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American Journal of Political Science, Vol. 29, No. 4 (Nov., 1985), 891-913.

Stable URL:
http://links.jstor.org/sici?sici=0092-5853%28198511%2929%3A4%3C891%3AREOPAP%3E2.0.CO%3B2-H

American Journal of Political Science is currently published by Midwest Political Science Association.

Reciprocal Effects of Participation and Political Efficacy: A Panel Analysis[*]

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While there have been numerous empirical studies of the causal determinants of voting behavior and other acts of political participation, political scientists have virtually ignored the *consequences* of such activity for the individual. Recent democratic theory asserts that participation should have significant individual-level effects, a hypothesis which is empirically tested in this paper. The effects of electoral and campaign participation on political efficacy are estimated in the context of a nonrecursive longitudinal model using the SRC 1972-1974-1976 panel study. It is found that these forms of participation exert positive impact mainly on the "external" or system responsiveness dimension of efficacy, and that these effects hold after controlling for educational attainment. These findings illustrate that engaging in political action does influence certain political attitudes, a fact which should be taken into account through reciprocal effects models of political attitude and behavior. The specific effect of participation on "external" efficacy also has important system-level consequences, as electoral and campaign acts influence the distribution of support for the regime or regime norms.

Empirical research in the field of political participation has produced a wealth of findings concerning the amount, types, and variations of public participation in political life. Survey-based studies conducted in the United States (Verba and Nie, 1972) and in cross-national settings (Almond and Verba, 1963; Verba, Nie, and Kim, 1978; Barnes and Kaase, 1979) have greatly enhanced the ability of political scientists to predict who will act in what ways with what frequency in a given political setting.[1] However, while our knowledge of the causal determinants of individual-level political participation is vast, our knowledge of the individual- level consequences of such activity is clearly deficient. Although such questions lie at the center of normative controversies in contemporary democratic thought, little empirical work has been done to discern whether participation in fact changes or affects the individual in any way. Does participation lead to changes in individual attitudes, self-image, or knowledge of or

[*]I would like to thank Helmut Norpoth, Jeffrey Segal, Richard Petrick, Peter Schrott, and James Enelow for criticism and encouragement. I would also like to acknowledge the helpful comments of Paul R. Abramson and Stephen Craig on a previous version of this paper, which was presented at the annual meetings of the Midwest Political Science Association, Chicago, 11–14 April 1984.

[1]For generalization of these empirical findings, see Milbrath and Goel (1977) and Goel (1981).

affect toward government or political institutions? According to one recent review of the literature (Salisbury, 1975), "There is a vast amount of empirical work to be done before we [will] know very much about [these questions]" (p. 335).

This paper tests several hypotheses concerning the individual-level effects of two modes of political participation, voting and campaign-related activity. After a review of the relevant theoretical literature, variables that may potentially be affected by these forms of participation are identified. The causal linkages between the attitudes and participation are then modeled using LISREL structural equation techniques, and estimates are obtained from U.S. election data from the 1970s. The results point to the consistent effect that both voting and campaign activity have on an individual's sense of "external" political efficacy, an important political attitude that has been defined, or strongly linked to, feelings of "system responsiveness" (Abramson and Aldrich, 1982), political trust (Balch, 1974; Craig, 1979), and diffuse political support (Iyengar, 1980; Wright, 1976). The role that participation plays in building and nurturing this orientation is then discussed in light of these findings.

The notion that participation has individual-level effects is central to several schools of contemporary democratic thought. From the standpoint of "participatory democracy," promoted most notably by Pateman (1970), Thompson (1970), and Mason (1982), political action should have beneficial or positive effects on the individual's moral and political development. Drawing on the classical thought of Rousseau and John Stuart Mill, these scholars stress participation's value in terms of individual self-actualization and advocate higher levels of mass participation precisely because of its positive effect on human character. Irrespective of its value in promoting individual self-interest or preferences in the political arena, or in achieving "instrumental" goals (Parry, 1972),

> the central feature of participation is an educative one, using the term education in the widest sense. [The system] is designed to develop responsible individual social and political action through the effect of the participatory process. . . . The human results that accrue through the participatory process provide an important justification for a participatory system. (Pateman, 1970, pp. 24–25)

But what might be an indicator of these "human results" or "self-realization processes" posited by the participatory theorists? Pateman and Thompson both asserted that the key psychological variable which represents this dimension is the "sense of political efficacy," or the sense of being capable of acting effectively in the political realm. These theorists are certainly referring in this context to the sense of "internal" political efficacy, that component of efficacy corresponding to feelings of personal political effectiveness, or the perception that the self is capable of influencing gov-

ernment and politics (Craig and Maggiotto, 1982).[2] As one participates in politics, one acquires political skills and perceptions of self-competence, qualities thought necessary for popular self-government and effective control over one's environment. In addition, the development of this attitude makes it more likely that individuals will participate in the future, and thus participation sets in motion a circular causal process whereby

> the very qualities that are required of individual citizens if the system is to work successfully are those that participation itself determines and foster . . . the more the individual citizen participates, the better he is able to do so. (Pateman, 1970, p. 29)[3]

While the participatory democrats see political activity as a potential avenue of self-development, other theorists see participation, and especially electoral participation, in a much less benign light. For these "mobilization of support" theorists, such as Ginsberg (1982), Weissberg (1975), and Wright (1976), participation serves to increase popular acquiescence to governmental authority or, more broadly, to promote feelings of legitimacy toward the political system. Regime stability, a primary focus of these theorists, is enhanced by "inducing citizens to believe that the government is responsive to their own needs and wishes" (Ginsberg, 1982, p. 182) or similarly by "encouraging [citizens] to believe that they are ultimately controlling the government . . . and keeping them committed to the existing system" (Olsen, 1982, p. 6).

From this perspective, participation should not affect "internal" political efficacy, the individual's sense of political self-competence, but rather the "external" component of efficacy, the belief that the authorities or regime is responsive to attempted influence (Craig, 1979). This attribute has been closely linked to feelings of trust in political authorities (Balch, 1974), and has more recently been suggested as part of Easton's concept of diffuse political support, generalized support for the political system (Iyengar, 1980).

Several recent studies (Shaffer, 1981; Abramson and Aldrich, 1982)

[2] Pateman explicitly related efficacy to political competence, and to feelings of personal self-confidence and effectiveness, qualities shown in various studies to correlate strongly with "internal" political efficacy (Craig, 1979).

[3] Participatory theorists do not assert that these processes exert profound influence on individuals in modern societies. Instead, individual self-development is an ideal which may occur most strongly when the entire society is democratized, i.e., when decision-making structures are decentralized, when workplace democracy is instituted, and when local-level social and political participation is radically increased. However, the strong correlation typically found between voting and other forms of participation and "internal" efficacy (Goel, 1981 lists over one dozen) is taken as evidence that participation does affect efficacy in the present system, and could do so even more powerfully in a future participatory society. Discovering whether or not voting and other "lower-level" political acts do in fact exert influence on the individual at present is the principal aim of this paper.

have documented the strong relationship between feelings of external efficacy and electoral participation, arguing that the decline of feelings of governmental responsiveness in the American electorate in recent years accounts for some of the decline in voting turnout. The "mobilization of support" theory suggests that the relationship operates in the other direction as well: the individual who votes or participates develops stronger feelings that the government is responsive, which then makes future participation within the system more likely. Conversely, nonparticipation will reinforce the sense that the government is unresponsive, which reinforces nonparticipation, and so forth. Taken together, the two viewpoints point to the existence of reciprocal causation between "external" efficacy and electoral participation.[4]

Unfortunately, empirical tests of the effects of participation on either dimension of efficacy have been few, and those that do exist have several flaws which render interpretation of their findings problematic. Most studies in this area have tested the effects of participation in industry or workplace democracy (cf. Elden, 1981), and have yielded inconclusive results. There is indeed some evidence that in some contexts high rates of participation lead to *negative* individual consequences, such as depression and loss of self-esteem (Kelso, 1978, chap. 9; Greenberg, 1981). Studies which investigate mainstream political action such as electoral, campaign, or communal behavior mainly report the strong relationship between efficacy (or other variables) and participation and suggest that possibly the relationship involves some measure of reciprocal causation (Barnes and Kaase, 1979; Bennett, 1975).

The problem in causal inference in the overwhelming majority of these studies is the reliance on cross-sectional designs, which renders the estimation of links both from participation to efficacy as well as from efficacy to participation almost impossible. More appropriate is the utilization of a panel design, which tracks the same individuals over time and allows the specification of reciprocal effects within the same model (Kessler and Greenberg, 1981). Several studies have utilized panel designs (Welch and Clark, 1975; Ginsberg and Weissberg, 1978; Iyengar, 1980), but none did so in the context of a reciprocal effects, or nonrecursive model. The regression models utilized by Welch and Clark and Iyengar are not optimal for testing the hypothesis of mutual causation, as these models do not control for the potential effects of participation on a respondent's initial level of efficacy, nor for the simultaneous impact of efficacy on participation at either time period. The work of Ginsberg and Weissberg (1978), who claimed that more voters

[4] Abramson and Aldrich acknowledged the possibility of reciprocal causation in footnote 2 of their 1982 article.

than nonvoters changed from "alienated" to "supportive" (as measured from single efficacy items) in a two-wave pre-post election analysis, is problematic as well. It is possible that individuals changed from alienated to supportive from the pre to post survey from reasons independent of their voting behavior and *then* decided to vote, in other words, that attitudes changed and then the new "supportive" attitude influenced the vote decision. Thus, the absence of fully nonrecursive causal structures indicates that the participation hypotheses may not actually have been tested in these studies.

Methodology and Model Specification

In this paper, a three-wave panel, the Survey Research Center's 1972-1974-1976 Election study (N=1,320), will be used to investigate the potential effects of both electoral and campaign participation on "internal" and "external" efficacy. The central questions will be whether reciprocal effects exist between these attitudes and behaviors, and whether the effects are similar for both attitudes, for both modes of action, and for different subgroups in the sample.

The models will be estimated with the LISREL procedure (Joreskog and Sorbom, 1976), which combines elements of factor analysis and structural equation modelling into one general statistical tool. Both portions of the technique will be used in this analysis. The factor analytic portions will allow the construction of latent, error-free constructs of "participation" and "internal" and "external" efficacy from responses to several survey items known to be imperfect, or fallible measures of those concepts.[5] The presence of measurement error in variables, as is widely known, produces unacceptable bias in estimates of causal effects, bias which may be either positive or negative in complex multivariate models (Achen, 1983; Asher, 1984). As previous research has shown substantial amounts of measurement error in both participation items (Sigelman, 1982; Carmines and McIver, 1983) and in indicators of "internal" and "external" efficacy (Craig and Maggiotto, 1982), models such as LISREL which take these errors into account are optimal for estimating unbiased structural effects between variables. After these error-free constructs are obtained, the structural equation portion of LISREL will allow the estimation, through maximum likelihood methods, of reciprocal causal effects between efficacy and the two types of participation.[6] The three-wave design here provides much flexibility in modeling the effects of the variables on each other over time, as

[5] No measurement models will be estimated for "voting," however, since only a single response was gauged in the SRC study.

[6] These effects can be thought of as similar to regression effects obtained from two- or three-stage least squares. The use of LISREL to generate the effects is preferable here for several reasons. First, the variables used in the final equations are unobserved, obtained indirectly

well as in specifying alternate models of the error terms in both measurement and structural equations (Kessler and Greenberg, 1981). The basic three-wave model is depicted in path diagram form in Figure 1.

Several facets of the model and their relationship to the theoretical questions addressed earlier require clarification before the results will be presented. Variables P_1, P_2, and P_3 represent, in the voting models, whether or not the respondent reported voting in the presidential elections of 1972 (P_1) and 1976 (P_3) and in the congressional election of 1974 (P_2). In the campaign models, they represent the latent variable "participation" in the three years, derived through analysis of the following three items commonly used in measures of campaign activity: working for a party or candidate, attending campaign meetings or rallies, and giving money to a candidate.[7]

The E_1, E_2, and E_3 variables represent the latent variable of either "internal" or "external" efficacy over time, derived from the three questions put forth by the SRC to measure each dimension. These items are listed in the Appendix, and frequencies can be found in the SRC 1972–1974–1976 Election Series Codebook (Survey Research Center, 1978).[8]

The major coefficients of interest in Figure 1 are the "b" values, representing the links between the efficacy and participation variables. Participation (or voting) in 1974 and 1976 is modeled as being caused by participation (or voting) in the previous period (the b_1 and b_2 stability effects), as well as by the same time period's attitude dimension (b_6 in 1974 and b_8 in 1976). The efficacy dimension is also assumed to have stability effects over time (b_3 and b_4), as well as effects from the participation variable

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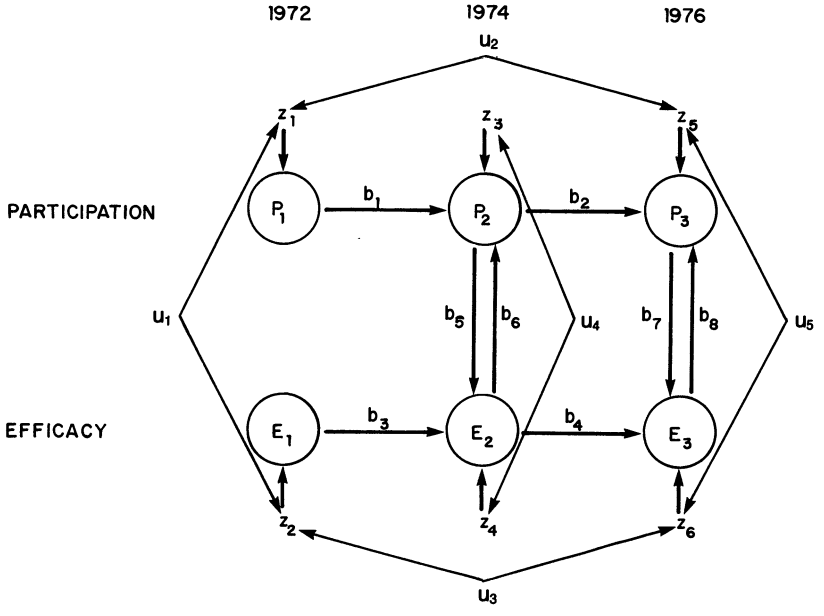
from the measurement models. Second, the models include both correlations between structural disturbances and equality constraints imposed on several parameters, which most regression packages cannot provide (Long, 1983b). Finally, LISREL produces estimates of the parameters in the measurement and structural equations simultaneously, as opposed to the stepwise function of two-stage least squares. These estimates have more desirable statistical properties, e.g., asymptotic efficiency (Hanushek and Jackson, 1977).

[7] Inclusion of only three of the five SRC participation items was purely for computational convenience, as a five-indicator participation index requires LISREL to estimate an extremely large number of variances and covariances. The three items analyzed here were those with high factor loadings on a separate measurement model of campaign participation.

[8] While there has been serious debate in the literature concerning which questions tap which dimensions of efficacy (see McPherson, Welch, and Clark, 1977; Balch, 1974; and Craig and Maggiotto, 1982), several analyses have validated the SRC formulation within the 1972-1974-1976 period (Iyengar [1980] for "external" efficacy, Finkel [1984] for both "internal" and "external"). Although there are substantial amounts of measurement error present in each question, the SRC two-dimensional model as a whole fits the data, for this time period, better than any alternative formulation. An explanation of the measurement procedures and results of separate LISREL measurement models are described in the Appendix, as they are less relevant to the substantive interests of this paper.

FIGURE 1

Structural Model Linking Efficacy and Participation Over Time



from that time frame (b_5 and b_7).[9] The reciprocal effects between P_1 and E_1 are not estimated due to identification problems, and instead the P_1-E_1 relationship is treated as an unanalyzed correlation which allows identification and estimation of the other links in the model.

In addition to the structural effects, correlations between the error terms of the participation equations of 1972 and 1976, between the efficacy equations of 1972 and 1976, and between the efficacy and participation equations in 1974 and 1976 are estimated. It is plausible that the disturbances in the equations for efficacy and for participation in the presidential election years (u_2 and u_3) are autocorrelated, that is, that each is influenced by many of the same situational factors (Welch and Clark, 1975) in presidential years (e.g., media exposure, political interest, candidate evaluations,

[9] Several cross-lagged models, where participation and efficacy at waves 1 and 2 affect each other at waves 2 and 3; were also estimated, and the pattern of results remained unchanged. In no cross-lagged model did efficacy influence participation in different ways than in an equivalent synchronous model, although the effects in general were somewhat weaker, due to the long time period between measurements.

etc.) which are not explicitly included in the model over time. The error terms u_4 and u_5 are necessary because of the strong probability that disturbances in a nonrecursive system are correlated (Duncan, 1975), due to their effects on variables which are themselves interrelated.[10]

From this system of relationships, an implied variance-covariance matrix of the observed indicators is generated in terms of the unknown model parameters ("b" coefficients, variances and covariances of the disturbances, and the links in the measurement models). Estimates of the effects in the structural and measurement models are obtained through maximum likelihood, which in effect minimizes the difference between the implied and actual variance-covariance matrix of the observed variables (see Carmines and McIver, 1983, or Long, 1983b, for a more detailed description of the estimation procedure). In this way, individual coefficients are obtained, as well as a summary measure, chi-square, which describes the amount of deviation of the implied matrix from the actual. To the extent that chi-square is large, the model does not adequately account for the observed data, and hence should be refined or rejected. However, chi-square is also sensitive to sample size, such that, other things being equal, large N's produce larger chi-squares. To control for this, a relative goodness-of-fit measure, the ratio of chi-square to degrees of freedom, is often used to assess how well the model explains the data relative to its sample size and the number of parameters to be estimated (Wheaton et al., 1977). Values of 2 to 1 or less for this ratio are "indicative of acceptable fit between that hypothetical model and the sample data" (Carmines and McIver, 1983, p. 64).

With LISREL procedure, four basic models were initially estimated and compared. First, models which link voting with "internal" and "external" efficacy were analyzed, followed by models which link these attitudes with campaign participation. The sample was then stratified according to level of educational attainment, and effects were compared across these subgroups. The results will show, first, whether reciprocal links exist between voting, participation, and these attitudes; second, whether the effects are different across the different modes of activity; and third, whether the effects differ for different types of respondents.

[10] The choice of these error structures was validated not only on theoretical grounds, but on statistical grounds as well. For example, in the "internal" efficacy–voting model, the chi-square value for a model without these error terms is 187.4, while the value for the final model is 59.8, a huge difference in goodness of fit. A model which includes only the u_1, u_2, and u_3 terms (i.e., no error terms between voting and efficacy in 1974 and 1976) yields a chi-square value of 66.3, again a worse fit to the data than the final model, with a difference of 6.5 points at 1 degree of freedom. The participation and "external" efficacy models show the same pattern of improvement in fit when introducing these error terms into the analysis.

Results

Voting and Political Efficacy

Tables 1 and 2 present the results of the LISREL VI estimates of the basic three-wave model of the relationship between voting and "internal" and "external" efficacy, respectively.[11] Both the standardized and unstandardized estimates are reported, as each will serve a useful purpose in the interpretation of the results. Because the choice of scale for the efficacy items is arbitrary, the standardized coefficients are more easily or intuitively interpretable, and will signify the relative impact of effects within a given model. However, that portion of the analysis which compares effects across subgroups will rely on unstandardized coefficients, as they are not dependent on the sample variance of the independent variables, which may differ across groups or populations (Hanushek and Jackson, 1977).

In terms of the global fit of the models, given by the chi-square statistic, both models account for the observed data reasonably well. The values of 59.8 for the internal model and 61.5 for the external, both with 42 degrees of freedom, are above the technically mandated probability level of .05, but their goodness-of-fit ratios are well below 2, and compare very favorably with values obtained in previous LISREL-based research (e.g., McPherson, Welch, and Clark, 1977; Dalton, 1980). Considering the number of indicators in each model (12), the number of variances and covariances (98), and the number of cases (1,069 and 933 through listwise deletion, respectively), these results are viewed as satisfactory.

In both models, the efficacy variable is extremely stable over time, somewhat more so than the act of voting itself. With average standardized stabilities of .69 for "internal" efficacy and .60 for "external" efficacy, both dimensions seem to approach the status of a fundamental orientation to politics which, like partisanship, is highly stable over time (Abramson, 1983). The act of voting is less stable, indicating that people will *feel* able to exert influence in government more consistently than they will actually act of those feelings.

The major difference between these two models involves the interrelationship between to two efficacy dimensions and voting, the primary hypothesis of interest. First, it should be noted that the overall correlations between internal and external efficacy and voting are modest, and thus decomposing this value into simultaneous structural effects yields coefficients of less than overwhelming magnitude. Yet the differences in the

[11] Only the structural estimates are reported, as the measurement models are of less substantive interest in this context. However, it should be noted that the estimates of both the measurement model and structural model are obtained simultaneously (see Long, 1983b).

TABLE 1

Voting and Internal Efficacy, Maximum Likelihood Estimates

		Standardized Beta	Unstandardized *b*	Standard Error
Stabilities				
Participation	b_1	.43	.50*	(.03)
	b_2	.30	.25*	(.02)
Efficacy	b_3	.76	.75*	(.06)
	b_4	.61	.63*	(.11)
Causal effects				
Participation-efficacy, 1974 (a)	b_5	.10	.06	(.04)
Efficacy-participation, 1974 (b)	b_6	.19	.30*	(.05)
Participation-efficacy, 1976 (a)	b_7	.08	.06	(.04)
Efficacy-participation, 1976 (b)	b_8	.24	.30*	(.05)
Error correlations				
Participation 1972–efficacy 1972	u_1	.31	.62*	(.08)
Participation 1972–participation 1976	u_2	.30	.77*	(.08)
Efficacy 1972–efficacy 1976	u_3	.15	.23*	(.15)
Participation 1974–efficacy 1974 (c)	u_4	−.12	−.27*	(.11)
Participation 1976–efficacy 1976 (c)	u_5	−.14	−.27*	(.11)
N	1,069			
Chi-square	59.8			
Degrees of freedom	42			
Chi-square/degrees of freedom	1.42			

NOTE: Coefficients designated (a), (b), and (c) are those constrained as equal over time.
*Significant at .05 level (two-tailed test).

magnitude and significance of the effects across models are substantial, and are of important theoretical consequence. For the "internal" model, the relationship between efficacy and voting is shown to be mainly unidirectional, with standardized effects of .19 and .24 from efficacy to voting compared to effects from voting to efficacy of .10 and .08.[12] The voting-to-efficacy value is small in comparison to the reciprocal efficacy-to-voting link, and also fails to attain statistical significance, given a two-tailed test.[13] Reestimation of the entire model without the voting-to-efficacy link shows,

[12] It should be noted that the coefficients linking participation to efficacy in 1974 and 1976 were constrained as equal over time, as were the opposite efficacy-to-participation effects. Relaxation of these constraints yields an insignificant improvement in chi-square.

[13] Because there has been some suggestion in the literature that participation may under certain conditions negatively affect individual attitudes (Kelso, 1978; Shingles, 1975), a two-tailed test of significance was mandated.

TABLE 2

Voting and External Efficacy, Maximum Likelihood Estimates

		Standardized Beta	Unstandardized *b*	Standard Error
Stabilities				
Participation	b_1	.46	.55*	(.03)
	b_2	.29	.24*	(.03)
Efficacy	b_3	.67	.66*	(.04)
	b_4	.53	.51*	(.06)
Causal effects				
Participation-efficacy, 1974 (a)	b_5	.18	.14*	(.03)
Efficacy-participation, 1974 (b)	b_6	.17	.23*	(.04)
Participation-efficacy, 1976 (a)	b_7	.15	.14*	(.03)
Efficacy-participation, 1976 (b)	b_8	.21	.23*	(.04)
Error correlations				
Participation 1972–efficacy 1972	u_1	.23	.54*	(.08)
Participation 1972–participation 1976	u_2	.32	.81*	(.08)
Efficacy 1972–efficacy 1976	u_3	.21	.43*	(.11)
Participation 1974–efficacy 1974 (c)	u_4	−.13	−.36*	(.09)
Participation 1976–efficacy 1976 (c)	u_5	−.17	−.36*	(.09)
N	933			
Chi-square	61.5			
Degrees of freedom	42			
Chi-square/degrees of freedom	1.46			

NOTE: Coefficients designated (a), (b), and (c) are those constrained as equal over time.
*Significant at .05 level (two-tailed test).

moreover, that, the inclusion of that link does not significantly improve the fit of the model to the data. The reestimated chi-square value is 62.7 with 43 degrees of freedom, a negligible chi-square difference of 2.9 from the original model.[14]

For the "external" efficacy model, the results point to the consistent

[14] Because the unidirectional model is "nested" in the bidirectional model, i.e., because the unidirectional model may be obtained from the birectional model by simply constraining one or more parameters (in this case by constraining b_5 and b_7 to equal 0), the two models may be compared directly with a chi-square difference test. The chi-square value for the bidirectional model is subtracted from the value for the unidirectional model, and this difference itself follows a chi-square distribution with degrees of freedom equal to the difference in the degrees of freedom of the two models. For these models, we find a difference of 2.9 with 1 degree of freedom, an insignificant value, indicating that the bidirectional model is not a significant improvement over the unidirectional model in the population.

TABLE 3

Campaign Participation and Internal Efficacy, Maximum Likelihood Estimates

		Standardized Beta	Unstandardized *b*	Standard Error
Stabilities				
Participation	b_1	.49	.45*	(.05)
	b_2	.52	.49*	(.06)
Efficacy	b_3	.74	.74*	(.06)
	b_4	.61	.62*	(.11)
Causal effects				
Participation-efficacy, 1974 (a)	b_5	.10	.15	(.09)
Efficacy-participation, 1974 (b)	b_6	.19	.12*	(.03)
Participation-efficacy, 1976 (a)	b_7	.09	.15	(.09)
Efficacy-participation, 1976 (b)	b_8	.20	.12*	(.03)
Error correlations				
Participation 1972–efficacy 1972	u_1	.33	.29*	(.05)
Participation 1972–participation 1976	u_2	.23	.12*	(.03)
Efficacy 1972–efficacy 1976	u_3	.16	.21*	(.13)
Participation 1974–efficacy 1974 (c)	u_4	−.11	−.09*	(.05)
Participation 1976–efficacy 1976 (c)	u_5	−.11	−.09*	(.05)
N	1,069			
Chi-square	179.2			
Degrees of freedom	115			
Chi-square/degrees of freedom	1.56			

NOTE: Coefficients designated (a), (b), and (c) are those constrained as equal over time.
*Significant at .05 level (two-tailed test).

reciprocal influences of efficacy and voting in both election periods.[15] The standardized effect of voting on "external" efficacy in 1974 is .18 and in 1976 .15, approximately the same magnitude as the links of .17 and .21 from efficacy to voting. These values are statistically significant, and are approximately twice as great as the corresponding standardized effects of voting on "internal" efficacy in Table 1. A similar unidirectional model for "external" efficacy and voting was also estimated, yielding a statistically weaker fit to the data than the reciprocal effects model (chi-square of 79.6 with 43 *df*). The results show that the relationship between voting and the two dimensions of efficacy are essentially different: "internal" efficacy

[15] Again, effects were constrained to be equal over time, and relaxation of this constraint yielded an insignificant difference in chi-square.

TABLE 4

Campaign Participation and External Efficacy, Maximum Likelihood Estimates

		Standardized Beta	Unstandardized *b*	Standard Error
Stabilities				
Participation	b_1	.51	.47*	(.06)
	b_2	.44	.51*	(.08)
Efficacy	b_3	.69	.68*	(.04)
	b_4	.53	.51*	(.06)
Causal effects				
Participation-efficacy, 1974 (a)	b_5	.14	.30*	(.10)
Efficacy-participation, 1974 (b)	b_6	.12	.06*	(.02)
Participation-efficacy, 1976 (a)	b_7	.13	.30*	(.10)
Efficacy-participation, 1976 (b)	b_8	.13	.06*	(.02)
Error correlations				
Participation 1972–efficacy 1972	u_1	.27	.27*	(.05)
Participation 1972–participation 1976	u_2	.29	.14*	(.04)
Efficacy 1972–efficacy 1976	u_3	.21	.43*	(.12)
Participation 1974–efficacy 1974 (c)	u_4	−.08	−.09*	(.05)
Participation 1976–efficacy 1976 (c)	u_5	−.08	−.09*	(.05)
N	933			
Chi-square	142.6			
Degrees of freedom	115			
Chi-square/degrees of freedom	1.24			

NOTE: Coefficients designated (a), (b), and (c) are those constrained as equal over time.
*Significant at .05 level (two-tailed test).

causes voting, but is not influenced by it, while "external" efficacy is both a cause and effect of voting in national elections.

Campaign Participation and Political Efficacy

Tables 3 and 4 report the results of the models estimated for the relationship between campaign participation and the two efficacy dimensions. The model's structure is similar in all aspects to the voting models, except for LISREL's estimation of a "latent" participation variable from the three indicators discussed above, as opposed to the single-indicator voting variable. This change results in a much larger model with 18 indicators and a total of 115 degrees of freedom.

The results of the models in many respects are similar to the voting

estimates. The chi-square values are at acceptable levels, the chi-square/degrees of freedom ratios are well below 2, and the stability of the efficacy variables is quite high. The participation construct, as would be expected because of the types of people who engage in such activities, exhibits significantly higher stability over time than does the simple act of voting.

The models are also very similar with respect to the links between the two dimensions of efficacy and political participation. Table 3 shows an effect from campaigning to "internal" efficacy of marginal significance and magnitude, while the main effect between these variables runs from efficacy to participation. Again, a unidirectional model with only the efficacy-to-participation link yields an essentially equal fit to the data, with a chi-square value of 181.8 with 116 *df*. Table 4, however, shows again the balanced reciprocal effects of campaigning and "external" efficacy. Both effects are significant, and inclusion of the reciprocal campaigning-to-efficacy link is a significant improvement over a unidirectional model (chi-square of 152.2 with 116 *df*). It appears from these tables that campaigning, as well as voting, exhibits effects mainly on the "external" dimension of political efficacy. While the effects are modest in magnitude, they are consistent across the two modes of political action, and represent a significant factor in explaining covariation of "external" efficacy and participation over time.

Controlling for Education

Thus far, the study has demonstrated the differences in relationships between different modes of participation and the two efficacy variables in essentially bivariate longitudinal models. Of course, many other factors may also account for the covariance between these variables, and not explicitly including them in the model may overattribute the effects of a variable that properly belong to an outside factor. It is also possible that the effects observed in the previous models are evident more strongly among certain subgroups in the population, and are thus conditional on the level of some demographic or attitudinal variable. An initial step towards investigating these possibilities was taken by reestimating the models for different educational groups, as this factor has been shown to exert strong effects on both conventional political participation (Goel, 1981; Verba and Nie, 1972), and the two dimensions of efficacy (Abramson, 1983; Cassel and Hill, 1981). The results of these analyses are reported in Table 5 for "internal" efficacy and Table 6 for "external" efficacy. For the voting models, the sample was divided into three educational categories, following Ginsberg (1982): less than high school (low), high school (medium), and some college or beyond (high). For the campaign models, so few of the low-education group engaged in any of these actions that it was necessary to merge the low and medium groups together to produce stable statistical estimates.

TABLE 5

Voting, Campaigning, and Internal Efficacy by Education

Causal Effects		Education Level		
		Low	Medium	High
Voting → Efficacy	U	.12	.06	.04
	S	.22	.09	.04
Efficacy → Voting	U	.45*	.28*	.16*
	S	.24	.18	.15
	(*N*)	(153)	(517)	(408)
		Low and Medium		High
Campaigning → Efficacy	U	.15		.02
	S	.06		.02
Efficacy → Campaigning	U	.12*		.17*
	S	.28		.21
	(*N*)	(660)		(403)

U: Unstandardized.
S: Average standardized effect in 1974 and 1976.
* Significant at .05 level.

TABLE 6

Voting, Campaigning, and External Efficacy by Education

Causal Effects		Education Level		
		Low	Medium	High
Voting → Efficacy	U	.14*	.13*	.09*
	S	.21	.17	.11
Efficacy → Voting	U	.28*	.22*	.08
	S	.18	.17	.07
	(*N*)	(136)	(453)	(351)
		Low and Medium		High
Campaigning → Efficacy	U	.40*		.20*
	S	.12		.15
Efficacy → Campaigning	U	.04*		.06
	S	.13		.08
	(*N*)	(582)		(347)

U: Unstandardized.
S: Average standardized effect in 1974 and 1976.
* Significant at .05 level.

Internal Efficacy

Table 5 indicates, first, that the nonsignificant overall effect of voting on "internal" efficacy is evident across all educational groups. The impact of efficacy on voting remains the dominant effect in all models. However, the magnitude of the efficacy-voting effect declines as education increases, as comparison of the unstandardized coefficients shows. Among the highly educated, efficacy does not exert as much impact on voting as among less educated respondents. The same pattern in evident for the reciprocal link between voting and efficacy, which reaches a fairly strong, though nonsignificant, level among the low-education group. There is thus a hint that voting may influence "internal" efficacy only for those respondents with less education, and hence with generally lower initial levels of that attitude.

The reestimation of the campaign participation models with "internal" efficacy show that the marginal effect from participation to that attitude in the bivariate model fails to hold up after introducing education as a control. The relationship between the variables within both subgroups is overwhelmingly unidirectional, as the effect from efficacy to participation remains strong and significant. Among both subgroups, then, "internal" efficacy causes participation, with little or no feedback onto the individual's attitude.

External Efficacy

Table 6 reports the results for voting, participation, and "external" efficacy by educational level. It is clear that voting exerts significant impact on "external" efficacy at all levels of education, although the effects tail off in magnitude among more highly educated respondents. The efficacy-to-voting link is significant for low- and medium-education respondents, but does not appear to be strong for the college-educated group. This indicates that education level, not efficacy, may be the determining factor for these respondents for the decision to participate. Still, once undertaken, voting does reinforce their level of system responsiveness, as it does for the two other groups.

The results are very similar for the campaign analyses in Table 6. Both the efficacy-to-participation and participation-to-efficacy effects are significant among the noncollege group, while at the highest level of education the effect of efficacy and participation is nonsignificant, and the standardized effect is half that of the significant participation-to-efficacy path. This indicates that, like voting, the effects of political action on "external" efficacy are consistent across the groups, while the opposite effect holds mainly for low- to medium-education respondents. Thus, whatever spurious effect that education level has on the "external" efficacy-participation

relationship operates on the attitude-behavior path, and does not substantially affect the influence of either voting or participation on that attitude. As with the act of voting, campaign participation exerts significant impact on the individual's sense of system responsiveness, regardless of educational attainment.

Discussion and Conclusions

The aim of this study was to reevaluate, in light of hypotheses derived from theories of democratic participation, the interrelationships between electoral and campaign activity and two fundamental political attitudes, "internal" and "external" efficacy. As many other studies have shown, these models indicate that both forms of efficacy exert positive impact on the two modes of participation. However, the results suggest that participation itself reinforces one of the dimensions of political efficacy as well; both voting and campaign participation influence an individual's sense of "external" efficacy, while these forms of action had little discernible effect on "internal" efficacy. These conclusions hold both in bivariate models which examine only participation or voting and efficacy over time and in more detailed subgroup analyses controlling for education. The findings have several implications for the theories of participation discussed earlier, as well as for empirical research which models the relationships between political attitudes and political behavior.

The results offer somewhat negative support for theories which stress the developmental nature of electoral or campaign behavior, as the effect of participation on the sense of political competence ("internal" efficacy) was negligible. Participation, in whatever form, was not seen as influencing the individual's own self-concept, but rather as "developing" attitudes about the responsiveness of the political authorities or political system. There are several possible explanations for these findings. First, these forms of activity (especially voting at the national level) may not be sufficiently demanding to promote individual self-development, as such activity involves little time or emotional or cognitive activation, and is far removed from the day-to-day concerns of the average citizen (Pranger, 1975; Bennett, 1975). Second, evidence from experiments in social psychology (following Bem, 1967) suggests that, to the extent that behavior influences individual attitudes, it does so primarily on attitudes about the object(s) toward which one directed one's actions (Nisbett and Valins, 1971). In this case, the object of behavior would seem to be the government, authorities, or institutions within which one participated and toward which one directed one's attempt at influence. For both these reasons, it may thus be reasonable that the primary attitude which changes as the result of routine electoral participation is one oriented toward those objects, and not toward the political *self*.

What results from electoral and campaign participation, therefore, is not a better-developed citizenry in the sense of increased political skills, but one with more sense that their leaders or institutions are "responsive." From the view of the mobilization of support theorists, the results suggest that these forms of participation can indeed be viewed as "inputs of support" for the regime (Rose and Massawir, 1967), developing positive system-related attitudes, and in the process potentially defusing more violent political behaviors or challenges to the existing political order (Ginsberg, 1982). The fact that these effects operate somewhat more strongly among less educated citizens may be especially beneficial to the regime, as positive system orientations are reinforced among those individuals with generally weaker overall senses of responsiveness and legitimacy.

Aside from its theoretical concerns, though, this study has sought to demonstrate more generally the utility of estimating reciprocal effects models of participation and political attitudes. Such models are more accurate tests of theory, in that participation may be expected *a priori* to influence a host of attitudes ranging from efficacy to tolerance (Muller and Jukam, 1981; Sullivan et al., 1981) to party identification (Franklin and Jackson, 1983). In addition, reciprocal effects models provide less biased parameter estimates than obtain in recursive designs estimated through ordinary least squares, in that they prevent mistakenly attributing variable x's impact on variable y as part of the opposite causal effect from y to x. The results of this study, in particular, indicate that some portion of the effect of "external" efficacy on voting found in previous studies (Shaffer, 1981; Abramson and Aldrich, 1982) more properly belongs in the opposite causal direction. Correcting for the presence of measurement error in the variables facilitates the "recovery" of some of the attitude-behavior effect, but this does not detract from the seriousness of the specification error in a simple recursive structure. The combination of models which correct for measurement error and which include reciprocal causal structures is required for an optimal specification of the full attitude-behavior relationship.

The drawback to these models, it must be noted, is that given the moderate correlations between attitudes and behavior typically uncovered in survey research, the decomposition of these correlations through nonrecursive structures will yield small effects in both directions. In this model, then, neither efficacy nor either mode of participation explains a large proportion of the variance in the other at a given point in time. However, what is more important in this study than the maximization of variance explained is the assessment of the causal interrelationships between variables. Other factors no doubt are important in explaining the levels of participation or efficacy at a given time, but the results of this study show that the traditional way of modeling the relationship between these two

variables is incomplete. The demonstration of reciprocal paths between "external" efficacy and participation is consistent with theoretical expectations, and indicates that participation is a means of building or reinforcing certain individual political attitudes. In addition, the models leave open the possibility that different modes of participation may have stronger effects on these or other attitudes under different conditions or among different people, and future research may address itself to these issues.

It is likely, for example, that more time-consuming and involving behaviors such as communal action or protest will lead to stronger effects on the individual's sense of internal efficacy or other political attitudes. Some of these types of action, moreover, may not be expected to influence system responsiveness in a positive fashion, and under some conditions, for example, voting for an ideologically extreme political party, even electoral action may lead to negative effects. It remains to be seen, in addition, what effect participation has on subgroups such as blacks, youth, or women. Did participation, for example, voting for Jesse Jackson in the 1984 Democratic primaries, increase blacks' feelings of legitimacy, "internal" efficacy, or group consciousness, or deepen existing levels of alienation and inefficacy? Are women building higher levels of "internal" efficacy through their increased participation in the campaign process in the 1980s?

What can be said from this study is that, in the context of American electoral behavior in the 1970s, voting and campaign participation led to the development of that componenent of political efficacy that bears on governmental or system responsiveness. After more research is done on other attitude dimensions with other political activities and subgroups, we may begin to make empirical generalizations about the varied ways that individual behavior, attitudes, and social structures interact and influence one another.

Manuscript submitted 28 June 1984
Final manuscript received 26 March 1985

APPENDIX

Measuring Political Efficacy

The confirmatory factor analysis portion of LISREL was used to generate the latent variables "internal" and "external" efficacy from responses to three indicators of each variable asked in the 1972, 1974, and 1976 surveys. Variations in each indicator's responses are assumed to be influenced by three factors: the latent variable "efficacy," an item-specific construct which accounts for stability in the item unrelated to efficacy, and random error. Inclusion of the item-specific construct is necessary with panel data because of the strong probability of stability in the item's responses due to other factors besides its relation to efficacy, such as correlated errors of measurement, test-specific response set, memory effects, or the effects of

any outside variable unrelated to efficacy which impinges on the indicators over time. These correlations will not be picked up by, for example, estimating correlations between the structural disturbances of the latent efficacy variables (z terms) in Figure 1.

The measurement model is thus defined by the following structural equation:

$$x_{ij}=a_iE_j+b_{ij}I_i+U_{ij}$$

where x_{ij} is the response to the observed indicator at time j (j=1, 2, 3 for 1972, 1974, and 1976), a_i is the effect of the latent variable "internal" or "external" efficacy (E_j) on indicator x_i, b_{ij} is the effect of the item-specific factor I_i on the indicator at time j, and U_{ij} is residual error in x_{ij}. All parameters are allowed to vary over time *except* the "a" values, the loadings of the indicator on the latent efficacy construct. This constraint ensures that "internal" and "external" efficacy are measured in the same way for all three time periods, and thus there is no qualitative difference in the nature of the latent variable in different years. This is an essential constraint in models which attempt to gauge an attitude's stability (Wheaton et al., 1977, p. 129).

Statistical estimates are obtained by first expressing all observed variances and covariances in terms of the unknown parameters (a's, b's, variances and covariances of E's, I's, and U's), and then solving a complex likelihood function which in effect minimizes the difference between the observed and implied covariance matrices (see Long, 1983a, for further exposition). These estimates are obtained simultaneously with the structural estimates linking all latent factors together as in Figure 1. However, to illuminate the measurement properties of the individual efficacy indicators, estimation of the model expressed in the equation above was conducted for both "internal" and "external" efficacy.

For the "internal" model, the following three indicators were used:

x_1: People like me have no say about what the government does;
x_2: Voting is the only way that people like me can have any say about how the government runs things;
x_3: Sometimes politics and government seem so complicated that a person like me can't really understand what's going on.

These questions are those recommended by the SRC as measures of the "internal" efficacy construct. The results were as follows: in the standardized measurement model, the average effect of internal efficacy on x_1 was .60, on x_2 .55, and on y_3 .44. The overall chi-square value is 39.3 with 19 degrees of freedom, just over the chi-square/degrees of freedom ratio of 2. In terms of reliabilities, these indicators are uniformly weak, with x_1 at .36, x_2 at .30, and x_3 at .19. This indicates that our measures of "internal" efficacy are severely error-filled, a condition remedied at least in part by the multiple-indicator confirmatory factor approach. The error-free latent factors are now used in the causal analysis linking this dimension with participation.

An identical model was estimated for "external" efficacy, with the three indicators specified by the SRC to measure that construct. They are as follows:

x_1: I don't think public officials care much what people like me think;
x_2: Generally speaking, those we elect to Congress lose touch with the people pretty quickly;
x_3: Parties are interested only in people's votes, not their opinions.

The results of the LISREL analysis are as follows: The standardized effect of the latent "external" efficacy construct on x_1 is, on average, .68, on x_2 .62, and on x_3 .77. The overall chi-square value for the model is 27.6 with 19 *df*, an excellent fit to the data and much improved over the "internal" model (p=.09). The reliabilities of the indicators are also improved. The mean reliability for x_1 is .47, for x_2 .39, and for x_3 .59. These results suggest that we are more successful at measuring "external" than "internal" efficacy with the SRC questions, but both dimensions have indicators with very large amounts of both item-specific variance and random

measurement error. Again, the LISREL procedure attempts to minimize the problem this condition poses for obtaining precise parameter estimates.

Models which represent alternative formulations of "internal" and "external" were also tested against the data. A model with all six indicators measuring one latent concept of "efficacy" was estimated, yielding a very weak chi-square value of 475.6 with 124 degrees of freedom. In contrast, the SRC two-dimensional model yields a much better fit, with a value of 305.0 with 110 degrees of freedom. Another model was estimated, which incorporates the "no say" item (x_1 in the "internal" model above) into the "external" dimensions, as some have suggested that this question is an indicator of "external," not "internal" efficacy (Abramson, 1983; Craig and Maggiotto, 1982). The resultant two-"internal"-indicator, four-"external"-indicator model yields a chi-square value of 402.4 with 110 *df*, again a much worse fit to the data than the SRC formulation. Finally, including "no say" into both dimensions yields a value of 295.8 with 109 *df*, a significant improvement over the SRC model. The factor loading of the "no say" item on both dimensions is statistically significant, but the impact of the "external" construct on the item is substantively negligible. The average standardized effect of "external" efficacy on "no say" is .20, over twice as low as the other two "external" indicators, and over twice as low as the effect of "internal" efficacy on that question. For these reasons, it was decided to retain the SRC two-dimensional formulation for this paper. Of course, alternative formulations should be encouraged, because of the extremely large amounts of error in the indicators. Craig and Maggiotto's (1982) new questions (1982) are a positive step in this direction.

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