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SOME PROBLEMS IN STUDYING THE EFFECTS OF RESOURCE
ALLOCATION IN CONGRESSIONAL ELECTIONS*

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Forthcoming in the American Journal
of Political Science (1981)



SOCIAL SCIENCE WORKING PAPER 344

(Revised for publication, October 1980)
Revised January 1981

ABSTRACT

After analyzing (1) data aggregated to the congressional district level, and (2) individual level data from the 1978 CPS Study, Johannes and McAdams conclude that congressional casework has no electoral impact. This commentary explains such null findings as the product of oversimplistic expectations and methodological weaknesses. Specifically, the Johannes and McAdams aggregate data analysis is misspecified on two counts. First, it attempts to reduce to a single regression equation a temporal sequence in which casework activity and electoral outcomes are mutually intertwined. Second, even were such a drastic reduction possible, the single equation employed would be poorly specified because of inattention to the differential productivity of cases, constituents, and representatives. The individual level analysis also is rife with statistical problems chief among which is multicollinearity aggravated by small numbers of cases. Analyses which do what is possible to minimize such problems reveal a statistically and substantively significant impact of casework on electoral outcomes. Further analyses which go beyond the Johannes and McAdams limitation of casework effects to the individual(s) directly helped suggest that the electoral effects of an incumbent's reputation for service may approach the effects of party identification.

SOME PROBLEMS IN STUDYING THE EFFECTS OF RESOURCE ALLOCATION IN CONGRESSIONAL ELECTIONS

Morris P. Fiorina

Until the mid-1970s the nature of congressional elections appeared simple and well-understood. Existing research (Stokes and Miller, 1962) indicated that House elections were predominantly party line affairs, largely because very few citizens had any additional information which could provide an alternative basis for voting. Even the short-term variation overlaid on the basic party division appeared to be party-related. Particular presidential candidates might stimulate a marginal amount of defection lower down the ticket (Miller, 1955-56). And in midterm elections evaluations of the incumbent President appeared to play some part in the overall outcome (e.g. Kernell, 1977). Indeed, using only an estimate of the party division, Presidential performance ratings, and trends in real income, Tufte (1975) developed a simple model which provided a good accounting for the in-party's midterm losses during the 1938-1970 period. To be sure, researchers recognized that scandals and other peculiar local circumstances could overwhelm the more general forces underlying the congressional voting (e.g. Miller and Stokes, 1966, pp. 369-370), but such possibilities were considered sufficiently random in their occurrence that they could safely be relegated to the error term in models of House voting.

By the mid-1970s however, new facts became apparent. Trends toward nationalization of House elections (Stokes, 1967) not only halted but dramatically reversed (Mann, 1978, chapter 5). Burnham (1975) noted the increasing insulation of the congressional electoral arena. Studies of

Presidential coattails indicated sharp declines from the New Deal era and even from the 1944-1964 period (e.g. Calvert and Ferejohn, 1980). And whether cause or consequence of all of this, the electoral showings of incumbent Representatives—already good—improved markedly (Erikson, 1972; Mayhew, 1974). By 1978 a mainstream congressional scholar could boldly declare:

The major conclusion of the study reported in this book is that Congressional elections are local, not national events: in deciding how to cast their ballots, voters are primarily influenced not by the President, the national parties, or the state of the economy, but by the local candidates. (Mann, 1978, p. 1).

Naturally, new facts called forth new theories. If contemporary House elections are greatly affected by local factors, then either previous research understated the awareness of the electorate, or voter awareness increased significantly since that research was conducted. In the absence of suitable time series data the question can not be answered conclusively. On the one hand there is circumstantial evidence consistent with the supposition of a better informed congressional electorate. Congressional campaign spending appears to have risen sharply, though pre-1970s data are poor. And, incumbents, at least, have increased access to staff, district office space, travel and communications funds, and are availing themselves of that access.¹ On the other hand, time series data on spontaneous name recall suggest no trends in public awareness of either incumbents or their challengers.² At any rate, whether the world has changed or our earlier picture of it was inaccurate, the present facts seem to be that

candidate-specific and district-specific factors exert critical influences on congressional elections.

The apparent significance of candidate-specific factors in combination with the burgeoning resources available to candidates, especially incumbents, has naturally led a number of researchers to focus on the resource allocation decisions of congressional candidates. The latter can do little or nothing about the party division in their districts. And individually, they have little or no effect on whom their party chooses to head the ticket, or once in office how that head performs with respect to the national problems of the day. But all candidates have their time; why do they spend it as they do? The same question applies to money. Incumbents have staff and district offices which can be utilized to emphasize certain functions and activities as opposed to others. How are they utilized, and why?

Those who study resource allocation in congressional elections make certain basic assumptions in their work. One is that resource allocation is purposive, not random; candidates use what they have to enhance the likelihood that they will achieve their goals. And what are those goals? That is a second basic assumption, namely, that candidate resource allocation is directed principally at the electoral arena. As support for these assumptions proponents of resource allocation theories cite two general phenomena. First, candidates themselves almost universally believe that their allocation decisions have electoral consequences.³ Second there is ample impressionistic evidence that "good," attentive, hard-working incumbents can "work" a marginal seat until it appears safe, for them, and conversely, "poor" lazy, out-of-touch incumbents can blow a "safe" seat. The task that proponents of resource allocation theories set for themselves

is to refine and document these basic propositions. Unfortunately, the task is not so easy as Johannes and McAdams (henceforth J & M) suggest.

The difficulty is best illustrated by considering some simple relationships between levels of various resources and/or activities and electoral outcomes:

- 1) The more incumbents spend, the worse they do (Jacobson, 1978).
- 2) The number of trips home is unrelated to incumbent electoral success (Fenno, 1978, Table 2.1).
- 3) District staff expenditure is unrelated to electoral success (Fenno, 1978, Table 2.6).
- 4) The number of district offices is negatively related to electoral success (Cain, Ferejohn, and Fiorina, unpublished research).
- 5) Casework and pork barrel activities are unrelated to electoral success (J & M).

These "findings" appear to cumulate into a clear conclusion: the naive empiricist should be willing to testify before Congress that if incumbents spend less money, go home less often, abolish their district offices, fire their staffs, and cut down on constituency service activities, they will do as well or better electorally than they do at present. Apparently, J & M would willingly offer such testimony (p. 32), but I doubt that anyone else would.

In this article I will show that the preceding "conclusion" is empirically incorrect as well as intuitively implausible. When complicated phenomena are analyzed simplistically, bizarre findings should come as no

surprise. The second section of this commentary argues that testing resource allocation theories with aggregated data poses major difficulties in statistical modeling.⁴ The third section demonstrates that untenable methodological decisions in the J & M individual-level analysis lead directly to their null findings. The facts are that the 1978 CPS data do reveal casework electoral effects of a magnitude consistent with the theoretical claims advanced in previous work.

THE EMPIRICAL IMPLICATION(S) OF RESOURCE ALLOCATION THEORIES

The first hypothesis suggested by resource allocation theories is simply that a resource efficiently allocated will produce a corresponding effect. Thus, in the case of congressional elections, an incumbent resource (R) allocated at time t is expected to produce an electoral effect (E) at time t + 1. Schematically,

$$R_t \longrightarrow E_{t+1} \quad (1)$$

Tests of this prediction, whether using simple cross-tabulations between the resource/activity and election results (e.g. Fenno), or more elaborate looking regression equations (e.g. J & M) produce the perplexing findings alluded to in the introduction. The reason is not hard to understand.

As Jacobson (1978) noted, there is also an important reverse linkage between expectations of the electoral outcome (E) at time t + 1 and the decision to allocate resources at time t. After the 1978 election, for example, William Natcher (D., Kentucky) reported expenditures of \$20 (to cover his filing fee and postage for mailing his report to the FEC). He was unopposed in the election. In contrast, Abner Mikva (D.,

Illinois) following a series of cliffhangers (including a defeat) and expecting another, spent \$385,000 and barely squeaked through. Many such examples produce the apparent negative relationship between incumbent spending and electoral success. It would be absurd to claim that the Natchers of the world do better than the Mikvas because they spend less money, but that is what an unthinking examination of the correlation between the two variables seems to suggest. If political scientists had license to play with the world, we could design an experiment in which Mikva would run two races, once in which he spent \$38.50, and one in which he spent \$385,000, with his challenger spending the same in both. But lacking such a capability we are stuck with a simultaneous equations relationship in cross-sectional data, namely

$$R_t \rightleftarrows E_{t+1} \quad (2)$$

This, of course, is what Jacobson saw, and what J & M refuse to see.⁵

Estimation of model (2) is a more difficult enterprise than that of model (1), and it still is too simple-minded. As noted earlier, in the cross-section the number of district offices and district staff often is negatively related to incumbent electoral success. Yet they bear an extremely interesting and plausible relationship to past electoral success. Table 1 contains a series of regression equations relating the number of district staff at time t to the number of district staff at time t - 2, perturbed by the incumbent's electoral margin at t - 1 (the data are drawn from the Congressional Staff Directory and Congressional Quarterly's Guide to U.S. Elections).

[Table 1 here]

TABLE 1
The Determination of District Staff at Time t
(Contested Elections Only)

Congress	District Staff (t-2)	Electoral Margin (t-1)	Constant	R ²	N
* 87	.801 (23.6)	- .0033 (1.38)	.487	.62	356
88	.779 (18.5)	- .0070 (1.92)	.965	.52	332
* 89	.781 (17.8)	.0048 (1.17)	.277	.49	338
90	.756 (19.9)	- .0088 (2.26)	1.47	.55	346
* 91	.711 (20.3)	- .0083 (2.24)	1.43	.53	381
92	.699 (17.0)	- .0037 (.818)	1.30	.460	346
* 93	.811 (18.4)	- .0059 (1.18)	1.43	.50	343
94	.756 (17.6)	- .0173 (3.26)	2.82	.50	309
* 95	.807 (20.7)	- .0121 (1.98)	2.39	.57	337
96	.634 (14.4)	.0095 (1.46)	1.88	.38	354

* on-year election

(t - statistics in parentheses)

percent, 500 cases of 5b percent, etc. Among the questions one might ask are two major ones. First, do all cases have the same impact? Do 400 social security and VA cases necessarily produce an electoral effect 40 times greater than 10 cases involving local school boards, community groups, mayors, contractors, etc.? J & M's analysis implicitly says yes. Second, even given some particular type of case, is electoral productivity independent of constituent and/or district characteristics? J & M allow for only one possibility, an additive effect of education. Others are certainly likely, though difficult to get at empirically. In a district with a stable population and integrated social structure, news of a successfully resolved case may spread far and wide; in an urban ghetto only the person directly involved may ever have knowledge of the case. We might expect the electoral effectiveness of a case to vary with the electoral strength of the incumbent. One already garnering 80 percent of the vote may have a harder time increasing his total than one garnering only 51 percent; most people helped by the former already support him, and the remaining opposition consists of the irreconcilables in the district.⁹ The electoral effectiveness of a case may vary with the constituent helped; perhaps independents are won over more easily than adherents of the opposition party. One could suggest many such possibilities, but these few should make the point. J & M have rough estimates of the simple number of cases handled by congressional offices. Their aggregate analysis does not consider the success rates in handling these, and it makes the presumption that all that matters is the sheer number of cases handled, independent of numerous relevant characteristics of the incumbent, the constituent helped, and the district. Although their analysis looks methodologically complex and substantively comprehensive, it is actually oversimplistic on both counts.¹⁰

In the fall of 1977 representatives of the congressional elections research community met at the University of Rochester under the auspices of the Center for Political Studies and the Board of Overseers of the National Election Studies. That conference debated the wisdom of devoting much of the 1978 survey to the subject of citizen perceptions of the activities of the congressional candidates (when the literature suggested that few citizens had any perceptions). Some researchers felt that theories of the incumbency advantage, for example, should be explored first using aggregate data, as J & M have tried to do. After considering the kinds of methodological problems just discussed, however, the conference decided that individual level data was the most appropriate for studying questions about the electoral effects of candidate resource allocation.

EVIDENCE FROM THE 1978 CPS ELECTION STUDY

On the level of the individual voter, the problems discussed in the preceding section are less severe. Model specification, for example, is fairly straightforward: one hypothesizes that voters "reached" by an incumbent resource will show higher levels of support for the incumbent than those not reached, ceteris paribus. Of course, a lot of thought should go into that "other things equal" clause, but the question of reciprocal influence between resource allocation and electoral outcomes largely disappears.¹¹ The question of the differential impact of any particular kind of case is moot because we have direct information on the number of constituents who report having received help (and having heard about other's receiving help). In addition, we can control for a number of factors which might condition the impact of a case--the respondent's party affiliation,

knowledge of the challenger, policy agreement with the congressman, etc. What then should we make of the null results reported by J & M? Simply that certain features of their analysis obscure the evidence actually present in the data. In this section I will first discuss several problems attendant to the J & M individual-level analysis, then show that correction of these problems reveals the expected effects of casework on electoral support. These initial results are the most conservative test of casework effects that is statistically reasonable and substantively plausible. I will then show that a less narrow interpretation of the casework hypothesis produces results which can only be described as massive. The exact effects of casework undoubtedly lie somewhere in between these most conservative and most generous estimates, but they are certainly present and substantively important.

The first important objection to the J & M analysis arises from their definition of casework. The 1978 Study contains the following item: "Have you (or anyone in your family living here) ever contacted Representative (name of House incumbent) or anyone in his/her office?" If the respondent answered yes, he or she then was asked "Was it to (1) express an opinion, (2) seek information, (3) seek help on a problem you had?" J & M define their variable "case" as taking on a value of one only if the response is "seek help with a problem." In the total sample 7 percent (166 of 2304) fall in that category, and in J & M's statistical analysis based on roughly one-third of the sample who vote, seventy or so people fall in that category.

In reviewing an earlier version of J & M's article I questioned the narrow definition of casework. Why not consider information requests (most must concern eligibility for government programs and/or seek explanations of

bureaucratic decisions) as perfectly legitimate kinds of cases? In fact, they are probably the kind congressional offices most like--routine and easy to resolve. Moreover, one can easily imagine constituent A telling a CPS interviewer about the "problem" he or she got help with, while constituent B considers a similar matter no more than a request for information (congressional staff, too, have difficulty making the distinction). The "seek help" and "seek information" variables seem to have similar relationships to other variables of interest (vote, job performance ratings, ect.) so I recommended that both categories should be regarded as cases.

What I meant, of course, was to combine the "seek help" and "seek information" items into one casework variable. The addition of the 119 persons in the "seek information" category yields 285 people in the whole sample who report casework experiences with the congressional offices, and 120 or so voters in the J & M analysis on whom to base an estimate. Unfortunately J & M add the information variable separately in Table 2, then report that neither information requests nor problem requests have a significant impact on the vote. It is not unreasonable to suggest that a better estimate might be obtained from a single category of 120 or so people than from two categories of 70 and 50, particularly in light of the next problem.

The second important problem with the J & M analysis is that it is plagued by multicollinearity. In recent years multicollinearity has been overplayed in the literature, serving as a general all-purpose criticism. But it should not be lightly dismissed in the present instance, so let us consider the problem and its relevance for J & M's analysis.

Classical regression analysis presumes that the right-hand side variables are linearly independent; if they are not, multicollinearity

exists. In any real analysis it is not a question of existence, but one of degree. At low levels of intercorrelation multicollinearity typically poses no great problem. At higher levels the problem becomes more severe. At the limit--a perfect relationship between one variable and some other(s)--the matrix of observations on the right-hand side variables is of less than full rank and the statistical procedure can not be performed.¹² At anything less than the limit the general effect of multicollinearity is to make it difficult to disentangle the separate effects of the right-hand side variables. Their standard errors are inflated--and therefore it becomes more difficult to show that any particular variable has a significant effect. Variables with truly major effects (e.g. party ID) will usually come through anyway, but less important variables (e.g. economic conditions, casework) may not appear significant either because they do not in fact have an effect, or because multicollinearity renders the estimates so imprecise that no effect is apparent when one in fact exists. The coefficient estimates themselves are not biased, but they are undependable. Multicollinearity renders them unstable in that the addition or deletion of a variable correlated with those already in the analysis may produce major changes in the coefficients of the variables already included. Addition or deletion of cases may have the same effect. Thus, though not theoretically biased, one's coefficient estimates may actually be implausibly large or small, or about right--one can't say--and they will be less precise estimates than they would be in the absence of multicollinearity.

Given these facts it is clear that one way to handicap a particular theory is to include its critical variables in a multivariate analysis containing lots of other variables with which they are correlated. I should emphasize that there is a fine line between giving certain variables the

chance to operate, and misspecifying an equation by leaving out variables which theoretically belong. But J & M have a long way to go before encountering the second problem.

Consider the use of the contact variables in J & M's Table 1. Those familiar with the contact variables know that there is quite a bit of common variance among them. Table 2 contains the bivariate gammas.¹³ As seen, the contact variables on average

[Table 2 here]

show moderate to high interrelations: the average gamma is .64. J & M speculate that only "news" comes out significant because it represents the most "objective" source of information about the candidates. Perhaps, but it may also be the case that other variables are important though their standard errors are too inflated to let us determine that. And it might also be the case that "news" would no longer be significant if we tried slightly different specifications.

Our principal concern, of course, is not the electoral impact of the contact variables; if their interrelations were limited to each other, we would not need to concern ourselves about them. But as I suggested in an earlier review of J & M's article, it would not be terribly surprising if casework experiences were highly related to contacts. For example, if a citizen wrote to request help with a problem, one might suspect that he or she would have a high probability of reporting a letter from the incumbent

TABLE 2

<u>Gammas</u>	<u>Met</u>	<u>Meeting</u>	<u>Staff</u>	<u>Mail</u>	<u>News</u>	<u>Radio</u>	<u>TV</u>
Met	---						
Meeting	.89	---					
Staff	.82	.78	---				
Mail	.67	.62	.68	---			
News	.68	.69	.71	.75	---		
Radio	.45	.47	.54	.60	.70	---	
TV	.48	.52	.45	.56	.65	.73	---
Info	.66	.67	.84	.70	.59	.43	.34
Help	.67	.64	.83	.56	.46	.42	.26

or his staff (129 of 166 help seekers report receiving mail, and 101 of 119 information seekers). J & M reply in a footnote (#12) that casework has no significant effect even after eliminating mail and staff contact, but this does not take into account the generally high level of interrelation between all the contact items and the casework variables (average gamma = .60 between contacts and seek information, .55 between contacts and seek help, from the bottom part of Table 2). Thus, the mutual interrelationships between the contact and casework variables serve to lessen the precision of the estimates of both.

Another source of multicollinearity in J & M's Tables 1 and 2 stems from the interrelation between seniority and the casework variables. Like "incumbency" seniority is an easily observed condition which we can use as a proxy for less easily observed but theoretically important variables—power in the institution, salience to constituents, record of electoral strength, etc. But there is less reason to use seniority when we have direct measures of its presumed components, as we do in the 1978 Study. Inclusion of seniority only further compounds the problem of multicollinearity. For example, constituents of an incumbent elected before 1964 are three times more likely to report a case or hearing about a case than constituents of a freshman. The former are twice as likely to recall something the incumbent has done for the district. And they are more likely to report contacts of all varieties. Seniority proxies the kinds of constituency service activities in which we are interested; including it in the analysis may capture additional influences of which we have no direct measure, but it also further spreads the variation which might legitimately be ascribed to casework.

Finally, by adding "info" to the equation reported in J & M's Table 2, additional interrelations with the contact variables and seniority are introduced. All in all, in their Tables 1 and 2 J & M have unwittingly engaged in multicollinearity maximizing; their methodological decisions predispose them toward null results.

The estimations reported below attempt to overcome the problems just discussed. First, the casework variable was broadly defined as either "seek help" or "seek information." Though this provides more voters (n = 120) who have a casework experience, the number dissatisfied with their treatment who vote and who have data on the other variables in the analysis is still only seven.¹⁴ Second, I have tried to lessen the multicollinearity problem in a number of ways. Since none of the contact variables bears a significant relationship to the vote when incumbent name recognition is in the equation, I eliminated them in favor of the latter. For the reasons previously mentioned I omitted seniority from the analysis. And finally, the more broadly defined casework variable provides a bit more latitude for the statistical procedure to separate the effects of the various variables.¹⁵

The analysis differs from the J & M analysis in several other ways. First, dummy variables for challenger name recognition and challenger contact (of any kind) were included in an attempt to capture the relative attractiveness of the incumbent's opponent.¹⁶ Second, in place of the J & M measure of ideological discrepancy, I have used the survey item on citizen agreement with the incumbent's voting record. While J & M probably are correct that their measure is more "objective" (if less interpretable), my principal concern is not ideology, and if anything, inclusion of a policy agreement measure susceptible to rationalization should lessen the chances of finding casework effects. Finally, I have added to the analysis dummy

variables which attempt to capture the second order or "ripple" effects of casework.¹⁷ J & M dismiss out of hand the possibility of such effects (footnote 16), but why resort to fiat when data is available?

Table 3 contains estimates of equations incorporating the considerations just discussed. The results agree with the J & M

[Table 3 here]

results in two major respects. First, party identification appears to have the single largest influence on the congressional vote, and second, the general policy stand of the incumbent is of considerable importance, at least among the 40 percent of the sample that has an opinion of the incumbent's voting record.¹⁸ As for casework, however, these results differ from the J & M results. From equation 1 we see that a personally satisfactory case experience has a significant positive effect on the probability of voting for the incumbent, and a personally unsatisfactory experience (very rare) has a significant negative effect. Granted, the .10 significance level is a bit lower than we normally stipulate, but it is still a far cry from suggesting the absence of a relationship, and considering the small number of cases underlying these estimates it is not bad at all. Equation 2 is the same as equation 1 except that dummy variables representing the case experiences of friends and relatives are included. As one would expect, the satisfactory and unsatisfactory experiences of friends and relatives also have corresponding effects on the citizen's probability of voting for the incumbent. Notice however, that inclusion of the second hand experience variables deprives the personal experience variables of statistical significance (without altering the

TABLE 3

Probit Estimates of 1978 Vote for Incumbent in Contested Elections

		Equation 1	Equation 2	Equation 3
Recognize Incumbent		.84**	.78**	.82**
Recognize Challenger		-.51**	-.51**	-.50**
Contact with Challenger		-.35**	-.37**	-.35**
Personal Casework Experience	Very Satisfied	.39†	.33	----
	Somewhat Satisfied	.02	-.06	----
	Not Satisfied	-.93†	-.74	----
Secondhand Casework Experience	Satisfied	----	.26†	----
	Somewhat Satisfied	----	.37	----
	Not Satisfied	----	-.89*	----
Combined Casework Experience	Excellent	----	----	.87†
	Good	----	----	.24†
	Bad	----	----	-.92**
Pork		.30†	.27	----
Opinion of Voting Record	Agree	1.12**	1.08**	1.06**
	Somewhat Agree	.64**	.65**	.64**
	Neutral	-.20	-.19	-.19
	Disagree	-.48*	-.42*	-.42*
Party ID	Opposite Incumbent	-.78**	-.78**	-.77**
	Same as Incumbent	.74**	.76**	.79**
Constant		.33	.36†	.34†
n		747	747	752
R ²		.55	.57	.57
% Correctly Predicted		85%	85%	84%

** p < .01

* p < .05

† p < .10

coefficients to any great extent). This is multicollinearity at work again: the gamma between satisfactory personal and secondhand case experiences is .75, while that between unsatisfactory personal and second hand experiences is .87. Equation 3 alleviates the multicollinearity problem in two ways. First, it omits the variable, pork, which relates to personal and second hand satisfactory case experiences at about the .6 level (gamma).¹⁹ Second, equation 3 combines the personal and second hand case variables into a simple index represented as follows: "Excellent" takes on a value of 1 if the respondent reports both satisfactory personal and second hand experiences; "Good" takes on a value of 1 if the respondent reports a satisfactory personal experience and either no second hand experience or a so-so experience, or if the respondent reports a satisfactory second hand experience and either no personal experience or a somewhat satisfactory one; "Bad" takes on a value of 1 if the respondent reports either an unsatisfactory personal or second hand experience (two respondents who reported one satisfactory and one unsatisfactory experience were relegated to the reference category). As seen in the third column of the table, these dummy variables representing the combined effects of case experience achieve a degree of statistical precision that should satisfy all but the most obsessive devotees of statistical significance. The important point however, is not so much the precise value or significance level of any casework coefficient in Table 3, but rather the overall picture conveyed by the table, namely, that casework experiences have the theoretically (not to mention common-sensically) predicted effects on the electoral fortunes of incumbents.

How important are those effects? In order to address that question we do have to consider the precise values of various coefficients. Probit

coefficients do not provide direct information about the magnitude of a variable's effect on the dependent behavior; they must be transformed into probabilities, and these probabilities depend on the values taken on by other variables in the equation. In Table 4 I have used the estimates from equations 1 and 3 of Table 3 to calculate probabilities of incumbent support under the assumptions that the citizen recognizes both the incumbent (90 percent do) and the challenger (less than 40 percent do), reports a contact by the challenger (less than 40 percent do), has no opinion of the incumbent's voting record (only 40 percent do), and remembers no pork the incumbent has procured (only 14 percent do). On balance these assumptions favor the challenger, i.e. the estimated probabilities of incumbent support are lower than in the overall electorate, since fewer than half the electorate has as much awareness of the challenger, as is assumed here.

[Table 4 here]

Evidently our estimates suggest a considerably larger effect than those of J & M. The difference between reporting no case experience and a personally satisfactory experience ranges from .08 to .15 depending on party affiliation. Considering that about one-half the voters share the incumbent's affiliation, one-third report the opposite affiliation, and one-sixth report independence, our estimates suggest that satisfactory personal casework experience increases the average voter's probability

TABLE 4

Estimated Probabilities of Voting for Incumbent
as a Function of Party ID and Casework Satisfaction

	<u>Opposite Incumbent</u>	<u>Party ID</u>	
		<u>Independent</u>	<u>Same as Incumbent</u>
No Case	.32	.62	.85
Not Satisfied	.08	.27	.55
Somewhat Satisfied	.33	.63	.86
Very Satisfied	.47	.76	.93
Casework Bad	.08	.17	.56
Casework Good	.59	.71	.90
Casework Excellent	.66	.88	.97

of supporting the incumbent by about .11. And in the most favorable case of a constituent who not only has personally satisfactory experience but also has heard of someone else's satisfactory experience, the increment in the average probability of electoral resources amounts to about .21.

As suggested earlier, the J & M rendering of the "casework hypothesis" is unduly narrow. Their analysis (and the "replications" of it in Table 3) presumes that the effects of casework are limited to those who have been personally involved in a case, or perhaps know of a friend or relative who was personally involved. Such a formulation considers only the direct effects of casework. But casework, particularly the so-called high level variety may have important indirect effects as well. It may produce endorsements, campaign contributions and other forms of incumbent support which enable the incumbent to increase his name recognition and contacts, and thus gain support. In addition, a plenitude of electoral resources may discourage a strong challenger from making the race, thus resulting in lower challenger recognition and contacts, and a higher level of incumbent support. Work now under way shows the existence of such effects (Cain, Ferejohn, and Fiorina, 1980).

A second indirect effect of casework is probably even more important than the one just discussed. In advancing the constituency service theory of the increasing incumbency advantage I hypothesized that popular perceptions of the congressman had changed, and that such changed perceptions were not limited to those who had requested aid. For example,

What if in 1958 those voters who had heard or read something about the incumbent had heard or read about one or more of his policy stands, whereas in 1970 they had heard or read about his effectiveness in

getting Vietnam veterans' checks in the mail? Some voters will agree with the policy stand, others will disagree, but everyone will applaud efforts in behalf of the veterans. . . . Thus, an increasing incumbency advantage is quite consistent with a constant informational advantage if information about the incumbent has grown increasingly noncontroversial in content and correspondingly positive in its impact.

Furthermore, as suggested above, if popular perceptions of the congressman gradually change from national legislator to district ombudsman, even those citizens having no specific information about incumbent or challenger act quite sensibly in going with the candidate who has experience and seniority. (Fiorina, 1977, pp. 51-52) (emphasis added)

And several theoretical articles written with Roger Noll (1978a, b; 1979) contain clear statements of the hypothesis that the casework effect occurs through future expectations as well as through past experiences. For example,

As the public bureaucracy grows larger, the importance of the performance of facilitation will grow, and a legislator who is a good facilitator will be increasingly likely to be reelected. A challenger who is unproven as a facilitator is a riskier choice than an effective incumbent, and consequently provides a lower expected payoff in this role. This tendency will be accentuated if a legislator is expected to become a more effective facilitator over time. (1978a, p. 257) (emphasis added)

Furthermore, the work of other scholars clearly suggests a broad

interpretation of the "casework hypothesis". Most prominently, Fenno discusses at length the desire of a congressman to present a favorable image to constituents, to convince constituents that as a general matter he is accessible to constituents, and can be trusted by constituents:

Above all, perhaps, they stress their accessibility. Access to some carries the assurance of access to more; and the assurance of access carries with it the assurance of two-way communication. The more accessible they are, House members believe, the more will their constituents be encouraged to feel that they can communicate with the congressman when and if they wish. As we have said frequently, however, this kind of assurance is not obtained by one-shot offers. It is created over a long time and underwritten by trust. (1978, p. 240) (emphasis added)

To be sure, Fenno is referring to more than casework here, but his observations surely apply to that special case. In designing the 1978 CPS Survey an attempt was made to tap Fenno's concern with the intangible long-standing relationships between congressmen and their constituents. And interestingly, the attempt was made in the context of casework. The Survey included the following item, which might be termed the "expectation of access" or "expectation of helpfulness" item:

If you had (another/a) problem that (name of Representative) could do something about, do you think that he/she would be very helpful, somewhat helpful, or not very helpful to you?

In contrast to the direct experience items three-fourths of the sample offer an opinion on this item, and the 537 "don't know" also constitute a

meaningful response in that these are individuals whom the incumbent has failed to reach.²⁰ If we substitute this measure of expected casework benefit for the direct experience measures used in Table 3, we get the statistical results shown in Table 5 (the suppressed reference category is "not very helpful"). These results are crystal clear:

[Table 5 here]

a positive expectation of the incumbent's helpfulness is the single most powerful variable in the equation. The effects of citizen expectations are graphically illustrated in Table 6, which contains estimated probabilities of supporting the incumbent calculated under the same assumptions as previously. The table shows that citizen expectations of the incumbent's helpfulness are fully as important as party affiliation in their vote decisions.

[Table 6 here]

Of course, in interpreting Tables 5 and 6 one should be cognizant of the rationalization dangers inherent in an item like "expectation of helpfulness." It is undoubtedly the case that some citizens respond positively/negatively to this item because they already like/dislike the incumbent on other grounds entirely. Still, Table 7 should encourage those who believe that survey data reflect reality as well as the inner needs and torments of the respondents. This table contains estimates of the impact of various factors on citizen expectations. As shown the single most important measured influence on expectations is actual casework experience.

TABLE 5

Probit Estimation of 1978 Vote for Incumbent in Contested Elections
(with Expectation of Casework)

		Equation 4
Recognize Incumbent		.73**
Recognize Challenger		-.53**
Contact with Challenger		-.35**
If Problem Arises, Incumbent would be	Very Helpful	1.56**
	Somewhat Helpful	1.14**
	Don't Know Helpful	1.00**
	Depends	.39
Pork		.22
Voting Record	Approve	.87**
	Somewhat Approve	.49**
	Neutral	-.13
	Disapprove	-.32
Party ID	Opposite Incumbent	-.76**
	Same as Incumbent	.82**
Constant		-.65*
n		747
R ²		.59
% Correctly Predicted		86%

** p < .01

* p < .05

TABLE 6

Estimated Probabilities of Voting for Incumbent
as a Function of Party ID and Expected Casework Satisfaction

Casework Expectation	Opposite Incumbent	Independent	Same as Incumbent
Not very helpful	.06	.21	.51
Depends	.12	.34	.66
Don't Know how Helpful	.32	.61	.87
Somewhat Helpful	.34	.63	.88
Very Helpful	.50	.78	.94

personal or secondhand, with the incumbent.²¹ Satisfactory experiences have highly significant (and substantively large) positive effects on expectations, while negative experiences have highly significant (and substantively large) negative effects. Recollection of something the incumbent has done for the district also has a highly significant effect on expectations, as does contact with the incumbent, whether of a personal, impersonal, or secondhand nature. Those who disagree with the incumbent's policy stands also tend to expect little in the way of help from him, and conversely for those who support his stands. This finding may reflect only a more general like or dislike of the incumbent, or then again it may be a reasonable extrapolation from a general context to a personal one. Finally, note that a principal source of rationalization in other situations—party identification—has a relatively small substantive impact in this one. If citizen responses to the expectation of helpfulness item are merely rationalizations which reflect a more general like/dislike of the incumbent, one must still explain how that rationalization arises; it does not appear to have deep roots in party affiliation.

[Table 7 here]

One final objection arises. The estimates in Table 7 might suggest to some that the equations in Table 3 and J & M's Tables 1 and 2 are reduced form equations, and that Tables 5 and 7 therefore contain no additional information. I offer two related points in reply. First, note the considerable amount of unexplained variance in Table 7; though important, actual casework experience, contacts, and knowledge of district service do not come close to exhausting the content of the expectation of helpfulness item. This point leads into the second, namely that such an objection

TABLE 7
Expectation of Helpfulness Equation (Probit Estimates)

Name Recognition		.30**
Personal Contact		.18*
Impersonal Contact		.27**
Secondhand Contact		.20**
Casework	Very Satisfied	.92**
	Somewhat Satisfied	-.40*
	Not Satisfied	-1.16**
Secondhand Casework	Satisfied	.44**
	Somewhat Satisfied	.51
	Not Satisfied	-1.16**
District Service		.25**
Party ID	Opposite Incumbent	.07
	Same as Incumbent	.22**
Voting Record	Agree	.90**
	Somewhat Agree	.33**
	Neutral	-.35**
	Disagree	-.53**
Seniority		.00
Constant		.07
n		1438
R ²		.39

** p < .01

* p <

ignores the conceptual distinction between actual experiences and expectations which stimulated the analysis in Tables 5 and 7 in the first place. The expectations variable reflects the incumbent's accumulated "stock" with his constituents. It responds to the "flow" of actual services, certainly, but it reflects a great deal besides. And the incumbent's stock may be high with constituents not ever touched directly by the flow of services. How incumbents accumulate their stock is what Fenno's Home Style is all about, and I dare say that it is a question that will not be answered by looking at the coefficients of two or three variables in a statistical model.

To sum up, Tables 3-7 provide ample evidence that individual voters respond positively to the casework activities of incumbents. Because the analysis in Table 3 incorporates only actual casework experience, it no doubt understates the effects of the latter (though it still suggests effects considerably larger than J & M suggest). Because the analysis in Table 5 contains an undetermined amount of rationalization it no doubt overstates the casework effect. But between these conservative and generous analyses there is ample room for casework to exert an electoral effect sufficient to explain a large part of the growth in the incumbency advantage over the past generation.

DISCUSSION

J & M conclude that "voters can not be bought cheaply" with casework. We have just seen that voters can be bought; do they sell their votes too cheaply? By looking down their noses at casework, J & M echo the biases of scores of their predecessors who substituted constitutional prescription for political analysis. From the standpoint of system

performance the discouraging thing is that rewarding congressmen for casework is so rational. Unless one's congressman is Tip O'Neill, Melvin Price, or a couple of others, his defeat or reelection changes the probability of building the MX Missile by an amount arbitrarily close to zero. To vote for him or her on the basis of such matters is largely symbolic, an expression of personal opinion which carries little instrumental value. But to many voters the incumbent's district office operations and personal record of service may appear to be largely a reflection of his personal efforts, and therefore contingent on his reelection.²² If these voters opt for the material and instrumental over the symbolic, does this make them irrational? If so, classical political machines are based on irrationality. It is precisely because voters are not fools that the constituency service strategy works. Even if the ultimate consequences of such behavior are negative from the standpoint of the larger system, the individual voter has little personal incentive to vote as the good government groups ask (just as none of us individually has the material incentive to equip our cars with the latest anti-pollution technology despite the fact that we all pollute). I, too, wish that congressional voters ignored casework, projects and the fluff in incumbent communications and voted entirely on the basis of congressional success in dealing with national problems such as inflation and energy. Unfortunately, wishing does not make it so.

FOOTNOTES

*The research reported in this paper is part of a larger project undertaken in collaboration with Bruce Cain and John Ferejohn and supported by the National Science Foundation (Soc 78-15413). The paper relies heavily on data from the 1978 CPS/NES National Election Study. Neither the National Science Foundation nor CPS/NES is responsible for the interpretations offered herein.

1. On congressional use of the frank see Mayhew (1974), on travel see Parker (1980), on district offices and staff see Fiorina (1977).
2. This important point was first made by Ferejohn (1977). The updated name recall series shows that not until 1978 (after the major changes in House elections had occurred) do we see any decline in challenger salience relative to the incumbent.
3. For example, in our 1978 survey of congressional AAs 88 percent expressed confidence that the casework activities of their offices had electoral benefits. Johannes and McAdams report a similar figure.
4. If testing the "casework hypothesis" were as straightforward as J & M presume, it would have been done long ago. Rough surrogates for casework effort (number of district offices and staff) are readily available and were included in my 1977 discussion (Chapter 7, Table 5).

5. In their footnote 10 J & M dismiss the possibility of a simultaneous relationship on the grounds that an event in the future logically cannot affect an occurrence in the present. It is standard, however, to assume that expectations of the future are accurate (i.e. $\hat{E}_{t+1} = E_{t+1}$) which renders (2) a true simultaneous equations formulation.
6. Since the release of the 1978 CPS Data a number of authors have suggested that challenger weakness rather than incumbent strength is the key to understanding contemporary Congressional elections. Space precludes an extended discussion here, but two points should be borne in mind when considering such arguments. The first is that whatever the contribution of challenger weakness to the present incumbency advantage, there is no evidence that increasing challenger weakness has contributed to the increasing incumbency advantage, which of course is the central fact underlying the literature on incumbency in Congressional elections (recall Ferejohn's findings referred to in footnote 2 above). The second fact is contained in the sentence to which this footnote pertains. As Hinckley (1980) among others, cautions, to posit two alternative theories--challenger weakness and incumbent strength--is the kind of simplistic thinking which retards intellectual progress. Obviously the decision of a strong challenger to make the race, and the level of commitment shown by his financial and other backers depends on the perceived strength of the incumbent, i.e. the likelihood of a successful challenge. A principal incumbent strategy is to discourage strong opposition, just as a principal sign of incumbent weakness and/or mistakes is the presence of strong

opposition. Given these widely-accepted theoretical propositions it makes little sense to examine the effects of "incumbent variables" and "challenger variables" in order to see which is more fundamental. Rather, we need carefully formulated models which incorporate the mutually dependent strategic calculations of incumbents and challengers.

7. This judgment is based on a reading of Professor Johannes' paper presented at the 1980 Western Political Science Association Meetings. In that paper Johannes reports casework load equations with adjusted R^2 of less than .05.
8. J & M argue that congressmen always run "flat out" in their campaigns, whether they have serious competition in a particular instance or not. If this were so, the Natchers of the world would always spend \$385,000 like the Mikvas, opposed or not.
9. This point, incidentally, is not vitiated by the presence in the J & M statistical models of ELEC 76. Whether the congressman's previous margin was 51:49 or 90:10, J & M's regression equations require that a given number of cases add the same amount to the congressman's next vote total.
10. To forestall charges of purely negative criticism I will briefly note that Bruce Cain, John Ferejohn and I have been approaching an analysis of model (5) for approximately two years. Like J & M we have conducted interviews with congressional staffers (AAs) about the constituency

service activities carried out by their offices (our sample consists of the districts included in the sampling frame of the 1978 CPS Study). We have also compiled a file of district offices, district staff and total staff, from 1958 to the present. For more recent years this file also includes staff payrolls, trips home by the congressmen, campaign expenditures and other relevant data. This historical file has been merged with a file of relevant data from the SRC/CPS election studies. Even with this data set there is no minimizing the problems that exist. In addition to the specification problems discussed above, there are errors in variables problems, aggregation problems, and of course, identification problems; the project is an econometrician's playground.

11. Not completely however--some causal ambiguity still accompanies the use of particular items. For example, do those who report a personal meeting with the incumbent support him as a result of the meeting or do they make a point of meeting him because they support him?
12. Incidentally, the extent of multicollinearity is not evident just from examination of the bivariate relationships between the right-hand side variables. Consider for example nine observation on three variables X, Y, Z as follows: $X = (0,0,0,0,0,0,1,1,1)$ $Y = (0,0,0,1,1,1,0,0,0)$ $Z = (1,1,1,0,0,0,0,0,0)$. The correlation (Pearson) between any two of the preceding variables is -.5, which though relatively high still reflects a degree of independent variation between any two of them. Note, however, that the correlation between X and the simple linear combination $(Y + Z)$ is -1.0, indicating that perfect multicollinearity in fact is present. For an older but accessible and illuminating

accessible and illuminating discussion of multicollinearity in social science research, see Robert Gordon, "Issues in Multiple Regression," American Journal of Sociology 73 (1968), 592-616.

13. Note the use of gammas. Most regression programs will calculate the correlation matrix (Pearson r) of all variables included in the analysis. Unfortunately, standard correlation coefficients understate the degree of relationship between dichotomous variables, and thus may not reveal the presence of serious multicollinearity.
14. Those who have worked with the 1978 CPS data are well aware that casework experiences tend to be quite satisfactory ones. The combined (help and info) casework variable has 84 of 120 respondents as "very satisfied" and only 7 as "not satisfied."
15. For any given level of relationship the more observations one has, the less serious the multicollinearity problem (except in the case of a perfect relationship where nothing helps).
16. J & M include challenger spending in their equations. Presumably spending is a factor in achieving contact and recognition, but as long as we have direct measures of the latter we may as well use them.
17. The item reads "Do you know anyone else who has contacted Representative (name of House incumbent) or anyone in (his/her) office?" If yes, "Did this (person/group) get a response?" If yes, "Was this (person/group) satisfied with the response?" As in the

personal experience item, the "somewhat dissatisfied" were combined with the "not at all satisfied" because of the small numbers in these categories (n = 13 in Table 3).

18. I have no quarrel with J & M on these findings. Though it is sometimes thought otherwise proponents of resource allocation theories do not argue that campaign spending, casework, incumbent perks, and so forth are the principal explanations for the outcomes of House elections. Rather, the argument is that such resources and activities matter at the margins, and that the margins have gotten relatively more important over time. For example,

. . . in order to account for the decline of the marginals we do not need to claim that all congressmen have opted exclusively for an ombudsman role and that all constituents now think of their Congressman in nonprogrammatic terms. . . . To explain the vanishing marginals we need only argue that over the past quarter of a century expanded constituency service and pork-barrel opportunities have given the marginal Congressman the opportunity to switch 3-5 percent of those who would otherwise oppose him on policy grounds to his supporting coalition. (Fiorina, 1977, pp. 52-53) (emphasis in original)

Whether the relative importance of programmatic/nonprogrammatic influences on House voting has shifted from 90:10 to 80:20, or from 60:40 to 50:50 is not critical to resource allocation theories of changes in House voting.

19. This variable is constructed from V238 ("Can you remember anything special your U.S. Representative has done for the district?"), codes 40-49.
20. In the total sample 616 respondents answer "very helpful," 790 "somewhat helpful," 219 "not very helpful," and 537 "don't know." An additional 90 respondents are coded "depends".
21. On pp. 3-32 J & M write

It should be noted that a rational voter, whether or not grateful for casework actually rendered, might vote for an incumbent (especially a senior one) because he or she believed that increasing seniority correlates with power and that power would bring about successful intervention with the bureaucracy if the constituent should ever need help (Fiorina, 1977, p. 51). But in such a case it is not the actual doing of casework, or even successful or satisfactory casework, that directly triggers the vote.

Though the latter assertion is literally true, it ignores the clear indirect "trigger" evident in Table 7. Mann and Wolfinger (1980, pp. 628-629) also overlook this linkage in their preliminary analysis of the 1978 CPS data.

22. Several colleagues have suggested informally that this "appearance of contingency" argument may not be as valid today as in the 1960s when

extensive constituency service operations were the exception rather than the norm. In the contemporary Congress "everyone does it," so in reality there is less reason for a citizen to regard efficient service provision as dependent upon the reelection of a particular incumbent. Thus, the electoral effects of casework might not be constant across time but rather may decline in proportion to the degree that casework becomes a standard element of the congressional job description. While this hypothesis is plausible, the only data of relevance are aggregate historical data with all the attendant problems discussed in the first section of this paper.

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