfortunes must be temporally linked to some visible action (or inaction) executed (or not executed) by a president one is predisposed to dislike, in the absence of other plausible accounts (including events in one's own life) for these personal misfortunes. In the real world, a chain this long with links this weak is easily broken. By contrast, in the simplified context of our experiment, the chain was short and secure: We simply informed the "voters" that their personal economic misfortunes were in fact due to the president's actions. Unmotivated or unable to break this sturdy chain, they used this information to help them choose between the candidates.

Finally and perhaps most significantly, consider the fact that in our experiment we manipulated the economic information a voter possessed independent of the voter's party affiliation and of any other bases the voter may have had for feeling positively or negatively about the incumbent or the challenger. By contrast, in the real world all these factors are apt to be intimately intertwined. Voters approach a presidential election wearing cognitive lenses—political schemas, in the terminology of some (e.g., Conover and Feldman, 1984; Lau, 1986)—through which they filter the new information that comes their way. They already have certain images of and feelings about the parties the candidates represent—images of competence, perhaps, or incompetence, and feelings of allegiance, hostility, ambivalence, indifference, or uncertainty. For some voters, these feelings are deeply ingrained; for others, only superficial.

Voters also have images of and feelings about the candidates, especially when one candidate is familiar to them, as an incumbent president invariably is. And they know something, or think they do, about where the candidates stand on the issues that matter most to them. In fact, many voters gain this "knowledge" through the perverse processes of "assimilation" and "contrast"—by assuming that the candidate they prefer shares their own positions on the issues or that the other candidate holds the opposite view (Berelson, Lazarsfeld, and McPhee, 1954).

Every day of their lives, citizens are exposed to a great deal of information, some positive, some negative, about how things are going economically—information about the national economy featured in the morning paper or on the evening news, and information about the family's finances

gained firsthand from paying the bills and balancing the checkbook. In order for such information to influence one's choice of candidates, it must somehow penetrate this maze of political preconceptions or schemas and override the information-processing biases they engender. Voters who are so inclined can simply ignore information that runs against the grain of their predispositions, or they can register such information as personally meaningful but discount it as electorally irrelevant.

Alternatively, they can revamp such information to make it fit more comfortably into the framework of their predispositions. For example, they might construct charitable explanations of why the economy is performing poorly during the term of a leader they like, but castigate a disliked leader under similar circumstances, permitting their political leanings to influence their attributional patterns. Of course, they can simply assimilate any information that reinforces their predispositions, leaving both political predispositions and voting preferences intact. Such, we believe, is the fate of much of the information to which citizens are exposed during political campaigns. The fact that economic signals in the real world are frequently mixed and subject to varied interpretations (rather than unambiguous, as in our experiment) makes biased information processing all that much easier.

It hardly seems surprising, then, that information about personal finances often falls by the wayside as an influence on vote choice, though we might expect such information to have at least the potential to affect the choice of the rare voter who approaches an election relatively unencumbered by the political baggage of identifying with a party, holding an opinion about the incumbent or the challenger, or having views on pertinent political issues. This interpretation, then, supports previous analyses indicating that economic assessments are typically biased by partisan stands (Conover, Feldman, and Knight, 1986, 1987; Peffley, Feldman, and Sigelman, 1987) and exert little influence of their own on vote choice.

In stark contrast to the situation that obtains in the real world, we force-fed unambiguous economic information to the "voters" in our experiment. We explicitly told them, for example, that their family was prospering as a consequence of a program sponsored by the president, or that even though the nation's economy was sagging, this was no fault of the president. The design of the experiment also ensured that economic information would be unrelated to, and therefore could not be systematically biased by, the other factors on which the voters would be basing their choice between the two candidates. Nor did our "voters" bring strong predispositions to their voting task; after all, they had no longstanding or deep feelings toward either of the hypothetical candidates between whom they were being asked to choose. The biased information processing of mixed economic signals that is so marked in actual elections was, then, largely missing from our experi-

ment. In all these ways, our carefully controlled experiment differed from an actual presidential election. To this difference we would attribute a large share of the divergence between our experimental findings and those recurrently documented in studies of real elections. It follows that we would also cite these biases as a prime source of the failure of pocketbook voting to emerge as an independent determinant of vote choice in actual elections. Moreover, we would suggest that future research might profitably be directed toward determining the effects of the nature and strength of preexisting political orientations and commitments on the interpretation of personal and collective economic conditions and, in turn, electoral decisions.

It is customary to conclude studies that present experimental data by acknowledging that effects observed in the laboratory may not carry over to the real world, and by speculating about whether they will. In the present case, questions concerning the external validity of our experiment might appropriately be raised, but there is no need to speculate about the generalizability of our experimental findings, because we already have the answer. It is clearly negative. To judge from our experimental data, pocketbook voting looms as a powerful force under controlled laboratory conditions, but we know from a long series of studies that in actual elections it is not an important influence on vote choice. This very fact may, if the interpretation outlined above points in the right direction, hold a key to understanding why pocketbook voting plays such a minor role in actual elections.

NOTES

1. Faced with a situation exactly parallel to the one confronting us here (a clash between strong theoretical reasons to expect "sophisticated" voting by legislators, on the one hand, and massive empirical evidence that members of Congress rarely engage in such behavior, on the other), Herzberg and Wilson (1988) pursued a similar strategy, devising a laboratory experiment to see which, if any, of several competing explanations could account for the observed anomaly.
2. Piazza, Sniderman, and Tetlock (1990) outline a parallel strategy for use in the mass survey context.
3. Each of the four decision factors with four alternatives is represented in the regression model by a set of three dummy variables, with one alternative serving as the excluded or reference category. By definition, the correlation between a mutually exclusive pair of dummy variables drawn from a single set must be nonzero; in fact, these correlations are all approximately $-.33$ (their invariance resulting from the approximately even distribution of values associated with random assignment). The statement in the text about correlations between decision elements thus holds with the obvious exception of these definitional correlations between variables constructed from a single underlying variable.
4. Bear in mind that the order in which vignettes were presented was random. Accordingly, we are interested here in "pure" order effects, unrelated to the substance of the vignettes.

5. In the table, $**p < .05$, $**p < .01$, and $***p < .001$. Each noneconomic decision element is a dichotomy (e.g., 0 = senator is not from the voter's home state, 1 = senator is from the voter's home state). For all four of the four-celled economic performance variables, the "poor, due to the president's actions" condition serves as the omitted or reference category for interpreting the remaining unstandardized coefficients; in every case, then, the implicit coefficient for "poor, due to the president's actions" is zero. The standardized regression coefficients are for a regression with the four four-celled economic performance variables recalibrated proportionally to their observed effects in the regression with three dummy variables for each economic performance variable. Such recalibration has no effect on the coefficients for the remaining predictors but produces a single β for each of the four-celled economic performance variables (Lyons, 1971).

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