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ASSESSING THE PARTISAN EFFECTS OF REDISTRICTING

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ABSTRACT

The purpose of this paper is to assess the reality behind the
politician's perception that redistricting matters. There are, of
course, many dimensions to that perception since redistricting has many
effects. This paper will focus on the impact that boundary changes
have on the partisan composition of seats. In order to do this, it
will be necessary to specify what the expected partisan effects of
redistricting are and how they can be measure. Thus, the paper first
explains how the impact of redistricting will vary with the strategy of
particular plans. Following this, there is an exploration of some
techniques for measuring the partisan impact of boundary changes, and
then a detailed analysis of the most important Congressional
redistricting in 1982—the Burton plan in California.

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Most legislators believe that redistricting is a life or death
matter. The prospect of even minor changes in district lines can
arouse great anxiety in a legislator. The public, on the other hand,
does not usually share legislators' interest in these matters. Since
boundary issues are somewhat esoteric by the standards of normal
political discourse, only severely addicted political junkies are
willing or able to follow redistricting disputes closely.

Political scientists also tend to be skeptical about the real
importance of redistricting. Early studies indicated that the first
reapportionments after Baker v. Carr advantaged Democrats, especially
in urban areas (Erikson, 1972). However, attempts to link boundary
with policy changes uncovered nothing striking (Bicker, 1972; O'Rourke,
1980; Saffel, 1983). Other studies seemed to imply that the major
effect of redistricting was to aid incumbents (Mayhew, 1971; Tufte,
1973), but to date there has been very little evidence in support of
that thesis either (Bullock, 1975; Ferejohn, 1977). Could it be then
that redistricting really does not have any important impact upon the
political system? Are legislators mistaken to worry as much as they do
about the partisan effects of boundary changes?

The purpose of this paper is to assess the reality behind the politician's perception that redistricting matters. There are, of course, many dimensions to that perception since redistricting has many effects. This paper will focus on the impact that boundary changes have on the partisan composition of seats. In order to do this, it will be necessary to specify what the expected partisan effects of redistricting are and how they can be measured. Thus, the paper first explains how the impact of redistricting will vary with the strategy of particular plans. Following this, there is an exploration of some techniques for measuring the partisan impact of boundary changes, and then a detailed analysis of the most important Congressional redistricting in 1982—the Burton plan in California.

PREDICTING THE EFFECTS OF REDISTRICTING

One of the reasons that it has been so difficult to find any systematic or striking redistricting effects is that the types of redistrictings undertaken have varied significantly across states and periods of time. In particular, the way that a plan affects electoral outcomes depends upon the strategy of the linedrawers and the nature of the demographic constraints they face. As to the first, a redistricting plan can be either partisan or bipartisan in its impact. A partisan effect is one that favors a particular party (usually the majority party) over the other and a bipartisan one favors neither party. To be sure, a redistricting plan will usually have other goals

such as the preservation of cities, the protection of minorities and the like, but the political impact is the sole concern of this study.

It is also important to recognize that a plan's effect may be different from its intent. A nonpartisan commission might try to ignore partisan considerations, but any plan that it implements will nonetheless have partisan consequences (Dixon, 1968; Cain, forthcoming).

Assume that the strategy of a plan is partisan and that the party controlling reapportionment is the one with a majority in both houses of the state legislature, how can the number of majority party seats be maximized, and what will the predicted pattern of changes be? The answer is that maximizing majority party seats requires minimizing the inefficiency of majority party strength to the extent demographically possible. The electoral inefficiency of a particular seat is defined as the amount of excess party support enjoyed by the winning candidate. If there is a registration level r that guarantees that a party will win almost any contest (within some reasonable range of candidate strength), then any level of strength above r is wasted. For example, if the Democrats can win any seat above 60% Democrat in registration, then a 70% seat is inefficient by 10 percentage points. From a partisan gerrymandering point of view, if that excess partisan strength could be traded to a 50% Democratic seat, then the party would have two sure seats instead of one. Classic examples of inefficiently distributed Democratic areas are inner city minority seats and of

inefficiently distributed Republican areas are white, upper income suburban seats.

Leaving aside for the moment the demographic and bargaining constraints that might obstruct the construction of a partisan gerrymander, what pattern of territorial trades should be observed? To begin with, some number of previously inefficient majority party seats will acquire less favorable territory and will actually experience a drop in partisan strength. To compensate, a certain number of marginal majority party seats will receive favorable areas and so become partisanly stronger. Finally, few, if any, of the majority incumbents should be forced to run against another incumbent or be required to run in seats with disproportionately large numbers of new constituents (i.e., low displacement). Thus, there should be an inverse correlation between the previous level of partisan strength and the gain made through reapportionment for majority party incumbents.

Just the reverse should apply to minority party incumbents. First, the most marginal members of their delegation will typically experience a loss in strength due to reapportionment, and the strongest ones will experience the gains. In short, the goal of the partisan gerrymander is to distribute minority party strength as inefficiently as possible. Hence, the correlation between previous partisan strength and reapportionment gain should be positive for minority party incumbents. Secondly, minority party incumbents will more frequently be forced to run against one another and to take very large amounts of

new territory. In other words, there will be a much larger displacement effect for them.

The key then to the partisan gerrymander is that incumbents in the party controlling redistricting will be treated differently from those in the party that does not. The average level of electoral safety might actually increase more among incumbents in the non-controlling party than among those in the controlling party since greater safety is a byproduct of higher electoral inefficiency. If one were to consider the average gain or loss of incumbents by party, one might mistakenly conclude that the non-controlling party was better off. The point is that many of the individual incumbents in the noncontrolling party will be better off, but if the gerrymander is effective, the party as a whole will be worse off. Indeed, one of the great difficulties for leaders in the non-controlling party during redistricting is to get individual incumbents to forsake their short term self-interests (i.e., whether their particular districts are to their liking) for the interest of the party (i.e., whether the plan is good or bad for the party as a whole).

The bipartisan gerrymander is much simpler. In this case, neither party gains an advantage out of reapportionment without the consent of the other. Whereas the goal of the partisan gerrymander is to make one party's support more electorally efficient than another's, the object of the bipartisan gerrymander is to protect incumbents in both parties—in short, to make the partisan strength of both parties inefficient wherever there is an incumbent. From the self-interested

perspective of the incumbents, the bipartisan gerrymander has much appeal. Incumbents who want to get stronger will seek to dispose of their least desirable areas. Because one party's undesirables are usually the other's most loyal supporters, Democrats will trade Republicans to Republican incumbents, and Republicans will trade Democrats to Democratic incumbents. Since incumbents tend to be risk averse—no margin of safety is ever too much—the result is greater electoral inefficiency and more noncompetitive seats.

In the bipartisan gerrymander, no incumbent who wants to return will be forced, unless demographically necessary, to run against any other incumbent. Moreover, there will be a correlation between incumbency and reapportionment gain regardless of party. Thus, an indicator that a plan is bipartisan would be the absence of any difference in the patterns of partisan gain between controlling and noncontrolling party incumbents.

The strategies of partisan and bipartisan plans as outlined will not necessarily be implemented as they are intended. Various considerations will compromise the best laid plans of reapportioning men. To start with, population needs will constrain the set of feasible trades. It will, for instance, be easier to make a trade when one of the two adjoining seats is overpopulated and the other underpopulated than it will be when both are overpopulated or underpopulated. Trades between seats with noncomplementary population needs only compound initial population deficits and surpluses and cause more difficult adjustment problems in the rest of the state. Secondly,

while trades between members of different parties can often be complementary because both want the other's weakest areas, trades between members of the same party will often be conflictual for essentially the opposite reason: both will want each other's strongest areas. This means that some strong incumbents will resist sharing their "wealth" with weaker members of their own party, further distorting the logic of the plan. Finally, there are the idiosyncratic concerns of incumbents. Incumbents will in many instances forego the partisan advantages of trades in order to keep amusement parks, fund raising locations, favorite donors, their residences and the like in their districts. So, even if partisan malice is in the hearts and minds of the linedrawers, the pure patterns of the partisan and bipartisan gerrymanders will be blurred by the noise of bargaining and demographic constraints.

MEASURING THE PARTISAN EFFECTS OF REAPPORTIONMENT

Having considered the expected patterns of change associated with various types of redistricting strategies, the question is whether it is possible to measure the specific effects of various plans and determine whether a given plan is partisan or bipartisan in its impact. We will therefore next discuss the relative merits of various measurement techniques. The most appropriate of these will then be used in the final section of the paper to analyze the 1981 California Congressional redistricting.

There are several ways to measure the political effects of reapportionment. The simplest class of methods compare district registrations or vote totals before and after the territorial changes caused by redistricting. For example, in states where the registration figures are published, it is possible to determine whether and by what amount the Democratic or Republican registration increased:

(1) $r_{d,o} - r_{d,n}$

where $r_{d,o}$ and $r_{d,n}$ are the Democratic registrations in the old and new districts

Another popular method is to take the vote totals for candidate j in the last election, subtract out the votes j won in the areas j loses in reapportionment, and add in the votes for candidate k who ran for the same legislative office in the same election in the areas that have been transferred from k to j:

(2) $v_{j,n} = v_{j,o} - v_{j,1} + v_{k,a}$

where $v_{j,n}$ is the predicted vote for candidate j in the new district

$v_{j,o}$ is the vote for candidate j in the old district

$v_{j,1}$ is the vote for candidate j in the lost areas

$v_{k,a}$ is the vote for candidate k in the newly added areas

where candidates j and k ran for the same legislative office in different districts in some year prior to redistricting

Finally, where the data are available, it is instructive to compare the totals received by some statewide candidate under the various proposed boundary changes.

(3) $v_{s,n} = v_{s,o} - v_{s,1} + v_{s,a}$

where $v_{s,n}$ is the vote received by a state wide candidate in the new district

o, 1 and a have the meanings previously defined

All of these methods have their particular flaws, but more generally, the difficulty with this class of methods is that it does not fully and efficiently use all the available information. For instance, two districts with the same Democratic registrations might have different Republican or minority party registrations. Moreover, since redistricting affects incumbency status as well as the underlying partisan strength of a district, merely looking at the registration figures does not give an accurate estimate of the political impact of a proposed plan.

The second class of methods, therefore, tries to eliminate this flaw by utilizing a multivariate estimation procedure to combine several pieces of information. One such technique, for instance, is to develop an expected vote model in which a candidate's vote at time t is regressed on various demographic data and on a statewide candidate's vote. This yields a set of estimated parameters that can be multiplied times the the post redistricting political and demographic data to yield new district totals:

(4) $v_p = a + BZ_p + c_1 s_p + u$

where v_p is the vote for relevant district race in precinct p

    B is a vector of coefficients

    Z is a vector of demographic variables for precinct p

    c_1 is a coefficient

    s_p is the vote for a state wide candidate running in the
      same election in precinct p

    u is the error term

This is a particularly useful technique for redistricting negotiations since it tells an incumbent how he or she specifically would have run in the proposed new district in an election at time t. However, its advantage as a bargaining tool is also its liability as a method for analyzing the general partisan impact of a plan: it is highly candidate specific in its predictions and does not provide a convenient basis for comparing results in open seats with results in seats with incumbents.

As a consequence, the technique developed for the present analysis is to try to estimate the probabilities of the Democrats and Republicans winning various seats given information about changes in registration and incumbency status as a result of the plan. The model is thus:

(5) $Pr(v_j = 1) = F(a + BR_j + c_1 d + c_2 r)$

where $Pr(v_j = 1)$ is the probability of a Democrat winning
    Congressional seat j

    R is a vector of registration data for various parties in
      seat j

    d is a dummy for a Democratic incumbent in seat j

    r is a dummy for a Republican incumbent in seat j

    B is a vector of coefficients

    c_1, c_2 are coefficients relating the incumbency dummies to
      the vote

The model is estimated with a probit procedure using the registration, incumbency and outcome data from the 1980 election that preceded the 1981 reapportionment in California. The new registration and incumbency data resulting from the new boundaries are then inserted into the estimated equation, yielding probit scores that can be converted into probability estimates. The actual estimated parameters were as follows:

(6) $Pr(v_j = 1) = -9.43 + .016 Demreg - .017 Aipreg + .007 Libreg$
$$ (.004) \qquad (.083) \qquad (.036)$$
$$- .045 Pfreg + .015 Dec + .822 Dinc - 1.60 Rinc$$
$$ (.136) \qquad (.012) \qquad (.460) \qquad (.55)$$
$$R^2 = .83 \quad \text{Chi Square} = .32$$

where Demreg is the percent Democratic registration

    Aipreg is the percent American Independent party registration

    Libreg is the percent Libertarian party registration

    Pfreg is the Peace and Freedom party registration

    Dec is the Decline to state registration

Dinc is the dummy for Democratic incumbent

Rinc is the dummy for Republican incumbent

The signs of the estimated coefficients on the incumbency and Democratic registration variables are significant and in the proper direction. The minor party coefficients are not, but are left in since they improve the fit marginally. The purpose of this model is predictive and not structural. Clearly, the large estimated incumbency effect is picking up a variety of phenomena related to holding office— e.g., spending advantages, resource advantages, etc. The point is to show what the effects of partisan reconstruction and incumbency removal are, not to show the causal routes that lead from incumbency or registration to electoral advantage. The equation is in this sense the most parsimonious reduced form.

The pre-redistricting probabilities referred to in the ensuing discussions are obtained from these estimated parameters by inserting the pre-redistricting registration and incumbency data into the model, taking the predicted score and converting it into a probability number. The post-redistricting probabilities are obtained in the same way using the same estimated parameters and the post-redistricting registration and incumbency data.

ASSESSING THE BURTON PLAN

The 1981 California Congressional redistricting was one of the most important and controversial redistricting plans in the country. Partly, its significance lies in the size of the California

Congressional delegation, which grew in 1982 from 43 to 45. But partly, its significance lies in the intense partisan battle it touched off. The plan was authored by Phil Burton with the technical assistance of Michael Berman—a brother of an Assemblyman who won one of the newly created LA Congressional seats in 1982—and Leroy Hardy, a political scientist at Long Beach State who had worked on redistrictings since the sixties. The California delegation had been split 22-21 after the 1980 election and prior to the redistricting. In 1982, the Democrats held 28 seats and the Republicans held 17, a dramatic shift in power that many Republicans attributed to redistricting. This plan—Burton I—was subsequently rejected by the voters in a Republican sponsored referendum and was replaced in 1982 with a new plan—Burton II. My remarks are solely directed to the now defunct Burton I plan.

We will examine this plan utilizing the framework of expectations discussed earlier to test whether it had the pattern of a partisan strategy. Applying those propositions to California, we get the following:

1) Some number of marginal Democratic seats should have been strengthened.

2) Some number of marginal Republicans should have been weakened.

3) Some number of strong Democrats should have been weakened to assist marginal Democrats.

4)   Some number of strong Republicans should have been made even

      stronger.

The question is do these expected patterns appear in the data? The

evidence for these patterns will consist of (1) simple registration

data, (2) the estimated probabilities of a Democrat winning the seat

under the assumption that all the seats are open, and (3) the estimated

probabilities given information about which incumbents actually ran in

1982 and which seats were open.

The first sign of a partisan plan is that some number of marginal

seats in the controlling party should have been strengthened. Table 1

shows the four Democratic incumbents who gained the most from the

Burton plan. The first is Phil Burton's brother, John, who represented

a district in Marin and areas to the north of San Franscisco. Burton

had received a strong challenge in the 1980 election and the 52.5%

registration in his district was by California standards marginal for a

Democrat. Typically, the seats with the highest probability of

changing hands fall into the 50-55% Democratic registration category,

and so it was clear that without assistance, Burton's district would

remain marginal throughout the eighties. The solution to Burton's

electoral insecurity was a highly controversial district that meandered

from Vallejo in Solano county, across the water to Marin, through a

narrow corridor on the east side of San Fransisco county and down into

Daly city in San Mateo county. This, more than any of Burton's other

districts, brought a great deal of criticism from the press and the

public.

[insert Table 1 here]

The effect of this contorted district was to increase Burton's

Democratic registration by about five points to 57.5%. The estimated

probability of a Democrat winning the 5th CD in an open race was 83% in

1980. Following reapportionment, it was 91%. Adding in the effect of

incumbency, the model projects that John Burton, had he run for

reelection, would have been elected with a 99% probability, up three

points from 1980. It is important to note the importance of an

incumbent running, a fact that has been much heralded in political

science research recently. Indeed, one theme that this study shows

clearly is that the displacement of incumbents is perhaps even more

important to the outcome of the first post-redistricting election than

are any changes in the underlying partisan composition caused by

redistricting.

Many of the changes made in the 5th CD in 1981 were taken back in

1982. The 1981 plan was rejected by the voters in a June 1982

referendum and new lines were redrawn in December. When John Burton

chose not to contest the seat in 1982, it was won by Barbara Boxer. In

the subsequent redistricting, Burton chose not to extend to Boxer the

same generosity his brother received, and the district dropped back

into the marginal category.

The only other Democrat to receive a boost in 1981 comparable to

the one the 5th CD got was George Brown's 36th CD. The 13th and 16th

CDs, by comparison, got almost trivial increases that really did not

improve their marginal status much. So, we can say that in two

TABLE 1

DEMOCRATIC INCUMBENTS WHO BENEFITED THE MOST FROM REAPPORTIONMENT

Seat #	Incumbent	1980 Reg	1982 Reg	1980 Prob (Open)	1982 Prob (Open)	1980 Prob (Dem Inc)	1982 Prob (Dem Inc)
5th	Burton	52.5%	57.5%	85%	91%	96%	99%
36th	Brown	51.4%	57.7%	73%	81%	92%	95%
13th	Mineta	49.7%	51.5%	48%	63%	78%	87%
16th	Panetta	49.2%	50.0%	39%	48%	71%	78%

instances primarily, marginal Democrats were strengthened by the redistricting plan while in the other instances, including some that are not included in this table, the changes were insignificant and did not change the status of the seat.

The second expectation of a partisan plan is that some number of marginal noncontrolling party incumbents—in this case, Republicans— should have been partisanly weakened by the redistricting plan. This appears to be where the Burton plan had its major effect. In several instances, the strategy Burton followed was more subtle than a straight collapse of the Republican incumbent's seat. Rather, the best Democratic portions were retained in the old district while the most Republican areas were used to create a new seat for the Republican incumbent. By inducing the Republican incumbent to run for the new seat, Burton was able to create an open seat with favorable registration for the Democrats. This was essentially the procedure used in the Hunter and Feidler seats. Both of these incumbents were sitting in seats with dangerously high Democratic registrations, and so it did not take a great deal of inducement—e.g., putting their house in the new district—to get them to move into the safer seat. A glance at Table 2 shows that the partisan composition changed slightly in the case of the 44th and negatively in the case of the 26th: the key to winning both seats was the removal of the incumbent, which, as the data show, dramatically altered to chances of a Democrat winning in both instances.

[insert Table 2 here]

TABLE 2

GAINS BY DEMOCRATS IN CONGRESS

Seat #	Incumbent '80	1980 Reg	1982 Reg	1980 Prob (Open)	1982 Prob (Open)	1980 Prob (Rep Inc)	1982 Prob (Dem Inc)
2nd	Clausen	51.6%	51.2%	54%	53%	7%	81%
34th	Rousselot	44.8%	65.1%	8%	96%	0%	99%
18th	New Seat	----	61.3%	---	87%	---	98%
44th	Hunter	54.9%	58.0%	80%	91%	23%	98%
26th	Fiedler/Goldwater	60.3%	59.3%	85%	82%	28%	96%
27th	Dornan	46.8%	55.9%	25%	79%	1%	95%

The 27th CD is a good example of a seat that benefited equally from partisan reconstruction and incumbent removal. Dornan, the Republican incumbent, did not have to be given an alternative seat to run in, because he had declared himself a candidate for statewide office. Since the seat was strengthened by 9 points in registration and no longer had an incumbent, it changed from one in which the Democrat had a 1% chance of winning to one in which he or she had a 95% chance. The 34th, on the other hand, represents a more classic example of destabilization in the sense that the incumbent's seat was dismantled and he was given no alternative open seat to run in. Portions of the 34th were parceled off to various surrounding Republicans, but none of the portions were sufficiently large to give Rousselot a base to run from. The largest overlap between his old district and the Burton created districts was the highly Hispanic 33rd, previously represented by George Danielson and then by Marty Martinez after a special election in July 1982. Rousselot chose to contest the Democrat, Martinez, rather than face his Republican colleagues in an expensive primary, and was defeated in the November 1982 election.

The other two gains by the Democrats in 1982 did not involve the weakening of Republican seats. The 18th CD was a newly created central valley district made possible by the allocation of two new CDs to California and the rapid population growth in that area. The Clausen seat, as Table 2 shows, did not change much in the redistricting plan, and the gain by the Democrats seems to have been the result of the challenger's strength and popularity in the area. So 5 of the 6 gains

appear to have been reapportionment related, and 4 of those 5 involved the forced or induced removal of Republican incumbents.

While certain Democratic incumbents benefited from the redistricting in 1981, not all of them did. In particular, some of them had to give up prime areas or had to take unfavorable areas because they were underpopulated. As a result, some Democrats were made worse off by the Burton plan, including Phil Burton himself. Burton's seat, the 6th, gave up some of the "best" areas in San Fransisco county to help boost his brother's seat. Indeed, when the Republicans ran a popular moderate Republican state senator against him in the November 1982 election, there was an enormous amount of speculation in the California press that Burton might have been too cute and left himself vulnerable to a challenge. My model indicates otherwise. The probability of Burton losing was unaffected by redistricting. Given that the seat had a 62.8% Democratic registration, a large, liberal decline to state vote and a well known incumbent, the sacrifice that he made was by no means extravagent.

[insert Table 3 here]

In fact, one of the most striking things about Table 3 is the high degree of electoral security enjoyed by all the Democratic "martyrs." All of them had Democratic registrations above 55%, and with the added advantage of incumbency, they all had a greater than a 95% chance of being reelected even after their districts were altered. Nonetheless, redistricting did affect the result in these seats in the subsequent

TABLE 3

THE DEMOCRATIC "MARTYRS"

| Seat #	Incumbent	1980 Reg	1982 Reg	1980 Prob (Open)	1982 Prob (Open)	1980 Prob (Dem Inc)	1982 Prob (Dem Inc)	1980 Margin	1982 Margin
30th	Danielson /Martinez	69.8%	62.8%	99%	93%	100%	99%	48%	8%
4th	Fazio	58.5%	56.1%	86%	79%	97%	95%	44%	28%
6th	Burton	62.8%	60.7%	99%	97%	100%	100%	44%	18%
23rd	Bellenson	59.6%	57.1%	88%	79%	98%	95%	32%	20%
32nd	Anderson	62.2%	60.3%	92%	87%	99%	97%	35%	18%

election. Even though 1982 was a more favorable year for Democrats

than 1980, all of them suffered a drop in their margin of victory. How

much of that drop was due to a loss in registration and how much was

due to pure displacement (i.e., the absorption of new territory and the

consequent loss of name recognition) is a matter for future research.

The changes made to the districts of various incumbents can also

be viewed aggregately, as they are in Figures 1 and 2. The vertical

axis of these charts shows the computed probability of a Democrat

winning the seat in an open race in 1982 and the horizontal axis shows

the corresponding probability in 1980. The line at the 45 degree angle

indicates points of no change: i.e., where the probabilities in 1980

and 1982 were the same. Points above the line indicate seats that were

made more Democratic by redistricting and those below it were made less

Democratic. The data is stratified by the party of the incumbent in

1980 so that Figure 1 displays the data for the Democratic seats and

Figure 2 the data for Republican seats.

[insert Figures 1 and 2 here]

Translating the expectations of a partisan plan as discussed

earlier into predicted points on the graph, the pattern in the

Democratic seats should be that: 1) some points in the upper right

hand corner, representing the safest Democratic seats in 1980, should

fall below the line since they are sharing their partisan wealth in the

interests of greater Democratic efficiency; 2) some points in the lower

left hand corner, representing the most marginal Democratic seats,

FIGURE 1

Changes in Dem Seats (Congress)

n=22

1982

1980

FIGURE 2

Changes in Rep Seots (Congress)
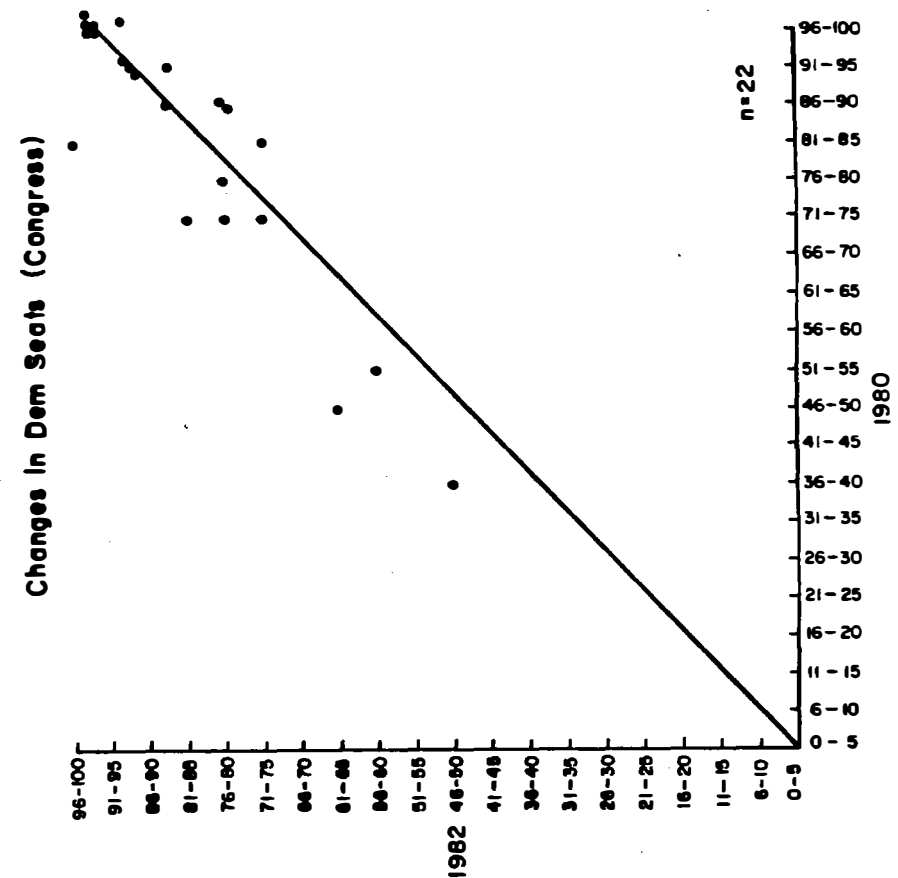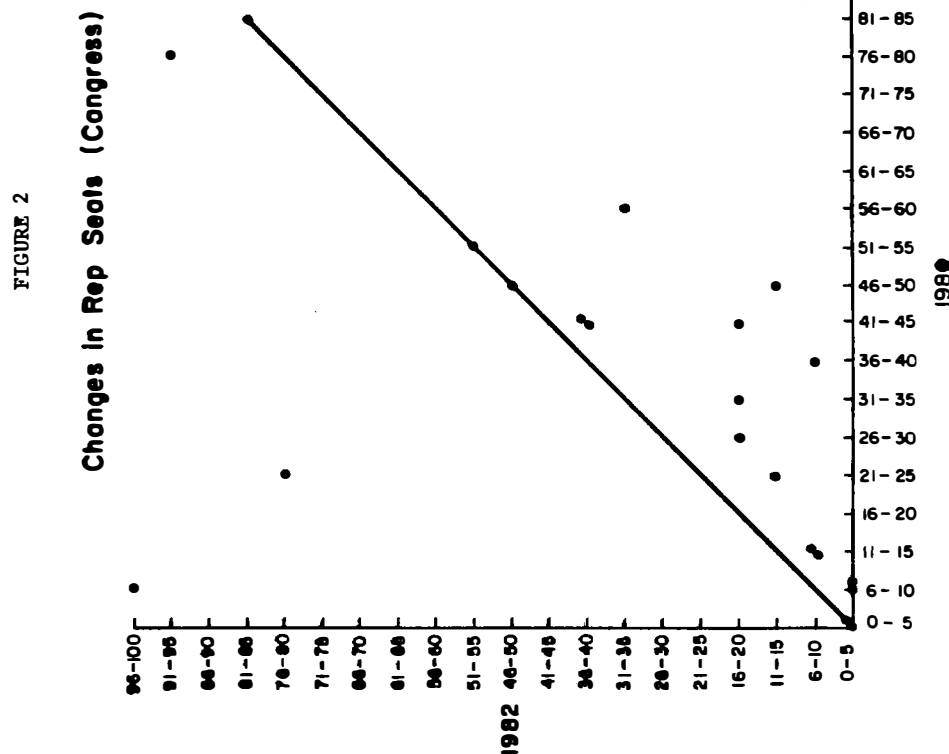
should fall above the line since they would be the natural beneficiaries of Burton's largesse; and 3) most incumbents should stay pretty close to the line since demographic, bargaining and geographical constraints put severe limits on partisan efficiency. A perusal of Figure 1 would seem to confirm our expectations. The four points furthest above the lines are those discussed in Table 1.

Figure 2 is no less revealing. Once again, our expectations are that: 1) some number of points in upper right hand corner, representing the most marginal Republicans, should fall above the line since they are the natural candidates for partisan conversion; 2) some number of those in the lower left hand corner should fall below the line since the Democrats would like them to be as inefficiently strong as possible; and 3) most points, once again, should cluster fairly close to the line because of demographic, bargaining and geographical constraints. The data do not conform quite as closely in Figure 2 as they do in Figure 1. To begin with, the three points above the line are scattered across the horizontal axis, implying that the Democrats did not simply target the weakest seats. However, the reader should note that all the points above the 51% category on the vertical axis were won by the Democrats and that includes all but 1 of the points to the right of the 51% category on the horizontal axis. In short, the Democrats won all the marginal seats even without changing the composition of some. The reason, which will be seen even more graphically in a moment, is that the Democrats made effective use of incumbent displacement: i.e., they kept the registration the same, but

moved the incumbent out in order to open up the seat. The three dramatically altered seats are the Hunter (extreme right), Dornan, (middle) and Rousselot (extreme left) seats. The Dornan case can be explained by his fortuitous departure for state wide office (which failed) and the Rousselot point by the grudge that Phil Burton bore him for his involvement in John Burton's 1980 Congressional campaign.

The increased inefficiency of the Republican seats as a result of Burton I is evident in the cluster of points below the line in the lower left hand corner. These are seats that are already strongly Republican and are made even more so by the plan. Notice also that the deviations from the line are somewhat larger, reflecting the likelihood that Burton felt more constrained by the wishes of his fellow Democrats than by those of the Republicans. This can be taken as support for the position I have argued elswhere that the risk averse, idiosyncratic preferences of legislators form a moderating influence on partisan designs (Cain, forthcoming). One suspects that because Burton felt a greater need to accomodate the Democratic incumbents, this intertial force minimized to some degree changes in their districts.

REAPPORTIONMENT AND ELECTORAL COMPETITION

There has been a great deal of academic and popular discussion in recent years about the decline of competition in congressional races (Mayhew, 1974; Ferejohn, 1977; Fiorina,1977a, 1977b). One particular aspect of this debate is whether redistricting has contributed to the decline of competition in congressional races. Ferejohn and others

have expressed doubts about this, and as the hypothesis is stated, these doubts are correct. If the question is whether all incumbents are indiscriminately aided by reapportionment, the answer is, not in all states, and maybe not all incumbents in any state. Not in all states, because some states will have more partisan plans than others; not all incumbents, because geographical, personal and idiosyncratic considerations will sometimes be more important. However, the hypothesis that reapportionment affects electoral competition may still be accurate in the sense that how it affects electoral competition will vary with the intent of the plan as well as the degree to which geographical, personal and idiosyncratic considerations introduce random noise into the final outcome.

Reapportionment affects electoral competition in two ways. One, it helps determine the odds of a Democrat or Republican winning by restructuring the underlying partisan composition of a seat (i.e., partisan reconstruction). Two, it affects the incumbency factor by removing or keeping incumbents in their territory. The model developed earlier can be used to illustrate both of these effects separately and conjointly. Much of the dialogue about the decline of competition begins with the so-called Mayhew diagrams, which are histograms displaying the electoral margins of incumbents at various intervals during the post war period. A variant of this idea is to create a histogram of the estimated probabilities from the probit model and show what happens to electoral competition at various stages in the reapportionment process. This of course leaves unanswered questions

about the duration of reapportionment effects and the role that it may

have played in the overall trend towards declining competition, but it

does at least give us a glimpse of the immediate impact in one state at

one period of time.

[insert Figures 3 through 7 here]

First, consider the impact of partisan reconstruction.
Redistricting changes the competitiveness of seats by increasing the

Democratic registration in seats that lean Democratic and the

Republican registration in seats that lean Republican. Figure 3 shows

the effect of the Burton I on all 45 seats under the assumption that no

incumbents would be allowed to run. As the figure demonstrates, the

consequence is some visible shrinking of the distribution in the

middle. However, the results are not dramatic. There are still some

seats left in the most competitive range and the rest are not simply

bunched on the ends. Geographic constraints—e.g., not being able to

use inefficient inner city Democratic strength to help out weaker

Democratic seats in the rural and suburban areas—and the desire of

incumbents to minimize displacement—i.e., the acquisition of new

constituents and the loss of former ones—explains why we do not

observe more radical partisan reconstruction.

What about the separate effect of removing the incumbent. This is

shown in Figure 4, which compares the distribution of seat safety in

1980 under the assumption that the seats were all open and versus the

assumption that all incumbents ran. Here the effect of incumbency on

FIGURE 3

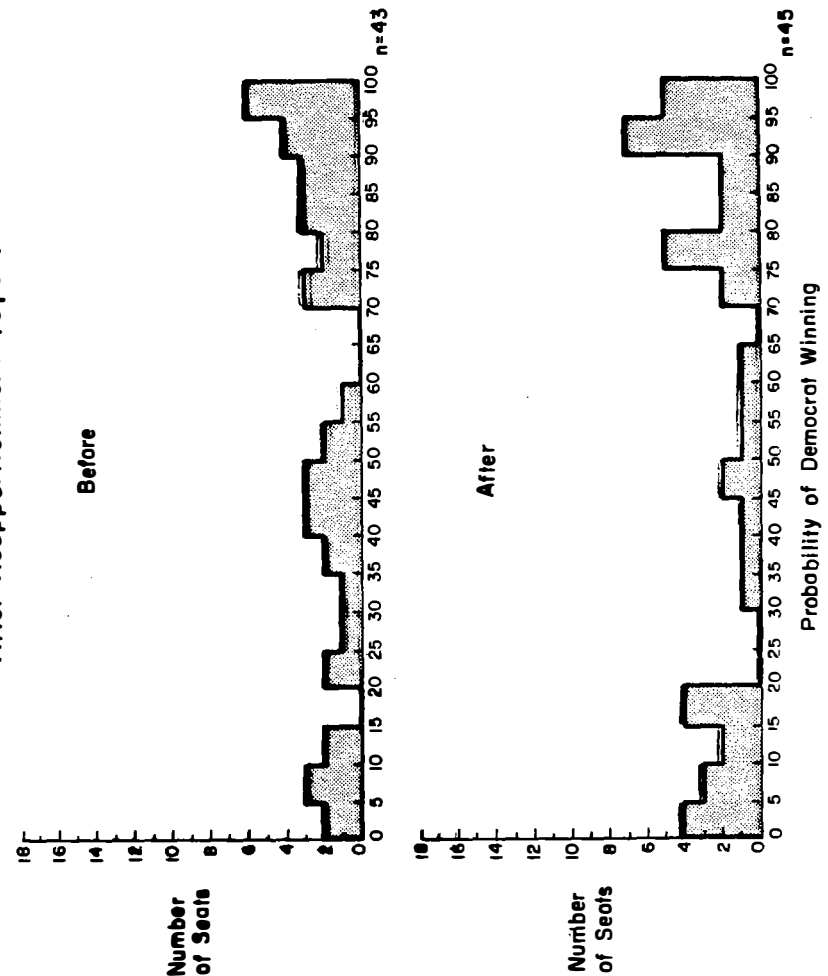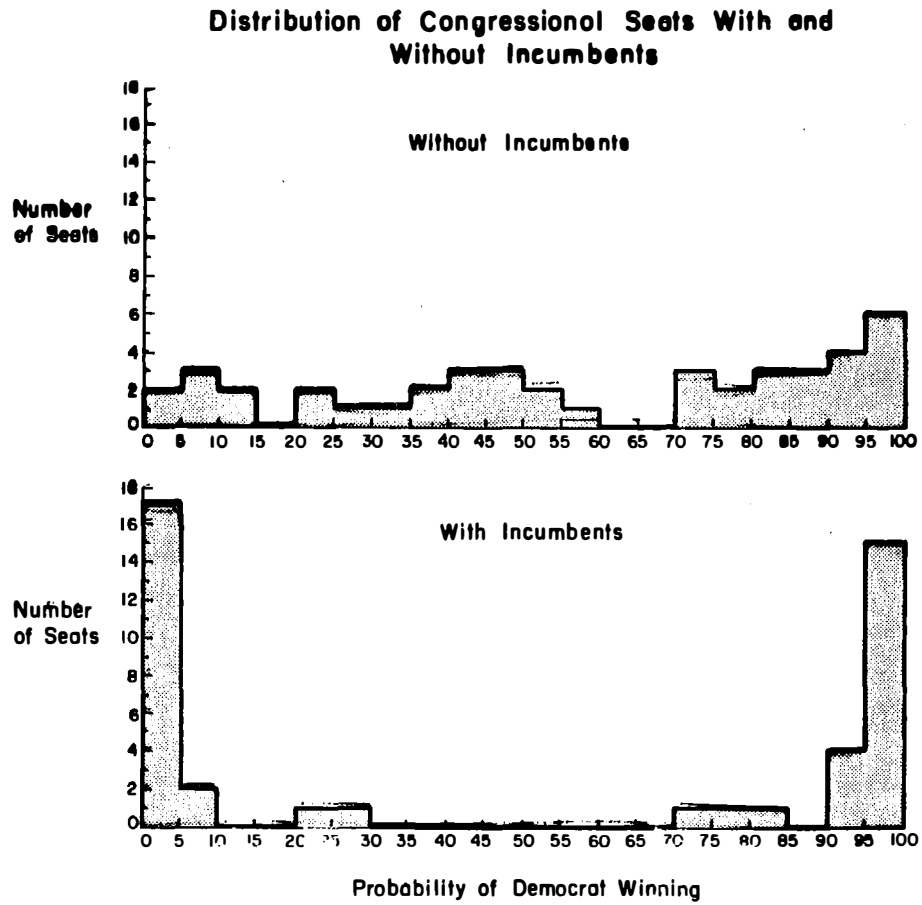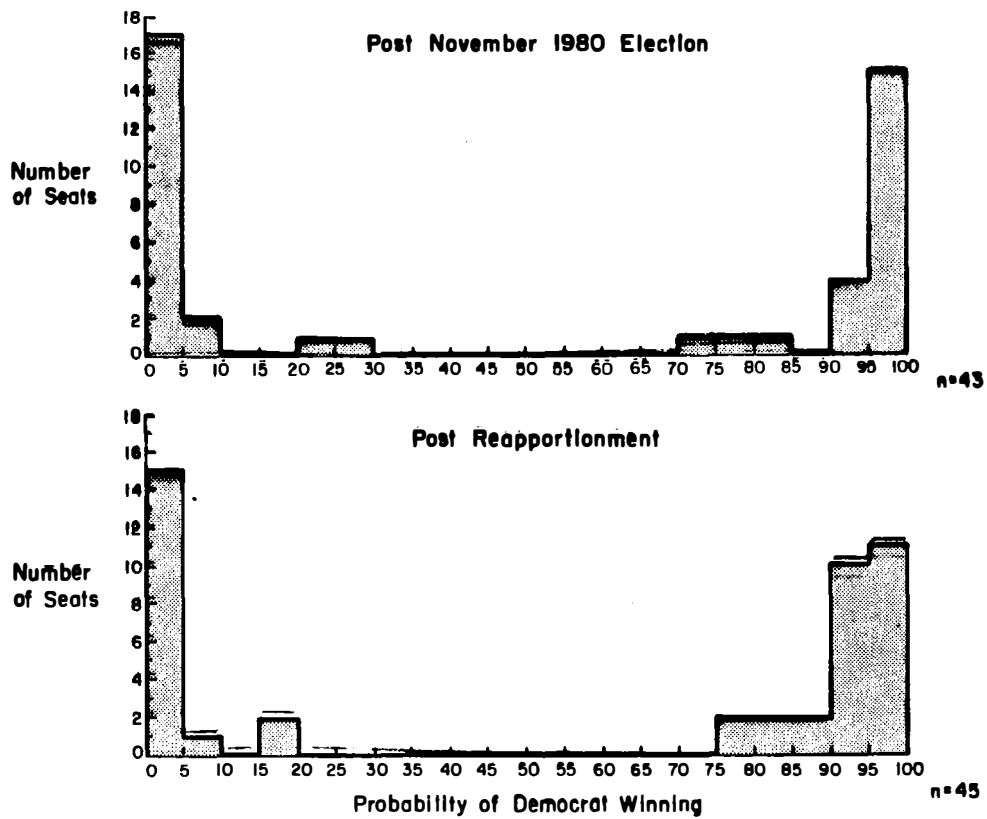Comparison of Congressional Seats Before and After Reapportionment (Open)

FIGURE 4

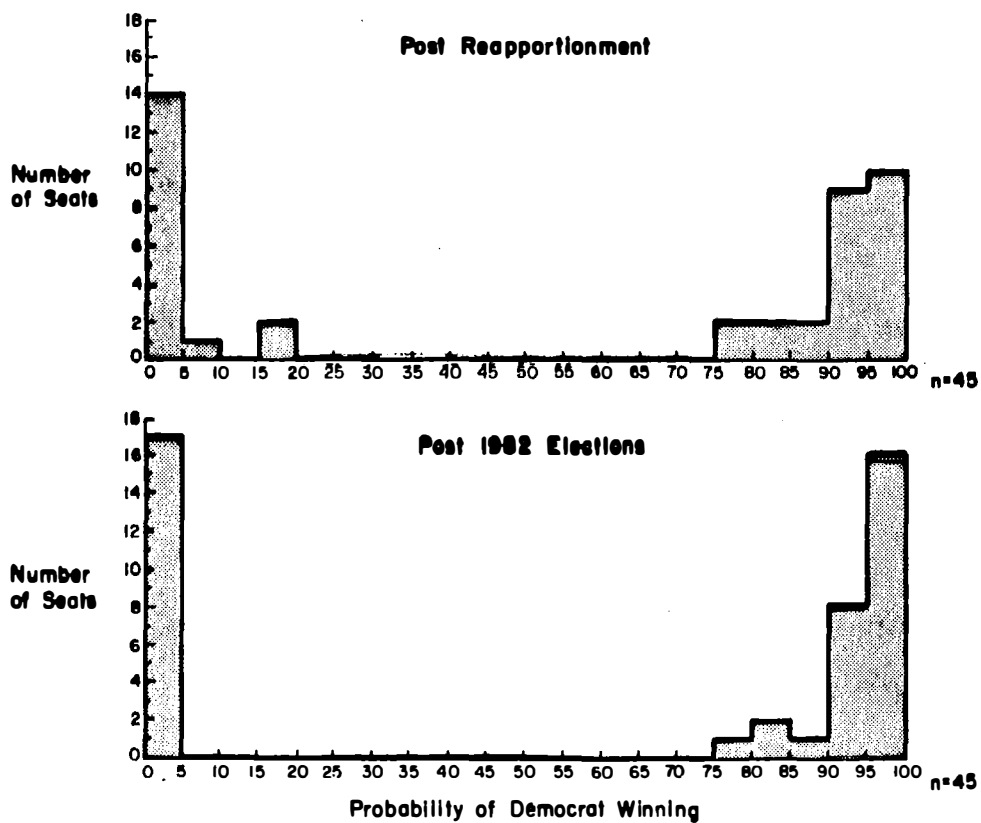# Distribution of Congressional Seats With and Without Incumbents

Without Incumbents

Number of Seats

Number of Seats

With Incumbents

Probability of Democrat Winning

FIGURE 5

Post November 1980 Election

Number of Seats

n=43

Post Reapportionment

Number of Seats

Probability of Democrat Winning

n=45

FIGURE 6

Post Reapportionment

Number of Seats

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100   n=45

Post 1982 Elections

Number of Seats

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100   n=45

Probability of Democrat Winning

FIGURE 7

Comporison of Congressional Seots

Post November 1980 Election

Number of Seats

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100   n=43

Post 1982 Election

Number of Seats

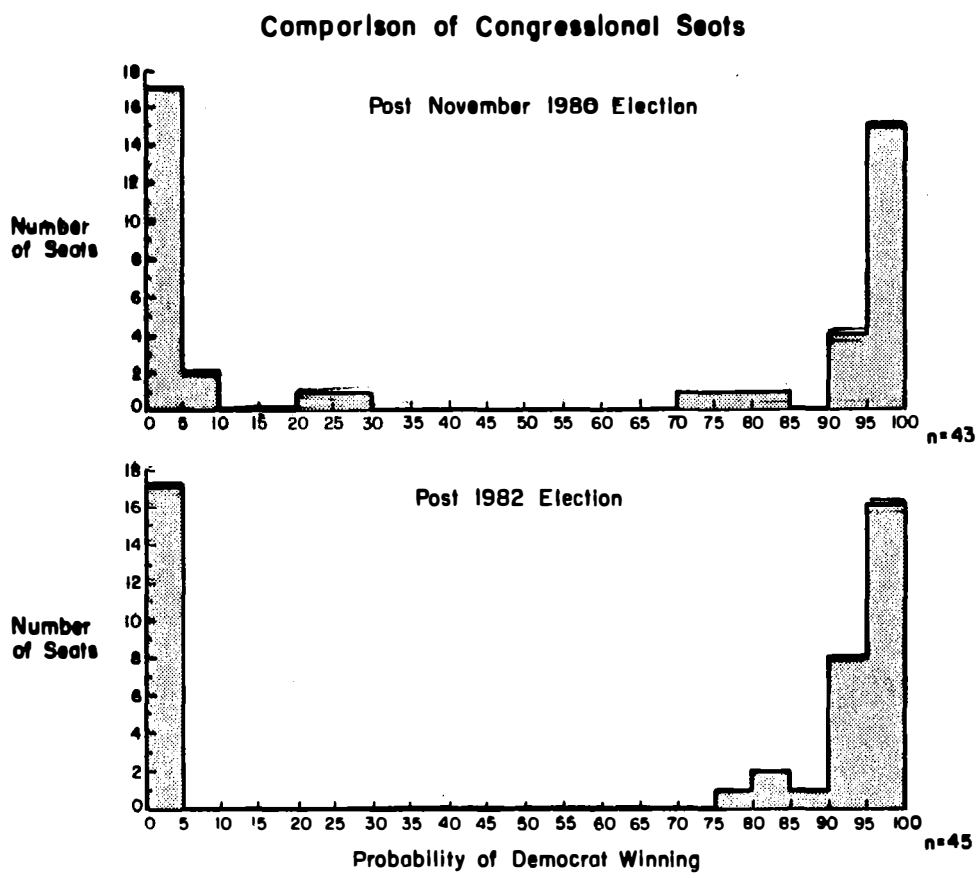0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100   n=45

Probability of Democrat Winning

the distribution in the most competitive, middle range is striking.
Large numbers of seats cluster on the ends of the distribution and no
seats fall in the 50% range. Of course, the reader should bear in mind
that the model assumes the average incumbent whereas in reality there
will be enormous variation in the strength of both the incumbent and
challenger. To some extent, this may be better modeled with campaign
expenditure data, but the quality of the candidates will in any case
remain difficult to capture.

The next three figures show the progression of changes in the
distribution brought about by redistricting, including both incumbency
removal and partisan reconstruction. Figure 5 compares the
distribution of seat safety right after the 1980 election and then
after the 1981 reapportionment. The post reapportionment distribution
assumes that the incumbents who held the seats in 1980 would run in
what most closely approximated their old seat in 1982. Thus, for
example, it was assumed that Dornan would run again in the 27th. Even
with this strong assumption, the distribution has been changed some by
movement to the extremes on both sides of the distribution. However,
as was discussed before, the redistricting plan induced some incumbents
to abandon their old seats to run for new ones and caused others to ·
lose in the November election. With the new incumbents in place, the
situation displayed in Figure 6 shows the almost perfect inefficiency
of the Republicans. Even though the Democrats were less clumped on the
end of the distribution, only a few of their seats were left in the 75%
to 90% area. In short, most incumbents in both parties are in safe

positions, but the Democrats are somewhat less inefficiently
distributed than the Republicans.

What then has been the total change from 1980 to 1982? The last
figure compares the two distributions. The answer would appear to be
that the combination of partisan reconstruction and the artful removal
of inconveniently placed incumbents can alter the seat distribution and
make the majority party more efficiently distributed than the minority
party. In the case of California, it was enough to help swing five
seats to the Democrats.

CONCLUSION

Are the partisan effects of redistricting important? The answer
would seem to be that they are. By changing the partisan composition
in a district and removing or retaining the incumbent's base, a
reapportionment plan can alter the odds of a party winning a particular
seat. The key to a partisan plan is not simply increasing the average
margin of victory or even the underlying partisan strength of all
majority party legislators. Rather, the key is increasing the
efficiency of majority party strength, which will mean a redistribution
of electoral strength for the purpose of maximizing the number of
winnable seats. Some majority incumbents will get stronger and others
weaker in inverse relation to their initial vulnerability. Simply
looking at the average registration or vote margin may be misleading.

A second conclusion from this research is that a proper assessment
of the partisan effects of redistricting cannot overlook its impact on

incumbency. To be sure, the post-redistricting election will introduce a new set of incumbents who will presumably also enjoy the electoral advantages of holding office. However, the temporary scrambling of incumbents can have momentous importance for the election that follows the redistricting. This should not be too surprising to political scientists since it seems logical that in an era when party loyalty counts for less and incumbency counts for more, redistricting tactics should include incumbent considerations. Indeed, if recent trends towards independence from the parties continue, redistrictings in the future could come to focus more displacement issues and less on the partisan makeup of districts.

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