CONGRESSIONAL ELECTION PATTERNS-PARTY TRENDS AND DISTRICT RANK ORDER RELATIONSHIPS, 1942-1956

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ABSTRACT

CONGRESSIONAL ELECTION PATTERNS--PARTY TRENDS AND DISTRICT RANK ORDER RELATIONSHIPS, 1942-1956

by Richard Lester Miller

The study of congressional elections in the United States is a fruitful source of political information that few persons have chosen to investigate. For the most part congressional district elections have been treated as a by-product of the more glamorous Presidential elections. This investigation focused on the congressional election as a significant event in itself.

The problem of locating and identifying the elements of partisan stability and variability in a series of congressional elections involved dealing with pertinent sub-problems. Analysis of aggregate election data for the period 1942-1956 included a determination of the stability of partisan rank order of congressional districts, the identification of districts exhibiting low rank stability, and an examination of the currently popular concept of "marginality" as a predictive device. Further, the problem of forecasting congressional election outcomes was investigated by experimenting with a new forecasting method.

The basis data for this study consisted of votes cast for the major party congressional candidates in the United States for the period 1942 through 1956. These statistics were converted into index numbers, Stalemate Indexes, to facilitate subsequent statistical operations. The Stalemate Index was defined as one-half the difference between the major party percentages of the total vote cast in a congressional district election.

The non-parametric rank correlation technique was employed to test congressional district rank stability. In addition, a new three-factor concept of political "marginality" was proposed. Using this new concept, an experimental forecast of congressional election results was accomplished by the projection of district partisan trend lines.

Among the major findings of this study was the discovery that the concept of "marginality" currently accepted as a forecasting base is inefficient. This concept, defined as the percentage spread between the two major party candidates at the last election, failed to forecast one-third of all party turnover cases that occurred where not expected. It failed to forecast at least 65% of non-party turnover cases where turnover was expected.

It was found that partisan rank orders of congressional districts are highly correlated between successive elections. Rank realignments occurred slowly over time, and no radical realignments were found even where an election produced a radical change in the partisan division of the House of Representatives. The Presidential year elections produced rank orders that closely reflected the rank orders of the preceding midterm elections.

Another major finding was that those few districts which are largely responsible for a less than perfect rank correlation could have been predicted as liable to experience a large rank change prior to the election in which the change occurred.

A projection of the 1948, 1950, 1952 and 1954 Stalemate Indexes of competitive congressional districts, fitted to a matrix of forecasted partisan rank positions, was accomplished. The projection was made by the method of linear regression. It produced a forecast of 1956 congressional election results that closely paralleled the actual results of the 1956 election.

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By

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CHAPTER I

INTRODUCTION

Each Congressman must take his voting record and party label before his electorate every two years. It has been said that the individual Representative, because of his short term of office, spends the major share of his incumbency campaigning for the next election.

Because of the frequency of congressional elections in the United States, the partisan composition of the House of Representatives is often viewed as a barometer of party fortunes in the nation.

In this study we will examine congressional election results for the period 1942 through 1956, giving particular emphasis to certain patterns of relationship. The approach to be used is directed toward a partial description of macro-politics in the United States.

More specifically, we shall look into these general hypotheses: (1) Partisan rank orders of congressional districts remain sufficiently stable between elections to produce high rank correlation coefficients; (2) The prevailing use of the single election forecaster, in which case a future election outcome is forecasted by examining the most recent election result, is wasteful of the election data which is available; and (3) a combination of the rank order stability of congressional districts and a multi-election statistical history of each district provides an efficient use of available election data in forecasting.

The individual voter is considered here only as his ballot is a part of the vote cast for a particular congressional candidate. Psychological variables of electoral behavior are excluded, for the most part, not for reasons of irrelevance, but for reasons of selection. It is felt that the study of individual motivations in electoral behavior is largely dependent upon definitions of the context within which it is undertaken. The solutions to questions of causal relationships must necessarily wait upon adequate and accurate description which includes characterizations of the elements of stability and variability in the phenomenon studied.

The importance of time analysis on aggregate electoral decisions has been stated convincingly by Key and Munger:

> Perhaps the collective electoral decision, the people's choice, is merely the sum of individual choices. If enough were understood about individual decisions by addition the collective political decision of the electorate would be comprehended. Yet when attention centers on the individual elector as he is led to decision by the compulsion of his nonpolitical group, the tendency is to lose sight of significant elements that both affect and relate individual decisions to the political aggregate. The study of electoral behavior then becomes only a special case of the more general problem of group inducement of individual behavior in accord with group norms. As such it does not invariably throw much light on the broad nature of electoral decision in the sense of decisions by the electorate as a whole.[1]

One cannot ask to what extent, for example, voting is a process of rational decision-making unless experience demonstrates that there is a phenomenon occurring which is called "voting" and that there is a psychological process which we call "decision-making" and, further, that there is more than one manner of making these decisions. Also, certain characteristics of the way a decision is made allow us to classify the act as "rational."

In the same fashion, questions regarding individual voting behavior in congressional electorates are dependent upon meaningful description of these electorates and the generalizations that can be drawn from the study of this description.

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[1]V. O. Key, Jr. and Frank Munger, "Social Determinism and Electoral Decision: The Case of Indiana," American Voting Behavior, ed. Eugene Burdick and Arthur J. Brodbeck (Glencoe, Illinois: The Free Press, 1959), 15, p. 281.

From previous voting studies we have evidence supporting hypotheses of the persistence of partisanship as a variable of individual and group voting. We should strongly suspect that a person whose parent had supported Democratic candidates would also support Democratic candidates. V. O. Key, while making this observation, has pointed out the pitfalls in making an assumption too inclusive:

> Party loyalties may extend from generation to generation. Party attitudes seem to be transmitted from father to son--not biologically, to be sure; community, family, and other influence play a part in fixing partisan attitudes . . . . The notion of inheritance of partisan attitudes through family influences, of course, oversimplifies the process of acquisition of party affiliations by young persons. The young are subject to the same types of community influences as are their parents and, in most instances, they look forward to a status in society similar to that of their parents. Identity of outlook and interest probably has quite as much significance in the "inheritance" of party affiliation as does parental example.[1]

Further, Key and Munger highlight the significance of time analysis in relating group bases of electoral decisions to individual choices:

> Explicit attention to the time dimension of electoral decision would probably bring to light a variety of characteristics not readily perceptible by the observation of a single case. Illustrative is the difficulty of obtaining a satisfactory estimate of the nature and significance of traditional or habitual partisan attachments by interviewing a sample at a particular point in time. Often electoral decision is not an action whose outcome is in doubt but a reaffirmation of past decisions, at least for the community as a whole. For generations the Democrats may carry this county and the Republicans may predominate in an adjacent county.[2]

If these hypotheses can be verified, it would logically follow that a large portion of the electorate tends to exhibit persistence in partisan choices at the polls.

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[1]V. O. Key, Jr., Politics, Parties, and Pressure Groups (New York: Thomas Y. Crowell Company, 1953, 3rd Edition), pp. 585-586.

[2]Key and Munger, op. cit., p. 282.

It is this characteristic of voters and aggregates of voters upon which electoral studies have focused, utilizing the stability of party preference as a base for forecasting the results of future elections.[1] More important for the discipline of political science, this stability has been used by students to illustrate the operation of the party system in the United States.[2]

The bulk of aggregate voting studies, however, have dealt with congressional elections in summary fashion.[3] There seems to many observers to be only two possible ways to describe the election results for congressional districts, a Democratic victory or a Republican victory. Consequently, many observers have been satisfied to summarize this aspect of American politics with a two-party percentage breakdown of House membership. Congressional studies, for the most part, have been residual to presidential election analyses. The relatively small amount of attention which has been devoted to this area is not commensurate with its importance as an indispensable part of the party system and government of the United States. We do not argue that academic investigation should be apportioned according to an arbitrary weighting of prospective subject matter. But we do insist that congressional politics cannot be regarded as a by-product of presidential politics.

A macro-political description of congressional districts undertaken here includes a classification of districts according to four essential

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[1]See for example Louis H. Bean, Ballot Behavior: A Study of Presidential Elections (Public Affairs Press, American Council of Public Affairs, 1940).

[2]Julius Turner, Party and Constituency: Pressures on Congress (Baltimore: Johns Hopkins Press, 1951).

[3]See Cortez A. M. Ewing, Congressional Elections, 1896-1944 (Norman: University of Oklahoma, 1947); Malcolm Moos, Politics, Presidents and Coattails (Baltimore: The Johns Hopkins Press, 1952); and Louis H. Bean, How To Predict Elections (New York: Alfred A. Knopf, 1948).

criteria. If we are to relate the results here to the functioning of the party system, the first criterion must be that of partisanship. The basic statistic must show whether a plurality of the district's electorate voted Republican or Democratic at each of the elections considered.

The second essential criterion is that of volatility, or the likelihood that a district will or will not retain its present partisan character from one election to the next. Volatility refers to the fluctuation of a district's partisan voting percentages.

The third criterion, trend slope, is concerned with the long range direction of percentage shifts.

The fourth criterion deals with various relationships, particularly rank orders, among all districts within the universe being studied. In the case of the first three criteria, each district is given a score or rated on a scale of absolute values. It is on this basis that the districts are finally ranked.

What results from these analytical explorations are new indications of the kind and extent of stability in the universe of congressional districts that are the intervening geo-political variables between voters and party divisions in Congress. A further contribution of this study may be the techniques it introduces for the evaluation of electoral prospects in the House contests, a matter of particular practical concern to the candidates and their campaign managers.

CHAPTER II

TECHNIQUES OF DATA-GATHERING AND ORGANIZATION

Selection of the Period for Study

The period selected for analysis in this study included congressional elections from 1942 through 1956. The use of this particular period presented some difficulties because of reapportionment action in many of the states. The congressional districts of 1942 in such states were split up in subsequent redistrictings. The advantages of spanning reapportionment years, however, made it necessary to attempt a solution to this problem rather than work around it.

In the first place, democratic politics such as we think we have in the United States exhibit cyclical patterns in which the two major parties alternate as the "party in power." Although there has been much disagreement among political scientists on the causal factors affecting any particular cycle, it certainly cannot be denied that irregular party cycles do occur.[1]

Accepting the fact of cyclical fluctuations and keeping the analysis within the realm of current politics, it was necessary to include sufficient elections to increase the prospect of finding a recent "hump" or "trough" of the "congressional cycle." Taking a cue from presidential election results, it would appear that the latest change in the trend of partisan politics occurred in the 1948-1952 period. At least one

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[1]Harold Gosnell, Grass Roots Politics, notes the irregularity of political cycles, page 9. Louis Bean, in How to Predict Elections, page 161, says "The evidence is clear that the year 1947 will go down in our political history as marking the end of the downward trend of the New Deal tide and the beginning of a new one."

experienced observer placed the turning point even earlier than 1948.[1] Accepting Bean's conclusions, it was necessary to cover at least the period 1946-1956 to span the suspected "trough" of the present cycle. Since we must go back to 1946 to include at least half of a cycle, one apportionment period had to be spanned, that following the 1950 census. In view of the limited resources of this study, no additional difficulties of constituency structure were risked by running the analysis back over other apportionments.

Another consideration in selecting the time period for study is the distinction between off-year or midterm elections and those held in presidential election years. Each of these two types of congressional election will be treated separately in one part of the analysis. However, the same number of elections of each type was included in order that a fair comparison between the two could be made. For this, the period 1942 to 1956 was suitable. Within the chosen length of time there occurred four off-year elections and four presidential year elections.

Since one purpose of this study is an investigation of trends associated with successive elections, a time period including at least three elections was required. It was just as convenient to obtain data on four off-year and presidential year elections, and this was done.

Another reason for covering as long a period as would be manageable was the desirability of reducing the candidate-personality factor in the election trends. It is not uncommon for an incumbent Congressmen to be re-elected to his seat in the House. In fact some Congressmen are re-elected so many times that for all practical purposes they "own" the office. A period that includes eight successive congressional elections increases the prospect of a change of candidates for most districts, although it may not have eliminated the peculiar influence of particular perennial congressional candidates on their districts'

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[1]Op. cit., Bean, p. 161. Bean sets the latest turning point in the national political cycle as 1947.

election outcomes. This difficulty would not have been completely remedied by using ten or twelve elections either. The choice of eight elections is a compromise dictated by convenience of data and the limits of the reapportionment problem.

Structural Aspects of Congressional Districting

This work was intended to be comprehensive in that the universe of electoral units to be studied includes every congressional district in the United States.[1]

Since it was necessary to carry the number of elections back beyond a period of reapportionment, some method had to be devised to deal with the reshuffling of geographical areas and constituencies that accompanies reapportionment. Had a method for spanning the reapportionment periods not been devised, and if we were compelled to use only the congressional districts not reapportioned in the period 1942-1956, the universe would have included only districts in twenty-nine states. This is hardly a satisfactorily inclusive universe to constitute a national study.

Another alternative would have been to carry the analysis, including the congressional districts of all states, back only as far as the most recent apportionment in any of the states involved. But since the most recent redistricting action occurred in 1952, we would have been limited to a period covering only three elections--two presidential year votes and one midterm contest. Again, this would hardly permit analysis of the time series type, nor would it allow any illustration of a trend's cyclicality.

In viewing the fluctuations of party fortunes in the electorates of congressional districts over a period of time, some attention must be given to the structural changes of the districts. A period of fourteen

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[1]This is subject to data-gathering difficulties which make it impossible to include certain districts, as explained later.

years, including eight congressional elections, was selected for study. To allow for a trend analysis of the electoral behavior of district constituencies during this period, it was necessary to reconstruct certain geographical areas so that the districts analyzed would be comparable geographically over the entire period. If no reapportionment or redistricting had occurred during the period 1942-1956, the problem of district boundaries could be ignored. Actually, nineteen of the forty-eight states altered in some way the boundaries of their congressional districts between 1942 and 1956. A total of 196 districts were affected by these changes.

The manner in which the vote for United States Representatives is reported by the states dictated the method of district reconstruction developed here.

The county is the basic unit for which congressional election statistics are reported by all states except where there are many districts in one county. Since the alterations mentioned above eliminate the use of the district figures where boundaries have not been permanent, it was necessary to re-collect the combination of counties in the areas redistricted.

For example, one district in New York consisted of Allegany, Cattaraugus, and Chautauqua counties prior to a redistricting in 1952, at which time Livingston county was added to these three counties to form a new district. For the purposes of this study these four counties are considered a single congressional district for the entire 1942-1956 period. The boundaries in effect in 1956 are used in compiling election data for all eight elections. In this way we have been able to take advantage of the permanence of county lines in creating a geographically stable universe of congressional districts.[1]

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[1]An exception to the stability of county boundaries is found in the Commonwealth of Virginia where some cities have assumed "county" status as local units of government. This change does not prohibit using the same method of retaining 1956 district boundaries over the entire period of study, however.

While new political combinations may occur in a redistricted constituency, permanently affecting party balance, the shortness of this trend analysis minimizes secular considerations of this kind.

It would be interesting to see how the congressional district constituencies would have voted had they maintained their 1942 geographical boundaries through 1956. The information would not possess as much practical value, however, as a study which shows the record of a contemporary constituency which will remain a single voting unit in the future. Since trend studies are in part a device for current forecasting, the use of 1956 district boundaries permits forecasting of future voting patterns for the geographically stable congressional districts.

After reconstructing a national aggregate of districts which were the same from one election to the next, it became necessary to give special attention to a small group of "special-problem" districts smaller in area than a county. These were not readily handled by the method established above. All are located in the metropolitan centers of the United States and are subdivisions of counties. This made it necessary to use wards and precincts as the basic source of election statistics.

Two factors, however, prohibited the reconstruction of urban congressional districts by combining ward and precinct areas. The first is that wards and precincts in many of the urban areas were changed during the 1942-1956 period. The second is that reconstruction of such districts would usually require a block-by-block summary of voting returns. This requirement was beyond the practical means available for this study.

The votes cast by metropolitan constituencies are of course as important to this study as those cast by the more accessible non-metropolitan constituencies. To eliminate these districts because their data cannot be collected in the same manner as the others would remove a large bloc of the national congressional electorate from the analysis. This problem was dealt with by the invention of the "Composite District."

Where reapportionment has led to redistricting of more than one district within or largely within a single county, all of the electorate within that county is treated here as a single constituency and is called a Composite District.

For example, Hamilton County, Ohio, contains two congressional districts under the present apportionment. The geographic composition of Hamilton County's two districts was changed by the redistricting of 1952, however, although both remained entirely within the county. The two are combined for this study and Hamilton becomes a single congressional constituency. In this manner the voting data is not lost and the labor of a block-by-block compilation of votes is avoided. Included in the 336 districts studied here are sixteen counties which became Composite Districts of this type. Eleven are in New York, two in Ohio, one in Missouri, and two are in Pennsylvania.

Another form of Composite District is constructed in cases where the 1956 district includes more than one county, but whose boundaries are not coterminous with county boundaries. Since we are limited by the fact that election returns are reported by county or congressional district, whichever is smaller in area, we have combined all the counties that are found in the same 1956 district with each part of the county split by a district boundary.

As an example, all of Putnam County and part of Westchester County in New York form a 1956 district. The remainder of Westchester contains a single district, but the vote cast in this portion of the county prior to the 1952 apportionment is not readily accessible. Therefore, the two counties are combined to form a single district. Eight of this type of Composite District are used in this study.

Composite Districts are as follows:

State	Composite District Number	Counties Contained in District
Illinois	1C	Cook, Lake
Maryland	3C	Baltimore City, Anne Arundel, Calvert, Charles, Howard, Prince Georges, and St. Marys
Missouri	1C	St. Louis (including St. Louis City)
	4C	Barton, Bates, Cass, Henry, Jackson (including Kansas City), Johnson, Lafayette and Vernon
New York	1C	Suffolk
	2C	Nassau
	3C	Queens
	4C	Kings
	5C	Richmond
	6C	New York
	7C	Bronx
	8C	Putnam, Westchester
	9C	Wayne
	10C	Monroe
	11C	Erie
	12C	Niagara
	13C	Orleans, Genesee and Wyoming
	14C	Albany, Rensselaer
	15C	Clinton, Essex, Warren, Saratoga, and Washington
Ohio	1C	Hamilton
	11C	Ashtabula, Geauga, Lake, Portage, Trumbull, and Mahoning
	20C	Cuyahoga
Pennsylvania	1C	Philadelphia city
	27C	Allegheny
North Dakota*	1C	
New Mexico*	1C	
Arizona**	1C	
Arkansas**	1C	

*North Dakota and New Mexico each elect two Representatives at-large. For purposes of this study each of these states is used as a single district. The vote recorded is that cast for the party candidate attracting the largest total vote.

**Because of data gathering problems explained in the next section, Arizona and Arkansas are considered one-district states.

Problems of Collecting Election Data

The election statistics employed in this study are presented in Appendix A. Compilation of such statistics for a study intended to be national in scope has proved to be almost a complete project in itself.

The problems of gathering data can be traced directly to the lack of any central source of election statistics, a lack that has been increasingly noted in the literature of politics.

Richard M. Scammon's America Votes has been an extremely valuable sourcebook for the voting figures of districts not affected by reapportionment. The use of Scammon's compilation was limited to the years 1946 through 1954.

Since we are concerned with the period 1942-1956, it was necessary to use Vote Cast in Presidential and Congressional Elections, 1928-1944, Department of Commerce, United States Bureau of the Census, to obtain the 1942 and 1944 congressional voting figures.

The 1956 statistics were obtained from Statistics of the Presidential and Congressional Election of November 6, 1956, Ralph R. Roberts, Clerk of the House of Representatives. From these sources the necessary data was readily available, but for districts affected by apportionment the task involved many additional difficulties.

State manuals, sometimes referred to as "blue books" or "red books," are published by many of the states. Many states include a public reporting of county voting returns in these manuals. The Michigan State Library in Lansing possesses a collection of these publications, but it covers only a small minority of states. In fact, even for those states that are covered the collection is incomplete. Nevertheless, this source was used to the extent possible before resorting to direct correspondence with the states concerned.

Where the county vote for United States Representative was needed, it was necessary to write to the separate state election authorities.

In most cases the reply to these requests for statistics was prompt. In some other cases, however, the reply did not contain the information requested and follow-up correspondence was required.

Officials of sixteen states were contacted with requests for county voting figures. The following persons were also contacted for information the states were unable to provide: Professor Clarence A Berdahl, University of Illinois; Professor Cortez A. M. Ewing, the University of Oklahoma; Richard M. Scammon, Governmental Affairs Institute; Professor Malcolm Moos, Johns Hopkins University; Arthur A. Schwartz, Director of the Ohio Legislative Reference Bureau; William B. Welsh, Research Director of the Democratic National Committee; and Richard C. Bain, Research Associate of the Brookings Institute. The task of collecting the basic data was made much less difficult by the willing assistance offered by these men.

Kentucky had to be removed from the scope of this analysis because the official records of county vote for 1942 through 1950 were destroyed by a fire. Mr. Scammon was able to furnish the 1946 statistics, but since a complete set of voting returns could not be accumulated, the entire state had to be dropped from the study.

All of the necessary statistics are available for the State of California, but the cross filing system peculiar to that state does not allow the accurate illustration of party vote required here. It is unfortunate that none of the California districts are included. The California electorate is especially important since we could expect its competitive status to be representative of the nation as a whole if the views contained in DeGrazia's Western Public are accepted. Because the two basic statistics employed here are vote cast for the Republican candidate and vote cast for the Democratic candidate, the vote for a person who is the nominee of both parties is not easily bisected on the grounds of partisan intent.[1] Also, this "mixing"

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[1]This distinction should not be confused with the vote cast for the party itself. If the party's candidate is supported by a third party, this vote is included.

of votes makes it impossible to accomplish trend comparisons from year to year. Only by a poll of the voters in California could it be determined accurately which party they were supporting in casting ballots for a candidate holding the nomination of both major parties. This requirement necessitates the omission of California.

Another problem was that state supplies of official voting returns were sometimes exhausted. In Oklahoma, the secretary of the State Election Board hired for the author a person to compile the statistics not previously published in a public report. The Director of Bureau of Commissions and Elections for Pennsylvania, Albert E. Eberman, furnished a photostated copy of the 1946 election returns in lieu of published returns not available. Following the suggestion of Professor Berdahl, the author requested and received from the University of Illinois Library reproduced voting figures which the Secretary of State could not provide.

The Secretary of State for Missouri extended a courtesy peculiar to that state alone. Because the supply of returns for public distribution was exhausted, he offered to loan the author his office copies for a short period of time. The offer was accepted and the official voting figures were recorded from this source.

In the cases of both Arizona and Arkansas, it was necessary to combine the total state vote for congressional candidates into a lumped figure and treat each state as a single district. Accessible information on Arizona and Arkansas showed only the total state vote cast for all congressional candidates. Despite repeated efforts to obtain the necessary voting returns from these states, they were not available.

The at-large congressional districts in existence at the time of the 1956 elections are not employed here except where the whole state was the only district unit for congressional elections. To offer an example, Texas has twenty-one Congressmen elected from apportioned districts in addition to a Representative elected from the state at-large. For our purposes the at-large district was not included and Texas was limited to twenty-one districts.

There are two specific reasons for excluding at-large districts found in states with regularly apportioned districts. The first is that the electorate for these at-large areas is the same electorate represented by all of the other districts in the state. To include them would only repackage votes already selected for study.

The second reason bears directly on one of our primary objectives, analysis of the single-member district. If we are to focus on this structural aspect of inter-party conflict, the inclusion of geographical areas represented by more than a single congressman must be minimized.

In addition, however, we have had to deal with cases such as Delaware which has a single Representative in Congress. Because it is not apportioned into more than one district, the State of Delaware is considered as a single congressional district. In addition to Delaware, the following are single-district states: Nevada, New Mexico, North Dakota, Vermont, and Wyoming. Of these six, New Mexico and North Dakota are actually entitled to two Representatives each, elected at-large under the 1956 apportionment. They are represented here, however, as single districts. The voting returns used are those case for each party candidate drawing the largest vote for a particular election.

Statistical Tools

The basic statistical unit used in this study has been called the "Stalemate Index." It is selected as a convenient index number which is both adaptable to further mathematical operations and representative of the competitive status of the Democratic Party *vis a vis* the Republican Party for a particular election and a particular electoral unit.

The Stalemate Index is defined as one-half the difference between the major party percentages of the total vote. In a case where the

Democratic candidate would draw 45% of the votes in a congressional district election and the Republican candidate would draw 35%, the Stalemate Index would be 5.0 or one-half the difference between the two percentages.[1]

To indicate which party is victorious, algebraic signs are attached to the absolute value of the index number. A positive Stalemate Index represents a Democratic victory and a negative index indicates a Republican victory. The complete representation of the above example, taking into account a Democratic plurality, would be +5.0.

We have used this particular manner of summarizing voting returns to capitalize on two specific advantages as follows:

1. As a descriptive device, the Stalemate Index is superior to possible alternatives in that it represents in a single explicit number the outcome and the winner's advantage in percentage. It is important to note, further, that this advantage is shown as one-half the difference between major party percentages of the total vote. From a politically practical point of view, the Index tells us what percentage of the total vote the loser needed to attain a tie or stalemate. The major assumption in stressing the descriptive significance of the Index is that the losing major party, had it achieved a stalemate, would have had to cover the ground indicated. Since the percentages used to derive the Index are computed with total vote as denominator, the "third" or minor parties are not completely disregarded while focusing on the major parties.

2. The Stalemate Index takes into account a reality of United States elections which has been neglected by other statistical descriptions--elections are won by a plurality of votes. A majority is unnecessary. If we were to employ the Democratic (or Republican) percentage of the total vote as our basic statistic, an election victory would be apparent from the statistic only when the Democratic (or Republican) candidate polled more than 50%. It is possible, however, that 45% of the total vote

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[1]See Appendix B for a complete explanation of the Stalemate Index.

represents a plurality sufficient for victory. The Index corrects this statistical deficiency while accurately representing the competitive status of the defeated major party. In the case of a 45-44-11 percentage split, the defeated major party was not 6% short of an election victory as would be the case if a majority were required. It lacked 1% plus 1 vote of winning.

CHAPTER III

MARGINALITY AND THE SINGLE ELECTION FORECASTER

Political parties function to win elections. When the decision-makers in the "out party" estimate that their chances of winning an election are great, they are willing to spend greater amounts of time and money on the campaign than when they estimate that their victory chances are small. Where the "in party" perceives its chances of losing the next election to be great, we could expect that party to invest greater efforts in attracting campaign resources to save the incumbent.

We would expect to find, for example, very little resource support for a Republican congressional candidate in Alabama's first congressional district. Information from past elections tells us that a Republican does not win this congressional seat. Therefore, we do not expect a Republican candidate to win. Nor do we expect that donors will step forward with large sums of money to support him. Campaign workers, having no real possibility of contributing to a successful campaign cannot be expected to volunteer in large numbers.

On the other hand, a campaign in a congressional district where close elections have been common in the recent past and where the congressional seat has alternated between parties would be expected to attract a greater amount of campaign ammunition.

In short, much in the allocation of campaign resources hinges upon political estimates of the chances of winning. Willingness to expend resources for campaign purposes increases as the possibility of an election turnover appears to increase, usually when a district is counted as "marginal." In the same manner, this willingness diminishes as the chances of a party turnover appear to diminish. There are so many variables involved in decisions on allocation of campaign resources that these conditional generalizations are the closest approach to a valid "rule" of any kind.

Defining Marginality

The next question logically is: "How is it determined whether or not the possibility of an election turnover is strong?" Intuitive and personal factors are intimately entangled in answering such a question and probably would lead to as many answers as number of candidates questioned.

An exhaustive study of how political candidates judge their chances of winning or losing an election would involve the endless array of variables necessary for studies of perception. Noting that this type of study would apply, but precluding it for our purposes here, we will proceed using a single, but general, variable of perception--the perceiver's judgment of "marginality."

Those who are personally involved in a campaign are likely to evaluate the chances of winning in a manner different from that of a political scientist making an objective analysis. Opposition candidates in a close district are likely to carry identical high hopes for victory. Even in normally one-party districts, the hopelessly beaten underdog is likely to consider himself a sure upset victor until election day. Naive optimism is a widespread characteristic among the ranks of political candidates.

Among the group of party strategists whose job it is to recommend the most efficient allocation of campaign resources, the possibility of an election victory in a particular district can not be forecasted on the basis of shallow optimism.

Limited resources require that little be wasted on noble gestures. For purposes of party morale expenditures might be necessary in districts where a loss is certain, but the greatest share of available money and materials will be funnelled to areas where success at the polls is at least possible.

The allocation of resources made available to the political parties and their candidates for campaign purposes is determined by the special circumstances of each separate election battle. The personal wealth of a candidate may allow him to campaign freely. Friends, personal campaign committees and party campaign committees must attract these resources for their candidate's campaign. Also, a decision must be made as to how much of the available resources might be used effectively in support of their candidate.

Even the independently wealthy candidate, or his managers, must decide at what point further expenditures of time and money would or would not be worth the effort.

V. O. Key points out the relationship of competition and campaign expenditure levels in the following way:

> Campaigns that are not warmly contested are apt to evoke small expenditures. The presidential campaign of 1924, for example, involved a relatively small expenditure. In many instances a sitting official is re-elected with only token opposition and with only slight expenditures. It is also apparent that campaign expenditures are influenced by the intensity of feeling about the issues.[1]

The keen sense of competition, indeed the feeling that it is obligatory to upset any competitive balance, which is prevalent among active policital participants, has a great deal to do with the allocation of campaign resources. Key sums it up as follows:

> The competitive factor induces high outlay. Each party or faction feels that it must attempt to match the expenditures and the showing

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[1]Key, op. cit., p. 532.

> made by the other, for undoubtedly in many elections and primaries money helps mightily in gaining victory.[1]

Investigation of available evidence on how people involved in political contests judge, or pre-judge, outcomes of particular elections shows that "marginality" or "closeness" of recent elections is the determining factor. The more evenly matched were the two major party candidates at the previous election, the more "marginal" or "close" is the electoral district classified for the next election.

Again turning to Key, we find that his observations uphold this conclusion:

> An elementary principle of campaigning is that efforts should be concentrated where they will do the most good; usually in closely contested and doubtful states . . . Elsewhere the greatest outlay of energy and of funds is likely to occur in the areas believed to be close.[2]

Key is doctrinaire in giving advice to politicians in regard to their expenditure of campaign ammunition:

> The significance of the pattern of behavior for campaign strategy is plain. Campaign resources ought to be concentrated in close districts.[3]

But surely all people, and politicians are no less people than political scientists, do not read the same meaning into the words "marginality" and "close"--even if they agree that "marginality" and "closeness" are crucial in the selection of districts where a party turnover might occur. What do the terms "marginality" and "closeness" mean to political prognosticators? How does a national party organization and its research staff select the congressional districts in which campaign efforts will be concentrated? These are the questions that will be treated here.

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[1]Ibid., p. 537.

[2]Ibid., p. 494.

[3]Ibid., p. 524.

The Research Division of the Democratic National Committee in recent years has focused its attention upon the percentage of two-party vote cast for major party candidates in a congressional district.[1] Each congressional district was classified as "marginal" of "safe." Where a Democratic candidate had won a congressional election by drawing less than 55% of the two-party vote, the district was classified as "marginal Democratic." If this same candidate had won with more than 55% of the two-party vote, the district became "safe Democratic." Districts won by Republican candidates were classified in the same manner.

By this method the size of the percentage differential between the candidates at the last election was the crucial forecasting device for the next election. This percentage differential size was supposed to tell us whether or not the district would be vulnerable to change at the next election.[2]

The terms used by the Democratic National Committee to describe the degree of competition between the two major party candidates in a particular district, then, indicate their evaluation of the possibility that the district will be won by the Democratic candidate. A "safe" Democratic district is expected to re-elect a Democratic congressman. A "marginal" Democratic district is expected to be more vulnerable to Republican campaigning.

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[1]Study of Marginal Districts: 1952, 1954 and 1956; Research Division, Democratic National Committee, March 1, 1957.

[2]The Republican State Central Committee in Michigan, in a statistical analysis of state elections following the November 1958 General Election, has used "marginality" as a criterion for vulnerability to change. In their study, the Republican percentage of the two-party vote cast is used as the basic statistic. "Marginal Congressional Districts" are those in which the winner's percentage of the major party vote at the last election was no greater than 5% more than the loser's percentage. "Semi-marginal Congressional Districts" are those in which the percentage difference between the two major parties at the last election was greater than 5% but less than 10%. Where the margin of victory at the last election was more than 10%, the Republican State Central Committee classifies the district as "Safe."

Statistical analyses of election results by both major parties employ this same method. Percentage spread between the two parties at the previous election is the crucial determinant of marginality.

It is inferred that the prime target districts would be the "marginal" Republican districts (for Democrats) and the districts demanding a strong defense would be the "marginal" Democratic districts. Employing this type of classification would presume an emphasis upon channeling campaign resources to the "marginal" district contests. "Marginal" and "vulnerability to change" are used synonomously.

Both parties in fact could be expected to follow the pattern. An abnormal concentration of men, material, and money in any particular "marginal" district by the out-party is likely to attract a counter concentration by the in-party.

In the light of congressional election results for the period 1942 through 1956, is the "55% and less" district actually more likely to be won by the out-party than the "over 55%" district? And, more important, would complete success in using this definition of marginality really be a success? Would the definition provide the greatest possibility of selecting districts most vulnerable to turnover? Or does the assumed stability of individual voting habits create voting trends that require analysis of many successive election results to determine the marginality of any selected district?

In Politics, Presidents and Coattails Malcolm Moos devotes an entire chapter to the "Marginal Congressional Districts." His use of marginality emphasizes the same elements highlighted by the two party studies referred to above--percentage of the two-party vote at the previous election. The Moos description is emphatic in precluding a great portion of our congressional district elections from even the slightest significance in the competition for political ascendency.

Moos insists that "legislative control of the Republic is determined by the elections in those districts where Republicans gather 45-55% of the two-party vote." He defines these districts as "Marginal."[1]

Moos establishes a separate classification of "Critical Marginal" districts. These are the districts in which Republicans gather 48.5% to 51.5% of the two-party vote.

Although he does not establish rigid classifications as does Moos, V. O. Key sees "closeness" or "marginality" in the same terms as Moos. To Key, the percentage spread between the two major-party candidates at the previous election is almost a determining factor in forecasting the result of the coming election:

> Another analysis that throws some light on the nature of the mid-term decision is the identification of the districts most likely to shift in partisan complexion at mid-term. Since voters' partisan attachments have a high degree of persistence, it would be expected that those districts most likely to change at mid-term would be those with the closest results at the preceding presidential election. The Republicans might have a chance to pick up a district in 1950 that had gone Democratic by 51-49 per cent at the preceding polling, but their prospects in a district that had divided 65-35 would be much less . . . Party shifts occur in close districts, but oddly enough the sentiment seems to move in the same direction in nearly all close districts.[2]

In addition to the definition of marginality proposed by Moos, Key and the party staff studies, it is suggested here that both the rate and direction of voting trends are necessary to evaluate effectively the possibility that a congressional district will be won by a party candidate at any given election. This statement presumes that the previous election result is not by itself adequate evidence for forecasting marginality. Marginality, employed as an indicator of vulnerability to change, would not be fully described by the closeness of the last election. For example, a district

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[1]Moos, loc. cit.

[2]Key, op. cit., p. 522.

whose last election showed a 2-party vote percentage split of 53-47 would be classified as a marginal district if closeness were the only criterion employed. If, however, further investigation showed that the results for the past four elections remained at a 53-47 split favoring the same party, we would be less inclined to classify the district as marginal.

Inadequacy of the Single Election Forecaster

Investigation of the election data gathered for this study will show that the "marginal" classification employed above is not an accurate description of the congressional district's competitive status.

Three types of congressional election sequences have been examined--successive elections, successive presidential year elections, and successive mid-term elections. Election sequences have been classified in this way because previous studies of congressional contests have made claims that each type is not comparable with the other and should be investigated independently.[1]

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[1]Malcolm Moos, loc. cit.; Bean, loc. cit.; Ewing, loc. cit.; Bean, in fact, minces no words in stating that these types of elections should be separated: ". . . congressional elections in mid-term are not strictly comparable with congressional elections in the more exciting presidential years. They must be studied separately." (p. 31). Bean explains these differences by offering his coattail theory: "Once it started upward, with the aid of the 1929-32 depression, the tide moved on a level of 6 or 7 percentage points higher in presidential than in mid-term election years. This suggests that in presidential campaigns 6 to 7 per cent of the 435 Democratic congressional candidates were elected mainly by virtue of the fact that they were on the national ticket. In other words, about 26 to 30 congressmen thus appear to have ridden into office on the President's coattail in 1932, 1936, 1940, and 1944" (p. 32). Moos, on the other hand, disagrees with Bean's coattail theory, but indirectly demands separate investigation of the different types of congressional elections by postulating a relationship between presidential and congressional candidates: "If we find the presidential candidate running well ahead of his party's congressional ticket, we may assume that he helps the congressional candidates who trailed behind him" (p. 10). A predecessor to Moos,

Table I relates the size of change in voting percentages (as measured by the Stalemate Index) to the election results for four presidential year congressional contests (1944, 1948, 1952 and 1956).

As an example, we can look at the election experience of Michigan's sixth congressional district. In all four elections (1944, 1948, 1952 and 1956) the Republican candidate won. This means that all of this district's cases (pairs of presidential-year elections) would be entered in the first row of Table I, the "Same Party Wins" row. In the election of 1944, the Stalemate Index for Michigan's sixth district was -5.4 and in 1948 it was -0.3; the difference between the two election results is 5.1 points. Therefore, the 1944-48 case for this district would be entered in column 2 of Table I, the 5.0-9.9 Stalemate Index Change column. The difference between the 1948 and 1952 elections was only 2.5 points. Therefore, this case would be entered in column 1 of Table I. The 1952-1956 difference would also put Michigan's sixth district in column 1 since the difference was 1.9 points. This district's contribution to Table I, then, was a single occurrence entered in row 1, column 2, and two cases entered in row 1, column 1.

If marginality were truly a function of the "closeness" of the last election of the same kind in a district, we would expect to find the greater

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Cortez Ewing, from whom the former borrowed heavily, also implied the distinction between congressional election types by ranking presidential candidates by "efficiency," or the percentage by which they led their congressional tickets.

The evidence offered by these authors, however, is not sufficient to justify including or excluding separate analysis of the three types of congressional elections. Perhaps the sharpest observation on the question was offered by V. O. Key stating "the chances are that, by a process of elimination, one is pushed to the conclusion that the difference between the outcome of congressional elections in presidential and mid-term years must be attributed chiefly to the coattail effect operative in presidential years." In view of the inconclusiveness of available evidence, the three types of election sequence will be examined separately to determine whether or not there is any further justification for examining them separately.

number of other-party victories in the 0-4.9 Stalemate Index Change column of Table I, because these are the closest districts. Actually, however, we find the greatest number of changes to the other-party in those districts where the size of the Stalemate Index Change exceeds 5.0 points.

Table I. Distribution of Congressional District Election Outcomes According to Size of Stalemate Index Change Between Successive Presidential-Year Elections

Election Result	Size of Stalemate Index Change 0-4.9	5.0-9.9	10.0 plus	Total
Same Party Wins	432	190	171	793
Other Party Wins	24	44	39	107
Total	456	234	210	900

No Change Cases = 107

In fact, there is an almost equal number of change cases in the 5.0-9.9 classification (44 cases) and the 10.0 plus classification (39 cases).

The same type of evidence is found in Table II which summarizes the data for congressional elections in four non-presidential years (1942, 1946, 1950 and 1954). Again, most congressional districts favor the candidate of the same party from one election to the next. But in those cases where there is a turnover, with the out-party winning the election, there are more occurrences in the 5.0 and over classifications.

There is one point that should be stressed about these figures. Their real significance is in those cases where the out-party wins.

Table II. Distribution of Congressional District Election Outcomes According to Size of Stalemate Index Change Between Successive Midterm Elections

Election Results	Size of Stalemate Index Change			
	0-4.9	5.0-9.9	10.0 plus	Total
Same Party Wins	450	188	146	784
Other Party Wins	27	32	41	100
Total	477	220	187	884
No Change Cases = 124				

If these findings contradict the predictive utility of the prevailing definition of marginality, those cases where the same party wins in successive elections must be disregarded. The mere fact that the greatest number of cases is found in the "0-4.9, same-party" class does not alone contradict the prevailing definition.

All of these cases could have occurred in heavily one-party areas where a small change means nothing. All, then, are vulnerable to the charge that they remained in the same-party column (despite a small c hange) because the difference in two-party vote percentages at the previous election was greater than 5%, or that the in-party candidate drew more than 55% of the two-party vote.

In Table III, only the cases where the out-party won are re-examined and it becomes evident that an actual party turnover occurred in each case. Consequently, classification of cases into size of Stalemate Index change does offer sound evidence as to whether or not the "closeness" of the previous election is a valid criterion for estimating turnover prospects.

If we find in a large number of districts where turnover has occurred that the Stalemate Index change from one election to the next has been 5.0 or greater, "marginality" as it is presently defined would be a poor guide to the most efficient allocation of campaign resources; district change of greater than 5.0 points would be too common. If, on the other hand, we find that in most districts where there has been an unseating of the incumbent the Stalemate Index change was less than 5.0, the evidence would support the prevailing predictive use of "marginality."

Table III. Distribution of Congressional District Election Cases According to Size of Stalemate Index Change Where Turnover Occurred at Second of Two Elections of the Same Type

		Size of Stalemate Index Change		
		0-4.9	5.0-9.9	10.0 plus
Percent of Cases	Pres. Year Elections	21.6%	39.6%	38.8%
	Mid-term Elections	26.7%	31.7%	41.6%
	Totals	48.3%	71.3%	80.4%

We see again that in cases where the district changed parties a greater percentage of districts experienced Stalemate Index changes of greater than 5.0.

The next logical question is: "But did these districts really need to move more than 5.0 for the out-party to win?" Perhaps all of them were in the 0.0-4.9 class before the turnover.

The previous examination of district election statistics, offered to point out the weakness in the prevailing concept of "marginality," was based solely on the size of the Stalemate Index change from election to election. This concept, however, included both the closeness of the previous election, vis a vis the relationship between the two parties, and the closeness of the out-party to an election victory. We have shown that, according to size of electoral change, more districts move more than 5.0 points than move 0-4.9 points in any election. But it is entirely possible that the districts moving more than 5.0 points actually would have had to move less than 5.0 points for the out-party to win.

Therefore, to complete the examination of "marginality" we must look at the starting point, that is, the size of the Stalemate Index at the last election, as well as the size of the shift from this starting point. If all districts which move less than 5.0 points started from a Stalemate Index of less than 5.0 and have moved to the out-party, then the prevailing use of marginality is essentially valid. But if an examination of the cases in which districts elected out-party candidates in the second of two successive elections shows that districts starting with a Stalemate Index of more than 5.0 points produced as many victories as those with less than 5.0, the usefulness of "marginality" is in serious question.

Table IV classifies cases in which congressional districts elected out-party candidates in the second of two successive elections. A quick inspection of the summarized statistics shows that in a sizeable, important portion of the cases the out-party has overcome a Stalemate Index of more than 5.0 to win the second of two successive elections of the same type.

For presidential year elections, in 41.7% of the cases where the out-party won in the second of two consecutive elections, the Stalemate Index at the previous election fell into the four categories greater than 5.0. In as many as 19.4% of the cases, the previous election Stalemate Index was 10.0 or greater.

For mid-term elections, in 35.0% of the cases where the out-party won in the second of two consecutive elections, the Stalemate Index at the previous election was greater than 5.0. In 17.0%, the previous election Stalemate Index was 10.0 or greater.

Table IV. Distribution of Pairs of Congressional District Election Cases According to Size of Stalemate Index at the First of Two Successive Elections Where Turnover Occurred at Second Election

Size of S.I. at the first Election	Pairs of Pres. Year Elections		Pairs of Mid-term Elections		Pairs of Successive Elections	
	Cases	Percent	Cases	Percent	Cases	Percent
0-4.9	63	58.3	65	65.0	148	68.5
5.0-9.9	24	22.2	18	18.0	41	19.0
10.0-14.9	12	11.1	8	8.0	20	9.2
15.0-19.9	6	5.5	3	3.0	4	1.9
20.0 plus	3	2.8	6	6.0	3	1.4
Totals	108	100.0	100	100.0	216	100.0

In 31.5% of the cases of all election years where the out-party won in the second of two consecutive elections, the Stalemate Index at the previous election was greater than 5.0. In 12.5% the previous election Stalemate Index was 10.0 or greater.

Thus, in a majority of cases where a party turnover has occurred in pairs of successive elections, the Stalemate Index of the first election was less than 5.0 points. This pattern holds true in all three types--pairs of presidential year elections, pairs of mid-term elections, and pairs of successive elections.

Each of the districts experiencing a party turnover in an election immediately following one where the Stalemate Index was greater than 4.9 is listed in Table V. These are the districts that contributed to the totals in the "Pairs of Successive Elections" column of Table IV. It is significant that no section of the nation, or for that matter no state, has a

Table V. Distribution of Cases in Which Turnover Occurred Where Stalemate Index at Preceding Election was Greater than 4.9

District	Pairs of Election Years													
	Mid-Term			Pres. Year			Consecutive Elections							
	42-46	46-50	50-54	44-48	48-52	52-56	42-44	44-46	46-48	48-50	50-52	52-54	54-56
Colo-3				D									
Colo-4		D		D					D				
Conn-1													R
Conn-2									D				
Conn-3		D							D				
Del-1			D										
Fla-1			R										
Ida-1								R					
Ill-1C				R				R					R
Ill-21				D					D				
Ill-23				D					D				
Ill-25						D						D	
Ind-8					R								
Ind-3									D				
Ind-5									D				
Ind-4				D					D				
Iowa-6						D							D
Kan-1					D						D		
Kan-5						D							D
Me-2						D							
Md-1	R												
Md-2	R				R			R					
Md-3C						R							R
Mass-2				D									
Mass-4	D			D				D					
Mass-1							D						
Mich-13								R					
Mich-14	R							R					
Mich-17			D										
Minn-3							D						
Minn-4							D						
Minn-6		D		D					D				
Minn-8	D												

Continued

Table V - Continued

	Pairs of Election Years												
	Mid-Term			Pres. Year			Consecutive Elections						
District	42-46	46-50	50-54	44-48	48-52	52-56	42-44	44-46	46-48	48-50	50-52	52-54	54-56
Minn-9			D			D						D	
Mo-1C								R					
Mo-6					R								
Mo-7						D							
Mont-2						D							
Neb-1	R						R						
Neb-2				D					D				
Nev-1		D							D				
N.J.-11		D							D				
N.J.-4				D									
N.J.-6			D									D	
N.J.-14													R
N.Y.-3C		D											
N.Y.-5C		D										D	
N.Y.-11C									D				
N.Y.-14C	R												
N.Y.-28							D						
N.C.-10					R								
N.D.-1				R			D	R					
Ohio-18		D							D				
Ohio-20C		D						R	D				
Ohio-16									D				
Ohio-14					R								
Ohio-3			R		R						R		
Ohio-15			R	D		R						R	
Ohio-1C				D					D				
Okla-1				D					D				
Ore-2						D							
Ore-4						D							D
Pa-1C		D						R	D				
Pa-14		D						R	D				
Pa-27C					R			R					
Pa-10									D				
Pa-22					R					R			
S.D.-1						D							D

Continued

Table V - Continued

District	Pairs of Election Years: Mid-Term 42-46	46-50	50-54	Pres. Year 44-48	48-52	52-56	Consecutive Elections 42-44	44-46	46-48	48-50	50-52	52-54	54-56
Tex-5			R			R						R	
Utah-1					R								
Utah-2	R				R			R					
Va-6			R		R						R		
Va-9											R		
Va-10		R											
Wash-1	R	D							D				
Wash-2			R		R						R		
Wash-3							D						
Wash-6	R			R				R					
Wisc-4	R							R					
Wisc-5									D				
Wisc-9			D			D						D	
Totals	11	13	11	16	13	14	7	15	23	1	5	7	8
32-States 82-Districts	9-R, 2-D	1-R, 12-D	6-R, 5-D	2-R, 14-D	12-R, 1-D	3-R, 11-D	1-R, 6-D	12-R, 3-D	0-R, 23-D	1-R, 0-D	4-R, 1-D	2-R, 5-D	4-R, 4-D

monopoly on this type of turnover, e.g. out-party overcomes a Stalemate Index greater than 4.9 at previous election to win. Eighty-two districts in 32 states have experienced this phenomenon in the 1942-1956 period.

The wide range in number of cases of this type occurring at different elections suggests that there may be a national factor more prevalent in one election than in another and that this factor enhances the vulnerability of districts to turnover. In the case of all successive elections, the number of turnover occurrences (Table V, column 3) for a single election ranges from 1 in the 1948-50 election pair to 23 in the 1946-48 election pair. Isolation of the factors which explain this variation certainly merits further study.

A clearer picture of the relationship between party turnover and the size of the Stalemate Index at the first of each pair of elections is illustrated in Tables VI and VII. Table VI is concerned with the districts in which the out-party won in the second of two successive elections. It shows that at the preceding election a Stalemate Index of greater than 5.0 existed for these turnover districts: (a) In nearly 42% of the cases for Presidential-year sequences; (b) In 35% of the cases for mid-term sequences; (c) In 31% of the cases for pairs of successive elections.

Table VII is limited to those districts in which the incumbent party won in the second of two successive elections. It shows, as most certainly would be expected, that a preponderance of non-turnover cases occur where the Stalemate Index at the preceding election was greater than 5.0.

Statistical Test on "Marginal" Districts

That the "closeness" of the first of a pair of successive elections can not be ignored, however, in forecasting the vulnerability of a district to change is demonstrated by chi-square tests. By placing the data in contingency tables, the relationship between size of Stalemate Index at the last election and out-party victory in the second of two elections is revealed.

Table VI. Distribution of Congressional District Election Cases According to Size of Stalemate Index at First of Two Successive Elections (Where Out-party Wins Second Election)

Size of S.I. at First Election	Number of Cases in Which Out-party Wins Second Election		
	Pairs of Pres. Year Elections	Pairs of Mid-term Elections	Pairs of Successive Elections
0-4.9	63	65	148
5.0 plus	45	35	68
Totals	108	100	216

Table VII. Distribution of Congressional District Election Cases According to Size of Stalemate Index at First of Two Successive Elections (Where Incumbent Party Candidate Wins Second Election)

Size of S.I. at First Election	Number of Cases in Which In-party Wins Second Election		
	Pairs of Pres. Year Elections	Pairs of Mid-term Elections	Pairs of Successive Elections
0-4.9	153	129	338
5.0 plus	746	779	1797
Totals	899	908	2135

Contingency Table A: Pairs of Presidential-Year Congressional Elections

Size of S.I. At First Election	Result of Second Election: Turnover	No Turnover	Total
0-4.9	63	153	216
5.0 plus	45	746	791
Totals	108	899	1007

Contingency Table B: Pairs of Mid-Term Congressional Elections

Size of S.I. At First Election	Result of Second Election: Turnover	No Turnover	Total
0-4.9	65	129	194
5.0 plus	35	779	814
Totals	100	908	1008

Contingency Table C: Pairs of Successive Congressional Elections

Size of S.I. At First Election	Result of Second Election: Turnover	No Turnover	Total
0-4.9	148	338	486
5.0 plus	68	1797	1865
Totals	216	2135	2351

The relationship between turnover and "closeness" may be tested by the chi-square test.

The null hypotheses to be tested are as follows:

1. We do not have sufficient reason to say that party turnover in successive presidential-year congressional elections is dependent on whether or not the size of the last Stalemate Index was above or below 5.0 points.

2. We do not have sufficient reason to say that party turnover in successive mid-term congressional elections is dependent on whether or not the size of the last Stalemate Index was above or below 5.0 points.

3. We do not have sufficient reason to say that party turnover in successive congressional elections is dependent on whether or not the size of the last Stalemate Index was above or below 5.0 points.

With a significance level of .05 the chi-square test of independence on each of the contingency tables results in rejection of each of the hypotheses. In other words, we cannot say that we do not have sufficient reason to say that party turnover is dependent on whether or not the size of the last Stalemate Index was above or below 5.0 points.

Although the null hypotheses of independence must be rejected, indicating that the "closeness" of the first of two elections is significant in guessing the outcome of the second, a second look at the contingency tables would indicate that the "closeness" does not tell the whole story.

In the presidential-year contingency table, we see that in 45 out of the 108 cases where a turnover has occurred the Stalemate Index at the first election was greater than 5.0. This means that 41.7% of turnover occurrences took place in districts which were not considered "marginal" under the prevailing use of the term. The mid-term statistics show that 35.0% of the 100 cases where a turnover occurred would not have been classified as "marginal" prior to the election in which the party change took place. In the case of all successive elections, 31.5% of the districts followed this same pattern. In all three types of election sequences, then, approximately one-third of the party turnovers occurred in district elections which were not considered "marginal" or "close" in the first place. These changes could be called unexpected.

On the other hand, the number of cases where a turnover might have been expected, but did not materialize, was high, enough to cast serious doubt on the validity of the marginality criterion upon which the expectation of turnover was based. In the presidential-year election sequences, 70.8% of the cases in which the previous Stalemate Index was less than 5.0 did not change parties in the subsequent election. For mid-term election sequences, 66.5% of those cases in which a change might have been expected did not in fact turn over. For all cases of successive elections, 69.5% of the cases where a district would be classified as "marginal" remained in the column of the incumbent party.

When the expectation of turnover is expressed as a function of the "closeness" (measured in terms of percentage spread between parties) of the last election, we found one-third of all turnover cases occurring where they were not expected and 65-70% of the non-turnover cases occurring where a turnover might be expected. To allocate limited campaign resources where the payoff probabilities are so low is wasteful. When expectations of party turnover are based upon criteria which result in as small a yield of success as the prevailing definition of "marginality," there is no reason for continuing to use it.

Summary

In this chapter we have examined the current measure of "marginality" widely employed by practicing politicians. Noting that "marginal" districts have been located by examining only the results of the most recent election, we found that this single-election basis for forecasting is not efficient.

Examination of congressional election statistics, as summarized by the Stalemate Index, shows that where the out-party wins, it does so by gaining more than 5.0 Stalemate Index points between two consecutive elections more often than it does by gaining less than 5.0 points. This observation holds for all three types of election sequences--presidential year congressional elections, mid-term elections and consecutive elections.

In cases where a congressional district elected the out-party candidate at the second of two consecutive elections, its Stalemate Index at the first election was more often smaller than 5.0 than it was greater. This observation is pertinent to all three types of election sequences. In a significantly large portion of the cases where the out-party won, however (at least one-third of the cases, depending on the type of election sequence), the Stalemate Index at the first election was greater than 5.0.

Chi-square tests of significance on the relationship between size of Stalemate Index at the first of two successive elections and the outcome of the second election lead us to reject the null hypothesis that "We do not have sufficient reason to say that party turnover is dependent on whether or not the previous Stalemate Index was above or below 5.0." "Marginality," or "closeness," as currently used and as measured by percentage spread between the two major-party candidates at the last election does have <u>some</u> relationship with the outcome of the next election. It is not sufficient explanation, however, for one-third of all turnover cases that occurred where they are not expected and 65-70% of non-turnover cases where a turnover might be expected.

If "marginality" is to be used as an indicator of prospective party turnover in congressional elections, the size of the Stalemate Index at the last election ought to be included in determining "marginality." Other factors must also be considered in conjunction with size of Stalemate Index. Political experience of a congressional district is not limited to the "last" election. Many elections have been held and the outcome of each is a part of the district's total experience.

If the single-election forecaster is not really an effective forecaster, the multi-election forecaster may be a more efficient manner of estimating future election results. In other words, if all of a district's election results were charted on a graph, this experience could be represented by a regression line. Any series of elections withdrawn from this historical representation could also be characterized by a trend line. This trend would be described by its direction of movement and its rate of change (or degree of angle) over time.

The employment of a multi-election trend line in forecasting would add two kinds of information lacking in the single-election forecasting base: direction and rate of change. Having shown in this chapter that the result of the "last" election is necessary but not sufficient evidence of prospective turnover, we now proceed to establish the value of rank order relationships as a forecasting aid (Chapter IV). In Chapter VI a multi-election (trend) forecasting base will be combined with demonstrated rank order relationships to suggest a forecasting procedure for future election results.

CHAPTER IV

COMPETITIVE DISTRICT RANK ORDER RELATIONSHIPS, 1942-1956

Hypothesis of Rank Order Stability

Previous studies of individual voting habits show the persistence of a person's tendency to vote for candidates of the same political party election after election. We are also aware of the existence of so-called one-party areas in which the candidates of a single party monopolize election victories year after year.

Assuming that voters tend to vote consistently for the candidates of the same party, we could picture the voters of an electoral district as consistently casting a majority of their vote for the same party. This is in fact the case in the one-party districts of the "Solid South" where the real battle for election occurs in the Democratic primary.

Such perfect consistency is not universal, however, as is evident from the changing partisan character of elected bodies. The division of Congress has never been the same from one election to the next; as illustrated by Table VIII.

As a consequence of the use of Composite Districts, explained in Chapter II, this study covers a number of congressional districts fewer than the legal total of 435.

It can be seen in Table VIII, however, that the actual partisan control of Congress is reflected in the study composition in seven out of the eight cases. In 1942, the exception, Republicans were actually in the minority, but the study composition shows a Republican majority.

Table VIII. Composition of the United States House of Representatives by Party Designation.

Table VIII. Composition of the United States House of Representatives by Party Designation, 1942-1956 Election Results

Year	Actual Composition[1]				Study Composition			
			Percent of Total				Percent of Total	
	Dem.	Rep.	Dem.	Rep.	Dem.	Rep.	Dem.	Rep.
1942	218	208	50.1	47.8	157	179	46.7	53.3
1944	242	190	55.6	43.7	173	162[2]	51.6	48.4
1946	188	245	43.2	56.3	140	196	41.7	58.3
1948	263	171	60.5	39.3	193	143	57.4	42.6
1950	234	199	53.8	45.7	177	159	52.7	47.3
1952	211	221	48.5	50.8	157	179	46.7	53.3
1954	232	203	53.3	46.7	177	159	52.7	47.3
1956	233	200	53.6	46.0	173	163	51.5	48.5

[1]Totals are not 435 in every case because of "other" party Representatives and vacancies. For 1942 there were four "other" party Representatives and five vacancies; 1944, two "other" party and one vacancy; 1946, one "other" party and one vacancy; 1948, one "other" party; 1950, one "other" party and one vacancy; 1952, one "other" party and two vacancies; 1954, one "other" party and two vacancies; and 1956, two vacancies.

[2]For the 1944 election, there were only 335 Representatives elected from study districts because no election returns were reported from Wisconsin's ninth congressional district for that year.

If individual voting habits are persistent, this consistency should result in a relatively stable outcome of elections for each congressional district over time. For example, if congressional district A elected the Democratic candidate in 1942 and congressional district B elected a Republican candidate, we would place a higher probability on district A electing a Democrat in 1944 than district B electing a Democrat; it is more probable that most voters in both districts will vote the same in 1944 as in 1942 than that voters will change their votes.

In the matter of balance of partisanship revealed by elections in each district, we would also expect a strong consistency. In other words, if the voters of district A cast 60% of their votes in the 1942 election for the Democratic candidate while the voters of district B were casting 60% of their votes for the Republican candidate, we would in turn expect the voters of district A to cast a larger percentage of their votes for the Democratic candidate in 1944 than would the voters of district B.

Developing further this comparison between two hypothetical districts, each election outcome in each district places the district in a rank order relationship with all other districts, on the basis of the proportion of the voters that supported the major parties. In this study a Stalemate Index is computed for each congressional district and for each election from 1942 to 1956, inclusive. For each election the congressional districts have been ranked according to the size of the Stalemate Index.

If all that has been said about the stability of voter preferences is valid, then it may be hypothesized that the Stalemate Index of each congressional district for each election, as it compares in size with the Stalemate Index of each of the other districts, will remain consistent enough so that the rank order correlation coefficient between the rank orders of successive elections will be high.[1]

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[1]Statistical tests of significance would not be pertinent in this case. The non-parametric test of rank correlation coefficients tests the independence of the correlated ranks. Here, we already know that successive elections in the same electoral district are not independent events.

The discovery of such a consistency in rank order relationships would be significant from a practical and a scientific point of view. If the rank orders are sufficiently stable to serve as a basis for estimating future election prospects, the practicing politician could use such information in estimating which congressional districts are the most vulnerable to change and in allocating available resources accordingly.

To the political scientist the discovery of high rank order correlations would be important largely as an addition to the existing body of descriptive information. It could serve as a sound exploratory test for more "microscopic" investigation of individual voting habits. For example, assuming that high correlations between election years are common, the occurrence of a low rank order correlation coefficient between a particular set of elections would show a realignment of congressional districts--and consequently a realignment of voters' preferences. This evidence could serve as sound justification for investigating further to discover the factors which cause realignment. A summary of election outcomes does not provide this type of descriptive information because it cannot isolate and identify a realignment in congressional electorate voting. A description of the mechanics of change and the discovery of inconsistencies are possible only after locating the consistencies, and rank order relationships are one such measure of consistency and deviancy.

For example, a change in control of Congress from Democrats to Republicans at a particular election may have nothing at all to do with basic realignment in the electorate. The change might simply be the extension of an electoral trend over time. A low rank order correlation coefficient for the districts between this and the last election, however, would indicate a change involving something more than the prevailing trend.

According to one political scientist, existing studies of voting behavior may be classified into six basic types.[1] These classifications include the

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[1]Samuel J. Eldersveld, "Theory and Method in Voting Behavior Research," The Journal of Politics, Vol. 13 (February, 1951), pp. 70-87.

hypothesis-testing exploratory study, the mass-tabulation case study, the comparative statistical survey, the single-hypothesis trend study, the hypothesis-testing factorial analysis, and the community dynamics type. We are attempting here the fourth type, the single-hypothesis trend study, more specifically described by Eldersveld as follows:

> A fourth category of research is the single-hypothesis trend study, in which the investigator, advancing a single proposition or an interpretation of one aspect of voting behavior, explores its validity over a considerable span of elections and in many different electoral units.[1]

Although Professor Eldersveld points out that the contribution of this type of study to theory construction has been negligible, he also points out that this approach in combination with the survey approach has been valuable:

> The trend-survey approach, however, is essentially valid, given hypotheses which are based on some objective facts, and systematically pursued in a variety of research situations, with a rigorous technique.[2]

As stated earlier, this is the objective of this study--to provide a valid basis upon which a survey investigation of the realignment of voting preferences could be made.

Computing Rank Order Correlation Coefficients

There are 336 congressional districts, many of them Composite Districts, included in this study. The Stalemate Index has been computed for each district for each election from 1942 to 1956. Subsequently, each district has been ranked for each election according to the value of its Stalemate Index. For the period 1942 to 1956, inclusive, then, there results eight arrays of congressional districts in which all are ranked from 1 through 336. For each election the district with the highest positive

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[1] Ibid.

[2] Ibid.

Stalemate Index (largest Democratic percentage) is ranked number 1 and the district with the lowest Stalemate Index (lowest Democratic percentage margin) is ranked number 336.

The formula used for computation of the rank correlation coefficient is that devised by M. G. Kendall.[1]

Rank correlation coefficients were computed for three types of congressional election sequences--(a) for successive elections, (b) for successive presidential-year elections, and (c) for successive mid-term congressional elections.

The correlation coefficients that resulted here suggest that, as far as the partisan rank order of congressional districts is concerned, there is not sufficient justification for examination of mid-term and presidential year elections as different types of election. Tables IX and X show the rank correlations between elections for all types of sequences to be uniformly high.

If the rank correlation coefficients had been higher between successive mid-term elections, or between successive presidential year elections, than between successive elections, it would appear necessary to treat each sequence of four year intervals separately. This evidence would have indicated that the constituency groupings of voters do not react to mid-term

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[1]M. G. Kendall, Rank Correlation Methods (New York: Hafner Publishing Company, 1955), p. 38, Formula (3.8).

The formula is:

$$P_b = \frac{1/6\,(N^3-N) - S(d^2) - T' - U'}{\sqrt{[\{1/6(N^3-N)-2T'\}\{1/6(N^3-N)-2U'\}]}}$$

where $T' = 1/12 \sum_t (t^3-t)$ and $U' = 1/12 \sum_t (u^3-u)$

and $S(d^2)$ = sum of squares of rank differences
t = number of occurrences of tied ranks in first ranking
u = number of occurrences of tied ranks in second ranking

Table IX. Rank Correlation Coefficients for Pairs of Congressional Elections in Sequences of Alternate Elections

Presidential-year Elections		Mid-term Elections	
Year	Rank Correlation Coefficient	Year	Rank Correlation Coefficient
1944-48	.9105	1942-46	.8859
1948-52	.9255	1946-50	.9217
1952-56	.8822	1950-54	.8949

Table X. Rank Correlation Coefficients for Pairs of Successive Congressional Elections

Year	Rank Correlation Coefficient	Year	Rank Correlation Coefficient
1942-44	.9100	1950-52	.9286
1944-46	.9234	1952-54	.9369
1946-48	.9478	1954-56	.9184
1948-50	.9307		

congressional contests in the same manner as they react to presidential year elections. Such evidence would support Bean's thesis that "congressional elections in mid-term are not strictly comparable with congressional elections in the more exciting presidential years . . . they must be studied separately." At least insofar as the present rank order evidence goes, whatever variation between on-year and off-year congressional elections does exist occurs fairly evenly spread among all districts thereby leaving rank order relatively unaffected.

Change in the rank order lineup of districts, however, is a very slow, plodding type of phenomenon. In fact, the coefficient is higher for each successive pair of elections than it is for each four-year interval pair of elections. The partisan lineup of districts changes less between 1942 and 1944 than it does between 1942 and 1946. The partisan lineup of districts changes less between 1944 and 1946 than it does between 1944 and 1948. This pattern is constant for all elections in the period covered. There is in fact no instance in the period studied in which the change in rank orders between a successive pair of mid-term elections produced a higher coefficient than the change between the first mid-term election and the succeeding presidential year election. Similarly, there is no instance in which the change in rank orders between a successive pair of presidential year elections produced a higher coefficient than the changes between the first presidential year election and the succeeding mid-term election.

The stability in rank order relationships shown by the high coefficients of Table X, then, is not a phenomenon in which on-year and off-year types of elections are involved. For our purposes here the coefficients indicate that there is only one type of election so far as ranking is concerned.

Important Realignments of Congressional District Rank Orders

The dimensions of change and stability in the partisan rank relationships of congressional districts are described here by correlation coefficients and changes in the over-all composition of the House of Representatives. The coefficients point out certain basic voting consistencies and realignments in district rank orders. The over-all political composition of Congress, of course, is evidence which major party has profited from any realignment of congressional constituencies.

For the period 1942 through 1956 there were two elections in which the alignment of districts changed a great deal.[1] The lowest correlation coefficient occurred for the rank changes between 1942 and 1944. This coefficient was .9100, indicating that there was an important realignment of districts in 1944. The result of the 1944 election in terms of the districts used for this study was the election of 173 Democrats and 162 Republicans (see Table VIII). Actual composition of the House in 1944 was 242 Democrats and 190 Republicans. The realignment of 1944, then, was to the advantage of the Democratic Party.

The other low correlation pair, 1954 to 1956, produced a coefficient of .9184, second lowest of the seven pairs. The result was the election of 173 Democrats and 163 Republicans (study district composition of the House).

The primary significance to be drawn from these apparent realignment election years is the fact that they show a greater than normal change within the universe of congressional districts. Certain of the districts within this universe assumed a political posture different from that displayed prior to the realignment year. And, more important, a sufficient number of these districts have altered their partisan complexion so that the total universe of districts is significantly different.

If, because of the great stability in rank orders, the rank order of congressional districts are used as a basis for forecasting the possible outcomes of future elections, a low correlation pair of elections would indicate a period of realignment in the electorate. Rank orders previous to the realignment year would be less serviceable as a reliable forecasting base.

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[1]Since the range of coefficients in Table X runs from .9100 to .9478, all relatively high correlations, even the election pairs with the lowest coefficients must be viewed as having high consistency in ranks.

The 1942-44 election pair produced a low coefficient of .9100 and a gain in the number of seats held by Democrats. The following election pair, 1944-46, produced a higher coefficient of .9234 and a large gain in the number of House seats held by Republicans; in 1946 House composition stood at 196 Republicans and 140 Democrats. This combination of factors would indicate that, following the 1944 realignment, the districts remained in a relatively stable rank order, but there was a uniform movement of the entire array of districts toward the Republican party.

The greatest stability in rank order for the period studied occurred between the elections of 1946 and 1948. For this election pair, the coefficient was .9478. Democrats gained seats to hold a plurality of 193 to 143 for the Republicans. Again, the rank order remained consistently firm while there was a relatively uniform movement among the districts toward the Democratic party.

Another high correlation was produced in the 1948-1950 election pair. With a coefficient of .9307 the Democratic majority was reduced to 18 seats. The party alignment in the House was 177 Democrats to 159 Republicans. There had been very little realignment of districts and only a moderate movement toward the Republican Party.

In 1952 the trend of the previous election toward the G.O.P. was continued. Republicans took control of the House by a margin of 179 to 159. The realignment of districts was again relatively small, however, as shown by a coefficient of .9286.

From 1952 to 1954 the composition of the House was completely reversed. In the latter year the Democrats regained control of the House by a margin of 177 to 159. The coefficient of correlation produced by this pair of elections was the second highest of all the years studied. A coefficient of .9369 is evidence that 1954 was not a year of realignment, but one in which there was an across-the-board gain for the Democratic party.

The final election in the study period, 1956, produced the second greater than normal realignment. A relatively low coefficient of .9184 coupled with a relatively stable composition of the House meant that the reshuffling of districts was now the beginning phase of a major shift away from one, the other, or both parties. The Democratic party still retained its majority in seats by a 173 to 163 count. Although, in summary, the Democrats had a net loss of three seats to Republicans in 1956, this in itself is not sufficient evidence to conclude that the realignment favored the Republican party.

By recalling that the 1944 realignment, which was accompanied by a Democratic gain, was followed by the election of a Republican-controlled House in 1946, we cannot assume that the 1956 election results point to a mounting Republican trend. In fact, the correlation coefficients produced by the 4-year interval election sequences indicate just the opposite.

The changes in the rank order of congressional districts between 1952 and 1956 were sufficient to produce a coefficient of .8822, the lowest of any in the 4-year interval comparison (see Table IX). This realignment between presidential election years was accompanied by a Democratic gain of 16 seats in the House, good evidence that the 1956 election was not a harbinger of happy days ahead for the Republican party.

The previous description of 1944 and 1956 as important realignment years is supported by the data showing 4-year interval correlations. The lowest correlation coefficient for any of the mid-term election comparisons was produced by the 1942-1946 pair (.8859). The lowest coefficient for presidential year pairs came between 1952 and 1956 (.8822). Evidence to support the hypothesis that this type of realignment is not a phenomenon of short tenure is also present. The low correlation between 1942 and 1944 was not followed by a return to the 1942 rank order. We see this in the low coefficient produced by comparison of 1942 and 1944 finished at the time of the 1944 election. A higher, but still relatively low, coefficient of .9234 between 1944 and 1946 indicated that the realignment continued on after the 1944 election.

In the 1956 realignment, the rank changes were not spread out over a four-year period as was the case in 1944. Whereas the correlation between 1952 and 1956 produced a very low coefficient of .8822, the rank changes between 1952 and 1954 produced a high coefficient of .9369. The big change or realignment, then, came in the two years between 1954 and 1956 as the relatively low coefficient (.9184) indicates.[1]

The rank order analysis of all the congressional districts used in this study has illustrated a phenomenon which would elude any trend study of congressional elections based upon the rise and fall of party fortunes in Congress. Where studies which use party membership in the U. S. House of Representatives as an indicator of partisan trends fail to highlight realignments in the universe of congressional districts, the correlation of rank order relationships does provide a measuring rod for district realignments.

The analysis in this section has isolated election pairs that we have accepted as "important realignments." Consistently high rank correlations have made it difficult, however, to accept these realignments as basic realignments. The relatively small difference between the highest and lowest coefficients point to the absence of any basic rank change between election pairs. In the next section we will employ a reduction of ranks to further investigate the possible occurrence of basic realignments.

It has been shown that the partisan rank order of congressional districts is very stable from election to election. For purposes of illustration, this finding could be simplified by picturing a permanently fixed rank order of units over time. In this illustration the unit ranked number 1 always

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[1]This interpretation of the 1956 realignment as one in which important changes occurred in a two-year period depends, of course, on the correlation between 1956 and 1958. It could be possible that the 1956-1958 coefficient of correlation was also low indicating a continuation of the 1956 realignment.

rates higher than unit number 2 on the basis of the criterion of classification. Similarly, unit number 2 always rates higher than unit number 3 over time. In other words, were these units correlated over consecutive time periods, the coefficient would always be 1.000, indicating perfect correlation.

The criterion of classification employed here is the Stalemate Index. If we were to assume perfect correlation of congressional district rank orders over time, the dimensions of change in congressional elections would involve only the movement of all districts in a single, monolithic shift up and down the fixed array of districts.

We have seen from the correlation coefficients in Tables IX and X that the assumption of perfect correlation is not valid. It has been shown, however, that almost perfect correlation between district rank orders does exist. The greatest number of districts retain a stable rank order in relation to the other districts. Only a few of the districts exhibit any radical change in position. It is to these districts that we will look in the next chapter to locate the causes of congressional electorate realignment.

Reduction of Ranks to Locate "Competitive" Districts

In the preceding section, the correlation coefficients of consecutive pairs of elections were examined. The purpose was to locate that pair, or pairs, of elections during which a greater than normal partisan realignment of districts occurred. Low rank order correlation coefficients were used as indicators of such realignments.

Examination of the coefficients showed so little fluctuation in rank correlation that realignment years so identified were suspect. An apparent cause of this correlation stability was the inclusion of non-competitive districts that retained a relatively stable rank in each of the eight elections. These districts were responsible for a low level of rank differences and consequently for a high coefficient.

In this section a reduction of the universe of districts will be accomplished in order to isolate more certainly the realignment years. Reduction of ranks will make the correlation coefficient a more sensitive instrument in detecting the changes in partisan alignments of congressional districts. Such a reduction can be accomplished by removing on logical grounds certain groups of districts from the rank orders in successive steps.

There are distinct groupings of the congressional districts studied here. Some of the districts have remained unchanged by redistricting through the entire period, 1942-1956. Others have been arbitrarily held constant according to their 1956 boundaries. Still others, the Composite Districts, are actually "artificial" districts employed to prevent waste of available data. All of these districts fall into distinct groups because of redistricting, or lack of it, during the study period.

There are two other obvious classifications which separate the universe of districts. These classifications are produced by the actual election results. Some districts can readily be classified as "one-party," such classification thereby dividing the universe into two groups.

The distinct groups of districts, described below, will be removed from the rankings in the following order by steps:[1]

Step 1. Remove one-party districts. The definition of a one-party district used here is "a district that has had a Stalemate Index of 20.0 or greater in at least five of the eight elections. An additional condition is that one party must have won all eight of the elections in that district." In this step, 93 districts are removed, 243 districts remain.

Step 2. Remove all Composite Districts. In this step, 25 additional districts are removed, 218 districts remain.

Step 3. Remove all districts that have been changed by redistricting during the 1942-1956 period. These districts have been previously treated

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[1]Appendix C contains a roster of districts removed in each of the first three steps. Those remaining after step 4 are listed in Appendix D.

as unredistricted by reconstructing their actual 1956 makeup back through the whole period. In this step, 64 additional districts are removed, 154 districts remain.

Step 4. To determine influence of highly competitive districts, remove all except those that have been won by one of the major parties not more than five of the eight elections. In this step, 132 additional districts are removed, 22 districts remain.

To isolate the factors contributing to realignment years more clearly than was done in the preceding section, those districts with high rank stability must be identified and removed. To find districts with high rank stability, rank order correlations must be computed before and after removal of each group of districts. A decrease in the computed coefficient for the districts remaining after removal of a group will mean that the eliminated group had been contributing to high rank stability for the universe in that election pair.

The end result of this removal process will be to "give the data a chance"--a chance to show when the districts are actually realigning in rank order. After the removal process the districts remaining should be those that have shown a partisan flexibility, those actual districts in which true competition and change have occurred during the eight elections. The experience of elections in these districts is that either major party can win an election.

By definition, the one-party districts do not qualify as districts in which competition occurs to any great degree. In Step 1, these districts were removed, and an illustrative spot-check made of the effect of their removal. A rank order correlation coefficient was computed and found to be .802 for the 1942-1944 pair of elections, after the one-party districts had been removed. In Chapter III it was shown that the rank order correlation coefficient for the 1942-1944 was .910, with all one-party districts included. By removing one-party districts, then, the coefficient was reduced from .910 to .802. The one-party districts, as expected, contribute much to increase rank order correlation, and their removal is justified.

In Step 2, the Composite Districts are also removed. The computed coefficient after the removal of these districts is .792, or just slightly less than the .802 produced in Step 1. The removal of these districts, then, is only moderately justified; the relatively minor reduction from .802 to .792 means that these districts probably have little effect on degree of rank correlation.

It will be recalled that Composite Districts consist of many actual districts lumped together because collection of election data for the component districts was not possible. The apparent result of this lumping was to cancel out the more extreme partisan voting elements of the lumped districts leaving the artificial districts stable in rank. In any event, the Composite Districts are not actual districts. Their removal seems additionally justified as a precautionary measure. To continue to include them could, because of their "artificiality," color the validity of the final results.

In Step 3, all districts changed by redistricting have been removed in addition to those withdrawn in Steps 1 and 2. These Step 3 districts are the ones altered by redistricting but treated as if their 1956 makeup had been constant since 1942.

Rural-Urban Character of Post-Step 3 Districts

It is significant to note what kind of district it is that remains after the Step 3 removal. If only predominately rural areas are retained in the analysis following the removal process, the results of the analysis itself would have to be viewed with certain limitations. In such a case, it would have to be concluded that rural districts generally escape redistricting, influence heavily the analysis of unredistricted congressional districts, and limit our post-Step 3 analysis to a small rank correlation study of rural congressional districts. Fortunately, it was discovered that the post-Step 3 group of districts contained a fair distribution of all types of composition as described by the rural-urban character of the districts.

Classification of the districts remaining after Step 3 removal according to rural-urban status shows the types of districts with which we are dealing. Identification of the rural-urban character of each of the 154 remaining districts is provided in Appendix D. The classification employed here is the same as that used by the Congressional Quarterly.[1]

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[1]Congressional Quarterly Almanac, Vol. XII, 1956, p. 788. According to the 1950 Population Census definition, the urban population includes all persons living in places of 2,500 or more inhabitants, and in the densely settled urban fringe around cities of 50,000 or more. The remaining population is rural.

Because the term urban is applied indiscriminately to tiny villages and huge metropolitan centers, CQ's classification of Congressional districts takes into account city size as well as the percentage of urban residents. They are defined as follows:

Class I. Rural district. General characterization: predominantly rural. Specifically: (a) At least two-thirds rural; or (b) One-half to two-thirds rural, with no city of 25,000 or more population.

Class II. Small-town district. General characterization: substantial rural population but with one or more cities of 25,000 to 50,000 population. Specifically: (a) One-third to one-half urban, and with a city of 25,000 to 50,000; or (b) More than one-half urban, but with no city of 50,000 or more; or (c) One-third to one-half urban with a city of 50,000 or more, the city having less than one-third the total district population.

Class III. Mid-urban district. General characterization: substantially influenced by a city of 50,000 to 200,000. Specifically: (a) More than one-half urban, and with a city of 50,000 to 200,000; or (b) One-third to one-half urban and with a city of more than 50,000, the city having more than one-third of the total district population; or (c) One-half to two-thirds urban and contains or is partly contained in a city of 200,000 or more.

The summary figures show that there are 28 rural districts (Class I), 48 small town-districts (Class II), 44 mid-urban districts (Class III), and 34 metropolitan districts (Class IV) left after the Step 3 removal. These districts remaining after Step 3 were all untouched by redistricting from 1942 through 1956.[1]

Analysis of Rank Order Relationships Excluding the One-Party, Composite, and Redistricted Districts

The correlation coefficients for consecutive pairs of elections, following the Step 3 removal, were computed for Table XI. These coefficients used all districts except: (a) one-party districts, (b) Composite Districts, and (c) redistricted districts.

Comparison of the 1942-1944 coefficient after Step 3 removal with the coefficient after Step 2 removal shows a further decrease in rank correlation. The new coefficient is .747. The step 2 coefficient was .792; the Step 1 coefficient was .802; and the coefficient for all districts was .910.

Further comparison of the Step 3 coefficients with those computed prior to the reduction shows a decrease in the size of the coefficient for every pair of elections (see Table XI).

Class IV. Metropolitan district. General characterization: predominantly "big-city"--including metropolitan suburbs. Specifically: (a) More than two-thirds urban, contains or is partly contained in a city of 200,000 or more; or (b) More than two-thirds of the population lives in the urbanized area of a city of 200,000 or more.

A number of one-party districts, those removed in Step 1, also were not redistricted. Of the unredistricted, one-party districts, 24 were Class I, 21 were Class II, 15 were Class III, and 12 were Class IV. Of all the 226 unredistricted districts, there were 52 Class I, 69 Class II, 59 Class III, and 46 Class IV districts. While Class II or "small town" districts were the largest in number of the unredistricted cases, the distribution of cases among the four classes is clear evidence that no one class of district escapes redistricting significantly more than the other classes.

[1]Ibid.

Table XI. Comparison of Rank Order Correlation Coefficients Produced by Ranking of Total Universe of Districts and Those Produced After Step 3 Removal*

Pairs of Election Years	Rank Order Correlation Coefficients All Districts	Step 3 Districts	Change
1942-1944	.910	.747	-.163
1944-1946	.923	.802	-.121
1946-1948	.948	.865	-.083
1948-1950	.931	.851	-.080
1950-1952	.929	.841	-.088
1952-1954	.937	.838	-.099
1954-1956	.918	.736	-.182

*Following the Step3 removal only those districts which are not classified as one-party, composite, or which have not been redistricted during the study period remain. This leaves a total of 154 districts remaining in the universe.

The differences between the coefficients computed after Step 3 and those for the whole universe highlight a variable effect of the removed districts on rank stability. In every case the one-party districts, the Composite Districts and the redistricted districts served to keep the rank order correlation high. But the effect was not uniform for every election pair (see Table XI).

Between 1942-1944 and 1944-1946, the original coefficient increased .013 and the Step 3 coefficient increased .055. This would mean that the removed districts actually kept the original coefficient higher than it would have been without them. Between 1944-1946 and 1946-1948, the same relationship held true.

Between 1946-1948 and 1948-1950, the original coefficient dropped .017 while the Step 3 coefficient dropped only .014. The conclusion here is that the removed districts caused the original coefficient to be lower than it would have been without them. Between 1948-1950 and 1950-1952, just the opposite was true. Removed districts kept the original coefficient from dropping more than it did.

Between 1950-1952 and 1952-1954, a situation existed where the original coefficient was increasing by .083 while the Step 3 coefficient dropped .003. The removed districts, then, were highly rank stable between this pair of election pairs.

The districts removed in Step 3 were largely responsible for the original high correlations. When they were included the coefficient increased. When removed, the coefficient dropped.

Between the final pair of election pairs, 1952-1954 and 1954-1956, the original coefficient dropped .019. The Step 3 coefficient dropped .102. The post-Step 3 group of districts, then, was experiencing an internal shuffling of ranks more drastic than that experienced by the original group of districts, indicating that Step 3 districts were heavy contributors to the relatively low coefficient of the original group.

The post-Step 3 rank order correlation coefficients in Table XI cluster around an average .810, indicating that the removal of districts by Step 3 was not sufficient to magnify evidence of basic realignments, if any actually did occur, from 1942 to 1956. Where the lowest coefficients were produced on the total set of data, the lowest coefficients were produced in Step 3. But the changes in the coefficient from one pair of elections to the next remained just about as small as when the coefficients were computed using all districts. The three-step reduction of ranks has provided supporting evidence for the findings produced by rank correlation analysis of the original group of 336 districts. The low coefficient between 1942 and 1944 for both the original and the Step 3 correlation indicates an atypical realignment of districts in 1944. The finding of a low coefficient for the 1954-1956 election pair in the post-Step 3 analysis also supports the findings of the original (336 district) analysis that the 1956 election was one in which an important realignment of districts occurred.

Table XII which compares the Step 3 and the original changes in coefficient size over time shows the close relationship between rank changes within the universe of post-Step 3 districts and rank changes within the original universe of 336 districts.

Table XII. Comparison of Rank Correlation Coefficient Changes for Pairs of Election Pairs--Between Coefficients for all Districts and Coefficients for the Step 3 Districts

Pairs of Election Pairs	Rank Correlation Coefficient Changes All Districts	Rank Correlation Coefficient Changes Step 3 Districts
1942-44 to 1944-46	+ .013	+ .055
1944-46 to 1946-48	+ .025	+ .063
1946-48 to 1948-50	- .017	- .014
1948-50 to 1950-52	- .002	- .010
1950-52 to 1952-54	+ .008	- .003
1952-54 to 1954-56	- .019	- .102

The distinction between the removed districts' responsibility for high rank correlations and their responsibility for fluctuations (or changes) in size of coefficients should be carefully considered, however. In every pair of elections, the removed districts were responsible for keeping the rank correlation coefficients above .900.

Generally, the one-party, Composite and redictricted districts are a stabilizing influence on the partisan rank order of congressional districts.

Test of Permanence and Rate of Realignments for Post-Step 3 Districts

A different basis of comparison was applied to the 154 districts remaining after Step 3 reduction of ranks. Correlation coefficients were computed to measure the rank stability between 1942 and each of the other elections. This procedure leads to the development of a coefficient trend line which has 1942 as its source. The advantage of employing such a procedure was that it provided an indication as to the rate of change in coefficients from election to election. It also provided information as to whether or not successive rank changes represent temporary or permanent realignments of congressional districts.

The coefficients produced by the correlations between 1942 and the other elections are contained in Table XIII.

Table XIII. Rank Correlation Coefficients for Districts Remaining After Steps 1, 2, and 3--Using 1942 as Base Year

Pairs of Election Years	Rank Correlation Coefficient
1942-1944	.747
1942-1946	.656
1942-1948	.572
1942-1950	.643
1942-1952	.578
1942-1954	.458
1942-1956	.306

The regression of the coefficients computed, using 1942 as the base year, has but one "hitch" in it. While the coefficient dropped from .656 in 1942-1946 to .572 in 1942-1948, the correlation moved back up to .643 in 1942-1950. After the 1942-1950 pair, the regression continued smoothly downward once again.

This "hitch" in the regression indicates that the realignment of districts from 1946 to 1948 was only temporary because the 1950 rank order was almost identical to that of 1946. The 1948 realignment took on permanent characteristics in 1952 since there was a difference of only .006 between the coefficients of these two years.

In summary, Table XIII shows the existence of relatively high and stable correlations until 1954. Overall, the 1942 rank order pattern experienced a slow but steady disintegration until big changes began to appear in 1954 and 1956. It is apparent from the series of midterm election coefficients that the 1942 alignment was almost completely disintegrated following the 1954 election. Focusing on presidential year elections, the 1942-1956 comparison shows a big rank change which must be recognized as a real departure from the political alignments of congressional districts in the era preceding the election of 1956.

Analysis of Election Data for Competitive Districts

Step 3 removals did not produce clear evidence where basic realignments of congressional districts occur. As a result, a further reduction of ranks was undertaken.

In Step 4 of the reduction of ranks, all remaining districts have been removed except those in which neither major party has more than five election victories in the eight elections covered. This means that the computation of rank correlation coefficients in Step 4 will be concerned only with an arbitrary but defensibly defined group of "competitive" districts in which one major party (Democratic or Republican) won at least three but not more than five elections. There are twenty-two competitive districts left after Step 4 removals (see Appendix C-3 for description).

The rank correlation coefficients produced by the array of competitive districts are presented in Table XIV, which also includes a comparison with the coefficients computed using all districts. The "change" column shows the difference between the original coefficients and those produced by Step 4 districts; that is, the relative "amounts" of the original coefficients attributable to the four groups of removed districts.

Table XIV. Rank Correlation Coefficients of Districts Remaining After the Step 4 Reduction of Ranks--For Consecutive Elections

Pairs of Election Years	Mid-term to Pres.	Pres. to Mid-term	Rank Correlation Coefficients All Districts	Step 4	Changes
1942-1944	X		.910	.888	-.022
1944-1946		X	.923	.353	-.570
1946-1948	X		.948	.668	-.280
1948-1950		X	.931	.302	-.629
1950-1952	X		.929	.349	-.580
1952-1954		X	.937	.767	-.170
1954-1956	X		.918	.801	-.117

Analysis of the Step 4 correlations shows a phenomenon which was not present in the Step 3 analysis--a distinction between mid-term and presidential year rank orders.

It also highlights a phenomenon to which many political scientists have directed their studies, that of the presidential coattail effect. Low correlations from midterm to presidential year are an indication that the presidential coattail effect was a significant factor in the congressional elections.

Employing the guideline presented in the preceding paragraph, Table XIV shows that the coattail phenomenon operates in some elections, but not in others. For the 22 competitive districts, the midterm to presidential year coefficients were high for 1942-44, 1946-48, and 1954-1956. The conclusion would have to be that the coattail-pulling power was weak in 1944, 1948, and 1956. In 1952, however, as shown by the low correlation of .349 between 1950 and 1952, the power of the presidential candidate to alter the regular pattern of district realignment is readily apparent.

The findings presented in Table XIV show that the coefficients of the 22 competitive districts follow an alternating pattern of change and stability. This alternating pattern is one in which the mid-term to presidential year coefficient is high, but followed by a low coefficient from presidential year to mid-term.

The exception to the general pattern found is between 1950 and 1952. The previous coefficient (1948-1950) was found to be .302, showing a relatively low rank correlation. If the 1950-1952 coefficient had fit into the pattern shown by all other mid-term to presidential year coefficients, it would have risen. The mid-term rank order would have remained quite stable over to the following presidential year.

On the contrary, the 1950-1952 coefficient was .349, or almost equivalent to the previous coefficient (.302). Out of the entire array of coefficients produced by competitive district rankings, then, only the 1950-1952 comparison was atypical. Not only was the coattail of Dwight D Eisenhower sturdy enough in 1952 to carry Republicans into control of the House of Representatives, but it also was strong enough to cause an important partisan realignment of congressional district rankings.
In general, this Step 4 analysis of what we have defined as "competitive" districts shows that it would be better to forecast from the mid-term election results than from presidential-year election results, if rank order realignment is to occur in the mid-term election year. When a significant realignment of our "competitive" district occurs at the presidential-year election, it indicates an unusual reshuffling of partisan realignments of the congressional districts which can be attributed to the coattail power of a presidential candidate.

Test of Permanence and Rate of Realignments--Competitive Districts

The rank correlation between 1942 and each of the other election years illustrates two atypical realignments in the 1942-56 period (see Table XV). The regression of coefficients did retain a fairly stable pattern of drop-off except between the 1942-1946 and 1942-1948 pair and between the 1942-1954 and 1942-1956 pair.

Table XV. Rank Correlation Coefficients of 22 Competitive Districts Remaining After the Step 4 Reduction of Ranks--Using 1942 as Base Year

Pairs of Election Years	Rank Correlation Coefficient
1942-1944	.888
1942-1946	.217
1942-1948	.215
1942-1950	-.015
1942-1952	-.490
1942-1954	-.803
1942-1956	-.682

The coefficient for the 1942-1946 correlation was .217. The coefficient for the 1942-1948 correlation was .215, indicating that there was very little rank realignment between 1946 and 1948. Recalling that the previous Table (Table XIV) showed a relatively high correlation between 1946 and 1948, further support is added to the assumption of rank stability between these two years.

Between the 1942-1954 and 1942-1956 pair, the coefficient actually jumped from -.803 to -.682. This change is definitely atypical, being the only increase between consecutive pairs of election pairs. It could be hypothesized from this occurrence that the election of 1956 was a major realignment of rank order for these Step 4, "competitive" districts. It would seem that the correlation with 1942 had reached its low point in 1954, showing an almost complete negative correlation, and had begun a return to the 1942 rank alignment in the election of 1956. Unfortunately, in terms of testing this hypothesis, the 1956 election is the last of the period studied and it is impossible to see if future elections would follow this upward trend.

The constant regression in the "1942-Base" coefficients of Step 4 competitive districts points to the conclusion that the mid-term to presidential year realignments found in "consecutive-election" correlations are relatively permanent realignments. While the partisan ranking of competitive districts is constantly changing, as compared to the 1942 base year, the general pattern is high stability from mid-term to presidential year congressional elections.

The original hypothesis of this section was that basic realignments of the partisan rank order of congressional districts do occur. Low rank order correlations were to be indicative of such basic realignments, presumed to occur suddenly and all at once. But just the opposite was found to be true. The "normal" pattern found was a continuing realignment going on in successive elections. A constant change in the rank alignment of these competitive districts should be expected, according to Table XV. A period of stable rank positions is, in fact, atypical.

Party Victory in Competitive Districts

Rank relationships and the fluctuation of rank orders of districts through time present only a partial picture of party competition. Whether or not a district actually elects a Democrat or a Republican is in the final analysis the most important fact of the election.

Examination of the election outcomes for Step 4 competitive districts shows that had Congresses been elected only by Step 4 districts during the 1942-1956 period, these Congresses would have been in almost every case, controlled by the same party winning a majority of all districts used in this study, that is, the "Study Districts" (see Table XVI). The actual control of Congress is reflected in the Step 4 outcomes in all but two cases, 1942 and 1956. In 1944, for example, Democrats actually held 55.6%of all House seats while 63.7% of the 22 competitive districts were won by Democrats. In 1952, when Democrats actually won only 48.5% of the House seats, 40.9% of the competitive districts went Democratic. In all cases, however, the changes in party strength in Congress were accurately reflected by changes in party fortunes among Step 4 districts.

A closer examination of partisan changes in the competitive districts is presented in Table XVII. Between 1942 and 1944, Democrats picked up strength "across the board." In 1944 they won 4 seats held by Republicans in 1942 and increased their margins of victory in 7 districts having a Democratic majority in 1942. The Democrats even gained strength in six districts won by the Republicans in 1944.

In 1946, the G.O.P. regained its 1944 losses, taking 9 seats previously held by the Democrats. But in 1948 the Democratic Party consolidated its 1944 gains and won a victory from which the Republicans had not recovered by 1956. The Democrats took 16 competitive districts from the Republicans in 1948.

The 1952 election was a big one for the Republican party. It took 10 districts from the Democrats and picked up strength in 5 districts retained by the Democrats.

In the next 4 elections the Republicans were able to take only 14 districts from the Democrats. But during the same period, the Democrats took 5 districts from the G.O.P. So, the net G.O.P. gain for the four elections was only 9 districts. Although the Republicans gained strength in 20 districts won by the Democrats from 1950 to 1956, their gains were not resulting in election victories.

Table XVI. Comparison of Actual, Study and Step 4 Competitive Districts--Percentage of Districts Won by Democratic Party

	Percentage of Seats Democratic		
Election Year	Actual Districts (435)	Study Districts (336)	Step 4 Districts (22)
1942	50.1	46.7	45.4
1944	55.6	51.6	63.6
1946	43.2	41.7	22.7
1948	60.5	57.4	95.5
1950	53.8	52.7	86.4
1952	48.5	46.7	40.9
1954	53.3	52.7	50.0
1956	53.6	51.5	54.5

The tendency of Competitive districts is to swing in the same direction as the total universe of districts, but to swing further. Thus, in 1952, Competitive districts gave Democrats 45.4% of the 22 seats and in 1944 the Democrats won 63.6%. This was an increase of 18.2 percentage points between the two elections. Between the same pair of elections, the actual composition of Congress moved from 50.1% to 55.6% Democratic, a gain of 5.5 percentage points. And the composition of Congress as shown by all of the Study districts (336 districts) showed an increase of 4.9 percentage points for the Democrats.

The relationship between rank correlation coefficients and the changes in party majority in Congress (as shown by Step 4 Competitive districts), is one in which the party that wins the presidency gains seats when it wins the presidency; high correlations occur between mid-term to presidential year election pairs except when a presidential candidate is able to interject a strong coattail influence on congressional election

Table XVII. Distribution of Partisan Changes in 22 Competitive Districts by Character of Change for the Period 1942-1956

Table XVII. Distribution of Partisan Changes in 22 Competitive Districts by Character of Change for the Period 1942-1956

Pairs of Election Years	Dem. Gains	Rep. Gains	Number of Occurrences — Types of Party Gains or Losses: Win Seats From Other Party, Dem.	Win Seats From Other Party, Rep.	Gain, But District Won by Other Party, Dem.	Gain, But District Won by Other Party, Rep.	Gain in Districts Already Held, Dem.	Gain in Districts Already Held, Rep.
1942-1944	17	5	4	0	6	3	7	2
1944-1946	6	16	0	9	1	4	1	3
1946-1948	20	2	16	0	1	1	3	0
1948-1950	9	13	0	2	0	10	9	1
1950-1952	4	17	0	10	0	5	4	2
1952-1954	16	6	3	0	5	1	8	5
1954-1956	9	13	2	2	1	4	6	7

outcomes; and low correlation occurs between presidential to mid-term election pairs except when the preceding mid-term to presidential year pair correlation is low (see Table XIX).

In each of the three election pairs, 1942-44, 1946-48, and 1952-54, a high correlation occurred with Democratic gains. In each of the three election pairs, 1944-46, 1948-50, and 1950-52, a low correlation occurred with Republican gains.

The 1954-56 election pair did not show conclusive changes. The correlation was very high (.801) and Republicans gained strength in 13 districts while Democrats gained in 9 districts. But each party took two seats from the other. In short, the period 1954-56 was one of very little change for congressional politics. The rank order remained stable. There was very little change in the partisan composition of Congress. And both parties remained fairly invulnerable in districts previously held. All of this indicates an unusual period in view of the changes exhibited during other 2-year periods.

Every change in the actual party composition of Congress is, therefore, substantially contributed to by the party division of competitive districts (see Table XVIII). The agreement in partisan direction of the changes is important, and suggests the political importance of these districts.

For example, if one could forecast the election results of the competitive districts, the agreement between Actual and Step 4 changes in Table XVIII suggests that this forecase would provide a basis for estimating the actual party composition of Congress.

In summary, then, rank realignment of the array of competitive districts has been in favor of the Republican party while subsequent rank stability has been characterized by Democratic gains. The 1956 election is the only one of the series in which increased rank stability was not accompanied by Democratic gains. The Republican victory in the presidential election of 1956 could well explain such variation from the normal pattern.

Table XVIII. Comparison of Changes in Percentage of Seats Held by Democrats--Actual Districts, Study Districts, Step 4 Districts

Pairs of Election Years	Change in Percentage of Districts Held		
	Actual Districts	Study Districts	Competitive Districts
1942-1944	+ 5.5	+ 4.9	+18.2
1944-1946	-12.4	- 9.9	-40.9
1946-1948	+17.3	+15.7	+72.8
1948-1950	- 6.7	- 4.7	- 9.1
1950-1952	- 5.3	- 6.0	-45.5
1952-1954	+ 4.8	+ 6.0	+ 9.1
1954-1956	+ 0.3	- 1.2	+ 4.5

Table XIX. Comparison of Rank Correlation Coefficients and Changes in the Partisan Distribution of Step 4 Districts

Pairs of Election Years	Coefficient of Consecutive Elections	Number of Occurrences	
		Dem. Gains	Rep. Gains
1942-1944	.888	17	5
1944-1946	.353	6	16
1946-1948	.668	20	2
1948-1950	.302	9	13
1950-1952	.349	4	17
1952-1954	.767	16	6
1954-1956	.801	9	13

Conclusions

The hypothesis that the partisan rank order of congressional districts is highly correlated between successive elections has been found to be valid.

The fact that rank correlations between election years have been shown to be consistently high casts serious doubt on our original contention that low correlations would emerge upon occasions of basic party realignments in the congressional electorate.

A reduction of ranks was employed to make the correlation coefficient a more sensitive indicator of important realignment years. In successive steps it was shown that the one-party, the Composite, the redistricted, and "non-competitive" districts were contributors to high rank correlations. While the groups of districts removed in the reduction of ranks contributed to high correlation in every case, each group had a variable effect on the changes that occurred between successive correlation coefficients. In some cases a group kept the coefficient relatively stable between successive election pairs. In other cases a group of districts was responsible for significant changes between successive computed coefficients of correlation.

A series of correlations which compared the rank order of 1942 with that of each of the other elections provided evidence of the permanence of rank realignments. In each successive correlation except one, the correlation coefficient decreased--the gradual realignments were not temporary diversions from the 1942 alignment. The single exception occurred between the 1942-1946 and 1942-1948 comparisons. While the 1948 rank order more closely paralleled the 1942 alignment than did the 1946 rank order, the gradual realignment continued on its course in 1950.

The step 4 reduction of ranks, which eliminated one-party, Composite, redistricted and "non-competitive" districts, revealed a distinction between mid-term and presidential year election rank orders. Comparisons showed a high mid-term to presidential year correlation and a lower presidential to mid-term correlation. This analysis indicates that forecasting based on rank orders is apt to be more accurate from mid-term to presidential year elections than the reverse. To be successful the forecast must be made on the basis of historical political facts, in this case the recent partisan rank orders of congressional districts. In addition, the evidence discovered here that presidential-year rank orders tend to reflect closely the preceding midterm year rank orders is a good indication that such a reflection will hold true in the future. Such evidence adds sound support for rank order forecasts.

The congressional district rank correlation device has provided new information relative to a special facet of congressional politics, the presidential coattail effect. It has been shown that this method can locate the elections in which such an effect has been influential. A low rank correlation from mid-term to presidential year has been shown to indicate the existence of coattail power. Also, it has been discovered that the existence of this coattail phenomenon affects not only the partisan division of congressional seats won, but also the stability of the entire partisan rank order of congressional districts.

Actual changes in partisan composition of Congress are found to be reflected in the partisan division of competitive districts. This is good evidence that the "competitive" districts comprise a fulcrum for the entire array of congressional districts. Estimating future congressional election results by making trend analyses of competitive districts obviously is strategically sound from a research as well as practical point of view. In Chapter VI experimentation with forecasting election results of competitive districts will be attempted against the background of the rank order phenomena discovered here.

CHAPTER V

DISTRICTS RESPONSIBLE FOR LOW RANK CORRELATION COEFFICIENTS

Rank correlation coefficients have added new information to the description of congressional elections. Composition of the House by party designation is not of itself sufficient evidence to tell the complete story of congressional partisan trends. Rank orders and their changes over time have isolated the outline of electoral realignments. A more complete description of the mechanics of change should result from an examination of those districts that contribute most to a less-than-perfect correlation.

The success of all efforts at forecasting depends upon reducing the unexpected to the expected. Further insight into the details of change in the voting decisions of congressional electorates may also provide new guidelines to investigation of the political process.

Identification of the Error Districts

Which are the districts that have experienced such a great change in rank position between successive elections that they have contributed the largest source of error to the correlation coefficients? These are the districts that hold the secrets of change in rank orders. In Tables XX through XXVI, the ten largest contributors of rank differences between pairs of successive elections are listed. For convenience of communication we shall call these districts Error Districts. Included in the tables is each district's Stalemate Index and an indication whether a party turnover occurred in the second of the paired elections.

Error Districts are not the sole possession of any section of the United States. Nor does any state or district monopolize occurrences in the category of largest contributors of error in the computation of rank correlation coefficients. In all of the election pairs covered, only fifteen districts out of a total 55 Error Districts appeared more than once. Of these fifteen, fourteen appeared twice and one appeared three times (Maine-1).

A common occurrence in the case of Error Districts is the phenomenon of "counteraction." Of those districts that appeared twice, twelve that experienced a large rank change moved back in the opposite direction at the second election pair in which they experienced a large rank change.

In three of the twelve cases, this counteraction was the result of one major party not having a candidate at one of the elections. This meant that the voters of that party, no matter how few, could not register their votes at one of the elections, but could at the other election of the pair being compared.

Five of the twelve counteracting cases were the result of actual partisan turnovers within the districts--or unexpected occurrences.

The remaining four counteracting cases were Composite Districts. The rank changes in these cases, also, were the result of actual partisan realignments within the district's electorate.

Three districts that twice classified as Error Districts moved in the same direction both times (Neb.-1, Tex.-18, Mass.-5).

Factors Related to Error District Occurrence

Examination of the Error Districts indicates that there is no single, readily discernible characteristic, common to all of the group which separates them from the other districts. They don't all move with the prevailing partisan trend. Nor do they all move against the prevailing trend.

Table XX. Ten Largest Contributors of Rank Differences Between the Elections of 1942 and 1944

State and Error District	Number of Rank Places Shifted 1942 to 1944	1942 Stalemate Index	1944 Stalemate Index	1944 Party Turnover?
Maine-1	-109.0	- 7.0	-18.8	No
Minn.-3	120.5	-15.5	1.0	Yes
Minn.-4	172.5	-27.7	1.8	Yes
Minn.-8	128.0	-20.5	- 1.9	No
Neb.-1	222.0	18.3	-19.9	Yes
N.Y.-5C	- 95.5	3.0	- 7.2	Yes
N.Y.-12C	107.0	-22.3	- 5.3	No
N.C.-9	- 94.0	50.0	8.8	No
N.D.-1	123.5	-10.4	11.2	Yes
Ohio-13	-116.0	- 7.4	-23.9	No

Table XXI. Ten Largest Contributors of Rank Differences Between the Elections of 1944 and 1946

State and Error District	Number of Rank Places Shifted 1944 to 1946	1944 Stalemate Index	1946 Stalemate Index	1946 Party Turnover?
Maine-1	100.0	-18.8	- 9.6	No
Nev.-1	-101.0	13.1	- 8.8	Yes
N.D.-1	-186.0	11.2	-21.5	Yes
Ohio-13	92.0	-23.9	-11.9	No
Pa.-7	- 96.0	- 1.5	-16.5	No
Tenn.-2	- 93.0	- 7.1	-34.0	No
Wash.-1	-106.0	3.4	-13.8	Yes
Wisc.-1	135.0	-37.4	- 6.9	No
Wisc.-6	89.0	-17.1	- 9.8	No
Wisc.-10	108.5	-13.2	- 5.3	No

Table XXII. Ten Largest Contributors of Rank Differences Between the Elections of 1946 and 1948

State and Error District	Number of Rank Places Shifted 1946 to 1048	1946 Stalemate Index	1948 Stalemate Index	1948 Party Turnover?
Ill.-1C	-101.0	- 1.9	- 6.1	No
Maine-2	- 94.5	-10.7	-17.2	No
Mich.-12	- 89.0	- 4.6	- 6.9	No
N.J.-8	107.5	-21.2	- 0.1	No
N.Y.-5C	83.0	-16.0	- 0.1	No
Ore.-3	- 82.5	- 6.7	- 9.2	No
Va.-10	-116.0	26.6	0.1	No
Wash.-1	81.5	-13.8	2.0	Yes
Wash.-6	- 95.5	- 3.9	- 7.1	No
Wisc.-10	- 81.5	- 5.3	- 6.6	No

Table XXIII. Ten Largest Contributors of Rank Differences Between the Elections of 1948 and 1950

State and Error District	Number of Rank Places Shifted 1948 to 1950	1948 Stalemate Index	1950 Stalemate Index	1950 Party Turnover?
Maine-1	97.0	-12.5	- 4.0	No
Maine-2	87.5	-17.2	- 7.7	No
Mass.-5	242.0	-49.7	-26.1	No
Mass.-10	85.5	-19.5	- 8.2	No
Neb.-2	-105.5	1.4	-13.5	Yes
N.J.-2	91.5	-12.1	- 4.3	No
N.J.-8	- 94.5	- 0.1	-13.8	No
N.Y.-1C	-133.5	-15.8	- 0.9	No
N.Y.-10C	- 84.5	- 1.4	-14.1	No
Tex.-18	- 86.5	38.7	2.5	No

Table XXIV. Ten Largest Contributors of Rank Differences Between the Elections of 1950 and 1952

State and Error District	Number of Rank Places Shifted 1950 to 1952	1950 Stalemate Index	1952 Stalemate Index	1952 Party Turnover?
Fla.-1	122.0	50.0	0.7	No
Fla.-7	89.5	50.0	6.3	No
Kan.-1	-163.5	-16.5	1.5	Yes
Mass.-5	237.0	-26.1	-26.1	No
Mich.-11	- 94.5	-16.7	- 9.3	No
Neb.-1	114.5	- 4.5	-22.0	No
Neb.-2	- 89.0	-13.5	- 6.1	No
Tenn.-2	121.5	- 2.2	-18.9	No
Tex.-18	-121.5	2.5	50.0	No
Va.-6	103.0	49.7	- 1.6	Yes

Table XXV. Ten Largest Contributors of Rank Differences Between the Elections of 1952 and 1954

State and Error District	Number of Rank Places Shifted 1952 to 1954	1952 Stalemate Index	1954 Stalemate Index	1954 Party Turnover?
N.J.-6	122.0	-14.3	4.6	Yes
N.Y.-1C	- 83.5	- 9.8	-14.6	No
N.Y.-12C	- 82.0	-10.8	-16.5	No
Ohio-15	-113.5	14.3	- 4.0	Yes
Okla.-4	83.0	9.0	50.0	No
Tex.-5	-168.5	50.0	- 2.9	Yes
Tex.-8	- 82.0	50.0	12.4	No
Va.-6	-127.0	- 1.6	-12.5	No
Wash.-3	-130.5	- 3.4	-14.9	No
Wisc.-9	133.5	-15.2	5.4	Yes

Table XXVI. Ten Largest Contributors of Rank Differences Between the Elections of 1954 and 1956

State and Error District	Number of Rank Places Shifted 1954 to 1956	1954 Stalemate Index	1956 Stalemate Index	1956 Party Turnover?
Fla.-5	-130.0	50.0	1.4	No
Fla.-6	-102.5	50.0	4.7	No
Iowa-6	99.0	-10.3	0.1	Yes
Kan.-5	147.0	-14.9	0.5	Yes
Mo.-9	99.5	9.0	50.0	No
Neb.-3	142.5	-15.2	- 0.1	No
Ore.-1	98.5	-13.0	- 4.7	No
S.D.-1	101.0	- 8.0	2.4	Yes
Va.-1	-104.0	49.9	0.8	No
Wash.-4	103.0	-11.0	- 0.4	No

Focusing on the party turnover experience of the Error Districts, we see that in 19 out of the 70 cases a party turnover occurred. Consequently, there were 51 cases, or approximately 73% of all cases, in which the incumbent party was successful while the district was experiencing an unusually large change in rank position. Such a majority of cases in the non-turnover category shows that the unusual rank changes of the Error Districts were not accompanied by district swings to the "out" party--at least not to the extent that the "out" party wins. Large average Stalemate Index change figures for non-turnover cases support the indication that the districts involved were, for the most part, districts in which the majority party enjoyed a large margin prior to occurrence of the large rank change.

For the period covered, the average Stalemate Index change between pairs of elections for non-turnover cases of Error Districts ranges from a low of 9.28 (for the 1946-48 pair) to a high of 31.13 (for the 1954-56 pair).

The second lowest average change for non-turnover cases is 26.07 (1950-52) and the remaining average change figures are 15.53 (1944-46), 21.05 (1942-44), 18.58 (1952-54) and 15.36 (1948-50). The fact that must be considered along with these averages is that despite relatively large changes in both their Stalemate Indexes and their rank positions, these Error Districts returned the incumbent party to office. They were not retaining a stable partisanship while the other, non-Error Districts were experiencing a uniform partisan change. By and large, the unusually high changes in rank position between successive elections were the result of the districts' own partisan changes.

Further, there is no clear relationship between Error Districts and any over-all partisan trend, as shown by changes in party composition of the House of Representatives. For example, the 1942-1944 pair of elections, while Democrats were gaining 24 House seats, five Error Districts were experiencing a Democratic trend and five a Republican trend (according to the study composition of the House, Democrats gained 15 seats at the 1944 election). Each of the other six election pairs, also, indicates no over-all relationship between partisan changes in Error Districts and partisan changes in the composition of the House (see Table XXVII).

Examination of the Stalemate Indexes of Error Districts shows that most would not be considered "close" districts. Applying for the moment the standard definition that a district election is "close" if the absolute value of its Stalemate Index is less than 5.0, we find most Error Districts not experiencing "close" elections immediately prior to the election during which they made radical rank changes (see Table XXVIII). In fact, 67% of Error District election cases experienced a Stalemate Index of 10.0 or greater at the first election of the pair in which they made big rank changes and 80% experienced a Stalemate Index of greater than 5.0. To summarize, there is no evidence to indicate that the partisan "closeness" of a district by itself bears any relationship to its potentiality for experiencing a large rank change.

Table XXVII. Comparison of House Composition and Partisan Trend of Error Districts for Pairs of Successive Elections 1942-1956

Election Pair	Democratic Gain or Loss--House Seats: Actual Composition	Study Composition	Number of Error Districts: Moving Democratic	Moving Republican
1942-44	+24	+15	5	5
1944-46	-54	-33	5	5
1946-48	+75	+53	3	7
1948-50	-29	-16	6	4
1950-52	-23	-19	4	5
1952-54	+21	+19	3	7
1954-56	+ 1	- 3	7	3

Table XXVIII. Distribution of Error District Election Cases According to Size of Stalemate Index at the First of Two Successive Elections

Election Pair	Party Turnover Cases-Stalemate Index at First Election: 0-4.9	5.0-9.9	10.0+	Non-Turnover Cases-Stalemate Index at First Election: 0-4.9	5.0-9.9	10.0+
1942-44	1	0	4	0	2	3
1944-46	1	0	2	1	1	5
1946-48	0	0	1	3	2	4
1948-50	1	0	0	2	0	7
1950-52	0	0	2	3	0	5
1952-54	0	0	4	2	2	2
1954-56	0	1	2	0	1	6
Totals	3	1	15	11	8	32

On the contrary, the greatest share of Error Districts would have been classified as "safe" districts prior to their radical rank changes.

A closer investigation of the circumstances in which each Error District occurred shows that most occurrences can be explained by special factors. Knowledge of these special factors was available prior to the elections and the resulting change in rank order could be expected. Forty-three of the total 70 occurrences of Error Districts can be explained by these special factors (see Table XXIX).

The ten Error Districts of the 1942-1944 election pair may be accounted for as follows. Three cases are Composite Districts. Three cases were the result of third party influences. In two cases one of the major parties offered no candidate in one of the two elections. In two cases the district bucked the national trend.

In 1942 there was a Democratic candidate in Ohio's 13th district, but there was no Democratic candidate in 1944. North Carolina's 9th district had no Republican candidate in 1942, but a Republican ran and lost in 1944. These two districts appeared as Error Districts because there was no two-party competition.

North Dakota 1C, New York 5C, and New York 12C are Composite Districts.

The third party influence caused Minnesota's 3rd, 4th, and 8th districts' to be Error Districts for the 1942-1944 pair of elections. In the case of each district, there was a large third party vote in 1942 with the Republican candidates winning in all three districts. In 1944, however, the Democratic-Farmer-Labor Party entered the picture. The 3rd party vote subsequently disappeared, absorbed by the new Democratic-Farmer-Labor coalition. As a result, the D-F-L candidates won in the 3rd and 4th districts. The Republican candidate beat the D-F-L candidate in the 8th district, but the Republican margin was cut from 36,000 in 1942 to 4,000 in 1944.

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Only Maine's 1st district and Nebraska's 1st district of the ten Error Districts for 1942-1944 are not readily explained. Both of these districts are persistently Republican and the GOP margin of victory was increased in both between 1942 and 1944 despite a Democratic trend nationally. It appears that the two reacted to a Democratic trend by increasing the Republican vote.

The ten Error Districts of the 1944-1946 election pair include one Composite District, North Dakota 1C. In three cases one major party offered no candidate at one of the two elections. There was no Democratic candidate in 1944 in Wisconsin's 1st district and Ohio's 13th district. In both cases the Democrats offered a candidate in 1946, but lost. Tennessee's 2nd district had a losing Democratic candidate in 1944, but only a Republican candidate in 1946.

The remaining six Error District occurrences of the 1944-1946 election pair are not as easily explained. In three cases, those of Washington 1, Nevada 1, and Pennsylvania 7, the large rank change could be accounted for by the national Republican trend. All three districts showed Republican gains, with two actually experiencing a party turnover. Wisconsin's 10th, Maine's 1st and Wisconsin's 6th, however, experienced an increase in Democratic strength--moving against the national trend.

It could be that Maine's 1st district, which had bucked the national trend in 1944 to register a Republican gain, was just returning to normal in 1946.

Between the 1946 and 1948 elections, two Error Districts were Composite Districts--Illinois 1C and New York 5C. Virginia's 10th district appeared as an Error District through the process of reconstructing, because it was not actually brought into existence by redistricting until 1952.

Two districts, New Jersey 8 and Washington 1, experienced Democratic gains in 1948 over 1946. In both cases the Republican incumbent ran in 1948. The incumbent in Washington 1 was beaten in 1948, but the incumbent won in New Jersey 9 although his margin was cut from 34,000 to 148.

The voters of Wisconsin 10 and Washington 6 moved against the national Democratic trend to increase the winning margin of the Republican incumbent in each case. Michigan's 12th district remained fairly stable in the face of the national trend, however, to re-elect the Republican incumbent with approximately the same margin in 1948 as in 1946.

The Progressive Party exerted some influence on the major party balance in 1948 for Oregon's 3rd district. The Progressive candidate attracted 13,171 votes. While the Republican incumbent was increasing his margin of victory between 1946 and 1948, most of this increase could be attributed to normally Democratic votes swinging temporarily to the Progressive candidate.

In the remaining 1946-1948 Error District, Maine 2 seems to have expressed its gratitude for the departure of the incumbent. Republican incumbent Margaret C. Smith did not run for re-election in 1948. Her successor, Republican Charles P. Nelson, won in 1948 and accumulated a bigger margin than Mrs. Smith did in 1946--despite a national Democratic trend.

Two Composite Districts fell into the Error classification in the 1948-1950 election comparison, New York 1C and New York 10C. Also, there was a single case, that of Massachusetts 5, where the Democratic Party offered a candidate in 1950, but not in 1948. The Republican candidate won despite opposition in 1950.

Four Error Districts moved against the Republican trend from 1948 to 1950. In Maine 1, the GOP incumbent was re-elected, but with a reduced plurality. In New Jersey 2 and Maine 2, the same thing happened. Partisan changes in the district hold the secrets of rank changes for these districts.

Republican Christian Herter of Massachusetts' 10th district was re-elected in 1950, but the Democratic candidate in 1950, Francis X. Hurley, actually cut Herter's 1948 margin despite a national Republican trend. This is another case where local factors seem to hold the key to unexplained changes in rank order.

New Jersey 8 followed the national trend from 1948 to 1950 as it did from 1946 to 1948. The Republican incumbent was re-elected in 1950 with a wider margin of victory than he had had in 1948.

Texas' 18th district elected a Democrat in 1948, but the incumbent did not run in 1950 and the Democratic plurality was down. A combination of the incumbent not running and a national Republican trend could account for Texas 18 appearing as an Error District in the 1948-1950 election pair.

Between 1950 and 1952 two Error Districts are explained by the absence of competition. In Texas 18 the Republican party ran a candidate in 1950 and lost, bur offered no candidate in 1952. Virginia's 6th district had no Republican candidate in 1950, but in 1952 a Republican candidate ran and defeated the Democratic incumbent. The election results in Virginia 6 point to the influence of the national Republican trend in 1952.

Florida 1 and Florida 7 were changed by redistricting between the 1950 and 1952 elections. The reasons for their appearances as Error Districts, then, are hidden by the reshuffling of geographic areas that occurs with redistricting.

Massachusetts' 5th district exhibited little internal partisan changes between 1950 and 1952. A long-time Republican incumbent won in 1952 and there was no unusual increase in Republican strength that could be traced to the influence of a national trend. In short, it appears that Massachusetts 5 was an Error District because it retained a fairly stable party division of the vote while other districts in the nation were swinging with a Republican trend.

Nebraska 1 followed the 1950 to 1952 national swing by increasing the victory margin of the Republican incumbent Curtis.

The voters of Nebraska 2 moved against the national swing from 1950 to 1952. A partial explanation is afforded by the fact that the Republican incumbent did not run in 1952. The new GOP candidate carried the district, but the 1950 Republican margin of 30,000 was cut to 17,000 in 1952.

The Republican candidate in Tennessee's 2nd district in 1950 ran for the first time and was elected. As the incumbent in 1952 he was re-elected with a larger margin than in 1950. The Democratic vote remained stable between 1950 and 1952. It appears that both the national swing and incumbency contributed to an above-average rank change here.

In Kansas 1, the voters bucked the national trend from 1950 to 1952 to defeat the Republican incumbent in 1952. The large rank change of Kansas 1 seems to have been caused by local factors peculiar to that district in 1952.

A local factor also was responsible for the wide rank fluctuation of Michigan 11 between 1950 and 1952. In 1950, Charles Potter, Republican, was elected. Potter ran for the U. S. Senate in 1952, however, and a new Republican candidate, Victor Knox ran in 1952. Although Knox was popular in that district, having been elected State Representative many times and having served as Speaker of the Michigan House of Representatives, his Democratic opponent was a strong "name candidate." Prentiss Brown, Jr., the son of a former Michigan U. S. Senator with the same name, cut into the 1950 Republican margin despite the national swing to GOP candidates.

Two Composite Districts, New York 1C and New York 12C, appeared as Error Districts between 1952 and 1954. In Texas 5 and Texas 8 there was no Republican candidate in 1952. The Democratic incumbent in Texas 5 did not run in 1954 and the Republicans were able to win the district. The Republican candidate in Texas 8 in 1954 cut the Democratic margin from 1952 drastically but the Democratic incumbent won. Both of these Error Districts were moving against a national Democratic trend in 1954.

The large rank change for Oklahoma 4 between 1952 and 1954 is accountable to the failure of the Republican Party to offer a candidate in 1954. There was a GOP candidate in 1952.

In Wisconsin's 9th district and New Jersey's 6th district the Republican incumbents did not run for re-election in 1954. In both cases, the voters of these districts elected Democrats, indicating vulnerability to the national trend. Also, in both cases, the "retiring" Republican candidates were popular individuals. In Wisconsin 9, Merlin Hull had been elected many times prior to 1952 and Clifford Case, the New Jersey 6 incumbent, ran successfully for the U. S. Senate from New Jersey in 1954.

Bucking the 1954 national trend were districts 3 of Washington and 15 of Ohio. In Ohio 15, the Democratic incumbent was not a candidate in 1954 and the Republican candidate won the election. In Washington 3, the Republican incumbent of many terms actually added to his 1952 margin of victory in 1954.

The voters of the remaining 1952-1954 Error District (Virginia 6) elected the Republican incumbent in 1954, but the increased Republican margin (against a national Democratic trend) could be attributed to a change in Democratic candidates. In 1950, Democrat Clarence Burton ran unopposed. Burton was beaten by Republican Poff in 1952, but a new Democratic candidate ran against Poff in 1954.

Between 1954 and 1956 three districts appeared in the Error classification because there was no Republican candidate in 1954 but a Republican candidate was offered in 1956. In all three cases the Democratic candidates won in 1956. These districts were Florida 5, Virginia 1, and Florida 6.

In Missouri 9, the GOP offered no opposition candidate to Democrat Clarence Cannon in 1956. There was a Republican candidate in 1954, so the lack of opposition in 1956 could explain the large rank fluctuation of Missouri 9 between 1954 and 1956.

Six of the 1954-1956 Error Districts swung with what little national trend there was between the two elections by moving Democratic. Oregon 1 re-elected a long-time Republican incumbent, but his 1954 margin of 40,000 was cut to 19,000 in 1956. The long-time GOP incumbent in Kansas 5 was not a candidate for re-election in 1956 and the Democratic candidate won by a narrow margin.

In Nebraska 3, the Republican incumbent won in 1956, but the GOP margin in 1954 was cut drastically in 1956. The same situation occurred in Washington 4 where the Republican incumbent barely nosed out his Democratic opponent.

An upset occurred in Iowa 6 where the Republican incumbent of many years lost by 198 votes out of 129,000 votes cast. And in South Dakota 1, a 4-term Republican incumbent was upset by a Democrat.

The 1954-1956 Error Districts, then, show a strong swing to Democrats (7 out of 10 cases) despite the fact that the Democratic Party actually experienced a net gain of only one seat from the Republicans.

The high rank correlations of the total array of study districts discovered in the preceding chapter suggested that forecasting of congressional district rank orders could be possible with substantial accuracy. Location and understanding of the deviant cases (Error Districts) actually strengthens this prospect. In the relatively cursory survey of the last few pages more than half (43) of the 70 cases of Error Districts were explained by special factors which were either forecastable prior to the election or would have meant that the district did not belong in the rankings in the first place (see Table XXIX).

In the category of special factors which were known prior to the election and which appear determinative of the election results, we find the following distribution: (1) There were sixteen cases in which one of the two major parties offered no candidate at one of the pair of elections for which the district qualified as an Error District; (2) in six cases the

Table XXIX. Distribution of Special Factors Explaining Error District Occurrence

Pairs of Election Years	Number of Occurrences--Special Factors: No Candidate for One of Two Major Parties at One of Two Elections	Incumbent Does Not Run for Re-election	District Not Real at Time of Error Occurrence--Re-districting Created District Later	Third Party Influence	Composite District
1942-44	2	0	0	3	3
1944-46	3	0	0	2	1
1946-48	0	1	1	1	2
1948-50	1	0	0	0	2
1950-52	2	1	2	0	0
1952-54	4	3	0	0	2
1954-56	4	1	0	0	0
Totals	16	6	3	6	12

incumbent did not run for re-election; and (3) in six cases a strong third party candidate upset the major party balance in the district.

In the category of special factors that would have kept the district out of the ranking in the first place, we find the following: (1) There were twelve cases in which Error Districts were Composite Districts--districts that could not be forecasted for future elections because they are not "actual" districts now; and (2) in three cases the districts were not "actual" districts at the time of Error classification, being created at a later date by redistricting.

If all of these Error Districts explained by special factors had been removed from the rankings prior to computation of the rank correlation coefficients, as they should have been, the coefficients would have been even higher. The rank orders could have been forecasted more accurately without these districts than with them.

There were 26 Error District occurrences not explained by the special factors outlined in Table XXIX. Almost half of these Error cases, however, were associated with a change in candidates for the incumbent party. In 5 of the 26 cases the "out" party beat the "in" party when the incumbent did not run for re-election (Wisconsin 9, 1952-54; New Jersey 6, 1952-54; Ohio 5, 1952-54; Kansas 5, 1954-56; and Iowa 6, 1954-56). In 5 cases the incumbent party held the district despite the departure of its incumbent candidate (Maine 2, 1946-48; Texas 18, 1948-50; Nebraska 2, 1950-52; Tennessee 2, 1950-52; and Michigan 11, 1950-52).

Although not quite as strong an indicator as the special factors in Table XXIX, the absence of an incumbent candidate in a congressional election appears to be a good indication of impending rank change greater than normal.

Removing these ten no-incumbent-candidate cases from the group of apparently unforecastable rank changes means that out of the 70 Error District cases only 16 were actually cases in which the possibility of significant rank fluctuation could not have been expected--on the basis of present knowledge and hypotheses--further support for the proposition that congressional district rank orders can be accurately forecasted.

Summary

In this chapter we focused on the deviant cases, Error Districts, attempting to find out some of the more significant reasons why the rank correlations of the previous chapter were less than a perfect 1.000. By examining the election circumstances of each Error occurrence we discovered that in 54 of the total 70 cases of Error occurrence the large rank changes actually could have been expected. These occurrences were explained by obvious circumstances, such as no candidate opposition, departure of a long-time incumbent, and third party influence.

Had we been attempting to forecast the rank order at the next election, these obvious and special circumstances would have been justification for removing the districts with which they were associated from the rank order. The removal of these districts would have increased the rank correlation between election pairs and consequently strengthened the accuracy of the rank order forecast.

This discovery will be put to use in the next chapter where procedures for making rank order forecasts will be tested.

A history of perfect rank correlations for all districts between successive elections would indicate that the rank order of the election to be forecasted would be the same as that of the previous election. For each individual district, a perfect rank correlation would mean that a trend analysis of each district in the rank order would tell us whether the whole rank order was moving in a Democratic or Republican direction. A trend analysis of those districts having a history of following the national swings closely should provide strong evidence for a valid forecast of the next election's results.

The trend analysis of partisan changes in individual districts will be combined with the rank order stability found in Chapter IV to produce a forecast in Chapter VI.

CHAPTER VI

AN EXERCISE IN CONGRESSIONAL ELECTION FORECASTING

In the preceding chapters several discoveries pertaining to congressional election results have been presented. These findings will be employed in this final chapter to experiment with a new method of forecasting election results.

Employing all of these discoveries, we will essay a forecast of the 1956 congressional election results. The procedure will follow these steps:

1. Set up a new operational concept of "marginality" to classify districts according to their vulnerability to a party turnover at the next election.

2. Adopt the 1954 rank order as an estimate of the 1956 rank order.

3. Accomplish a projection to 1956 of the Stalemate Indexes for each Step 4 Competitive district by fitting a linear regression to the 1948, 1950, 1952, and 1954 Stalemate Indexes for each Step 4 Competitive District.

4. Fit the forecasted Competitive District Stalemate Indexes into the estimated 1956 rank order to locate the rank at which all districts above it are Democratic and all below it are Republican--the "cut-off" point.

5. Correct the expected partisan exaggeration of the forecasted Step 4 Competitive District election outcomes.

Three-Factor Marginality

The new concept of marginality to be employed in this study will classify districts on three criteria, all three of which are related to a forecast of the Stalemate Index of the district being classified. The first criterion is the direction in which the partisan trend of a district is moving. The second is the size of the Stalemate Index forecasted by extending the trend line. The third criterion is whether or not the slope of the district's trend line is steep enough to result in a forecast of party turnover in the district.

For purposes of rating the probability of party turnover in a district, those districts whose slopes indicate a Republican gain will be classified "Republican" and those with a slope moving toward a greater Stalemate Index will be classified as "Democratic." Where the forecasted Stalemate Index indicates that a district could elect the out-party candidate, the district will be classified as "critical," regardless of the size of the forecasted Stalemate Index. Where the forecasted Stalemate Index indicates that a district could elect the in-party candidate, the district will be classified as "marginal" or "close" depending on the size of the forecasted Stalemate Index. If the forecasted Stalemate Index is between 0 and 4.9, the rating will be "marginal." If it is between 5.0 and 9.9, the rating will be "close." If the forecasted Stalemate Index indicates no turnover and a resulting Stalemate Index 10.0 or greater, the district is classified as "non-competitive."

The following chart lists all possible combinations of the above factors and the district classification which would result from each combination:

		Size (Absolute Value) Of Forecasted Stalemate Index 0-4.9	5.0-9.9	10.0 plus
Democratic Trend (Positive Slope)	Turnover Forecasted	Critical Democratic	Critical Democratic	Critical Democratic
	No Turnover Forecasted	Marginal Democratic	Close Democratic	Non-Competitive
Republican Trend (Negative Slope)	Turnover Forecasted	Critical Republican	Critical Republican	Critical Republican
	No Turnover Forecasted	Marginal Republican	Close Republican	Non-Competitive

The new concept of marginality can best be illustrated by the use of an example. By linear regression the Stalemate Index of Wisconsin-5 is estimated to be -0.6 in 1956 (see Table XXX). Since the actual Stalemate Index in 1954 was 2.3, a party turnover is forecasted. The computed trend slope for Wisconsin-5 is negative, or moving Republican (b = -.57), indicating a Republican trend. For 1956, then, the classification of Wisconsin-5 would be "Critical Republican."

Our new concept of marginality, like the old, classifies a district according to a judgment of the probability that the district will elect the out-party candidate in the next election. The prevailing concept of marginality classifies a district on the basis of the result of the last election. The concept used here, however, demands a judgment based upon a statistical forecast of the next election result. More important, the forecast upon which our marginality classification depends is based upon more than one previous election. Because the forecast is based upon a consideration of a district's electoral history, our marginality rating also is determined by a district's trend line, the slope or rate of change of that trend line, and the direction in which the trend is moving.

Briefly, then, there are four basic classifications--Critical, Marginal, Close, and Non-competitive. We would estimate that the probability of a party-turnover in Critical Districts is greater than in

Marginal Districts. Similarly, it is estimated that a party turnover is more likely to occur in Marginal Districts than in Close Districts. We expect no turnover in the Non-competitive Districts.

Forecasting the 1956 Rank Order

The Step 4, or "competitive," districts are a microcosm of all congressional districts. We will work here with the group of 22 Competitive Districts, forecasting their 1956 partisan character.

Calling upon the rank order stability demonstrated in Chapter III, we can justifiably estimate that the rank correlation of all districts between 1954 and 1956 will produce a correlation coefficient greater than .9000. We shall accept this correlation as evidence that the 1954 rank order is the best possible estimate of the 1956 rank order.

Acceptance of the 1954 rank order as an estimate of the 1956 rank order allows the assignment of a 1956 rank position to each of the 22 Competitive Districts. These rank positions are listed for each Competitive District in Table XXX. Except for Virginia-6 which is ranked 296, most of the array of Competitive Districts are bunched in the middle of the 1-to-336 ranking. The top-ranked district is New Jersey-10 which has a rank position of 109. Other than Virginia-6, North Carolina-10 has the lowest rank, that of $247\frac{1}{2}$.

The first part of our forecast for 1956 is completed by the assignment of forecasted ranks of Step 4 Districts for 1956.

Estimating Stalemate Indexes by Linear Regression

A rank order forecast is not a complete estimate of the over-all results of an impending national congressional election. In addition, it is necessary to know which party will control Congress as a result of the election. This estimate is aided by a forecast of election results in at least some of the individual districts.

Table XXX. Competitive Districts' Projected Stalemate Indexes for 1956 Fitted to 1954 Rank Order*

State and District	Estimated 1956 Rank (Based on 1954)	1956 Forecasted Stalemate Index
New Jersey-10	109	15.95
Minnesota-6	114	12.10
Massachusetts-2	121	8.10
New Jersey-4	129	5.00
New Jersey-11	132	8.65
Ohio-18	133½	8.15
Connecticut-1	138	6.35
Colorado-4	154½	2.60
West Virginia-1	158	0.50
Indiana-8	163	-1.95
Wisconsin-5	163	-0.60
Pennsylvania-11	172	-0.10
Montana-2	178½	-3.60
Washington-2	188½	-10.75
Washington-1	192½	-4.40
Connecticut-3	195	-4.30
Utah-1	204	-13.15
Nevada-1	214	-5.05
Indiana-11	220	-10.40
Utah-2	245	-12.10
North Carolina-10	247½	-16.10
Virginia-6	296	-20.80

*Forecast made from regression line based on S.I.'s for 1948, 1950, 1952, and 1954.

Forecasting the 1956 Stalemate Indexes

We will look into the future, here, by fitting a linear regression to the trend of each Competitive District. Once each trend has been characterized by a straight line, a simple extension of this line will provide an estimate of the Stalemate Index for 1956.

The method of linear regression is essentially one of averaging.[1] By regression we are able to estimate or predict unknown values of one variable from known values of another variable. The most commonly used example of such use of regression is the prediction of grades at the end of a course from grades in a prognostic test given prior to the beginning of the course.

While our earlier use of the correlation method dealt with the joint variation of two measurements, regression methods also deal with the frequency distribution of one variable when another is held fixed.

Here we shall fit a regression line to the relationship between election years and the Stalemate Indexes for each Competitive District. The "best" regression estimate will be the straight line from which the sum of squares of the deviations is at a minimum. The use of the linear regression method is not intended to imply that non-linear regressions have no relevance here. The most accurate forecasts could probably be made by actually "fitting" the regression line and equation to the existing trend line of a district. In such a case, where the recorded Stalemate Indexes form a trend line containing no curves, the linear regression formula would be used. Where the regression of the trend line is non-linear, or not a straight line, it would be necessary to employ an equation that would fit the curve, the exact formula to be determined by the number

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[1]For a more complete explanation see Cyril H. Goulden, "Linear Regression Analysis," Chapter 6, Methods of Statistical Analysis (New York: John Wiley and Sons, Inc., 1956, 2nd edition).

of curves in the trend line. This type of methodology, however appropriate here, is very complex and, while its relevance can not be denied, the sheer volume of computations necessary has precluded the use of this technique. We shall take the regression line to be fitted as $Y_e = a + bx$, where the subscript indicates that Y is an estimated quantity, the 1956 Stalemate Index.

This method is called "Linear Regression" because the graph of the formula is a straight line. Stalemate Index is represented as Y and election year is X. The term "a" represents the origin of the line or the value of Y for X = 0, and "b" represents the slope of the line. Thus, b is the increase in Y for a unit of increase in X.

The working formulae for finding the line origin and the slope of the line are as follows:

$$b = \frac{N\Sigma XY-(\Sigma X)(\Sigma Y)}{N\Sigma X^2-(\Sigma X)^2} \qquad a = \frac{\Sigma Y-b(\Sigma X)}{N}$$

One problem which arises immediately is that of deciding upon the number of previous elections from which to project the 1956 estimate. One election, of course, does not provide a line of any kind. It would provide only a point. On the other hand, two elections could be represented graphically as a line, but would hardly present enough data to establish a workable trend.

Three election years provide sufficient information to establish a trend or a presentation of fluctuations in the Stalemate Index. Obviously, four elections would meet the same requirements. At some point, however, in including past elections we would reach the point of diminishing returns. At this point the election statistics have so little relationship to the election result actually being forecasted that their inclusion would not aid predictability. An extreme example would be to go back in time to include the 1900 election results to forecast the 1956 election for a particular district.

For our experimental purposes, four elections will be used to establish the trend to which a linear regression will be fitted. The decision to use a four-election base from which to forecast was a tentative one. Three or five or six could have been selected as readily as four. Actually, the four-election base was chosen because it allows the establishment of a definite trend line, but does not extend the trend so far back into political history that the early election points on the trend would be irrelevant to the election being forecasted. The election years used as a base for projection are 1948, 1950, 1952, and 1954.

Presented as an example, the following is a summary of the computations for determining the estimated Stalemate Index of West Virginia-1 in 1956:

	X (Election Year Sequence)	Y (Stalemate Index)	XY (Cross-Product Values)
(1948)	0	7.3	0
(1950)	1	1.7	1.7
(1952)	2	2.9	5.8
(1954)	3	2.7	8.1
Sum	6	14.6	15.6

$$b = \frac{N\Sigma XY-(\Sigma X)(\Sigma Y)}{N\Sigma X^2-(\Sigma X)^2} = 1.26$$

$$a = \frac{\Sigma Y-b(\Sigma X)}{N} = 5.54$$

Y_e = the estimated Stalemate Index of West Virginia-1 for 1956.

$$Y_e = a + bx = 0.5$$

N = 4

x = value of X for the forecasted election year = 4

The results of trend projections for all 22 Competitive Districts show the estimated partisan outcome to be nine districts going Democratic and thirteen Republican (see Table XXX). It is interesting to note that the district with the lowest positive (Democratic) Stalemate Index has a higher 1954 rank (1956 forecasted rank) than all districts having a negative (Republican) projected Stalemate Index for 1956. This would indicate that there is substantial agreement between the rank forecast and Stalemate Index forecast accomplished here.

According to the projections of Step 4 Stalemate Indexes, the universe of these districts for 1956 would be divided 40.9 percent Democratic and 59.1 percent Republican. This represents a drop of 13.6 percent from 1954 in Democratic strength among Step 4 Districts, a loss of 4 Democratic seats to Republicans.

The projections of Step 4 Stalemate Index trends fitted into the 1954 ranking would indicate that there would be at least 158 Democratic districts in 1956 (Study districts) and that districts ranked from 163 to 336 (174 districts) would be won by Republicans.

Four districts, those ranked 159, 160, 161, and 162, fell in the "no-party's land" between the lowest ranked district with a projected Democratic Stalemate Index and the highest-ranked Republican district. These are crucial districts in estimating the cutt-off point above which in the ranking all districts will be Democratic. For this reason it is useful to project their Stalemate Index trends. For convenience of communication, these districts will be called Pivot Districts.

The Pivot Districts in the 1956 forecasted rank order are Illinois-25 (rank 159), Pennsylvania-27C (rank 160½), Oregon-3 (rank 160½), and Michigan-17 (rank 163). The projections of Stalemate Index trends for these districts place all in the Democratic column for 1956 (see Table XXXI).

Taking into consideration the results of forecasting the 1956 election outcomes both for Pivot Districts and for Step 4 Districts, we could expect the election of 174 Republicans and 162 Democrats from a total of 336 Study Districts.

The election forecasts made by use of Step 4 Districts require correction, however. We found earlier that the partisan trends of Step 4 Districts consistently overestimate the actual shifts experienced by all of the districts. In fact, the Study District changes have been as low as 13.2% of the Step 4 District changes (see Table XXXII). Any estimate of

Table XXXI. Projected Stalemate Indexes for 1956, Fitted to the 1954 Rank Order (Pivot Districts)

State and District	1954 Study Rank	1956 Forecasted Stalemate Index
Illinois-25	159	0.55
Pennsylvania-27C	160½	6.80
Oregon-3	160½	5.00
Michigan-17	163	3.10

Table XXXII. Comparison of Changes in Number of House Seats Won By Democratic Candidates

Election Pairs	Changes in Percentage of House Seats Won by Democratic Candidates			Study District Change as Percent of Step 4 District Change
	Actual Districts	Study Districts	Step 4 Districts	
1942-44	+5.5	+4.9	+18.2	26.9%
1944-46	-12.4	-9.9	-40.9	24.2%
1946-48	+17.3	+15.7	+72.8	21.6%
1948-50	-6.7	-4.7	-9.1	51.6%
1950-52	-5.3	-6.0	-45.5	13.2%
1952-54	+4.8	+6.0	+9.1	65.9%

the 1956 election results for Study Districts based upon Step 4 projections obviously must include a correction factor to compensate for Step 4 District exaggeration.

Since the Study District change, as percent of Step 4 District change, ranges from 13.2%to 65.9%, there is a wide range from which to select a correction factor. Using the data from previous election pairs (see Table XXXII) the most conservative correction of the Step 4 exaggeration would be to estimate the 1954-1956 Study District change as 13.2 percent of the Step 4 District change.

Since we are reaching out into the unknown with this forecast, conservative estimates should be more justifiable than liberal predictions. It is better to underestimate the exaggeration than to overestimate it. All of the discoveries found here point to stability and persistence in the party preference of congressional districts over time. For this reason the most conservative correction factor will be employed (Study District change as 13.2% of Step 4 District change).

By projecting the trend lines of Step 4 Districts to 1956 we have found that 9 districts are forecasted as Democratic and thirteen as Republican. The 1954 party division of Step 4 Districts was 11 districts Democratic and 11 districts Republican. The percentage of Step 4 Districts held by Democrats dropped, then, from 54.5 in 1954 to 40.9 in 1956--a change of 13.6 percentage points.

The Step 4 change exaggerates and we have selected the conservative estimate of its exaggeration, 13.2 percent. Therefore, we estimate that the Study District change from 1954 to 1956 will be 13.2 percent of 13.6. This provides an estimate that the Study group of districts will experience a drop from 1954 to 1956 of 1.8 percent in the number of contests won by Democrats.

Democrats won 52.7 percent of the Study Districts in 1954. A change of 1.8 percent from 1954 to 1956 would mean that Democrats would win 50.9 per cent of the 336 Study Districts in 1956. This means the election of 171 Democrats and 165 Republicans.

The estimated rank-order cut off point in Table XXX falls between West Virginia-1 (rank 158) and Indiana-8 (rank 163). In addition, however, our projection of Pivot District Stalemate Indexes (see Table XXXI) indicates that the four Pivot Districts would elect Democrats in 1956. This means that our corrected estimate of the rank-order cut off would place it between Michigan-17 and Indiana-8, both tied at rank 163 in 1954. Placing the cut off here would provide a forecast that Democrats would win 162 districts and Republicans would win 174 districts.

The difference between the 162-174 division of Study Districts presented in the preceding paragraph and the 171-165 division arrived at through the use of a correction factor is accounted for by two factors. The first, of course, is the correction factor that was used on Step 4 Districts to compensate for the normal exaggeration of Study District changes. The second factor is that we have projected the trend lines of only 26 districts (22 Step 4 and 4 Pivot Districts) from a group of 336 districts. In short, the sample size has been quite small in the absence of computer devices for handling more cases easily.

The 171 Democratic to 165 Republican partisan division of Study Districts is the one we want to use as the forecasted 1956 division because it has been corrected for Step 4 exaggeration. This means, then, that there are some districts among the 336 (at least 9) in the 162 Democrat to 174 Republican division that should be moved up into the Democratic column.

The "best" estimate of which, among the total of 336 Study Districts, are most likely to be in the Democratic column in 1956 involves finding the districts we consider most vulnerable to party turnover. In the next section we will combine the new concept of marginality with rank-order and Stalemate Index forecasts to complete our over-all "prediction."

Combining Rank Order and Stalemate Index Forecasts With the New Marginal Concept

In the preceding section, the cut-off point in the rank order of Study Districts was set between rank 162 and rank 163. If we assumed a perfect rank correlation between 1954 and 1956, this is the point above which all districts in the rank order would be Democratic in 1956 and below which all districts in the rank order would be Republican. We know from experience with the rank order correlations, however, that the correlation will be slightly less than perfect. The implications from this conclusion are that some of the districts ranked below the cut-off point in 1954 (between 162 and 163) are "riding" trends that might well carry them above the cut-off point in 1956 and some districts ranked above the cut-off have trends that could carry them below the cut-off of 1956.

Also, we have forecasted earlier that the party division among the 336 Study Districts will be 171 to 165 in favor of the Democrats. This would mean that at least nine districts not already forecasted as Democratic in 1956 could be elevated from below the cut-off to above the cut-off.

By applying our new concept of marginality to the districts it is possible to make estimates of which districts, in addition to those Step 4 and Pivot Districts already dealt with, will be most likely to elect Democratic candidates in 1956. This is possible because the classification process is based upon forecasted Stalemate Indexes. The twenty districts ranked nearest to the cut-off (ten above and ten below) which are not Pivot or Step 4 Districts will be classified according to their "marginality."[1] These districts will be called "Classified" Districts (Table XXXIII).

Of the twenty Classified Districts, only two ranked below the cut-off are forecasted as Democratic districts. In addition, one district ranked above the cut-off is forecasted as Republican in 1956. This means a net

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[1]The choice of these 20 districts is arbitrary and is done only to demonstrate the method suggested by this study. Any full-scale forecast in which this method is used should classify all districts by the concept of marginality suggested. This is not done here because the computations would be lengthy and beyond the scope of this study.

Table XXXIII. Projected Stalemate Indexes for 1956, Trend Slopes and "Marginal" Classifications (Classified Districts)

State and District	1954 Study Rank	1956 Forecasted Stalemate Index	Trend Slope (b)	"Marginal" Classification
Idaho-1	146½	3.5	0.62	Marginal Dem.
Delaware-1	146½	4.4	2.19	Marginal Dem.
Illinois-21	148	5.2	1.21	Close Dem.
Missouri-4C	149½	1.9	-1.49	Marginal Rep.
Ohio-20C	149½	1.3	-1.41	Marginal Rep.
New Jersey-6	151	1.0	3.36	Marginal Dem.
Minnesota-3	152	3.2	-0.01	Marginal Rep.
Missouri-6	153	-1.0	-1.32	Critical Rep.
Pennsylvania-25	154½	4.6	2.03	Marginal Dem.
Massachusetts-8	156½	3.2	1.57	Marginal Dem.
Ohio-9	156½	3.2	0.01	Marginal Dem.
North Carolina-9	165½	-1.9	-3.18	Critical Rep.
Ohio-6	165½	3.0	1.22	Marginal Dem.
New York-3C	167	-0.1	0.14	Critical Dem.
Michigan-6	168	0.1	0.53	Marginal Dem.
New York-5C	169½	-1.7	-0.27	Critical Rep.
Minnesota-9	169½	-1.8	2.11	Critical Dem.
Pennsylvania-19	171	-1.1	-0.55	Critical Rep.
Virginia-9	173	-1.4	-1.52	Critical Rep.
Ohio-11C	174	-4.9	-4.44	Critical Rep.
West Virginia-4	175	-3.0	-1.37	Critical Rep.

gain of only one district of the nine needed to fill out the estimated partisan division of Study districts.

If the group of Classified Districts constituted the total group being forecasted, it would be necessary to select the remaining eight districts on the basis of which are most likely to be turnover cases, disregarding the forecasted Stalemate Indexes. In such an event the eight districts ranked below the cut-off point that are rated as "Critical Republican" would have to be chosen as most liable to elect Democrats in 1956.

The group of Classified Districts is only a small part of the total group of districts, however. It is entirely possible that projections of the trend lines of the remaining districts would show that some of them would be forecasted as Democratic in 1956. Since we have already dealt with 28 districts ranked consecutively above the cut-off (13 Step 4, 4 Pivot and 11 Classified districts) and 23 districts ranked consecutively below the cut-off (13 Step 4 and 10 Classified districts), it is more likely that Error District occurrences (see Chapter V), would account for a major share of the nine districts needed to fill out the total of 171 forecasted Democratic in 1956. When we move as far as 25 ranks away from the cut-off, to accept a projected Stalemate Index which would seem to place the district near the cut-off, we risk violation of one of the major conclusions of this study. The stability of rank orders from election to election must take precedence over the projection of Stalemate Indexes in forecasting. For this reason our forecast for 1956 will remain at 171 Democrats and 165 Republicans.

The 1956 forecasted election results for Step 4, Pivot and Classified Districts are listed in Table XXXIV. In addition, it is suggested that approximately 9 districts, somewhere below the cut-off in the total ranking of 336 districts, will experience Democratic wins in 1956. This would place 171 districts above the cut-off point in the Democratic column.

Efficiency of Forecast

We have completed a forecast of the 1956 election results based upon the projection of Stalemate Index trend lines and the stability of congressional district rank orders. A comparison of the actual results and the forecasted results indicates that our general prediction that

Table XXXIV. Comparison of Actual and Forecasted Stalemate Indexes and Rank Positions for 1956--Step 4, Pivot, and Classified Districts

State and District	1956 Stalemate Indexes Actual	1956 Stalemate Indexes Forecast	1956 Rank Position Actual	1956 Rank Position Forecast
New Jersey-10	6.1	15.95	128	109
Minnesota-6	6.2	12.10	127	114
Massachusetts-2	11.2	8.10	106½	121
New Jersey-4	4.5	5.00	135	129
New Jersey-11	13.3	8.65	99	132
Ohio-18	9.6	8.15	113	133½
Connecticut-1	-3.7	6.35	198	138
Idaho-1	5.1	3.5	132	146½
Delaware-1	-2.0	4.4	187	146½
Illinois-21	3.5	5.2	144½	148
Missouri-4C	4.0	1.9	140	149½
Ohio-20C	0.2	1.3	172	149½
New Jersey-6	-1.1	1.0	183½	151
Minnesota-3	2.0	3.2	156½	152
Missouri-6	2.0	-1.0	156½	153
Pennsylvania-25	1.3	4.6	163	154½
Colorado-4	11.8	2.6	104	154½
Massachusetts-8	6.3	3.2	126	156½
Ohio-9	5.2	3.2	131	156½
West Virginia-1	-0.3	0.5	177	158
Illinois-25	3.8	0.6	141½	159
Pennsylvania-27C	-4.0	6.8	203½	160½
Oregon-3	11.6	5.0	105	160½
Michigan-17	3.4	3.1	146½	163
- - - - - - - -	- - - -	- - - -	- - - -	- - - - Cut-off
Indiana-8	0.2	-1.95	172	163
Wisconsin-5	7.8	-0.6	121½	163
North Carolina-9	3.4	-1.9	146½	165½
Ohio-6	4.5	3.0	135	165½
New York-3C	-0.5	-0.1	179	167
Michigan-6	-0.9	0.1	181	168
New York-5C	-8.2	-1.7	244½	169½
Minnesota-9	2.7	-1.8	150½	169½
Pennsylvania-19	-3.8	-1.1	201	171
Pennsylvania-11	3.0	-0.1	149	172

Continued

Table XXXIV - Continued

State and District	1956 Stalemate Indexes Actual	Forecast	1956 Rank Position Actual	Forecast
Virginia-9	4.1	-1.4	139	173
Ohio-11C	3.8	-4.9	141½	174
West Virginia-4	-2.8	-3.0	191	175
Montana-2	0.9	-3.6	165	178½
Washington-2	-6.0	-10.8	221	188½
Washington-1	-8.1	-4.4	242½	192½
Connecticut-3	-10.0	-4.3	256½	195
Utah-1	-10.5	-13.2	261½	204
Nevada-1	4.2	-5.1	138	214
Indiana-11	-9.5	-10.4	253	220
Utah-2	-7.6	-12.1	239	245
North Carolina-10	-12.7	-16.1	283	247½
Virginia-6	-12.3	-20.8	277	296

Democrats would win a majority of the 336 Study Districts (171 to 165) was fulfilled. The more specific forecasts pertaining to the Stalemate Index and rank position of each district was not quite as accurate (see Table XXIV), but could not be expected to be.

As far as the rank forecast is concerned, we know from Chapter IV that the correlation between the 1954 rank order and the 1956 rank order was high. The rank correlation coefficient for all 336 Districts for the 1954-1956 pair was .9184. For just the Step 4 Districts it was still high at .8100. Although a comparison of the actual and forecast rank position of each individual district (Table XXXIV) shows a wide range of variation among districts, the number of districts forecasted as ranked on the "wrong" side of the cut-off point is small. There are six districts ranked above the cut-off by the forecast that actually belonged below the cut-off by virtue of their 1956 election results. There are eight districts ranked below the cut-off point by the forecast that belonged above the cut-off. This points to an impressive record of forecast efficiency because the districts ranked close to the cut-off are the most difficult to forecast. A small difference between the actual and the forecast here can mean the difference between a correct or an incorrect forecast.

Our method of forecasting Stalemate Indexes of congressional districts also produced predictions that were close to the actual results (see Table XXXV). In 32 of the 47 cases forecasted, the difference between the actual Stalemate Index and the forecast was less than 5.00 points. In 13 cases the difference was between 5.0 and 9.9 points. In 2 cases the difference was greater than 10.0 points and in no case was it greater than 15.0 points.

Of the 13 cases where the difference between the actual and forecasted was between 5.0 and 9.9, two cases involved Composite Districts. In this same category there was one case, that of Nevada-1, where the incumbent did not run for election and the out-party candidate (who had run five times previously) won the election. Of the remaining 10 cases in this category, there were nine in which the incumbent won and only one (Delaware-1) in which the incumbent lost.

Both of the cases where the difference between the actual and forecasted was between 10.0 and 14.9 are cases where we would expect the occurrence of an Error District. Pennsylvania-27C is a Composite District. In Connecticut-1 the incumbent, Thomas Dodd, did not run for re-election in 1956. He ran instead for the U. S. Senate seat and lost. His successor, the Democratic candidate in Connecticut-1, failed to carry the district.

Of the total of 15 cases where the difference between actual and forecasted Stalemate Index was 5.0 or greater, there were 7 cases where our method correctly forecasted the winning party and 8 cases

Table XXXV. Distribution of Differences Between Actual and Forecasted Stalemate Indexes of Step 4, Pivot and Classified Districts for 1956

	Size of Differences Between the Actual and Forecasted Stalemate Indexes			
	0-4.9	5.0-9.9	10.0-14.9	15.0 Plus
Forecast winning party as winner	24	7	0	0
Forecast losing party as winner	8	6	2	0
Totals	32	13	2	0

where the method incorrectly forecasted the winner. As was noted in the preceding paragraph, 2 of these 8 cases would have been classified as Error occurrences (the two where the difference was 10.0 or greater). In addition, there were two Composite Districts in the category where the forecast picked the loser and the actual-forecast difference was between 5.0 and 9.9. This means that the method of forecasting used here produced only 4 errors where the difference between actual and forecasted turned out to be greater than 4.9 points.

There were 8 errors in the forecast where the difference between actual and forecasted Stalemate Index was less than 5.0 points. These are the cases that are close to the cut-off. It is more difficult to correctly forecast the winning party in these cases because of their rank location near the cut-off. A small error in forecasting, something that should be expected, can place the district on the wrong side of the cut-off. Our method has produced only 8 errors of this kind (where the actual-forecasted difference is less than 5.0). The average actual-forecasted difference for districts above the cut-off is 3.92 and the average for those below the cut-off is 4.34. The over-all average error of the Stalemate Index forecasts is 4.12--another credit to the efficiency of the forecasting method.

The most accurate of the three forecasts made here estimated the partisan division of Step 4 Districts to be 171 Democrats and 165 Republicans in 1956 (see Table XXVI). The actual division was 173 Democrats and 163 Republicans. Our forecast, then, underestimated Democratic strength by two seats. This underestimation can be attributed to our error in forecasting the party division of Step 4 Districts and subsequently to the projection of Stalemate Index trends.

The number of Step 4 districts actually won by Democrats in 1956 was 12. Our forecast showed that Democrats would win only 9, an error of 3 districts that is the result of projecting Stalemate Index trends by linear regression. Regardless of this error, however, our forecast of a Congress (of Study Districts) controlled by Democrats with a small majority was an accurate forecast.

Table XXXVI. Comparison of Actual and Forecasted Election Results, 1956

	Actual Results		Forecast Results	
	Dem.	Rep.	Dem.	Rep.
Step 4 Districts	12	10	9	13
Study Districts	173	163	171	165

Summary

Investigation of Stalemate Index changes has shown that the single-election forecaster is not an efficient method of estimating future election results. A determination of marginality based solely on the results of the last election disregards much of the information upon which a forecast should be based. The alternative to the single-election forecaster is, of course, a multi-election, or trend, forecaster. The advantage of basing forecasts upon a series of election outcomes is that the forecasting takes into consideration more of the political history of a congressional district than is possible by limiting the history to the outcome of a single election. A series of election results allows the establishment of a trend line--graphic representation of a district's electoral history.

Rank order correlations of congressional districts ranked according to size of Stalemate Index were shown to be very high during the period 1942 through 1956. The correlations were so nearly perfect that the rank order of the most recent election could be expected to be the rank order of the next election.

The primary contributors to a less than perfect rank order correlation were few in number and, for the most part, expected. We referred to these districts as Error Districts. Expectations of Error District occurrences were found to be special factors such as third party influence, departure of incumbent or withdrawal of candidacy by one of the two major parties.

Out of 70 cases selected as Error District occurrences, only 16 could actually be classified as "unexpected." Only 7 of these 16 cases were accompanied by a party turnover between the two elections involved. Error occurrences can be expected, then, but their total effect on any forecast should be negligible.

Through a systematic reduction of the total number of districts in the ranking we isolated a group of congressional districts classified as "competitive." As a group, these districts reflected the changes in each party's numerical strength in the House of Representatives over time--whether measured by party division of actual districts or of Study Districts. The major difference between this group of "competitive" districts and the total universe of districts was that the "competitive" group tended to exaggerate actual changes. When the Democratic Party actually lost 10% of its House seats in an election, it could be expected to lose 20% or 30% of the "competitive" districts it had previously held. When the Democratic Party actually gained 10%, we could expect a 20% or 30% Democratic gain in the universe of "competitive" districts.

In brief, this group of "competitive" (Step 4) districts was a fair representation of the total group of Actual (or Study) districts, but was more sensitive to political change than the total group. From past experience we can expect changes in Step 4 districts to indicate similar changes in the total group.

Another significant discovery was that the rank orders of congressional districts were more stable from mid-term to presidential year elections than from presidential to mid-term year for the period studied. A forecasted rank order for a presidential election year could be expected to be more accurate than a forecasted mid-term election rank order.

Proposals for Further Research

In this study we have investigated some of the attributes of congressional district elections and have experimented with forecasting to test our discoveries. The forecasting results, when compared with actual results, show that the projection of Stalemate Index trend lines by the method of linear regression is not universally efficient. Most of the differences between actual and forecasted results can be traced to errors in Stalemate Index projections.

The projection method is essentially sound. It is possible that variations of the method used here would produce more accurate results. To this end, further research is suggested as follows:

1. A sampling of public opinion in Step 4 Districts combined with projection of Stalemate Indexes against the background of stable rank orders should provide more accurate information as to the prevailing

partisan trend in each Step 4 District. The "correction factor" that we used to correct the usual Step 4 exaggeration of Study District changes is admittedly weak. Because it is weak, we have had to employ the most conservative "correction factor." It is proposed that public opinion sampling in Step 4 Districts would produce a valuable refinement of our forecasting tools.

2. The Stalemate Index trend line of every district is not a straight line. While the trend of some districts closely approximates a straight line, the trend of others takes a non-linear form. It is proposed that further research be done on the possibility of fitting the "best" regression line to the election data of each district, whether it is linear or non-linear. If the line that best fits the trend of the Stalemate Indexes has a single curve in it, a quadratic regression line could be fitted and the forecast made by extending this line. If the trend line has two curves in it, the best fitting regression would be a cubic regression line. It is suggested that this type of trend line projection might produce more accurate forecasts of individual Stalemate Indexes.

The new concept of "marginality" presented in this study has not been thoroughly tested. Since the "marginal" classification employed here deals with the forecasted Stalemate Index of each district, the research recommended above would have a strong bearing on the efficiency of our concept of "marginality." It is suggested that further research on the accuracy of the new "marginal" ratings be accomplished as a part of the proposed research into refinment of the Stalemate Index projections. Increased accuracy for Stalemate Index forecasting would mean more accurate "marginal" pre-election ratings.

The tools and approaches used here to examine and forecast congressional election results constitute a new exploration into political behavior in terms of aggregate data. Admittedly, there remains much to be done to fully verify the validity of the methods we have suggested. It is hoped, however, that the discoveries of this study have provided a sound basis upon which new studies of congressional elections can be founded.

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APPENDICES

APPENDIX A

Congressional District Stalemate Indexes, 1942-1956

State and District	1942	1944	1946	1948	1950	1952	1954	1956
Ala.-1	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
Ala.-2	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
Ala.-3	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
Ala.-5	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
Ala.-6	50.0	50.0	50.0	32.3	50.0	50.0	50.0	50.0
Ala.-7	50.0	15.9	22.7	50.0	50.0	22.5	28.9	50.0
Fla.-2	50.0	50.0	50.0	38.7	50.0	50.0	50.0	50.0
Fla.-8	48.6	47.8	46.3	43.1	48.0	50.0	50.0	50.0
Ga.-2	50.0	50.0	50.0	50.0	50.0	50.0	49.9	50.0
Ga.-3	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
Ga.-4	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
Ga.-6	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
Ga.-8	50.0	50.0	50.0	50.0	50.0	49.9	50.0	50.0
Ga.-9	35.5	50.0	50.0	50.0	50.0	50.0	50.0	50.0
Ga.-10	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
La.-1	50.0	50.0	41.8	50.0	50.0	16.4	32.3	50.0
La.-3	50.0	50.0	50.0	16.6	50.0	50.0	50.0	50.0
La.-5	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
La.-6	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
La.-7	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
La.-8	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
Miss.-1	50.0	47.9	50.0	50.0	43.8	50.0	50.0	50.0
Miss.-2	50.0	49.0	50.0	50.0	48.7	50.0	50.0	50.0
Miss.-3	50.0	46.4	50.0	50.0	42.5	37.2	50.0	50.0

Continued

Appendix A - Continued

State and District	1942	1944	1946	1948	1950	1952	1954	1956
Miss.-4	50.0	42.6	50.0	50.0	46.3	50.0	50.0	50.0
Miss.-5	50.0	49.1	50.0	50.0	47.6	44.1	50.0	50.0
Miss.-6	50.0	45.7	50.0	50.0	37.9	50.0	50.0	50.0
Mo.-9	-0.9	1.8	2.0	10.2	8.3	4.7	9.0	50.0
Mo.-10	5.0	5.3	8.9	20.1	43.9	10.7	13.9	50.0
N.C.-2	50.0	45.9	50.0	46.2	50.0	44.8	50.0	50.0
N.C.-4	15.2	24.7	15.7	28.3	22.8	25.3	50.0	50.0
N.C.-6	24.5	23.3	13.4	23.3	25.4	19.5	24.2	50.0
N.C.-11	50.0	15.6	8.5	14.9	18.9	13.0	17.5	50.0
S.C.-1	50.0	47.8	49.8	39.1	50.0	50.0	47.7	50.0
S.C.-2	50.0	48.0	49.3	46.4	50.0	50.0	47.7	50.0
S.C.-5	50.0	48.1	50.0	47.1	50.0	43.9	50.0	50.0
S.C.-6	50.0	28.0	48.5	47.1	50.0	50.0	48.9	50.0
Tenn.-6	47.7	47.6	47.2	46.7	50.0	50.0	49.7	50.0
Tenn.-7	11.2	13.3	50.0	19.2	50.0	50.0	50.0	50.0
Tenn.-8	39.3	37.8	50.0	41.1	50.0	50.0	50.0	50.0
Tex.-1	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
Tex.-2	50.0	44.0	46.2	43.3	50.0	29.0	50.0	50.0
Tex.-4	50.0	50.0	43.7	50.0	50.0	50.0	50.0	50.0
Tex.-6	50.0	50.0	50.0	49.9	48.1	50.0	50.0	50.0
Tex.-7	49.1	46.1	50.0	50.0	50.0	50.0	50.0	50.0
Tex.-9	50.0	43.4	50.0	50.0	50.0	50.0	50.0	50.0
Tex.-10	50.0	43.2	50.0	50.0	50.0	50.0	50.0	50.0
Tex.-11	50.0	44.8	50.0	46.3	50.0	50.0	50.0	50.0
Tex.-12	50.0	50.0	37.7	39.1	30.6	50.0	49.4	50.0
Tex.-13	48.1	45.4	50.0	50.0	50.0	50.0	50.0	50.0
Tex.-15	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0

Continued

Appendix A - Continued

State and District	1942	1944	1946	1948	1950	1952	1954	1956
Tex.-17	50.0	46.8	50.0	50.0	50.0	50.0	50.0	50.0
Tex.-18	50.0	43.1	24.0	38.7	2.5	50.0	14.9	50.0
Tex.-19	50.0	50.0	44.6	45.6	43.9	50.0	50.0	50.0
Tex.-20	31.7	50.0	50.0	25.3	50.0	50.0	50.0	50.0
Tex.-21	50.0	39.7	50.0	50.0	50.0	50.0	50.0	50.0
Va.-4	50.0	40.1	34.8	43.7	49.9	49.9	49.9	49.9
Ga-7	50.0	50.0	50.0	50.0	50.0	49.9	50.0	49.6
Tenn.-4	33.6	25.2	33.3	28.4	50.0	50.0	50.0	49.2
S.C.-3	50.0	27.0	49.9	47.7	50.0	43.9	49.4	43.1
Fla.-3	50.0	50.0	50.0	50.0	50.0	50.0	50.0	39.6
Ga.-1	49.1	50.0	49.9	50.0	50.0	50.0	41.9	38.9
N.C.-1	42.6	40.6	39.2	42.7	42.8	50.0	42.5	38.6
Tex.-14	50.0	50.0	50.0	39.0	50.0	50.0	43.8	37.3
Ark.-1C	50.0	42.4	46.4	41.3	50.0	35.5	50.0	37.3
Mich.-1	28.0	30.8	16.3	33.7	33.2	34.5	38.5	36.1
S.C.-4	50.0	26.6	49.8	44.9	49.9	50.0	49.2	35.1
N.C.-7	50.0	29.3	23.9	34.5	34.0	49.3	31.2	34.0
Tex.-3	50.0	43.2	50.0	38.7	41.1	50.0	50.0	33.5
Mass.-12	28.7	25.8	50.0	50.0	50.0	32.2	50.0	32.5
Ala.-8	50.0	50.0	42.4	38.4	50.0	37.3	41.6	30.7
N.C.-3	50.0	21.6	16.7	28.8	50.0	26.1	27.3	28.8
Okla.-3	28.6	26.0	34.3	33.8	32.8	27.9	33.3	26.8
Va.-2	50.0	16.6	12.0	9.4	49.9	49.9	24.5	26.4
Mass.-11	19.3	15.6	22.4	50.0	32.6	19.5	28.2	25.3
Tenn.-5	50.0	48.5	27.1	32.2	15.9	17.5	40.8	24.5
Mich.-15	14.6	13.9	2.1	15.2	14.2	16.8	22.8	24.2
Ala.-4	50.0	34.5	38.1	35.0	43.7	50.0	50.0	23.4

Continued

Appendix A - Continued

State and District	1942	1944	1946	1948	1950	1952	1954	1956
Minn.-8	-20.5	-1.9	7.7	16.6	12.9	12.6	21.8	23.2
Tenn.-9	50.0	50.0	50.0	43.1	50.0	42.8	33.5	21.7
Mass.-3	0.4	11.5	12.2	23.9	21.5	17.5	50.0	20.9
Mich.-13	1.1	8.1	-3.0	12.7	11.6	14.9	16.1	19.8
Va.-7	48.7	10.4	12.2	10.2	19.0	29.1	24.2	19.0
Okla.-6	11.0	13.6	20.2	25.5	16.5	13.3	19.3	18.9
Mass.-7	50.0	17.9	11.5	29.2	28.9	25.1	50.0	18.5
Ill.-24	-4.0	3.1	2.8	19.5	14.9	14.8	19.2	18.2
La.-4	50.0	50.0	50.0	50.0	50.0	50.0	50.0	18.1
Va.-5	46.6	42.3	23.5	49.8	49.9	49.9	49.9	17.4
Va.-8	44.9	33.9	24.2	20.3	26.3	37.9	33.3	17.3
Ala.-9	45.6	31.7	44.1	37.1	50.0	50.0	50.0	15.9
Wisc.-4	9.3	14.8	-1.8	8.2	10.9	14.3	21.1	15.7
Tex.-16	50.0	50.0	50.0	49.8	50.0	50.0	50.0	14.6
La.-2	50.0	50.0	40.7	50.0	50.0	50.0	50.0	14.5
Mich.-16	8.5	11.6	2.4	12.8	11.1	11.0	18.1	14.3
Minn.-4	-27.7	1.8	-2.2	9.4	10.4	11.7	13.0	14.1
Okla.-5	20.7	13.4	3.3	17.8	9.7	12.4	16.0	13.7
N.Y.-4C	9.8	14.2	12.4	16.5	18.3	13.9	21.7	13.4
N.J.-11	-10.4	-2.8	-11.5	0.8	2.1	2.9	7.6	13.3
N.Y.-6C	5.6	13.1	3.5	8.9	5.4	5.4	16.1	12.6
Fla.-7	50.0	48.7	49.2	48.5	50.0	6.3	5.5	12.4
Mont.-1	9.8	18.4	7.6	18.2	10.8	0.7	6.0	12.1
Pa.-26	5.9	11.9	5.2	13.7	6.1	9.1	15.3	11.9
Col.-4	-8.8	-11.7	-8.7	1.9	7.3	0.1	3.5	11.8
Ore.-3	-1.8	-5.1	-6.7	-9.2	-3.6	-4.0	2.4	11.6
Mass.-2	-11.7	-5.7	-1.4	4.9	4.6	1.9	9.6	11.2

Continued

Appendix A - Continued

State and District	1942	1944	1946*	1948	1950	1952	1954	1956
Tex.-8	47.5	42.3	40.8	35.5	27.8	50.0	12.4	11.2
Okla.-4	6.3	9.4	9.2	19.3	13.1	9.0	50.0	11.1
Fla.-4	31.6	21.8	21.8	31.0	32.1	16.0	50.0	10.9
W.Va.-5	7.2	11.7	6.9	15.1	15.7	13.8	17.4	10.7
Okla.-2	3.0	5.7	7.5	14.1	9.4	10.2	14.7	10.2
N.C.-5	17.5	16.5	12.9	23.5	50.0	49.1	16.2	9.7
Ohio-18	-3.3	-1.1	-8.8	4.1	0.8	5.8	7.3	9.6
N.C.-8	6.6	9.8	4.2	12.7	9.6	9.9	9.1	9.5
Mass.-4	-7.2	-5.5	0.5	9.2	7.2	4.7	7.1	9.4
Ga.-5	48.0	47.3	30.8	49.8	50.0	50.0	14.4	9.2
Va.-3	50.0	50.0	23.1	24.0	42.7	7.7	8.0	9.1
Mo.-1C	-0.7	10.5	-3.2	11.4	6.8	6.4	9.1	8.9
N.Y.-7C	9.5	19.5	3.7	15.3	14.2	9.2	15.6	8.3
Pa-1C	-0.1	8.2	-6.7	1.0	3.8	9.2	7.3	8.1
Col.-1	3.7	-2.0	2.1	14.8	1.0	1.1	5.8	7.8
Wisc.-5	3.0	2.8	-5.9	4.2	-1.6	-1.6	2.3	7.8
W.Va.-6	1.8	8.3	2.9	12.5	11.6	5.6	12.7	7.4
Mich.-14	8.7	6.5	-3.5	7.1	1.6	3.1	8.3	6.8
Pa.-21	3.5	9.7	2.9	12.2	7.1	2.9	11.1	6.8
Mass.-8	-6.2	-7.5	-13.5	-1.1	-3.9	-1.1	3.2	6.3
Minn.-6	-7.3	-11.5	-7.4	1.7	6.2	2.6	11.9	6.2
N.J.-10	-4.1	-3.6	-3.4	2.5	11.0	7.6	13.4	6.1
R.I.-1	9.0	11.9	7.1	12.0	13.2	4.9	9.1	6.0
Pa.-15	4.1	7.3	2.5	8.8	8.3	4.8	11.6	5.6
Ohio-9	-1.5	-1.4	0.4	4.0	1.4	3.9	3.2	5.2
Ida.-1	4.1	6.6	-0.3	3.1	-0.5	0.3	4.9	5.1
Fla.-6	34.3	19.4	20.3	16.6	49.8	10.8	50.0	4.7

Continued

Appendix A - Continued

State and District	1942	1944	1946	1948	1950	1952	1954	1956
N.J.-4	-13.9	-5.7	-2.6	11.5	2.2	4.7	8.4	4.5
N.C.-12	15.3	14.2	10.5	13.1	13.7	6.9	11.5	4.5
Ohio-6	-3.3	-2.2	-6.2	-0.1	-1.6	0.1	2.2	4.5
Mo.-8	-0.2	1.3	.0.1	8.1	6.1	2.8	7.2	4.3
Nev.-1	3.6	13.1	-8.8	0.6	2.8	-0.5	-4.5	4.2
Va.-9	13.6	6.3	4.4	2.4	8.4	-1.7	0.7	4.1
Mo.-4C	3.4	2.5	-1.0	8.6	6.2	3.0	4.7	4.0
Ill.-25	-6.0	-5.6	-9.8	-2.1	-2.0	-6.2	2.6	3.8
Ohio-11C	2.3	8.2	4.5	13.4	8.1	3.0	0.3	3.8
Tenn.-3	24.4	17.0	41.1	17.3	50.0	20.0	9.2	3.7
Ill.-21	-6.6	-5.4	-5.6	1.7	-0.4	2.4	4.8	3.5
Me.-2	-17.6	-17.3	-10.7	-17.2	-7.7	-16.7	-4.0	3.5
Mich.-17	-6.9	-7.2	-16.3	-4.6	-5.1	-3.0	2.3	3.4
N.C.-9	50.0	8.8	4.9	9.6	11.1	1.5	2.2	3.4
N.M.-1	8.9	6.1	2.3	8.6	6.3	2.0	9.1	3.1
Pa.-11	-4.5	2.1	-0.8	1.8	4.4	-0.2	0.9	3.0
Ind.-1	3.6	11.6	2.6	11.1	2.8	6.6	11.7	2.7
Minn.-9	-24.8	-9.2	-13.9	-4.6	-14.2	-10.5	1.2	2.7
Ariz.-1C	20.9	19.3	16.8	11.6	15.0	1.5	4.3	2.4
S.D.-1	-9.9	-14.0	-11.5	-3.5	-10.8	-18.5	-8.0	2.4
W.Va.-2	0.2	4.1	-1.4	4.7	4.3	1.5	5.0	2.4
R.I.-2	7.4	7.8	2.6	9.7	10.8	3.4	10.5	2.2
Minn.-3	-15.5	1.0	-2.1	4.6	1.7	2.2	4.4	2.0
Mo.-6	-6.5	-1.0	-2.6	6.8	1.2	-2.4	3.6	2.0
N.Y.-14C	6.2	2.5	-0.3	2.3	3.3	-0.1	7.2	1.9
W.Va.-3	-3.3	2.3	-1.6	7.0	4.3	3.4	8.9	1.5
Fla.-5	19.4	16.6	10.1	20.2	25.9	50.0	50.0	1.4

Continued

Appendix A - Continued

State and District	1942	1944	1946	1948	1950	1952	1954	1956
Wisc.-9	-13.5	----	-49.5	-49.1	-20.8	-15.2	5.4	1.4
Ore.-4	-9.9	-14.0	-19.2	-16.6	-9.5	-16.3	-5.9	1.3
Pa.-14	4.1	6.3	-6.8	2.0	1.2	0.3	12.0	1.3
Pa.-25	-8.5	-0.4	-8.8	-2.6	-2.4	-0.4	3.5	1.3
Mont.-2	2.8	4.3	-4.5	-1.0	-4.7	-12.0	-0.6	0.9
Mo.-11	-1.6	-0.7	-2.1	6.0	2.5	0.4	5.3	0.8
Va.-1	50.0	33.3	26.8	30.4	39.6	49.8	49.9	0.8
Kan.-5	-16.6	-19.0	-12.6	-15.0	-11.8	-20.9	-14.9	0.5
N.J.-13	29.6	20.0	15.4	18.1	5.3	6.9	16.9	0.5
Mo.-7	-11.4	-12.6	-14.0	-2.7	-6.9	-11.7	-3.6	0.3
Ind.-8	-3.7	-2.2	-2.3	5.7	1.4	-2.8	2.3	0.2
Ohio-20C	3.8	7.0	-6.3	10.3	0.7	3.4	4.7	0.2
Ore.-2	-11.4	-15.7	-17.4	-8.2	-5.4	-8.5	-2.6	0.2
Ia.-6	-10.3	-8.9	-13.4	-5.8	-14.8	-18.8	-10.3	0.1
Me.-1	-7.0	-18.8	-9.6	-12.5	-4.0	-11.6	-2.1	-0.1
Neb.-3	-18.7	-20.3	-24.8	-14.8	-16.9	-21.9	-15.2	-0.1
W.Va.-1	-4.7	0.4	-3.1	7.3	1.7	2.9	2.7	-0.3
Wa.-4	-13.6	-10.2	-17.6	-3.2	-14.3	-17.5	-11.0	-0.4
N.Y.-3C	2.4	-0.1	-10.5	-0.3	0.4	-3.3	1.4	-0.5
Ia.-4	-14.5	-4.9	-8.4	-1.7	-7.1	-12.0	-5.6	-0.7
Mich.-6	-8.0	-5.4	-7.7	-0.3	-3.3	-2.8	1.3	-0.9
Ill.-1C	2.0	6.2	-1.9	-6.1	-0.4	-0.3	6.6	-1.1
Ia.-5	-13.2	-4.2	-9.4	-1.2	-7.1	-8.9	-5.6	-1.1
Kan.-6	-14.2	-16.0	-10.1	-7.6	-9.5	-12.5	-3.3	-1.1
N.J.-6	-8.7	-6.2	-15.9	-7.3	-12.2	-14.3	4.6	-1.1
Ia.-2	-7.4	-6.5	-9.1	-7.7	-8.8	-12.3	-5.4	-1.4
Del.-1	-3.9	0.5	-6.4	-0.8	-6.7	-1.9	4.9	-2.0

Continued

Appendix A - Continued

State and District	1942	1944	1946	1948	1950	1952	1954	1956
Md.-3C	11.2	11.9	8.3	10.9	5.1	5.3	11.3	-2.2
Col.-3	-1.3	-6.3	-4.6	0.7	-1.6	-7.7	-3.0	-2.5
Ill.-23	-6.4	-6.2	-6.7	0.4	-3.0	-7.7	-2.9	-2.6
W.Va.-4	-2.2	-1.2	-2.6	3.1	1.7	-3.3	0.2	-2.8
Mass.-10	-1.2	-5.8	-14.0	-19.5	-8.2	-4.6	-0.7	-3.0
Ind.-3	-5.2	-2.0	-6.0	2.3	-3.2	-4.8	-0.6	-3.1
Col.-2	-18.0	-12.8	-16.4	-1.9	-7.8	-13.1	-5.3	-3.4
N.J.-14	28.9	13.2	13.4	12.8	9.2	3.1	13.8	-3.4
Ind.-9	-5.9	-6.0	-6.3	-1.9	-5.2	-6.6	-1.7	-3.6
Conn.-1	-1.4	4.0	-3.1	5.3	8.3	4.0	7.0	-3.7
Kan.-1	-9.2	-17.3	-14.3	-10.5	-16.5	1.5	-4.3	-3.7
Mich.-7	-17.3	-16.3	-24.6	-9.4	-13.2	-10.4	-2.9	-3.7
Kan.-4	-5.7	-8.9	-6.2	-5.6	-8.9	-9.4	-6.2	-3.8
Pa.-19	-1.4	-3.5	-3.6	1.8	0.8	-2.3	1.0	-3.8
Wa.-5	-12.7	-2.3	-12.4	-4.6	-4.8	-6.0	-8.6	-3.8
Pa.-27C	3.2	6.5	-1.7	7.2	0.5	-0.9	2.4	-4.0
Wa.-6	14.2	11.2	-3.9	-7.1	-10.8	-9.8	-5.2	-4.0
Md.-6	-9.5	-7.9	-8.1	-5.3	-11.9	-7.8	-1.4	-4.2
Neb.-2	-3.2	-9.5	-8.3	1.4	-13.5	-6.1	-2.9	-4.2
Ore.-1	-14.3	-16.7	-22.0	-15.2	-16.5	-18.0	-13.0	-4.7
Kan.-2	-9.1	-9.1	-8.8	-1.9	-2.2	-7.3	-4.7	-4.9
Kan.-3	-9.8	-10.2	-5.3	-5.0	-4.7	-9.5	-5.4	-5.0
Ind.-6	-8.1	-5.4	-7.7	-0.2	-2.6	-5.9	-2.5	-5.1
Ohio-16	-3.5	3.0	-6.0	2.5	-0.7	-4.4	-8.3	-5.2
Ia.-7	-14.2	-11.6	-13.0	-6.9	-12.2	-17.4	-10.4	-5.4
Mass.-13	-9.3	-15.8	-17.5	-6.6	-12.5	-10.6	-8.0	-5.6
Tex.-5	50.0	21.4	25.8	49.2	50.0	50.0	-2.9	-5.6

Continued

Appendix A - Continued

State and District	1942	1944	1946	1948	1950	1952	1954	1956
Md.-1	5.9	0.8	-0.9	-2.4	-7.0	-11.1	-5.5	-5.7
Ill.-19	-11.3	-5.8	-14.2	-4.0	-9.0	-10.8	-6.5	-5.8
Pa.-10	-0.5	-0.4	-6.1	1.4	-3.3	-3.6	-0.5	-5.8
Pa.-8	-12.0	-8.0	-8.9	-9.2	-8.2	-9.3	-1.2	-5.9
S.D.-2	-21.9	-19.0	-23.7	-15.9	-10.3	-19.0	-12.8	-5.9
Mich.-9	-15.7	-12.6	-22.1	-9.1	-4.8	-9.7	-5.9	-6.0
Minn.-5	-23.6	-6.6	-8.3	-4.0	-9.3	-9.2	-5.8	-6.0
Wa.-2	9.9	10.4	3.1	13.0	11.5	-4.3	-2.1	-6.0
Mich.-11	-8.0	-9.2	-16.0	-14.0	-16.7	-9.3	-4.9	-6.1
Mich.-12	-3.0	0.6	-4.6	-6.9	-11.7	-8.2	-5.9	-6.3
Fla.-1	50.0	50.0	50.0	50.0	50.0	0.7	-0.7	-6.4
Ind.-10	-7.4	-4.9	-5.9	-3.1	-9.1	-10.4	-6.3	-6.5
Pa.-12	-8.2	-6.8	-12.7	-10.6	-6.8	-10.7	-5.5	-6.5
Wa.-3	-7.1	2.0	-3.9	-2.1	-3.0	-3.4	-14.9	-6.5
Ind.-5	-5.7	-4.0	-6.4	2.6	-4.4	-7.3	-3.5	-6.7
Mich.-18	-6.8	-6.8	-13.9	-1.5	-6.5	-6.3	-3.9	-6.7
Va.-10	33.0	26.1	26.6	0.1	-0.4	-0.3	-4.7	-6.7
Minn.-7	-15.0	-16.0	-15.4	-2.5	-11.7	-12.6	-2.6	-6.9
Pa.-22	-4.4	-2.6	-4.6	5.4	-2.5	-2.4	-1.9	-6.9
Wisc.-1	-23.0	-37.4	-6.9	-2-2	-7.2	-9.4	-4.4	-7.1
Ind.-7	-6.9	-4.2	-1.5	4.2	-0.4	-6.4	-5.5	-7.2
Okla.-1	-4.0	-6.2	-7.5	3.1	-6.2	-8.6	-8.8	-7.2
N.H.-1	-2.1	-0.9	-9.7	-5.8	-7.5	-10.2	-0.2	-7.4
N.Y.-34	-13.4	-2.7	-5.7	-1.2	-5.5	-9.8	-9.4	-7.5
Utah-2	5.8	12.3	-2.7	7.5	3.4	-2.5	-7.1	-7.6
Pa.-24	-10.4	-4.6	-13.9	-4.5	-7.0	-7.1	-2.0	-7.8
Ia.-1	-12.4	-6.7	-11.5	-3.8	-11.9	-12.9	-7.0	-8.0

Continued

Appendix A - Continued

State and District	1942	1944	1946	1948	1950	1952	1954	1956
Md.-2	14.2	9.4	-1.1	8.1	2.1	-11.4	-6.1	-8.1
Wa.-1	15.7	3.4	-13.8	2.0	1.8	-1.6	-2.6	-8.1
N.Y.-5C	3.0	-7.2	-16.0	-0.1	0.7	-5.9	1.2	-8.2
Wyo.-1	-0.7	-5.7	-6.0	-1.5	-4.5	-10.1	-6.2	-8.2
N.J.-1	-11.7	-0.5	-13.5	-3.6	-6.7	-5.2	-4.4	-8.4
Pa.-17	-14.9	-10.2	-15.8	-10.0	-8.0	-14.7	-6.5	-8.6
Ill.-18	-18.8	-9.0	-17.5	-2.1	-11.6	-5.2	-7.5	-8.8
Ia.-3	-10.7	-6.8	-12.0	-8.5	-14.3	-15.9	-12.1	-8.8
Ohio-14	-0.2	1.7	5.1	9.1	1.4	-8.5	-4.6	-8.9
Conn.-2	-1.4	1.2	-5.3	1.6	-0.8	-5.5	-0.7	-9.0
Ohio-3	-1.0	3.2	-1.2	9.0	5.2	-1.1	-2.6	-9.0
Ind.-11	0.3	1.3	1.4	1.1	-6.8	-9.5	-5.1	-9.5
Ill.-20	-4.6	-7.2	-9.8	-2.8	-8.1	-11.8	-12.9	-9.6
Pa.-18	-11.7	-13.2	-15.9	-12.8	-10.7	-13.5	-5.9	-9.9
Conn.-3	-1.7	1.5	-8.9	0.4	2.1	-2.8	-2.7	-10.0
Ida.-2	-4.8	-2.3	-10.7	-1.1	-7.1	-16.2	-10.8	-10.0
Ia.-8	-14.7	-6.2	-18.6	-5.4	-14.2	-49.8	-13.8	-10.1
Wisc.-2	-15.0	-15.5	-13.4	-4.2	-7.7	-12.9	-4.0	-10.3
N.J.-12	-12.3	-1.7	-14.5	-1.9	-4.2	-4.8	-3.1	-10.5
Ohio-15	-10.7	-10.0	-4.8	5.4	9.2	14.3	-4.0	-10.5
Pa.-16	-16.0	-12.3	-19.1	-14.1	-14.6	-11.7	-9.8	-10.5
Utah-1	0.2	7.8	0.1	9.0	1.1	-10.5	-3.4	-10.5
Me.-3	-50.0	-27.9	-22.9	-20.9	-12.9	-26.2	-10.5	-10.6
Mass.-9	-8.8	-8.5	-11.5	-6.7	-8.4	-9.3	-6.7	-11.1
N.J.-8	-16.8	-8.7	-21.2	-0.1	-13.8	-13.8	-4.9	-11.1
Wisc.-3	-18.4	-22.3	-48.1	-19.5	-8.9	-25.1	-12.1	-11.2
Minn.-1	-21.2	-11.7	-18.4	-11.4	-17.1	-19.4	-10.9	-11.5
N.Y.-11C	-11.1	-2.2	-12.7	0.5	-2.6	-6.2	-9.6	-11.6

Continued

Appendix A - Continued

State and District	1942	1944	1946	1948	1950	1952	1954	1956
Ohio-12	-8.4	-4.3	-12.0	-2.1	-14.1	-12.3	-11.5	-11.8
Wisc.-7	-21.9	-19.6	-21.9	-13.2	-18.3	-22.3	-9.1	-11.8
Conn.-5	-4.0	-2.3	-6.2	-1.9	-3.7	-6.7	-2.8	-11.9
Pa.-7	-8.5	-1.5	-16.5	-11.8	-12.7	-11.7	-10.9	-11.9
Mich.-4	-19.0	-14.3	-23.0	-15.8	-18.9	-16.8	-12.3	-12.0
N.Y.-28	-9.6	2.9	-9.9	-11.8	-12.5	-15.9	-16.1	-12.2
Ill.-22	-8.9	-7.3	-14.3	-4.6	-12.1	-13.0	-12.0	-12.3
Ohio-5	-13.7	-21.7	-12.0	-3.1	-9.7	-13.2	-9.5	-12.3
Va.-6	46.7	19.0	15.3	15.0	49.7	-1.6	-12.5	-12.3
Ind.-2	-14.2	-11.9	-11.8	-5.6	-7.5	-13.6	-9.6	-12.4
Mass.-14	-9.4	-14.1	-13.6	-11.4	-14.5	-13.4	-12.0	-12.4
N.Y.-8C	-18.3	-13.1	-21.8	-9.4	-12.2	-13.1	-10.4	-12.5
N.D.-1	-10.4	11.2	-21.5	-19.9	-15.6	-28.4	-16.1	-12.6
N.C.-10	5.4	15.4	3.8	9.8	2.3	-7.4	-7.5	-12.7
Pa.-20	-11.0	-7.8	-15.9	-10.4	-9.5	-12.8	-6.3	-13.0
Mich.-2	-13.4	-14.9	-21.6	-6.4	-10.7	-13.6	-9.9	-13.3
Ohio-8	-9.3	-15.4	-15.8	-5.4	-14.5	-18.7	-13.0	-13.5
Ind.-4	-11.0	-10.2	-9.9	1.3	-6.6	-14.2	-10.1	-13.6
Ill.-16	-25.3	-13.8	-21.9	-8.5	-17.3	-16.5	-50.0	-13.7
Mass.-1	-7.9	-0.5	-9.2	-7.2	-18.9	-17.2	-5.6	-13.8
Minn.-2	-26.9	-25.7	-26.0	-13.9	-9.8	-17.7	-7.9	-13.8
Mich.-3	-16.6	-12.9	-19.5	-10.4	-11.9	-12.2	-9.6	-14.0
N.Y.-2C	-24.6	-17.7	-28.5	-19.5	-13.4	-18.3	-11.9	-14.0
Mich.-8	-17.4	-17.7	-23.1	-12.1	-10.9	-16.8	-12.9	-14.3
Wisc.-10	-19.0	-13.2	-5.3	-6.6	-7.0	-17.4	-9.8	-14.5
Ill.-15	-19.0	-11.4	-20.0	-6.4	-13.3	-13.6	-12.8	-14.6
N.J.-5	-15.1	-8.7	-11.4	-8.1	-11.6	-12.2	-9.3	-14.6
Wisc.-8	4.5	-2.8	-14.7	-6.9	-12.1	-23.6	-12.0	-14.6

Continued

Appendix A - Continued

State and District	1942	1944	1946	1948	1950	1952	1954	1956
Ill.-17	-18.6	-11.3	-18.9	-10.0	-15.1	-13.6	-15.0	-14.9
Ohio-1C	-12.7	-6.4	-13.7	0.6	-5.8	-9.1	-11.2	-15.1
N.J.-3	-3.4	-7.0	-15.8	-9.3	-12.7	-14.7	-7.6	-15.3
Mich.-10	-10.4	-15.0	-21.5	-13.8	-16.2	-17.5	-11.4	-15.6
N.H.-2	-8.4	-4.5	-14.9	-7.8	-14.5	-16.4	-10.4	-15.9
Ohio-7	-18.8	-11.5	-17.9	-50.0	-17.9	-50.0	-13.9	-15.9
Pa.-23	-14.4	-14.2	-19.9	-14.3	-14.2	-17.8	-11.9	-16.1
Ohio-17	-11.6	-12.1	-14.7	-2.5	-13.7	-18.2	-14.6	-16.5
Neb.-4	-17.1	-16.6	-21.3	-13.6	-15.8	-23.3	-20.4	-16.7
Pa.-13	-19.2	-13.7	-24.4	-16.9	-16.1	-16.4	-14.3	-16.7
N.Y.-12C	-22.3	-5.3	-5.7	-0.1	-9.4	-10.8	-16.5	-16.8
Neb.-1	18.3	-19.9	-16.4	-7.2	-4.5	-22.0	-8.6	-17.0
Mich.-5	-4.5	-7.7	-21.6	-11.1	-16.9	-16.5	-13.3	-17.1
Vt.-1	-20.2	-12.4	-14.3	-10.8	-23.9	-21.8	-11.4	-17.1
Wisc.-6	-21.1	-17.1	-9.8	-5.9	-15.0	-21.7	-12.5	-17.2
N.Y.-32	-14.1	-9.7	-9.2	-7.0	-15.2	-18.5	-11.5	-17.5
N.Y.-35	-14.7	-3.1	-13.3	-2.1	-11.9	-13.4	-13.6	-17.6
N.Y.-1C	-23.7	-18.5	-27.3	-15.8	-0.9	-9.8	-14.6	-17.8
N.J.-2	3.0	-4.4	-17.1	-12.1	-4.3	-13.4	-13.6	-17.9
Pa.-9	-18.8	-11.3	-22.7	-17.1	-17.2	-16.2	-12.7	-18.4
Conn.-4	-2.1	-0.5	-10.9	-5.9	-5.5	-10.4	-7.4	-18.7
N.J.-9	-11.7	-13.5	-19.1	-12.2	-12.5	-16.4	-10.2	-18.7
N.Y.-43	-18.1	-13.8	-22.0	-12.4	-16.7	-17.1	-16.3	-18.7
Ohio-4	-13.5	-11.0	-9.8	-5.8	-16.1	-18.3	-17.6	-18.8
N.Y.-10C	-12.6	-0.4	-11.8	-1.4	-14.1	-15.2	-16.5	-19.1
N.Y.-36	-15.5	-17.1	-22.0	-10.5	-17.8	-20.0	-18.4	-19.6
Ill.-14	-24.5	-20.5	-28.4	-18.3	-24.2	-21.5	-22.4	-20.6

Continued

Appendix A - Continued

State and District	1942	1944	1946	1948	1950	1952	1954	1956
N.J.-7	-18.8	-16.1	-19.0	-6.5	-19.7	-18.3	-12.2	-20.7
Ohio-13	-7.4	-23.9	-11.9	-4.3	-14.9	-8.8	-9.1	-20.7
N.Y.-29	-10.4	-12.6	-19.5	-14.8	-16.9	-20.8	-17.4	-21.4
N.Y.-37	-15.7	-17.8	-21.3	-13.0	-14.5	-19.5	-21.7	-21.6
Tenn.-1	-46.1	-50.0	-50.0	-34.7	-10.5	-15.9	-12.5	-22.2
N.Y.-33	-22.7	-13.5	-23.6	-12.7	-16.2	-19.9	-19.0	-22.7
Mass.-5	-50.0	-23.2	-21.8	-49.7	-26.1	-26.1	-50.0	-23.3
N.Y.-15C	-19.5	-13.8	-20.9	-15.9	-21.0	-22.6	-17.7	-23.5
N.Y.-13C	-26.3	-20.5	-26.7	-16.5	-22.2	-25.7	-24.2	-27.8
N.Y.-9C	-20.2	-21.9	-28.1	-15.3	-23.3	-28.1	-27.9	-28.5
Mass.-6	-25.3	-17.0	-20.2	-50.0	-23.7	-47.6	-21.2	-50.0
Ohio-10	-14.7	-13.0	-15.3	-5.7	-11.4	-14.0	-11.7	-50.0
Tenn.-2	-4.8	-7.1	-34.0	-8.0	-2.2	-18.9	-8.0	-50.0

APPENDIX B

STALEMATE INDEX

NOTE: The following clarification and explanation of the Stalemate Index is taken directly from the work of Professor Ralph M. Goldman, Department of Political Science, Michigan State University. The Stalemate Index was devised and first employed by Dr. Goldman.

"Index numbers are statistical inventions for summarizing in a single figure a group of related variables and for measuring their differences. Economists, for example, have found index numbers particularly useful in measuring movements over time in price levels, cost-of-living, industrial growth, etc. Perhaps because of the non-quantitative character of most political data, political scientists have made little use of the index number.[1]

"The stalemate index (SI) is designed to summarize in a single number the balance in the voting strength of the majority party and its principal opposition party within a given voting district or unit. The stalemate index is one-half the difference between the majority's and the principal opposition's percentages of the district's total popular vote. For example, in New Hampshire in 1828 the Jackson party received 53.55 per cent of the popular vote for presidential electors and the Adams party received 46.45 per cent; there was no vote for other parties. The arithmetic differences between the two was 7.10 percentage points. This figure, however, magnifies the size of the electoral "distance" between the two parties. The Adams party would have needed only half of the arithmetic difference, that is, 3.55 per cent of the vote cast, plus one additional vote, in order to overtake (stalemate) and defeat the Jacksonians. This half of the arithmetical difference is called the stalemate index. The Index describes in proportion terms the electoral distance that the principal opposition would have had to cover in order to tie the majority in the given election. The index name is intended to focus attention upon the majority-opposition relationship.

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[1]The use of political index numbers has been urged by Harold D. Lasswell, The World Revolution of Our Time (1951), and endorsed by Norton E. Long in a review of the Lasswell book, American Political Science Review (September 1952), p. 867.

"The stalemate index is based upon percentage relationships so as to make the measures of state party balance comparable in all elections and regardless of the absolute number of votes cast. In every case the SI has as its denominator 100 per cent, representing the total vote cast for presidential electors. However, only the percentage relationship between the two major parties is actually reported by the index.

"Finally, a third method might have used the vote data of only one of the major parties, either Democratic or Republican. In the 1828 New Hampshire example, either the 53.55 per cent representing the Jackson vote or the 46.45 per cent Adams strength could have been taken alone as the indicator of the party balance in the state. Use of one party's voting data carries with it several assumptions that are unsatisfactory for some of the purposes of this study. First, there is the assumption that the minor party vote is invariably insignificant and may therefore simply be "rounded into" the opposition vote percentage. In the four-party example given earlier, if X's were the party vote used, the index of party balance would be 35 per cent, with the opposition to X consisting of 65 per cent of the electorate. In this way, the significantly large votes of parties Y and Z are completely obscured. A second assumption is that examination of one party in a two-party system is all that is necessary to know what is happening to the other major party. But it is clear from the above example, that W's 45 per cent strength is hardly evident from X's 35 per cent or the opposition total of 65 per cent. Still another assumption is that the critical winning achievement of a party is to obtain over 50 per cent of the total vote. In the actual situation, however, the balance between the two major parties may be pushed a substantial distance from the 50th percentile by a large third party vote. The stalemate index realistically identifies the hurdle to victory: one vote more than a stalemate.

"The stalemate index always takes into account the situation of the two major parties and gives weight to the third party vote without complicating the data. By positing for each voting district or unit a condition of political equilibrium that may be quantified and variable at the same time, the stalemate index provides a transitive and additive relation that is of substantial value in the analysis of election data. For example, assume that four, and only four, parties receive votes for presidential electors in the following proportions: W - 45 per cent; X - 35 per cent; Y - 15 per cent; Z - 5 per cent. These total 100 per cent. The stalemate index refers to the relationship between the two parties receiving the highest percentages, that is, W and X, or 45 and 35, figures representing proportions of the total vote. In this case, the stalemate index is 5 points, or $\frac{1}{2}$ (45-35). Thus, the specific variables included in the SI are: majority's per cent, opposition's per cent, and one hundred per cent. The strength of other minor parties, if any, is reflected indirectly because total vote cast instead of major party vote is used as the denominator for the proportion.

"The stalemate index highlights the relationship between the two largest parties, hence is convenient for dealing with the voting data of relatively stable two-party systems. Despite the one-party leanings of many states, the American national party system has been predominantly a two-party one. The occasional national third-party movements have failed to alter the basic two-party character of the national voting.

"Other indexes than the stalemate index were rejected on one or another ground. The percentage differences in the two major party proportion of the total vote might have been used. Thus, in the 1828 New Hampshire case cited earlier, 7.10 rather than 3.55 would have indicated the balance between the parties. This, however, would have amounted to doubling the electoral deficit of the opposition. Another method would have been the use of major party voting data only; that is, the votes received by the two highest parties taken as 100 per cent rather than the total vote cast. This would have left the third-party situation entirely out of the index, leaving a somewhat unrealistic picture of the party balance."

Although the "third" or minor party vote could have influenced the results of this particular study, it did not. Minor party votes for congressional candidates did appear during the 1942-1956 period in a few cases and these instances have been noted in the text.

APPENDIX C

C-1. Districts Removed in Step 1. One-Party Districts

State	Dist.	State	Dist.	State	Dist.
Alabama	1	Maine	3	Texas	1
	2				2
	3	Massachusetts	6		3
	4		7		4
	5		11		6
	6		12		7
	7				8
	8	Michigan	1		9
	9				10
		Mississippi	1		11
Arkansas	1C		2		12
			3		13
Florida	2		4		14
	3		5		15
	4		6		16
	7				17
	8	New York	9C		18
			13C		19
Georgia	1				20
	2	North Carolina	1		21
	3		2		
	4		3	Virginia	1
	5		4		2
	6		6		3
	7		7		4
	8				5
	9	Oklahoma	3		8
	10				
		South Carolina	1		
Illinois	14		2		
			3		
Louisiana	1		4		
	2		5		
	3		6		
	4				
	5	Tennessee	4		
	6		5		
	7		6		
	8		7		
			8		
			9		

Total One-Party Districts: 93

C-2. Districts Removed in Step 2. Composite Districts

State	Dist.	State	Dist.	State	Dist.
Arizona	1C	New York	1C	North Dakota	1C
			2C		
Illinois	1C		3C	Ohio	1C
			4C		11C
Maryland	3C		5C		20C
			6C		
Missouri	1C		7C	Pennsylvania	1C
	4C		9C		27C
			10C		
New Mexico	1C		11C		
			12C		
			14C		
			15C		

C-3. Districts Remaining After Step 4. Competitive Districts

State	Dist.	State	Dist.
Virginia	6	Connecticut	3
Washington	1	Ohio	18
Washington	2	Indiana	8
Utah	2	New Jersey	10
North Carolina	10	Pennsylvania	11
Nevada	1	W. Virginia	1
Wisconsin	5	Minnesota	6
Montana	2	Colorado	4
Indiana	11	New Jersey	11
Utah	1	Massachusetts	2
Connecticut	1	New Jersey	4

APPENDIX D

Districts Removed in Step 3 by 1956 Rural-Urban Status. Redistricted Districts

Class I Rural	Class II Small-Town	Class III Mid-Urban	Class IV Metropolitan
Colo.-2	Conn.-2	Colo.-3	Colo.-1
Colo.-4	Ida.-2	Conn.-1	Ind.-1
Ida.-1	Ind.-2	Conn.-3	Ind.-11
Ind.-9	Ind.-5	Conn.-4	Mass.-4
Iowa-6	Ind.-6	Conn.-5	Mass.-8
Kan.-6	Ind.-7	Del.-1Al	Mass.-10
Md.-1	Iowa-2	Ill.-18	Mass.-13
Mich.-4	Iowa-3	Ind.-3	Mich.-13
Mich.-11	Iowa-4	Ind.-4	Mich.-14
Mich.-12	Iowa-7	Ind.-8	Mich.-15
Minn.-2	Iowa-8	Ind.-10	Mich.-16
Minn.-6	Kan.-1	Iowa-1	Minn.-3
Minn.-7	Kan.-3	Iowa-5	Minn.-4
Minn.-9	Kan.-5	Kan.-2	Minn.-5
Nebr.-3	Me.-2	Kan.-4	Nebr.-2
Nebr.-4	Md.-6	Me.-1	N.J.-1
N.C.-8	Mass.-3	Mass.-1	N.J.-5
N.C.-11	Mich.-7	Mass.-2	N.J.-6
N.C.-12	Mich.-8	Mass.-5	N.J.-8
Ore.-2	Mich.-9	Mass.-9	N.J.-9
S.D.-1	Mich.-10	Mass.-14	N.J.-10
Tenn.-1	Minn.-1	Mich.-2	N.J.-11
Vt.-1AL	Mont.-1	Mich.-3	N.J.-12
Va.-9	Mont.-2	Mich.-5	N.J.-13
W.Va.-2	Nebr.-1	Mich.-6	N.J.-14
W.Va.-5	Nev.-1AL	Minn.-8	Ohio-12
Wisc.-9	N.H.-2	N.H.-1	Ore.-3
Wyo.-1AL	N.J.-3	N.J.-2	Pa.-7
	N.J.-7	N.J.-4	R.I.-1
	N.C.-5	N.C.-10	R.I.-2
	N.C.-9	Pa.-8	Tex.-5

Continued

Appendix D - Continued

Class I Rural	Class II Small-Town	Class III Mid-Urban	Class IV Metropolitan
	Ohio-18	Pa.-11	Wash.-1
	Ore.-1	Pa.-14	Wisc.-4
	Ore.-4	Pa.-20	Wisc.-5
	Pa.-9	Pa.-24	
	Pa.-12	Utah-2	
	Pa.-13	Va.-6	
	Pa.-21	Wash.-2	
	Pa.-25	Wash.-5	
	S.D.-2	Wash.-6	
	Utah-1	W.Va.-1	
	W.Va.-6	Wisc.-1	
	Wash.-3	Wisc.-2	
	Wash.-4	Wisc.-8	
	Wisc.-3		
	Wisc.-6		
	Wisc.-7		
	Wisc.-10		
Total: 28	48	44	34