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Candidates' Policy Positions in Congressional Elections

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*David W. Rohde*

Major professor

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RISK AND ...

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A DISSERTATION

RISK AND UNCERTAINTY IN POLITICAL

CHOICE:  CANDIDATES' POLICY POSITIONS

IN CONGRESSIONAL ELECTIONS

By

Eugene J. Alpert

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**ABSTRACT**

RISK AND UNCERTAINTY IN POLITICAL CHOICE:
CANDIDATES' POLICY POSITIONS IN
CONGRESSIONAL ELECTIONS

By

Eugene J. Alpert

This study involves the analysis of decision making
by congressional candidates under conditions of risk and
uncertainty. Decision making under uncertainty occurs if
each action chosen leads to one of a set of possible out-
comes, each occurring with a certain probability. The
probability is either unknown or estimated by the decision
maker. If there is some expected loss that can occur,
then the decision making involves a level of risk.

In a political campaign, the action often involves
the choice of a public policy position that will lead to a
minimization of the expected loss of votes in the election.
Since there is often uncertainty about the true distribu-
tion of voter opinion on an issue, a candidate can use
subjective and objective information to estimate the
majority position. A theoretical framework is thus
developed to determine the effects of risk and uncertainty
on the selection of a public policy position.

The model includes concepts associated with Bayesian
decision making, since the choice of a public policy

position involves the use of prior information to establish and revise estimates of district opinion as a campaign progresses. The Bayesian analysis allows us to deduce a number of hypotheses relating the independent variables of uncertainty and risk to the candidates' choice of a public policy position, the dependent variable.

The 1958 Representation Study, conducted by Warren E. Miller and Donald E. Stokes at the University of Michigan, includes data used to test the hypotheses. The study contained interviews with 251 Congressmen from the 85th Congress and their challengers in the 1958 midterm election. The basic findings show that candidates who were opposed for election and who perceived less uncertainty about district opinion were more likely to choose a public policy position close to what they perceived to be the opinion of a majority in their district than those candidates who perceived more uncertainty. Opposed candidates who perceived themselves to be in a situation where uncertainty and risk made the potential for a loss of votes high were also more likely to follow what they perceived to be district opinion. Generally, the results indicate that risk and uncertainty could be used to explain the circumstances in which candidates would be more likely to follow their perceptions of district opinion.

The research provides empirical information about the linkage between public opinion and public policy, which can assist in the determination of the responsiveness of

representatives to their constituents' opinions. For example, majority party candidates from safe districts and incumbents in general were more likely to follow district opinion than those from the minority party in safe districts and those who were nonincumbents. This is interesting, because, as earlier results from these data have shown, the constituents from these districts were not likely to vote for their representatives on the basis of the candidates' legislative positions.

The present study provides support for the use of subjective decision making techniques in studying the perceptions of political actors. As a result, additional avenues of research in this area can be identified, as well as areas where a reconceptualization according to the framework of Bayesian decision making can provide stronger results. This is illustrated in the thesis by the examination of the "marginality hypothesis," which showed that a subjective decision making approach could help to understand the contradictory findings in the literature. In this way, the relationship between campaign decision making and legislative decision making can be more fully explored.

what must have been record time, Lynn Dally drew many of the figures, and Kathy Larsen and Jackie Wishert helped prepare the bibliography.

It is acknowledged that neither the ICPR nor the original collectors of the data for the 1958 Representation Study, Warren E. Miller and Donald E. Stokes, bear any responsibility for the analysis or interpretations presented herein.

My sincere thanks and a debt of appreciation go to my parents, Esther and Theodore Alpert, who have helped support my education and whose encouragement was always welcomed. A very special acknowledgment is owed my wife, Heidi, who has assisted me during various stages of the research and in many valuable ways, while patiently waiting for this long task to find its way toward completion. I dedicate this dissertation to Heidi.

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CHAPTER ONE

RISK AND UNCERTAINTY IN POLITICAL DECISION MAKING

1.  Introduction

Political actors are often required to make a series of decisions, that is, to choose.  Choice is defined as a basic social act that transforms the essentially private thoughts of individuals into "public activity."[1]  The act of decision  by an individual is a manifestation of his desire to achieve a particular goal in the most efficient way he knows how.

A person who is confronted with a set of choices will therefore try to make an optimal or rational decision; one that is "best" for him.  This implies that a rational decision may be different for different persons, depending upon how they evaluate the possible consequences of a decision.  In addition, the rational decision may depend upon the decision criteria applied, since the use of objective or subjective probabilities can indicate different choices, neither of which can be considered "wrong" or "irrational."[2]

A rational decision may also depend upon the relevant information that is available.  There are consequently a number of parameters the values of which must be estimated in order to make an optimal choice.  Since information about

these parameters will vary across a set of individuals, they must make choices under conditions of <u>risk</u> and <u>uncertainty</u>.[3] Decision making under <u>uncertainty</u> occurs if each action chosen leads to one of a set of possible specific outcomes, with each outcome occurring with a certain probability, which is unknown. When the probability is known or estimated by the decision maker, it is termed decision making under <u>risk</u>. <u>Risk</u> in another sense means that there may be some expected loss as a result of choosing an action. Since there is uncertainty regarding the occurrence of these factors, the rationality of a decision maker can therefore be interpreted as the efficient use of contextual information so as to produce actions consistent, <u>a priori</u>, with his preferences.[4]

This study is concerned with the decision making of congressional candidates under similar conditions of risk and uncertainty and the extent to which their behavior coincides with that expected under the rubrics of a rational choice model. By employing the concepts associated with subjective decision making, a set of hypotheses are developed and tested to determine how candidates' perceptions of their environment determine the type of public policy positions they are likely to choose in order to attain their desired goal of winning political office.[5]

In this chapter, we will examine previous attempts to study the perceptions of political actors and try to show the significance that the present study has for the

development of a theory in political science. In the first
section, the problem of the responsiveness of legislators
to their constituents is discussed, and then a decision-
theoretic model is examined to illustrate the importance of
investigating the perceptions of political actors. The
latter part of the chapter continues the literature review
by outlining the empirical research that has been conducted
to determine the relationship between perceptions and poli-
tical behavior in various political settings.

In the following chapter, a subjective decision making
model, employing the concepts of Bayesian decision theory,
is applied to the study of a congressional campaign in order
to investigate the processes through which candidates decide
on public policy positions. The results of this research
will provide us with some empirical evidence about the
effects of risk and uncertainty on the nature of represen-
tative government in the United States.

## 2. Representatives and Responsiveness

A basic process that is important in a democratic
society is that of responsiveness. Responsiveness connotes
a conscious and deliberate effort by a politican to match
his decisions of public policy to the opinions of most
people in his constituency.[6] Responsiveness exists
1) when a politician perceives his constituency's opinions
correctly and 2) when he acts in accordance with his per-
ceptions of constituency opinion.[7]

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This topic is an important concern because it involves
the activities of individuals who are often elected to re-
present us. Political decision makers elected to positions
in government are likely to have as their goal the attain-
ment and retainment of public office. In order to achieve
their goal, they often rely upon a number of resources, one
of which is the responsiveness of their policies to public
wants and needs, or at least the appearance of responsive-
ness.[8] As Hershey argues:

> Even if voters do not force their representa-
> tives to be responsive, responsiveness may
> still occur. If leaders feel, rightly or
> wrongly, that the voters are determined to
> have their views represented, then learning
> and expressing public opinion may be seen as
> the road to public approval and reelection.
> This alternative rests on the plausibility
> of the idea that leaders feel voters are
> issue-oriented, even though we know most
> voters are not.[9]

Thus, the perceptions of political decision makers are
strongly linked with one of the basic fundamentals of our
democratic principles, that is the extent to which the
representatives represent their constituents. Since not all
representatives are likely to be exposed to exactly the
same quantity and quality of information, and will undoubt-
edly exhibit some bias in interpreting the information they
receive, it becomes an important question as to the extent
to which these governmental representatives try to fulfill
their responsibilities. Also, if one is concerned about
democratic theory and popular control in a democratic
government, then only through the study of perceptions can

we determine whether in fact some responsiveness to public opinion does exist.

The concept of responsiveness, however, may only go as far as the coincidence of politicians' policy positions with constituency opinion guarantees political rewards. If a politician does not believe people know anything or even care about a particular issue, then does it really matter what stand he takes?

If we at least assume that politicians desire election to office, and that they will choose public policy positions that they believe will help them in attaining their goal, then we must investigate why they behave in certain ways, why some seem more responsive than others, and why less responsive ones are nevertheless successful.

Jones[10] appears to be on the right track in investigating this problem, for he asks if representatives even attempt to be responsive, or what factors are operating to facilitate or even discourage responsiveness. In a study of the 1969 Texas legislature, Jones examined the causal relationship between representatives' policy attitudes and roll call behavior, and between their perceptions of constituency attitudes and roll call behavior. He found that the relationship between attitudes and roll call behavior was much more important than perceptions and roll call behavior. This was also the case for representatives from marginal districts, so we find that competitiveness does not facilitate responsiveness. Only those representatives who adopted

the role of a delegate, rather than of a trustee or politico, appeared to follow their perceptions of constituency opinion, rather than their own attitudes.[11] Responsiveness, according to this study, is based primarily on the particular role orientation of the representatives.

If responsiveness is based on the predisposition of the representative, the question is, to what extent is there likely to be popular control over public officials and their policies? In investigating this question, Sullivan and O'Connor listed four necessary conditions for a strong linkage between constituency attitudes and public policy:[12]

1. voters must perceive the issue positions of the candidates,

2. voters must cast their ballots on issue grounds,

3. opposing candidates must differ attitudinally on the issues,

4. winners must vote in accordance with their pre-election attitudes.

The last two conditions are of particular significance, because without a difference among the candidates on the basis of their policy positions and some consistency between their campaign positions and roll call voting, there is certainly no overwhelming reason for the voters to become informed on the issues or vote on the basis of issues.[13]

In order to answer some basic questions about our representative democracy, we must examine the nature of responsiveness of politicians to constituency opinion and

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the degree of popular control over public policy. To do this, we need to fully understand the linkages between constituency opinion and public policy.

While much research has been concentrated on whether citizens vote on the basis of issue content and perceived differences in the candidates,[14] we have only an incomplete picture of how politicians perceive their constituents' opinions and how they decide on a public policy position. In this study we will be primarily focusing on the responsiveness of candidates for congressional office and the extent to which there appears to be some popular control by the citizens over their leaders' policies. In this way, we can provide additional information about the relationship of constituency influence within a campaign environment to that of the legislative arena. Significantly, the study will be organized within a theoretical framework that will allow us to derive some lawlike generalizations about the nature of representative government in the United States.

3. Constituency Influence in a Legislature:
   A Theoretical View

The political arena in which we can most readily measure the responsiveness of a politician is a legislature. In contrast to a politician in the executive branch, a legislator must often take clear cut stands on issues by answering series of roll call votes.[15]  Traditionally, his responsiveness to constituency opinion has been measured by his voting record.  Along with constituency influence, other

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important variables, such as party influence, have been examined to determine their influence on congressional voting.[16]

Until recently, many of the findings of these studies were either contradictory or apparently so unrelated that the development of a theory of constituency influence based on these studies was precluded. One example of the kind of contradictory evidence that posed more questions than could be answered was that discovered by Miller and MacRae.[17] Miller found that representatives from safe districts were in greater agreement with their constituents than those from marginal districts. MacRae, on the other hand, found just the opposite; representatives from marginal districts were more in agreement with their constituents than those from safe districts. A resolution of this contradiction, as well as a breakthrough in studying constituency influence, has come from a model developed by Morris Fiorina. The model was a formal, deductive approach that utilized a Bayesian decision making framework.[18]

Basically, Fiorina presented a new approach to the problem of an elected representative choosing an optimal strategy of roll call voting to assure himself of a certain minimally acceptable level of the probability of reelection. By employing a decision-theoretic approach, he deduced hypotheses incorporating the parameter of a representative's perceptions about the state of the world[19] and was able to reorganize much of this seemingly contradictory evidence

about representative-constituency relationships in the literature into a coherent framework. Although the connection between the formal model and the testing of its hypotheses was not entirely a direct one, Fiorina offered several convincing arguments and additional data that helped support the hypotheses.

Since Fiorina's model has contributed to the development of a theory of constituency influence, and has relied upon the concept of legislators' perceptions, it would be worthwhile to examine his approach at some length. This will help lay some of the groundwork for the present study, in which the perceptions of congressional candidates are investigated.

In Fiorina's model, the states of the world were represented by $C$, the degree to which a representative believed that a group in his constituency "cared" about the representative's vote on an issue, and might be drawn into the campaign, either in support or in opposition to the legislator.

Two kinds of goals were postulated: 1) to maximize the probability of winning or 2) to maintain a minimum acceptable level of the probability of winning. A "maximizer" would then choose an alternative that yielded the largest expected increase in the probability of winning. A "maintainer" would adopt an optimal voting strategy that is a discrete probability distribution over the set of alternatives, such that the expected value of voting over

time would equal zero. This would result in a "break even" situation in which the legislator's personal probability of election would remain at an acceptable constant level.[20]

From these and other assumptions, Fiorina was able to deduce hypotheses about the best strategies for representatives with either maximizing or maintaining goals. Our concern is what effect the subjective estimate, $C$, of drawing a group into the next election campaign, had upon these strategies. Once this is determined, one can begin to see the importance that the estimation of this parameter has upon other types of political choices, including those outside the legislative environment.

To begin, let us consider some of Fiorina's hypotheses. First, he found that in a homogeneous constituency a legislator should not vote any differently when his estimate of $C$ was high, than when it was low. That is, his perception of $C$ made no difference in his voting decision, assuming rationality. For this case, the maximizer had a dominant strategy and the maintainer had a mixed strategy over the set of possible alternatives.[21]

In the heterogeneous case, with two groups in the constituency with diametrically opposed policy preferences, the maximizer had no dominant strategy when his perception of $C$ for both groups was equal ($C_1 = C_2$). In fact, all the strategies of the maximizer were equivalent in their leading to a decline in his subjective probability of reelection. In this situation, the maximizer would lose

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votes no matter what his choice. In contrast, a maintainer was required to vote for the preferences of the stronger group to maintain a certain probability of reelection. These results lead to Fiorina's Proposition 10, which stated that in cases when $C_1 = C_2$, a representative's voting does not vary with his estimate of $C_1$ and $C_2$.[22]

In the general heterogeneous case, the estimate of $C_1$ and $C_2$ did make a difference. When $C_1 \neq C_2$ was assumed, the existence of an optimal voting strategy for the maintainer was postulated and it was discovered that the maximizer and the maintainer may be led to vote predominantly with the weaker group.[23]

The following propositions derived by Fiorina are stated below in order to summarize as well as emphasize the significance of the subjective estimate of $C$ in a representative's voting decision. We see that especially in the general case of $C_1 \neq C_2$ that the estimate of $C$ can have some nonobvious consequences:

Proposition 17: Ceteris paribus, with a two-group constituency, as the maximizer raises his estimate that the stronger group cares, the likelihood that he votes with them increases.

Proposition 18: Ceteris paribus, with a two-group constituency, as the maximizer raises his estimate that the weaker group cares, the likelihood that he votes with them increases.

Proposition 19: Ceteris paribus, with a two-group constituency, as a maintainer raises his estimate, $C_1$, that the stronger group cares, the minimum probability, $Q$, that he must vote

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                            to the provision that no change
                            in his optimal strategy occurs.

Proposition 20:    $\underline{Ceteris}$ $\underline{paribus}$, with a two-group
                   constituency, as a maintainer
                   raises his estimate, $C_2$, that the
                   weaker group cares, the minimum
                   probability $\underline{(1 - Q)}$, that he must
                   vote with them decreases, subject
                   to the proviso that no change in
                   optimal strategy occurs.[24]

The first two hypotheses may not be surprising, but
Propositions 19 and 20 may seem nonobvious.  When a group
in a maintainer's district increases its interest in the
representative's position on an issue, the propositions
predict that the chances of his voting with them on the
issue declines.  Although this may be part of a maintainer's
reelection strategy, he may nevertheless find it difficult
to increase his probability of reelection or maintain it at
an acceptable level unless he can accurately assess the
value of $\underline{C}$ for each important group in his district.  If he
misperceives whether a group cares or not, he may act in a
manner that is rational, but not acceptable as far as the
implications of his decision are concerned.

The study of a political decision maker's perceptions
of his political environment is therefore an interesting
question, since his actions may not be understood except
within the framework of a positive theory.  Such a study is
also interesting in a normative sense as well, for we are
interested in the responsiveness of representatives to the
majority will and the extent to which they live up to the
ideals of a democratic society,[25] as expressed by Burke,

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for example:

> ...it ought to be the happiness and glory of
> a representative to live in the strictist
> union, the closest correspondence, and the
> most unreserved communication with his consti-
> tuents. Their wishes ought to have great
> weight with him; their opinions high respect;
> their business unremitted attention. It is
> his duty to sacrifice his repose, his pleasure,
> his satisfactions, to theirs--and above all,
> ever, and in all cases, to prefer their
> interests to his own.[26]

Some attention will be paid to a comparison of the empirical results of this study with a normative interpretation of representation.

Of particular significance is the fact that this research will extend the traditional analysis of the linkages between citizen and representative by moving beyond the legislative forum to the campaign environment. Politicians may have to make a number of policy decisions that can be affected by the parameters of their environment within which they may be competing for another term of office. Risk and uncertainty play an important part in the nature of these constraints on decision making and it is important to know how much they can affect the nature of representation.

Since nonincumbent challengers occasionally defeat an incumbent seeking an additional term, it would also be worthwhile to study how risk and uncertainty affect them as well as the much-observed incumbent legislators. In this way, we can begin to understand representation as a process rather than as a product of the electoral system. To do

this, we must study how politicians develop their attitudes and formulate their perceptions of constituency opinion. Since the process is dynamic, there is also an opportunity for a politician to revise his perceptions and thus his policy positions. If we can identify the important independent variables which alter candidates' perceptions then we will not only be closer to explaining and predicting the kinds of public policy choices that are made, but also closer to influencing these decisions according to the normative values of our society.

The approach that is well suited for this kind of analysis is Bayesian decision making, which employs subjective estimates of the world,[27] that can be continuously revised on the basis of new sample information to produce a "best" estimate of a parameter. Since a candidate's perceptions are actually based on prior knowledge and continually revised when new information is received, there is a good likelihood that the techniques of Bayesian decision making can be applied to the study of political choice in a campaign environment.

In order to proceed in the development of this analysis, the next section covers the important empirical research that has involved the study of the perceptions of political actors and the effect of their perceptions on their political behavior.

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4. __Political Perceptions:  A Survey of the Art__

   Although the Fiorina model seems adequate in formaliz-
ing the nature of representatives' choices and decisions
in a legislative environment, it falls short of explaining
the behavior of an incumbent in a political campaign.  In
the legislature, a representative's only opponent is him-
self; his own actions will help raise or lower his proba-
bility of reelection.  A political campaign, however, intro-
duces additional factors over which the candidate may have
little control, including the activities of his opponent.
In addition, a bad decision or a mistake in judgment during
the campaign can have a very critical effect on the outcome
of the election, perhaps more than anything the representa-
tive had done during his entire tenure in office.  No matter
how careful or cautious he may be, one critical error could
possibly deflate the candidate's probability of reelection
to a totally unacceptable level.

   During the campaign, public awareness of the candidates
is likely to be relatively high and it is a time when a
candidate's actions may be closely scrutinized by certain
groups and individuals in the district.  It is therefore
essential that he have not only a good perception of which
groups care or don't care, but also a good estimate of the
probability that other parameters important to the campaign
will attain certain critical values necessary for winning
the election.  Fiorina's model may be important in explain-
ing legislative voting influences, but it does not consider

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the important variables related to campaigning and how they may affect the candidates' policy positions which may be carried over in some form to the legislative arena. There are constraints in legislative decision making, but the constraints in a campaign may be even more serious, especially if they affect the spatial mobility of the candidates and their ability to meet the challenges of their opponents.[28] The problem then becomes a question of reconciling the difference between what is promised during a campaign and what limited policy options are available in the legislature.

Occasionally, a legislator must vote for a bill that does not represent his most preferred policy position rather than face the prospect of no bill at all.

It is therefore important to study the perceptions of the candidates in an election campaign in order to gain some empirical knowledge about candidate choices that can provide the basis for the development of a model of campaign decision making and a more complete explanation of the process of representation. As Kingdon explained:

> A full account of representation, therefore, must include representatives' perceptions of the constituents as a variable intervening between the constituents and the behavior of the elected policy-maker. These perceptions may or may not be accurate, but it is necessary to take them into account in order to explain the behavior of the politician.[29]

In this section we will review some of the important efforts that have been made in the study of candidates' perceptions and evaluate them in light of their potential for contributing to the development of hypotheses that can

be used to help explain candidates' behavior.

One of the first major studies that dealt with the problem of uncertainty in political campaigning was Kingdon's survey of a sample of Wisconsin candidates in the 1964 election.[30] Despite the fact that his sample was small (N = 66), which precluded the use of significance tests, it nevertheless provides us with some insightful information that can be used to make comparisons with some later studies.[31]

Kingdon was concerned with the differences among politicians and how their images of their constituency and beliefs about voters affected their roll call voting, public policy stands, or campaign strategies. The research provides us with information regarding each of the following areas: 1) how candidates receive information, 2) how they interpret information, and 3) how they respond to this information. These topics will be covered in each of the following sections.

A. _Informing the Ignorant_ - The first category entails an investigation into how candidates receive information about the electoral environment and how they use this information to develop a good estimate of the true state of the world. Knowing the reliability of a particular source of information is very valuable to a candidate who wants to keep in touch with reality. Too often political decision makers are told only what they are thought to want to hear, for, as Lewis Dexter has found, "...a congressman hears most

often from those who agree with him."[32]  Therefore, in order
to evaluate the opinion of the electorate, and to form an
optimal campaign strategy, a candidate must rely upon a
number of independent sources.  Because of a number of con-
straints on resources that are available, he has to learn
which sources are available and at what cost, as well as the
utility of such information.

Kingdon asked the following question of his sample:
"Can you tell me your sources of information about how you
will do when the votes are in?"  They were also asked which
of these resources they relied most heavily upon.  The res-
ponses most often mentioned were 1) polls, 2) party people,
3) volunteers, 4) past statistics, and 5) warmth of
reception.[33]

The reliability of the polls, which were used primarily
in the upper level races (congressional and state), was
usually accepted without qualification.  Party people and
volunteers were frequently used as sources, but were never-
theless not relied upon as accurate sources of information.
Candidates used and relied most heavily on past election
statistics and the warmth of reception they received from
their constituents.  Some candidates were necessarily
cautious about placing too much reliability on any one
source, especially since factors outside their control
could have influenced the election, such as the effect of
national and other state contests, as well as the vagaries
of predicting voter turnout at the polls.

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The level of the office sought reflected the extent to which the candidates relied upon sophisticated campaign techniques such as polling. State legislators felt that voters were not paying as much attention to them as to the candidates for Congress. Their campaigns had less of a direct, personal appeal to the voters, but a greater appeal to interest groups. Congressional candidates, on the other hand, were more likely to take account of the media and voter reaction to their public policy positions, since they were more likely to believe their issue positions were well known and would make a difference at the polls.[34]

B. Rationalizing Reality - Although candidates may have a number of sources of information in which they have varying degrees of confidence, there may be certain biases created by the ambiance of the campaign or are inherent in the psychological drama of politics. In this regard, a strong distinction can be made between the attitudes of winning and losing candidates. Since most of Kingdon's interviews were conducted after the election, the state of mind of the candidates may have been affected by the results. In addition, the fact that one person was an incumbent and another a challenger could have subjectively affected their perceptions of the campaign.

Indeed, this distinction between winners and losers was confirmed by Kingdon's research. He found that losers developed rationalizations for defeat, which showed up in a number of their beliefs, whereas winners tended to

congratulate themselves and the district for having such good judgment.[35] Winners ranked the importance of their personal characteristics high as well as the importance of issues in the campaign. The losers felt that the party label was too much of a factor, and that the voters were not informed on the issues.[36]

Further study in this area has been conducted by Kim and Racheter, who attempted to test Kingdon's "congratulation-rationalization" hypothesis, which states that winners tend to develop complimentary beliefs about voters, while losers tend to rationalize their defeats by downgrading voters' competence.[37] Kingdon could not successfully test this hypothesis himself, because he could not compare the attitudes of the winners and losers before the election with their attitudes after the election. In contrast, Kim and Racheter conducted a pre- and post-election survey to determine the attitudes of candidates in the 1970 Iowa general election.[38]

Using the election outcome as the independent variable, they found that winners did not develop more complimentary beliefs, nor did the losers develop more pejorative beliefs about voters. However, considering the original cognitive dissonance states as the major independent variable, among the winners, the "high dissonance" group (the candidates who had unfavorable beliefs about the electorate at the outset of the campaign) tended to upgrade their beliefs more than the "low dissonance" group (the candidates who had favorable

beliefs about the electorate at the outset of the campaign).
Among the losers, the "high dissonance" group tended to
downgrade the voters more than those of the "low dissonance"
group. The "congratulation-rationalization" effect was
supported only after a refinement of the original analysis,
but it points out that candidates' perceptions are influ-
enced by their original perception of the election outcome.[39]

Another study which illustrates the importance of
attitudes on perceptions was conducted by Hedlund and
Friesema.[40] As part of the Iowa Legislative Research Pro-
ject, they interviewed members of the 1967 legislature and
asked the subjects to predict their own district's majority
preferences on four constitutional amendments that were on
the ballot. The purpose was to determine whether those
representatives who adopted various representational roles
differed in perceiving and responding to constituency
opinion.[41]

Out of 181 legislators, one-third predicted the results
for all four amendments and another one-third correctly pre-
dicted the results for three of the four issues. Four
legislators failed to predict any of the results, and the
difference in the prediction rate between the two legisla-
tive chambers was not significant.[42]

When considering the role orientations of the legisla-
tors, however, significant differences were apparent.[43] It
was discovered that in the Iowa legislature, delegates were
least able to predict their districts' responses, which was

astonishing, because it was precisely this group that felt
strongly about following their own districts' opinions as
closely as possible. The second most accurate group was the
one composed of politicos, while the most accurate represen-
tatives were the trustees. Even on questions designed to
assess the different perceptions of the legislators toward
their constituents, the same relative orderings were found.[44]

Those who won reelection did better at predicting three
out of four of the results, but a higher percentage of those
defeated were correct on all four (31% vs. 27.8%). Inter-
estingly, those who did not run for another term for reasons
of retirement, primary defeat, or other reasons, made the
best predictors (40.5% correct on all four issues).[45] Given
the interpretation of role orientation, these results were
quite surprising, since we would normally expect the dele-
gates to be most accurate in assessing district opinion.

Hedlund and Friesema found that those candidates who
would most likely be in close contact with their consti-
tuents were not usually more correct in assessing the ballot
results. This could have been because they were either
following their own opinions or there was a great amount of
uncertainty about the results. Unfortunately, they did not
control for the margins of the winning propositions, nor
did they control for other factors that could indicate the
degree of uncertainty in perceiving the majority attitudes
in the districts.[46] Clearly, there is a need to relate this
kind of phenomenon within some kind of theoretical framework

in order to explain these results.

In a similar study, Erikson, Luttbeg, and Holloway tried to assess the accuracy of Florida state legislators in predicting the results of a statewide referendum.[47] They improved upon the previous study by asking the legislators to predict the actual percentage of the vote for each of the three issues on the ballot. This was especially useful, since nearly all legislators correctly predicted the majority position on each issue, thus, a comparison of the legislators' average estimates could be made.[48]

Veteran legislators (those with two prior two-year terms) and delegates were the least accurate assessors of constituency opinion, while the junior legislators and trustees had the smallest error of prediction, following Friesema and Hedlund's findings that those who claimed to be most concerned about assessing constituency opinion were the least able to do so accurately.[49]

We emphasize that the immediate question is not really the accuracy of perception, but why different types of legislators have different perceptions and how these were developed. Role orientation and years in office appear to be important factors in influencing behavior, but the problem is that we have so few well confirmed hypotheses that can assist us in building a concatenated theory to explain legislative behavior. Such a theory could help us to explain why these factors are important and how the perceptions of decision makers affect the public policy

decisions they make.

Another study which provided insight into the formation of candidates' perceptions was conducted by Bullock.[50] The purpose of the study was to investigate candidate evaluations of the effects of party identification, presidential coattails, candidate personalities, issues, and redistricting on their election chances. The data were based on questionnaires sent to challengers and incumbents from 30 congressional districts. This was the first major study since the 1958 Representation Study to compare the perceptions of candidates from the same electoral districts.[51] While many of the hypotheses tested by Bullock were comparable to those tested by Kingdon, Bullock's study had the advantage of being able to place the responses of the candidates side by side on a district level of analysis.[52]

Concerning the election outcome, Bullock found that incumbents were more likely to be pessimistic, while the challengers were more likely to be optimistic about the results. In addition, more incumbents than challengers accurately predicted the outcome.[53]

Bullock was also concerned with the effect of presidential coattails on the perceptions of the candidates. The perceived partisan implications of the national election were hypothesized to have an effect on the reasons for the election or defeat of the candidate. He tested three hypotheses about the effects of the 1972 election: 1) few freshmen or challengers will report being aided by the

performances of their party's presidential nominee,
2) congressmen initially elected in an off-year may have a
greater sense of independence from the futures of the party
and its presidential nominees than do congressmen initially
elected on the ticket with a president of their own party,
and 3) Democrats will tend to believe they were harmed by
the presidential race and Republicans will generally deny
that the presidential election had any effect.[54]

The findings indicated that most of the incumbents and
challengers perceived that indeed there was a coattail effect
and that challengers were more likely to report a coattail
effect than incumbents. Also, Democrats more often than
Republicans perceived that the presidential race affected
their election.[55]

The coattail effect was seen as a possible excuse for
blaming the electoral outcome on sources beyond the control
of the candidate. Consistent with previous research, win-
ners were more likely to attribute their success to factors
within their control, while losers blamed factors beyond
their control.

The difference between incumbents and challengers was
again illustrated by the difference in their perceptions of
the effect of redistricting on their election chances.
Incumbents (and in this case, winners) were less likely to
believe that redistricting made a difference in the election
than the challengers.[56] Incumbents instead emphasized their
personalities and other factors amenable to their influence,

such as issues, as contributing to their success.[57]

A definite inverse relationship was found between incumbents and challengers in their ordering of election factors. Generally, the greatest agreement on the rankings came from urban areas, while in the Midwest there was strong disagreement, stressing that perhaps district compactness or more sophisticated techniques employed by candidates in the urban areas influenced the results.[58]

The distinction between winners and losers and incumbents and challengers is significant beyond the campaign environment, because candidates who believe that they were elected on the basis of issues are likely to ascribe an unrealistic amount of political interest and knowledge to the voters.[59] Winners who then become legislators are thus prompted to become delegates and pay undue attention to constituent desires, even though their constituents may know very little about them or what they are doing.

The Bullock study was important because it helped to verify some of Kingdon's earlier findings and presented comparisons of incumbents and challengers on the district level for the first time.[60] The main focus was on the difference in the perceptions of the incumbents (winners) and challengers (losers) and how they saw various factors affecting the electoral outcome. The value of the study, however, was limited in that some hypotheses that were tested could only be applied to the unique electoral situation of the 1972 election. Also, the analysis did not

follow through by controlling for important independent variables which were found to be significant in other studies of candidates' perceptions. Additional research is needed to assess what these differences mean in terms of public policy formation and how these findings can fit into an overall conceptual framework of candidate behavior under conditions of risk and uncertainty.

C. _Overcoming Uncertainty_ - The third category of major concern is the overall effect of uncertainty on candidates' behavior. After they have collected and evaluated information, they may form an estimate of what would be the best course of action, given a certain degree of confidence in their evaluation of the possible states of the world. That is, although they may have acquired a certain amount of information and assessed its implications, the candidates may not always be quite certain that their knowledge about campaign parameters is accurate. As a result, candidates may try to adopt a rational strategy in order to minimize their potential losses.

Kingdon, for example, suggested that one of the main factors behind many of the actions of the candidates in his Wisconsin study was uncertainty:

> His [the candidate's] belief about his election chances probably influences his decision to enter the race in the first place, and may influence the conduct of his campaign and even his behavior in office, should he win.[61]

Candidates may even seek to perpetuate an aura of uncertainty within their own campaign organization in order

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to keep their supporters from becoming too overconfident.[62] This is theoretically significant in that it can affect the formation of minimum winning coalitions. According to Riker's theory of political coalitions, the greater the degree of uncertainty about a game's outcome, the larger the coalition that must be built.[63] Likewise, Kingdon hypothesized that in the context of his study, the greater the politician's uncertainty about his election chances, the greater would be his efforts to enlarge his coalition by attracting more groups and voters.[64] Therefore, the investigation of the importance of uncertainty and the means by which politicians cope with it is important in determining the characteristics of campaign behavior, as well as legislative behavior.

One recent study that has gone beyond Kingdon's investigation of the effects of uncertainty on a political campaign was conducted by Hershey.[65] Although primarily concerned with the impact of perceptions on the choice of campaign strategies, she found some interesting results in the areas related to this present discussion of uncertainty.

Unlike other studies, Hershey interviewed not only candidates for congressional and statewide office, but also the campaign managers of the candidates as well.[66] Altogether, 57 individuals were interviewed: 28 candidates and 29 managers. Unfortunately, once again we find the sample too small to allow the use of significance tests and the lack of a random sample casts some doubt on the

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representativeness of the results.

Despite these drawbacks, a number of significant findings about the effect of uncertainty on campaign behavior were developed and warrant further study. These important conclusions include the following:

1. Uncertain managers, and to a lesser extent, uncertain candidates, were more likely to seek voters' opinions and information about the campaign than those who were sure.[67]

2. Uncertainty was likely to heighten the campaigners' attention to other groups.[68]

3. Uncertainty about the election result stimulates campaigners to seek out public opinion, both from voters and contributors.[69]

4. Incumbents were less active than challengers in determining public opinion.[70]

5. Challengers were more likely to use public opinion polls, while incumbents were more likely to ask party leaders about the campaign.[71]

These results serve to illustrate that uncertainty about the political environment is an important factor in the development of strategies and the choice of campaign activities. As Hershey's findings show, under certain circumstances, candidates may try to seek additional information and be more aggressive in their campaigning. However, more research is needed in order to determine how uncertainty in this context affects the selection of a public policy position.

D. <u>Risky Choices</u> - Another factor that is important in decision making is the estimation of the possible loss that could occur from adopting a particular choice of action.

With uncertainty, one is not sure whether even the best decision will result in an outcome that minimizes expected loss. The perception of the degree of risk present in a decision making context may thus influence the desire for more information or the search for safer alternatives.

Although the term risk has more than one interpretation in the formal decision making literature, in political science it has been most effectively used in the study of political ambition.[72] As Schlesinger notes in his book, Ambition and Politics:

> Nevertheless, there is structure to the opportunities for political office in the United States. Any elective system of opportunities is full of risks for the politician. But if we look at the American system from the standpoint of ambitions we can see that the risks tend to foster some ambitions and reduce others. The risks for those with progressive ambitions are not equally distributed among officeholders. Career risks are maximized in a situation in which, in order to seek a higher office, a man must give up his current office. The congressman who reaches for the Senate and fails loses everything...[73]

The loss involved in such decisions would include the possible loss of the office presently held, unless a politician was fortunate enough to be able to hold on to one office while running for a higher one.

Black has extended this interpretation of risk by defining it in terms of the investment that would be lost if a candidate were to lose an election.[74] Black described an election as a "...risk taking venture in which candidates are forced to wager a portion of their resources in the pursuit of office."[75] The magnitude of the risk is

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determined by the structural characteristics of the electoral system, such as the size of the unit and the competitiveness of its election. He hypothesized that the risk of running for office is an increasing function of the size and the degree of electoral competition in the unit. Thus, as the size of the investment (risk) increases, the less committed individuals would be the ones most likely to drop out of the race.[76]

Besides indicating who is likely to run for office, Black's conceptual scheme could also be applied to an officeholder who must decide whether to run for reelection or for higher office. He hypothesized that "...the greater the cumulative investment of the individual in political office seeking, the greater will be the value placed on the offices to which the individual might aspire."[77] The investments made while holding an office were presumed to be transferable to other offices. The data he collected on 435 city councilmen in the San Francisco Bay area seemed to confirm his hypothesis.

Also of interest was that he found that uncertainty played a role in the councilmen's aspirations. Those who were certain of winning their reelection bids were also the ones more likely to aspire to higher office. The logic behind this presumes that the probabilities of obtaining various offices are interdependent and that winning one race increases the probability of winning a race for another office.[78]

It should also be noted that Black was concerned with subjective probabilities, based on the perceptions of the politicians, rather than on a series of experimental trials. They represented the state of belief of the politicians at a particular time and their perceptions could easily change on the basis of new information. This study provides additional conceptual support for the study of how candidates' perceptions of risk and uncertainty can affect their political choices.

Rohde has also investigated the effect of risk on political ambition.[79] His use of the term risk, however, takes on a different meaning. Instead of considering risk as the expected loss of an investment, as Black does, Rohde was concerned with candidates' attitudes toward risk and how they might affect their decision to run for higher office.

In formal terms, a candidate's attitude toward risk depends on the shape of his utility function: one with a concave utility function is risk-averse and prefers the choice that leads to an outcome with certainty; one with a convex utility function is risk-acceptant and prefers the choice that leads to an outcome with a certain probability; one with a linear utility function is risk-neutral and is indifferent between the choice that leads to an outcome with certainty and one that leads to an outcome with a certain probability.[80]

Rohde's hypothesis, based on these propensities toward risk, was stated as follows:

> Hypothesis 8: If two House members are presented with similar opportunities to seek higher office, and one is a "risk-taker" and the other is not, then the "risk-taker" will have a greater probability of running for higher office than the other.[81]

In testing his hypothesis among candidates for congressional, senatorial, and gubernatorial offices, he found that "risk-takers are more likely to take an opportunity to run for higher office than are others, and that in most comparisons the difference is substantial."[82]

From these studies we know something about the importance of risk as expected loss and as a characteristic describing the nature of a candidate's utility function. The dependent variable has been the decision to run for a higher office. However, the use of the concept of risk has not been widespread in the political science literature and it has not been used to explain the choice of a public policy position, except in purely theoretical models.[83] There is a need to relate the impact of risk within a model that assumes that less than perfect information is available (uncertainty) to an empirical situation. In this way, we could begin to test our theoretical models and discover how candidates make their choices and estimate the true value of the parameters of the campaign environment.

## 5. A Need For Theory

In this chapter, we have attempted to establish the utility of studying the perceptions of political actors in

order to explain the nature of representation in the United States. We also showed that two important factors, risk and uncertainty, influenced one's perceptions of the political environment. As a result of this discussion, we can proceed to try to advance our understanding of the causal linkages involved in the process of representation by developing a political decision making model that accounts for these concepts.

The development of a model in this area would be important because it would help give us an understanding of the relational structure of these theoretical concepts. It would also provide additional precision and clarity of thought which could be used to help summarize the data in terms of the parameters of the model. Consequently, the model would be valuable as a means of exploration and discovery. For example, if the data are reliable, and if the calculus of the model describes the real relations existing in the subject matter being described, the theorems of the calculus will yield important inferences from the data. The discrepancies that are found can then be used as a kind of base line for further inquiry.[84]

This approach was effectively utilized by Fiorina in his model of constituency influence. For example, he was not only able to identify contradictions in previous research, but was able to deduce a set of hypotheses that included some nonobvious explanations of political behavior. The model was also able to identify gaps in our knowledge

and specify further paths of research.[85]

Although Fiorina's framework was a useful tool for discovery and illustrated a way in which subjective decision making concepts could be applied to the study of legislative voting behavior, we argued that there was a need to examine decision making in a political campaign in addition to the legislative environment. The two situations are not alike, but similar kinds of policy decisions must be made in both arenas. Therefore, it would be desirable to examine sub-jective decision making within a campaign and formulate hypotheses that describe the relationship among the rele-vant variables. In this way, we can proceed at a later time to develop a larger framework that could adequately describe the interrelationships that may exist between campaign (electoral) and legislative decision making.

The latter part of this chapter included a review of the literature that served to identify some of the important variables that could be included in a campaign decision making model. For example, the importance of information and the reliance placed on various sources was illustrated by Kingdon in his study of political candidates in a Wis-consin election. This kind of research can help explain the kinds of biases that may influence the perception of political information.

Research has also established that a number of inde-pendent variables can also influence the perceptions of the candidates and thus their decisions. Winning and losing

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candidates were likely to have different perceptions of their electorate as well as the incumbents and challengers. Thus the perceived chances of winning, as well as the electoral outcome itself, were shown to be important influences on candidates' behavior. Also, the role orientations adopted by the legislators were found to be related to their perceptions of their constituents' preferences, although some of the findings in this area have not been conclusive.

One of the two primary independent variables of this study is uncertainty. A review of the literature, especially the work of Kingdon and Hershey, has shown the significance that uncertainty has for a campaign. Their research indicated that uncertainty was likely to influence the search for additional information and heighten the attention paid to groups in one's district.

The other primary independent variable is risk. Since the concept of risk has been interpreted in a number of ways, its inclusion within a formal model will help clarify its meaning. To summarize, risk has been frequently used in each of the following contexts: 1) to indicate the subjective probability of an outcome, given the selection of a particular course of action, 2) to measure the expected losses in making a decision, such as a loss of votes or a loss of an investment, and 3) as a description of the choice environment, in which the decision makers may have utility curves that are either linear, concave, or convex. In the first case, risk becomes an important consideration in estimating

the probability of a particular state of nature. In the second, risk can be interpreted as an important component in a decision calculus, and in the third instance, it can determine the choice of an individual when faced with the choice between an outcome occurring with certainty and others occurring with a known probability.

We have thus laid the basic foundation for the development of a subjective decision making model by indicating the nature of the problem and the need for additional research. In the next chapter, we will relate these concepts within a theoretical framework that is an interpretation of Bayesian decision theory. This will allow us to deduce hypotheses that can help explain and predict the dependent variable of this study, the public policy choices of candidates in congressional elections. These hypotheses will primarily relate the degree of perceived uncertainty and risk to the selection of a public policy position and enable us to determine the extent to which responsive representation is likely to occur under these conditions.

# CHAPTER ONE

## NOTES

1. Kenneth A. Shepsle, "The Strategy of Ambiguity: Uncertainty and Electoral Competition," American Political Science Review, 66 (1972), 55.

2. Wayne Lee, Decision Theory and Human Behavior (New York: John Wiley, 1971), Chapter 1.

3. The terms risk and uncertainty have a number of interpretations in the decision making literature. Some writers make a sharp distinction between risk and uncertainty, while others, such as Shepsle, identify uncertainty as a special case of risk. See Kenneth A. Shepsle, "Essays in the Theory of Risk-Taking" (Unpublished Ph.D. Dissertation, University of Rochester, 1970), Chapter 1. In addition, a special use of the term risk appears in the Bayesian decision theory literature. In this case, risk refers to expected opportunity losses. See Morris Hamburg, Statistical Analysis for Decision Making (New York: Harcourt, Brace and World, Inc., 1970), Chapters 14 and 15, and Alexander M. Mood and Franklin A. Graybill, Introduction to the Theory of Statistics, Second Edition (New York: McGraw-Hill, 1963), pp. 165-167. These definitions will be discussed in more detail in Chapter 2.

4.  Shepsle, "The Strategy of Ambiguity," op. cit., p. 555.

5.  By developing a theoretical framework that does not have to depend upon the strict assumption of perfect information, as many rational choice models do, we can more realistically determine the nature of choices within a charged political environment, such as a campaign, where intuition and experience are often the bases for political action. For a discussion of the assumptions of spatial models of electoral competition and other rational choice models, see William H. Riker and Peter C. Ordeshook, Introduction to Positive Political Theory (Englewood Cliffs, New Jersey:  Prentice-Hall, 1973), Chapters 11 and 12.

6.  Bryan D. Jones, "Competitiveness, Role Orientations, and Legislative Responsiveness," Journal of Politics, 35 (1973), 925.

7.  Ibid.

8.  Marjorie Randon Hershey, The Making of Campaign Strategy (Lexington, Mass.:  Lexington Books, 1974), p. 19.

9.  Ibid., p. 20.

10. Jones, op. cit.

11. The concept of representational role orientations was developed by Wahlke et al. in The Legislative System (New York:  Wiley, 1962). In this comparative study of state legislatures, a delegate was a representative who felt a need to consult his constituents and to usually follow their judgment. A trustee was a legislator who viewed his

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role as essentially a free agent and could follow his own beliefs in deciding how to vote. A politico was a type of representative who adopted a role somewhat characteristic of both types. See also Wayne Francis, "The Role Concept in Legislatures: A Probability Model and a Note on Cognitive Structure," Journal of Politics, 27 (1965), 567-585.

12. John L. Sullivan and Robert E. O'Connor, "Electoral Choice and Popular Control of Public Policy," American Political Science Review, 66 (1972), 1256-1257.

13. Ibid.

14. See Gerald M. Pomper, "From Confusion to Clarity: Issues and American Voters, 1956-1968," American Political Science Review, 66 (1972), 415-429, Benjamin Page and Richard Brody, "Policy Voting and the Electoral Process: The Vietnam War Issue," American Political Science Review, 66 (1972), 979-995, and David RePass, "Issue Salience and Party Choice," American Political Science Review, 65 (1971), 389-440.

15. Under certain circumstances, a legislator may choose not to vote at all. For a discussion of the absten- tion strategy, see Morris P. Fiorina, Representatives, Roll Calls, and Constituencies (Lexington, Mass.: Lexington Books, 1974), Chapter 4.

16. See, for example, Duncan MacRae, Jr., Dimensions of Congressional Voting (Berkeley: The University of California Press, 1958), Lewis Froman, Congressmen and Their Consti- tuencies (Chicago: Rand McNally, 1963), Julius Turner and

Edward Schneier, <u>Party and Constituency: Pressures on Congress</u> (Baltimore: Johns Hopkins Press, rev. ed., 1970), Wayne W. Shannon, <u>Party, Constituency and Congressional Voting</u> (Baton Rouge: Louisiana State University Press, 1968), Jeff Fishel, <u>Representation and Responsiveness in Congress: The Class of Eighty-Nine, 1965-1970</u> (Beverly Hills: Sage Publications, 1973), Lewis Froman, "Inter-Party Constituency Differences and Congressional Voting Behavior," <u>American Political Science Review</u>, 57 (1963), 57-61, Duncan MacRae, Jr., "The Relations Between Roll-Call Votes and Constituencies in the Massachusetts House of Representatives," <u>American Political Science Review</u>, 46 (1952), 1046-1055, Hugh LeBlanc, "Voting in State Senates: Party and Constituency Influences," <u>Midwest Journal of Political Science</u>, 13 (1969), 33-57, Wilder Crane, "Do Representatives Represent?" <u>Journal of Politics</u>, 22 (1960), 295-299, and Warren E. Miller and Donald E. Stokes, "Constituency Influence in Congress," <u>American Political Science Review</u>, 57 (1963), 45-56.

17. Warren E. Miller, "Majority Rule and the Representative System of Government," in <u>Mass Politics</u>, ed. by E. Allardt and Stein Rokkan (New York: Free Press, 1970), pp. 284-311 and MacRae, Jr., op. cit. For a discussion of the contradictions between the findings of these two studies, see Fiorina, op. cit., Chapter 1.

18. Ibid. Fiorina found that the problem lay in a mistaken inference by MacRae. See also Fiorina's "Electoral Margins, Constituency Influence, and Policy Moderation,"

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*American Politics Quarterly*, 1 (1973), 479-498.

19. A Bayesian analysis involves the selection of an optimal strategy under conditions of uncertainty or risk. In this case, the individual is presumed to be uncertain about which <u>state</u> of a specified <u>world</u> is the <u>true</u> <u>state</u> which obtains. In Savage's terminology, <u>world</u> is defined as "the object about which the person is concerned," and a <u>state</u> <u>of</u> <u>the</u> <u>world</u> is "a description of the world, leaving no relevant aspect undefined." For example, the state of the world might be the true probability of reelection. See Leonard Savage, <u>The Foundations of Statistics</u> (New York: Dover Press, rev. ed., 1970), p. 9.

20. Fiorina, <u>Representatives, Roll Calls, and Constituencies</u>, op. cit., Chapter 2.

21. Ibid., Chapter 3. A district is assumed to be homogeneous with respect to a particular vote on an issue. The constituency, as perceived by a legislator, may only refer to a small portion of the absolute constituency, but these will be the individuals who will be the most important to consider when deciding how to vote.

22. The propositions are not formally stated in his book but are to be found in his dissertation, "Representatives and Their Constituencies: A Decision-Theoretic Analysis" (Unpublished Ph.D. Dissertation, University of Rochester, 1973).

The strength of a group is defined as the net increment in the probability of reelection that a group has the power

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23. Ibid., p. 124.

24. Ibid., pp. 126-128.

25. Sources for normative theories of political representation include the following:  Hanna F. Pitkin, The Concept of Representation (Berkeley:  University of California Press, 1967), J. Roland Pennock, "Political Representation, An Overview," in Representation:  Nomos X, ed. by Pennock and John W. Chapman (New York:  Atherton Press, 1968), and Alfred de Grazia, Public and Republic (New York:  Alfred University Press, 1961).  For a discussion of the normative aspects of representation in terms of reapportionment in the United States, see Robert G. Dixon, Jr., Democratic Representation (New York:  Oxford University Press, 1968).

26. Edmund Burke, "Speech to the Electorate at Bristol," in The Writings and Speeches of Edmund Burke (Boston:  Little, Brown, Co., 1901), Vol. II, pp. 95-97.

27. For an introduction to Bayesian decision theory, see Savage, op. cit.

28. See, for example, the analysis by Peter H. Aranson and Peter C. Ordeshook, "Spatial Strategies for Sequential Elections," in Richard G. Niemi and Herbert F. Weisberg, eds., Probability Models of Collective Decision Making (Columbus, Ohio:  Charles E. Merrill, 1972), pp. 298-331.

29. John W. Kingdon, Candidates for Office:  Beliefs and Strategies (New York:  Random House, 1968), p. 7.

30. Ibid.  See also Kingdon, "Politicians' Beliefs

About Voters," <u>American Political Science Review</u>, 61 (1967), 137-143.

31. Kingdon, <u>Candidates for Office</u>, op. cit., pp. 159-160.  Another reason to reject the reliability of the study was that, as Kingdon himself admits, "The data analysis began by simply running the four independent variables against everything else to see what results would obtain," (p. 160). Given his small sample size, the sampling error might be high, and therefore any relationships discovered may have occured by chance.

32. Lewis Antony Dexter, "The Representative and His District," in <u>New Perspectives on the House of Representatives</u>, ed. by Robert L. Peabody and Nelson W. Polsby (Chicago:  Rand McNally, 1963), p. 11.

33. Kingdon, op. cit., p. 90.

34. Kingdon, "Politicians' Beliefs About Voters," op. cit., pp. 140-141.

35. Ibid., pp. 139-142.

36. Ibid., Chapter 2.

37. See Chong Lim Kim and Donald P. Racheter, "Candidates' Perception of Voter Competence:  A Comparision of Winning and Losing Candidates," <u>American Political Science Review</u>, 67 (1973), 906.

38. Ibid.

39. Ibid., pp. 912-913.  Kim and Racheter suggested that other variables may also be important in explaining candidates' beliefs.  These included the incumbent status of the

candidates, the degree of competitiveness in their districts, their career socialization, and the level of their political ambition.

40. Ronald D. Hedlund and H. Paul Friesema, "Representatives' Perceptions of Constituency Opinion," Journal of Politics, 34 (1972), 730-752.

41. Ibid., p. 738.

42. Ibid., p. 741.

43. For a review of the various role orientations of legislators, see Wahlke et al., op. cit.

44. Hedlund and Friesema, op. cit., p. 743.

45. Ibid., p. 745.

46. In a subsequent article, employing the same data, Friesema and Hedlund found that overall 70% of the legislators' votes coincided with the referenda results in their districts, indicating that legislators' perceptions of constituency opinion might have an effect on their roll call behavior. However, when they controlled for role orientation, the delegates were more inconsistent with the results in their districts. These results may indicate that the concept of representational role orientation may not be a meaningful way of explaining legislative behavior. See H. Paul Friesema and Ronald D. Hedlund, "The Reality of Representational Roles," in Public Opinion and Public Policy, ed. by Norman Luttbeg (Homewood, Illinois: Dorsey Press, 1974), pp. 413-417.

The question of the utility of the role concept is

further complicated by Kuklinski's study which supports the traditional interpretation of role explaining legislative behavior. Among California assemblymen, he found that delegates were more representative of constituency opinion than those who were either politicos or trustees. The relationship was especially strong on issues that were considered to be highly salient to the voters. See James H. Kuklinski with Richard C. Elling, "Representational Role, Constituency Opinion, and Legislative Roll Call Behavior," American Journal of Political Science, 21 (1977), 135-147. Further tests in this area are clearly needed.

47. Robert S. Erikson, Norman R. Luttbeg, and William V. Holloway, Knowing One's District: How Legislators Predict Referendum Voting," American Journal of Political Science, 19 (1975), 231-246.

48. Ibid., p. 235.

49. Ibid., p. 241.

50. Charles S. Bullock, III, "Candidate Perceptions of Causes of Electoral Outcome," Paper presented at the 1973 Annual Meeting of the American Political Science Association, New Orleans, September, 1973.

51. See Miller and Stokes, op. cit. Although the Miller and Stokes 1958 Representation Study contained information on candidates' perceptions, only the data for incumbents have been analyzed in publications based on this study.

52. Since in all but one of the districts surveyed the incumbent won the election, no distinction was made between

incumbents and winners, and between challengers and losers.

53. Bullock, op. cit., p. 4.

54. Ibid., p. 5.

55. Ibid., p. 6.

56. Ibid., p. 10.

57. Ibid., p. 13.

58. Ibid., pp. 14-15.

59. Ibid., p. 17.

60. See note 51.

61. Kingdon, Candidates for Office, op. cit., p. 84.

62. Although incumbents may be confident of their ability to win reelection, they often find reasons to create enthusiasm within their campaign organization to prevent complacency. Incumbents may set a goal higher than 50% of the vote plus 1 vote by emphasizing their desire for a strong show of constituency support. See Marjorie Randon Hershey, "Incumbency and the Minimum Winning Coalition," American Journal of Political Science, 17 (1973), 631-637. For a theoretical view of the advantages of a larger than minimum winning coalition in American politics, see Charles Adrian and Charles Press, "Decision Costs in Coalition Formation," American Political Science Review, 62 (1968), 556-563.

63. See William H. Riker, The Theory of Political Coalitions (New Haven: Yale University Press, 1962).

64. Kingdon, op. cit., p. 85.

65. Marjorie Randon Hershey, The Making of Campaign Strategy (Lexington, Mass.: Lexington Books, 1974).

66. Hershey's study was conducted during the 1970 election in the state of Wisconsin.

67. Ibid., p. 21.

68. Ibid., p. 22.

69. Ibid.

70. Ibid.

71. Ibid., p. 95.

72. See Joseph A. Schlesinger, <u>Ambition and Politics:</u> <u>Political Careers in the United States</u> (Chicago:  Rand McNally, Inc., 1966).

73. Ibid., p. 17.

74. Gordon S. Black, "A Theory of Political Ambition: Career Choices and The Role of Structural Incentives," <u>American Political Science Review</u>, 66 (1972), 144-159.

75. Ibid., p. 148.

76. Ibid., p. 149.

77. Ibid., p. 156.

78. Ibid.

79. David W. Rohde, "Risk-Bearing and Progressive Ambition:  The Case of Members of the United States House of Representatives," Paper presented at the Conference on Uncertainty, Political Processes and Public Policy, San Diego, California, August, 1974.

80. For a more technical discussion, see Shepsle, "The Strategy of Ambiguity:  Uncertainty and Electoral Competition," op. cit.

81. Rohde, op. cit., p. 24.

82. Ibid.

83. See, for example, Kenneth A. Shepsle, "Parties, Voters, and the Risk Environment: A Mathematical Treatment of Electoral Competition Under Uncertainty," in Probability Models of Collective Decision Making, ed. by Richard G. Niemi and Herbert F. Weisberg (Columbus, Ohio: Charles E. Merrill, 1972), pp. 273-297.

84. For a discussion of the advantages of a formal model, see Morris P. Fiorina, "Formal Models in Political Science," American Journal of Political Science, 19 (1975), 133-159, May Brodbeck, "Models, Meaning, and Theories," in Readings in the Philosophy of the Social Sciences, ed. by May Brodbeck (New York: MacMillan, 1968), pp. 579-600, and Paul Diesing, Patterns of Discovery in the Social Sciences (Chicago: Aldine-Atherton, 1971).

85. This is indicated by the discussion of the functional relationship of the variables utilized in his study. See Fiorina, Representatives, Roll Calls, and Constituencies, op. cit., pp. 83-86.

# CHAPTER TWO

# A BAYESIAN MODEL OF POLITICAL CHOICE

## 1.   Introduction

In chapter one, we discussed the significance that information can have upon the choice behavior of political actors.   Information was shown to be a crucial factor in the decision making process and unless the information acquired is accurate and complete, a politician may choose an alternative leading to a less than optimal outcome.   Coping with uncertainty is therefore an important concern for a decision maker.[1]

The information with which a politician comes into contact is often influenced by his perception.   Perception is defined as being sensitive to and developing certain interpretations of stimuli and facts.[2]   During the perceptual process, the individual attempts to order the stimuli and facts and interprets them, based upon his current impressions and past experiences.   He then can use these interpretations as the basis for actions directed toward the achievement of his stated goals.[3]

In this study we are concerned with the explanation and prediction of the policy decisions of candidates in political campaigns.   Since the nature of campaigning involves the collection and interpretation of available information for

making decisions, it is important to know the nature of the decision making process. This can be determined by the development of a model which describes in abstract terms the relationship of a set of concepts within the framework of an election campaign.[4]

An approach to the formulation of a model of decision making that has developed into an important model for the making of rational selections among alternative courses of action when information is incomplete or uncertain is Bayesian decision theory.[5] A Bayesian analysis is relevant to the problem of making optimal policy decisions in a campaign, because, as Winkler and Hays state:

> The motivation for Bayesian methods is essentially the desire to base inferences and decisions on any and all available information, whether it is sample information or information of some other nature.[6]

We can thus incorporate the knowledge, the experience, and the intuition of candidates into the decision calculus in order to explain their policy choices.[7]

In this chapter, we will apply the Bayesian framework to study the decision making of candidates in a campaign under conditions of risk and uncertainty. First, we will examine the basis for the Bayesian approach, which involves the use of subjective or "personalistic" probabilities, as compared to the frequentist approach to statistical infer-ence, which uses "objective" probabilities. Then a dis-cussion of the use of Bayes' theorem is followed by an explanation of the Bayesian decision model and its

application to a problem in political choice.

In the following chapter, the hypotheses derived from the Bayesian model will be operationalized for testing, using data from the 1958 Representation Study, which contains information about the perceptions of congressional candidates concerning their constituencies and their campaign activities.[8] Chapter four will include an analysis of the results.

## 2. Bayesian Decision Theory

Since World War II, increased emphasis has been placed on the problem of decision making when information is incomplete or uncertain. The approach that has been developed to make the best decisions under such conditions is known as Bayesian decision theory,[9] named after the English Presbyterian minister and mathematician, Thomas Bayes (1702-1761). Although he did not originate this statistical decision theory, he is recognized for what has become known as Bayes' theorem, [10] which is the essential tool of the analysis used to handle the problem of uncertainty.[11]

Bayes' theorem states a procedure for the revision of prior opinion about an event in the light of new information. The opinion is expressed in terms of a probability, and it is the subjective interpretation of this probability that distinguishes the Bayesian approach from the non-Bayesian approach.[12] For a Bayesian, these prior probabilities are "degrees of belief" and the result of human judgment.[13]

The subjective or "personalistic" theory of probability was first introduced by F.P. Ramsey in his book of essays, The Foundations of Mathematics and Other Logical Essays,[14] but was primarily developed by de Finetti,[15] Koopman,[16] Good,[17] and Savage.[18] In fact, it was not until the publication of The Foundations of Statistics by Savage that scientists began to widely accept the use of the concept of subjective probability.

The basic thesis of the personalistic theory of probability[19] is that the probability of an event is the "degree of belief or degree of confidence placed in the occurrence of an event by a particular individual based on the evidence available to him."[20] This definition contrasts to the more traditional view in which a probability of an event is seen in terms of a relative frequency:

> Non-Bayesians argue that the only legitimate
> types of probabilities are "objective" or
> relative frequency of occurrence probabilities.
> They find it difficult to accept the idea that
> subjective or personalistic probabilities
> should be processed together with relative
> frequencies, as in the Bayesian's use of Bayes'
> theorem, to arrive at posterior probabilities.[21]

The occurrence of some events, however, cannot validly be assigned an objective probability. For example, the statement, "The Democrats will probably win the election tomorrow," appears to be a probability statement, but it is very difficult to see how it could describe long run relative frequencies of outcomes of repeated experiments. The problem is that this event is unique and cannot be duplicated. Information regarding past events in similar situations is not

available and no information in the form of observed frequencies exists as repeated trials under identical conditions. Instead, the statement describes one's degree of belief or subjective judgment about a situation that will occur only once. Long run objective frequencies are thus incapable of interpreting many of the kinds of events that are of concern to those studying political behavior, and "if we rigidly maintain that only objective probabilities have meaning, we prevent ourselves from handling some of the most important uncertainties involved in problems of decision making."[22]

Subjective probabilities have the same properties as objective probabilities,[23] and may be chosen in any manner prior to the occurrence of an event and may be based in part on objective evidence. Thereafter, the change in subjective probability as a result of experience or sampling is governed by Bayes' theorem. The simplest version of Bayes' theorem[24] can be stated as follows: for two events, A and B,

$$P(A/B) = \frac{P(B/A)P(A)}{P(B/A)P(A) + P(B/\bar{A})P(\bar{A})},$$

where $\bar{A}$ represents the complement of the event A (that is, "not A").

The equation consists of two basic components: a prior probability, P(A), and a likelihood, P(B/A). The prior probability is the subjective probability held at the beginning of the investigation or experiment. The likelihood is the probability of B conditional on the occurrence of A.

When the probabilities are combined in the manner specified by Bayes' theorem, they form a <u>posterior</u> <u>probability</u>, P(A/B), which summarizes the state of knowledge after taking into account the new information from observing B. The equation can be restated as follows:

Posterior Probability =

$$\frac{\text{Likelihood x Prior Probability}}{\text{Likelihood x Prior Probability + (1-Likelihood) x (1-Prior)}}$$

As more information becomes available, the first posterior probability may be combined with the new information to form a revised posterior probability.[25]

At this point we have shown how subjective probabilities differ from those based on relative frequencies. Subjective probabilities are more suitable in describing the occurrence of events in a political campaign, since these are unique events which can only be represented by one's degree of belief. Through the operation of Bayes' theorem, these probabilities are combined with all relative information, subjective or objective, to produce revised probability estimates. These new posterior probabilities can then be used to select an alternative within a Bayesian decision making model. This process will be explained in the next section.

We again wish to emphasize that we do not claim that individuals actually employ Bayes' theorem for revising and estimating the probability of an event. Instead, we hope to

show that rational decision makers act as if they attempt to revise their probability estimates in this manner for the purpose of making the "best" decision possible, given uncertainty about their environment. A model should not be judged by the realism of its assumptions, but by the accuracy of its predictions. If our hypotheses accurately reflect our data, then we have developed a significant new tool for the discovery of new relationships and theories.

## 3. The Bayesian Decision Model

The Bayesian approach to decision making involves the selection of a decision rule that minimizes expected losses under uncertainty. However, the interpretation of uncertainty in decision theory has been the subject of some discussion and it would be appropriate at this time to specify its meaning within the Bayesian framework and discuss its relationship to the concept of risk.

Decision making under uncertainty is defined as a situation in which one does not know the probability of an event. However, with the use of subjective probabilities to describe the occurrence of events, Bayesian decision making under uncertainty becomes decision making under risk.[26] Since under the subjective interpretation of probability it is always possible to assess probabilities for the possible events, it may not be necessary to emphasize this distinction. As Shepsle argued, uncertainty is actually a degenerate case of risk: a known probability distribution

collapsed on a single point.[27]  The risk versus uncertainty

dichotomy is therefore one of degree and is essentially

artificial according to the subjective interpretation of

probability.  Henceforth, we shall refer to uncertainty as

a situation in which the probability of an event is not

equal to 1.0 (not certain).  This is consistent with the

modern approach to refer to this entire spectrum as one of

uncertainty.[28]

The use of the term risk will be reserved for repre-

senting  the expected loss, which is the loss of making an

error times the probability of making the error.  In Bayesian

decision theory, the weighted average or expected value of

these risks, using prior probabilities of events as weights,

yields the expected risk of a particular strategy.[29]

To summarize, uncertainty refers to decision making

when subjective probabilities are used to estimate the

occurrence of an event and risk refers to a description of

the expected loss involved in making a decision under uncer-

tainty.  We can now proceed to define the elements of a

Bayesian decision model.

Bayesian decision theory starts with the assumption

that regardless of the type of decision, there are certain

basic characteristics of the decision problem that can be

identified.  These characteristics form the basic components

of the model and provide a structure for a solution to the

problem.[30]

The basic unit of analysis is the decision maker, who

is the individual charged with the responsibility for making the decision. The individual is presumed to be uncertain about which state of the world is the true state which obtains. In Savage's terminology, the world is defined as "the object about which a person is concerned," and a state of the world is "a description of the world, leaving no relevant aspect undescribed."[31] The set of states of the world are assumed to be mutually exclusive and collectively exhaustive; one and only one description of the world does in fact obtain, or is the true state of the world.[32] An event is defined as a set of states, usually containing the true state of the world.[33]

Let $\Theta$ denote an event containing a set of n elements, $(\Theta: \Theta_1, \Theta_2, \ldots, \Theta_n)$, such that each $\Theta_j$ is a possible state of the world. Empirically, one could think of $\Theta$ as an unknown parameter relevant to a decision making problem in a political campaign, such as the median position of constituency opinion on an issue of concern. A candidate may be uncertain as to the actual value of the median (i.e., the true state of the world).

An action A, $(A: A_1, A_2, \ldots, A_m)$, is a function which assigns a consequence to each state of the world. Set A contains a set of alternative courses of acts, actions, or strategies taken when a state of the world, $\Theta_j$, obtains and results in a consequence $E_{ij}$, $(E: E_{11}, \ldots, E_{mn})$, which is a set of specific outcomes or payoffs. A payoff is a measure of the net benefit received by the decision maker.

The problem is to choose the best of the alternative strategies to achieve the highest payoff possible. An illustration of the decision problem is shown in Figure 2.1.

| ACTIONS | STATES OF THE WORLD | | | | | |
|---------|--------|--------|--------|---|---|--------|
| | $\theta_1$ | $\theta_2$ | $\theta_3$ | . | . | $\theta_n$ |
| $A_1$ | $E_{11}$ | . | . | . | . | $E_{1n}$ |
| $A_2$ | . | $E_{22}$ | . | . | . | . |
| $A_3$ | . | . | $E_{33}$ | . | . | . |
| . | . | . | . | . | . | . |
| . | . | . | . | . | . | . |
| $A_m$ | $E_{m1}$ | . | . | . | . | $E_{mn}$ |

Figure 2.1

THE DECISION PROBLEM

Decision making under <u>certainty</u> will occur when the true state of the world is known: $P(\theta_j) = 1.0$. The decision maker would merely have to look down the column of actions in the payoff table and select the alternative $A_i$ that maximizes the value of $E_{ij}$. Under <u>uncertainty</u>, the individual does not know the true probability of each possible state of the world, so he assigns each a subjective probability. The selection of an appropriate action is based on the outcome of a lottery, and the act with the greatest expected value will be the most desirable choice.[34]

Therefore, once the probabilities of the states of the world have been specified, usually after repeated sampling,

and after a utility function has established the value of each possible outcome,[35] the Bayesian decision rule is applied, by choosing the action with the highest expected value, or, alternatively, by choosing the one that minimizes expected loss.[36]

A Bayesian decision model is very appropriate for the study of candidates' perceptions.[37] Perceptions are not based on repeated trials of experiments, but on previous knowledge, experience and intuition, as well as one's biases and prejudices. An individual's estimate of the true state of the world is constantly subject to change, and if we are going to be able to explain and predict political behavior, we need to know what factors influence the choice of an estimate, what is the effect of new information, and how the individual values the outcomes. In the next section we will apply this framework for analysis to a decision making problem in a political campaign.

4.   The Decision Problem

In politics, the nature of the decision making process is not unlike the Bayesian procedures presented in the last section, for politicians may often base their decisions on subjective estimates that are revised as new information is received. When the final decision is to be made, the individual must assess the likelihood of particular outcomes, as well as the confidence he has in his estimates. Thus, decisions are likely to be based not only on objective

criteria, but on subjective beliefs as well.[38]

We proceed in the presentation of a campaign decision problem by assuming that candidates are rational and will select courses of action that maximize their expected utility.[39] Since we are concerned with how candidates estimate and revise their subjective probability distributions of the true states of the world, the rationality of a decision maker can be interpreted as the efficient use of contextual information so as to produce actions consistent, a priori, with his preferences.[40]

In a campaign, one of the most crucial decisions to be made by a candidate is the selection of a public policy position on an issue of concern to his constituency. In order to make a choice to maximize the probability of winning the election, a number of factors or parameters must be known. These may include the shape of the distribution of voter opinion on an issue, the salience of the issue to the electorate, the voter turnout, the spatial mobility of the candidate, and the strategy of the opposition.

This topic has been of great concern to political scientists in recent years. Attempts to model the electoral process have resulted in hypotheses that specify when electoral situations are likely to have equilibrium positions that the candidates will adopt or describe when candidates are likely to converge or diverge in their selection of a public policy position.[41]

Since most of these models assume perfect information,

candidates can act under conditions of certainty. However, considering all the parameters that must be estimated in a campaign, the models appear to be unrealistic and perhaps too simplified in their approach to the study of political behavior. Attempts to complicate and generalize these models have only succeeded in moving them further from reality and empirical testability.[42]

In relating the spatial analogy to the study of campaign behavior, we do not assume perfect information. Instead, we assume that candidates base their decisions on subjective probabilities, derived from sampling information (random or nonrandom) and prior experience. In this way, we can explain the behavior of a candidate under the more realistic assumption of uncertainty and we can also avoid having to make interpersonal comparisons of utility. Politicians can and do make mistakes from misinterpreting information which may or may not be complete, so by studying candidate decision making within this kind of framework, we should be able to explain and predict the actions of the candidates more accurately.

In this model, we will select one of the important parameters about which a candidate needs information in order to make a rational decision and maximize his probability of election. The parameter is specified as the true position of the median of the voter preference distribution for a salient political issue. Information about this parameter may be obtained over the course of a campaign and a

posterior distribution can be formulated. If we find that candidates do make their decisions as if they have formulated a posterior distribution of the true value of the parameter, then we have shown the value of this model as a tool for discovery and can extend the analysis to encompass other important factors relevant to campaign decision making.

In a campaign, the candidates will often try to adopt a policy position that will insure them of at least a tie (50% of the vote) in a two-way race. In this case, the best position to adopt would be the one representing the median of the voters' preferences. In a district where the distribution of the voters' preferences is symmetric and unimodal, the mean position is the same as the median.[43] Under uncertainty, the true position of the median is unknown and must be estimated by the candidate. It is thus necessary for the candidate to specify a subjective probability distribution over the set of possible values of the median. The distribution could be formulated by the use of Bayes' theorem.[44] The formula for a conditional probability distribution of the discrete population parameter $\theta$ is as follows:

$$P(\tilde{\theta} = \theta_j / \tilde{y} = y) = \frac{P(\tilde{y} = y/\tilde{\theta} = \theta_j) \, P(\tilde{\theta} = \theta_j)}{\sum\limits_{i=1}^{J} P(\tilde{y} = y/\tilde{\theta} = \theta_i) \, P(\tilde{\theta} = \theta_i)}$$

This equation shows how it is possible to revise probabilities concerning the unknown values of a parameter $\tilde{\theta}$, when sample information, represented by $\tilde{y}$, becomes available,

regardless of how the information is obtained. The result is a posterior probability for each possible value of $\tilde{\theta}$, which can be described as a conditional probability distribution of $\tilde{\theta}$.[45]

For example, if we wish to determine the probability that a coin is fair: $P(\ P(H) = P(T) = .5)$, we can flip the coin and, as a result of the new information, revise our estimate of the true state of the world. The true state of the world is the true probability that the coin is fair. The following chart illustrates a possible result:

| BEFORE THE TOSS | | AFTER THE TOSS | |
|---|---|---|---|
| P(H) | $\theta$ | P(H) | $\theta$ |
| 0.4 | $\theta_1 = .10$ | 0.4 | $\theta_1 = .05$ |
| 0.5 | $\theta_2 = .80$ | 0.5 | $\theta_2 = .75$ |
| 0.6 | $\theta_3 = .10$ | 0.6 | $\theta_3 = .15$ |
| 0.7 | $\theta_4 = .00$ | 0.7 | $\theta_4 = .05$ |

Before the toss, the probability that the coin is fair is .80. After the toss, the probability distribution changes on the basis of the new information and the probability that the coin is fair changes to .75. Another toss of the coin would produce additional information and the probability distribution of $\theta$ would be revised accordingly.[46]

The number of probability distributions of the states of the world that may exist is infinite, but we can classify them into two general types: 1) those that approximate a uniform probability distribution and 2) those that approximate a "spiked distribution," or one with minimum variance.

These two types are illustrated in Figures 2.2 and 2.3.
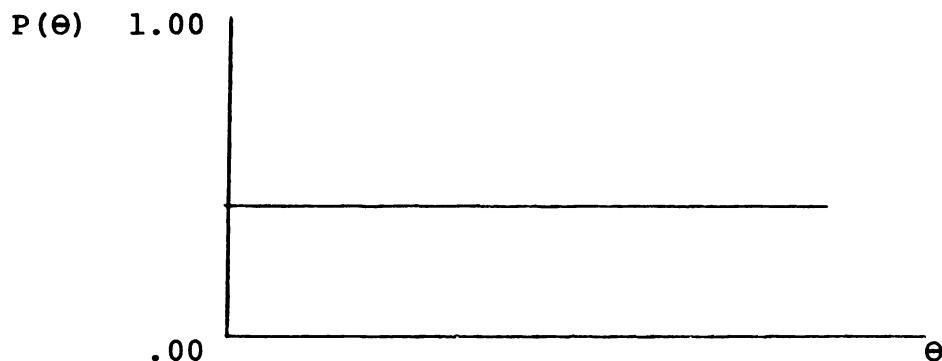


Figure 2.2

A UNIFORM PROBABILITY DISTRIBUTION OF A PARAMETER $\Theta$

Figure 2.2 shows the extreme case in which either no knowledge is available or the individual has no reason to believe that one value of the parameter $\Theta$, the true value of the median of the voter preference distribution, is more likely to occur than another. This is a situation described by Borch as satisfying LaPlace's Law of Insufficient Reason, which states that when the probability of a series of events is unknown, the events should be treated as equally probable:[47]

$$P(E_i) = 1/N \text{ for all } i.$$

In selecting a position that he believes may be the median of the voter distribution, a candidate would not be considered to be very knowledgeable about constituency opinion if his subjective probability distribution for the median was represented by a distribution similar to the one in Figure 2.2. In this case, it really would not matter to the candidate which of the values he may choose to adopt,

since each value has been assigned the same subjective probability of occurrence. The candidate is considered "ignorant" of the true value of the median, for he has no information to indicate that one value is more likely to be the median than another. The selection of a policy position becomes essentially a "guess", and with a wider range of choices, there is a greater likelihood of making the wrong decision.

Given the ignorance associated with this kind of distribution, a decision maker may not be very confident about his selection of the median position, which in the case of a uniform distribution is essentially a random choice. However, with a uniform distribution, the incentive would exist for the candidate to gather additional information in order to make his estimates more precise. Theoretically, this may be accomplished by sampling and using this new information to revise the distribution through the use of Bayes' theorem. It would be rational for a candidate to seek additional information until such time as the cost of the information is greater than or equal to the value of the increased precision of the subjective estimate of the true state of the world (unless of course the election comes first). (See Figure 2.3.)

On the other hand, a "spiked" distribution represents just the opposite situation, in which only one value is considered likely to occur. Figure 2.3 shows a distribution in which the probability of all values of $\theta$ are equal to

P(Θ)   1.00

.00
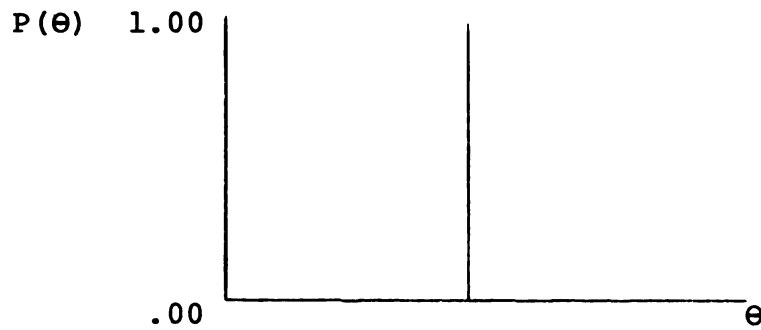
Figure 2.3

A SPIKED PROBABILITY DISTRIBUTION OF A PARAMETER Θ

0.0, except one, which is equal to 1.0. The variance of the distribution equals 0.0. In this case, the candidate would be unlikely to choose any other position, since the probability of one particular value is so much higher than the rest. As an example, in frequentist (objective) terms, if one were to toss a coin 100 times and it came up heads 100 times, then the probability of a head would be 1.0, and if asked to predict the next toss, one would of course choose heads.[48]

The contrast between a candidate with a uniform distribution and one with a spiked distribution of the possible states of the world is that the former would have a much greater incentive to seek out additional information. The candidate with a spiked distribution would not be expected to be able to add much to the precision of the information already received. This does not necessarily mean that the information is correct, but that it is at least consistent.[49]

In the selection of a value of Θ to adopt as a public

policy position, the candidate with a spiked distribution would be likely to select the value with the greatest probability, and would probably repeat that choice if given the opportunity. He would therefore be <u>confident</u> about his decision, but not necessarily certain of the outcome, since nature can still play strange games. The candidate with the uniform distribution would be less confident about his decision (since any choice would be as likely as another) and if given a number of opportunities to select a public policy he believed to be the median, would not have any rational reason to keep selecting the same position. Since each position would be equally likely to occur, a random selection of positions would be an acceptable strategy. The result is that compared to a less confident candidate, a confident one would be more consistent in his choices, selecting the positions with the greatest probability. The actions of the confident candidate would thus be more predictable than those of one who chose in a more randomized fashion. (See Figure 2.4.)

Figure 2.4 represents another example of a spiked distribution, one with small variance, but not as extreme as the one in Figure 2.3. In this case, there are a few values that show a high probability. We could still consider the candidate to be fairly confident of his choice of a public policy position if he were to choose one of the few values that cluster around a certain position. For example, it appears the $\theta_5$, $\theta_6$, and $\theta_7$ have the greatest subjective

P(θ)   1.00



0.00    θ₁   θ₂   θ₃   θ₄   θ₅   θ₆   θ₇   θ₈   θ₉   θ₁₀   θ
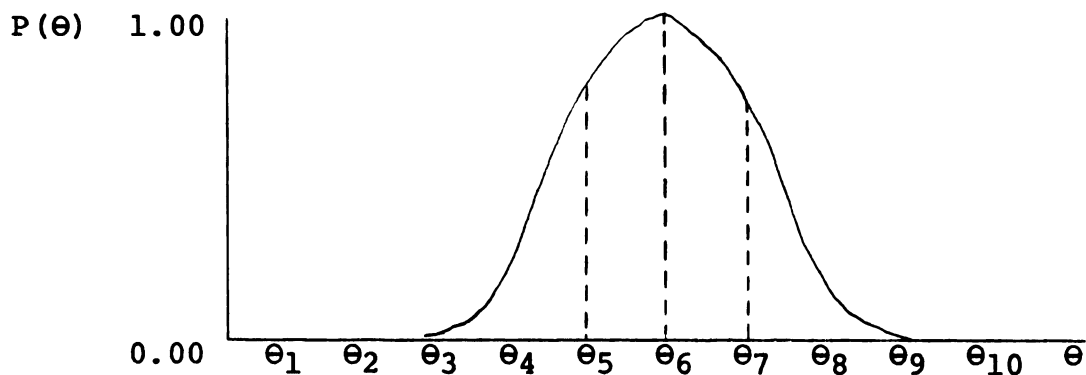
Figure 2.4

A SUBJECTIVE PROBABILITY DISTRIBUTION OF
A PARAMETER θ

probability of being the true median position.  Over the

long run, he would not have to always choose $\theta_6$ (the value

with the highest probability), but by choosing these values

most often he probably would not be too far off the mark,

according to his estimates.  In any case, his choices would

remain fairly consistent, with only an occasional and infre-

quent deviation.  As the distribution approaches a more

uniform distribution, with the values becoming more equi-

probable, his choices over the long run would be more random

and thus less predictable.

We have thus shown why a confident candidate in a

campaign would be more likely to choose a position close to

what he perceives as the most likely position of the median

of the voter distribution.  In contrast, the less knowledge-

able and therefore less confident candidate would also be

less predictable in terms of his selection of a public

policy position.  These conclusions can be stated in the

form of the following proposition:

> Proposition 1:   <u>Ceteris</u> <u>paribus</u>, the smaller the variance of the subjective probability distribution of a parameter $\theta$, the more likely a candidate will consistently choose his best estimate of $\theta$ as the true value of $\theta$.

The converse is also expected to be true:   as the variance of the probability distribution of $\theta$ increases, the less likely a candidate will choose his best estimate of the true value of $\theta$, since the values will approach equiprobability.

This "uncertainty" or lack of confidence in one's choice of the probability of a state of the world which leads to a less consistent choice underlies the notion of <u>ambiguity</u> in terms of a probability distribution of probabilities, or, as Savage calls it, a "second-order" distribution of probabilities.[50]  For example, consider a situation in which a subject is given two urns, A and B, with urn A containing 5 red and 5 black balls, and urn B containing 10 balls of unknown color (either red or black). If asked to select a ball from one of the urns and predict the color of the ball, which urn would the subject choose, urn A or urn B?  Since he has no knowledge of the distribution of the balls in urn B, he could apply LaPlace's Law of Insufficient Reason and assume the selection of either a red or black ball is equally likely.  The selection of a red or black ball is also equally likely if a ball is selected from urn A, so there is actually no reason to select one urn over the other in order to improve the prediction of what kind of

ball would be selected. There is, however, reasonable evidence to believe that urn A will be chosen, since the subject was told by the experimenter what the true distribution of balls in urn A was. The subject was thus more "certain" or more "confident" that he knew the true distribution of balls in urn A.[51] When applying this result to candidates in a political campaign, we can predict that the uncertainty regarding the true distribution of an unknown parameter can affect the kinds of choices made by a candidate, depending upon his degree of knowledge and experience, as well as his perceptions.

We can also examine the selection of a policy position within the framework of the normal form of a decision matrix.[52] For the sake of simplicity, let us assume that there are two possible states of the world: 1) the median of the voter distribution in a constituency is $\theta_1$, 2) the median of the voter distribution in the same constituency is $\theta_2$. A candidate has essentially two choices: 1) select $A_1$, the perceived position of the median at $\theta_1$, or 2) select $A_2$, the perceived position of the median at $\theta_2$. W, X, Y, and Z represent the set of possible payoffs when an action is chosen and one of the states of the world obtains. (The payoffs can be either positive or negative.) (See Figure 2.5.)

If the state of the world is such that $\theta_1$ is the true median and $A_1$ is chosen, then the candidate could expect to receive W votes (cell 1). Likewise, if $\theta_2$ is the true median and $A_2$ is chosen, then one could expect to receive Z

STATES OF THE WORLD

| ACTIONS | $\Theta_1$ | $\Theta_2$ |
|---|---|---|
| $A_1$ | 1) W | 2) X |
| $A_2$ | 3) Y | 4) Z |

Figure 2.5

A DECISION MATRIX

votes (cell 4). If the candidate chooses incorrectly, i.e., chooses $A_1$ when $\Theta_2$ is the median (cell 2), or chooses $A_2$ when $\Theta_1$ is the median (cell 3), he could receive a smaller number of votes (or lose votes), represented by X and Y, respectively. In order to decide whether to choose $A_1$ or $A_2$ under uncertainty, the expected value of $A_1$ and $A_2$ can be calculated. The action with the greatest expected value will then be the one chosen:[53]

Let $P = p(\Theta_1)$, $(1-P) = p(\Theta_2)$, such that

$P + (1-P) = 1.0$, $0 \leq P \leq 1.0$

$E(A_1) = PW + (1-P)X$

$E(A_2) = PY + (1-P)Z$

For example, if $p(\Theta_1) = .8$ and $p(\Theta_2) = .2$, then the expected value of $A_1 = .8W + .2X$, and the expected value of $A_2 = .8Y + .2Z$. The payoffs of W and Z would be greater than X and Y, since W and Z represent outcomes when one picks the true state of the world. The expected value of $A_1$ would be higher than $A_2$ in this case (assuming W=Z). If the probabilities were reversed, then $A_2$ would be chosen. When

$P = (1-P)$, there is no dominant choice.

The question that still remains, however, is how confident is the candidate that his estimates of $p(\theta_1)$ and $p(\theta_2)$ are true. If he is not confident, then his probability distribution of $\theta$ will have a high variance, and as the variance decreases, his confidence will increase. According to Proposition 1, a confident candidate would be more likely to trust his judgment and go with his best estimate of the true value of the median. One who is less confident would consider a wider range of choices.

This proposition can go far in explaining the selection of a public policy position of a candidate, but we also have to consider the nature of the incentives and rewards that would be needed to encourage the collection of information by candidates to learn district opinion. Clearly, the candidate who runs unopposed need not concern himself with estimating the median of the voter distribution during the general election, but the case is quite different when a candidate perceives there is some risk involved in the selection of a public policy position.

Risk is defined as expected loss. This means that the expected loss of votes as a result of adopting a particular policy position is determined by a loss function. Formally, a loss function $L(A,\theta)$ is a real-valued, non-negative function which reflects the loss in taking action A when $\theta$ is the true value of the parameter. The loss is zero when A is the best action for $\theta$. The risk is thus the expected value

of the loss function given an action and the values of the unknown parameter.[54] The values in the matrix represent the <u>loss</u> from choosing an action, rather than the payoffs, as shown earlier. The task is to adopt a decision rule to minimize expected loss. Although the criteria of maximizing expected payoffs and minimizing expected loss yield identical results, we will henceforth refer to the decision matrix in terms of loss, since this is the method most often used in the analysis of decisions when sample information is obtained, and it allows us to use the concept of risk.[55]

|  | STATES OF THE WORLD | |
| :---: | :---: | :---: |
| ACTIONS | $\theta_1$ | $\theta_2$ |
| $A_1$ | 1)  0 | 2)  X |
| $A_2$ | 3)  Y | 4)  0 |

<u>Figure 2.6</u>

<u>A DECISION MATRIX SPECIFYING LOSSES AS OUTCOMES</u>

Figure 2.6 is a decision matrix in which the components in the cells represent positive losses. The zeros represent no loss, but X, Y in this case represent the number of votes lost from choosing an action, given a particular state of the world. The expected loss (risk) for each action is:

$$E(\ L(A_1,\theta)\ ) = P0 + (1-P)X = (1-P)X$$

$$E(\ L(A_2,\theta)\ ) = PY + (1-P)0 = PY$$

A decision maker can then choose either $A_1$ or $A_2$, whichever minimizes the expected loss. For example, if X and Y are

equal and (1-P) is greater than P, then $A_2$ will minimize the expected loss.

If there is no risk in choosing a policy position that is not the median position (if the expected loss is zero for each action), then a decision may be made on the basis of some other factors that are of salience to the voters. These may include satisfying an intense minority in order to gain their support and use of their resources, or perhaps the candidate may choose to merely satisfy his own policy pre- ferences. Candidates who are unopposed will perceive no risk and may be free to adopt any policy position, except that instead of perceiving risk in the general election, it may arise during a primary contest, which, in many one-party areas, is tantamount to election. Consideration of the con- sequences of uncertainty and risk in primary contests is beyond the scope of this investigation.

When there is risk perceived in the general election, in order to prevent any loss of votes in an uncertain world, the candidates might be expected to make a greater attempt to determine voter sentiments in order to adopt a position that comes closest to minimizing expected loss. This will presumably depend upon the confidence of the candidate and the cost of such information. The greater the confidence of the candidate, the less likely he will engage in a large scale effort to gather additional information, since it would be expected only to confirm what he already knew. Less con- fident candidates who had the necessary resources would be

expected to try to gain additional information in order to make the best decision.[56]

To summarize, when there is no risk associated with choosing one alternative over another (the expected loss for each alternative is zero), there is no reason for a candidate to favor a particular alternative. However, when there is some risk associated with a set of alternatives, there is an incentive for the candidate to choose a position to minimize his expected loss. In addition, when the risks associated with each alternative are non-zero and equal, then the choice of an alternative can be chosen randomly, but as the risks for each alternative change, the best choice to make would be the one based on the candidate's best estimate of the state of the world. This leads us to the statement of Proposition 2:

> Proposition 2: Ceteris paribus, as the risk from choosing an alternative increases, the more likely a candidate will choose his best estimate of $\theta$ as the true value of $\theta$.

This implies that both risk and uncertainty play an important role in the selection of a public policy position by a candidate. Risk is important because it determines the expected value of the outcome of each decision and uncertainty determines the degree of confidence attached to the estimates of the true value of $\theta$, which in turn determines the expected losses (risks). It also means that the relationship in Proposition 1 would be strengthened by consideration not only of the uncertainty regarding the

probability of occurrence of a parameter, but also the degree of risk involved. With no risk, it would not matter which position was taken, at least within the framework of this model. If the risks were greater than zero, then consideration of risk and uncertainty would be important in the selection of a policy position.[57] Also, since these concepts are based on candidates' perceptions of the world, if we discover that candidates act as if they followed their perceptions, then these results can have important implications for the popular control of public policy.

## 5. Conclusion

In this chapter, the basic framework of a Bayesian decision model has been formulated to analyze the subjective decision making of politicians seeking electoral gain under conditions of risk and uncertainty. The propositions derived from the Bayesian model explain why candidates would be more likely to follow their best estimates to make a decision and why others would be more willing to adopt a more randomized strategy.

One important consideration in the development of the Bayesian model has been the concern for empirical relevance that can assist us in the development of a political theory. As a result, the mathematical complexity of the model has been maintained at a level that simplifies the realities of a political campaign, but can be easily modified to accomodate more complex situations. The simpler form may have

resulted in fewer hypotheses, but their empirical implications are potentially quite fruitful, as shown in the following chapters.

In the next chapter, the two propositions are operationalized with the consideration for the data that are available, which include the 1958 Representation Study, and given both the data's strengths and limitations. Although not all of the hypotheses stated in chapter three will be formally and directly deduced from this model, they will generally reflect the relationships of the basic concepts of Bayesian decision theory. The testing of these hypotheses will be intended to serve the purpose of providing empirical knowledge that can be considered in the construction of more complex models and in the collection of a more specialized set of data.

CHAPTER TWO

NOTES

1. As Downs states, "...it is the basic force affecting all human activity...it shapes the nature of [every significant institution in society]." See Anthony Downs, _An Economic Theory of Democracy_ (New York: Harper and Row, 1957), p. 13.

2. E. Frank Harrison, _The Managerial Decision Making Process_ (Boston: Houghton-Mifflin Co., 1975), p. 158.

3. Ibid., p. 160. For some recent research on the nature of the perceptual process, see John R. Bergen, "The Structure of Perception," _Journal of the Association for the Study of Perception_, (1969), 1-19, and Sheldon S. Zalkind and Timothy W. Costello, "Perception: Some Recent Research and Implications for Administration," _Administrative Science Quarterly_, (1962), 218-235.

4. From the calculus of the model, one can manipulate variables, while holding others constant, in order to derive a set of testable hypotheses. If the results of the model coincide closely to the data, then we can proceed to develop a body of knowledge that can lead to the development of a well-defined theory. For a discussion of the model building process, see Paul Diesing, _Patterns of Discovery in the Social Sciences_ (Chicago: Aldine-Atherton, 1971), Abraham

Kaplan, The Conduct of Inquiry (San Francisco: Chandler, 1964), Richard Rudner, The Philosophy of Social Science (Englewood Cliffs, New Jersey: Prentice-Hall, 1966), and Ralph M. Stogdill, ed., The Process of Model-Building in the Behavioral Sciences (New York: Norton, 1970).

5. This may also be referred to as simply statistical decision theory, but the term "Bayesian" usually implies the additional use of subjective probabilities. See Morris Hamburg, Statistical Analysis for Decision Making (New York: Harcourt, Brace and World, 1970).

6. Robert L. Winkler and William L. Hays, Statistics: Probability, Inference, and Decision (New York: Holt, Rinehart and Winston, 1975), p. 473.

7. Bayesian decision theory is basically a prescriptive theory, rather than a descriptive one. That is, it presents the principles and methods for an individual to make an optimal decision under risk and uncertainty, but it does not claim to present an accurate or complete description of how actual decisions are made in the real world. Instead, it allows us to postulate goals for decision makers and determine whether they act as if they had these postulated goals and used a decision calculus to arrive at their choices. For a discussion of the "as if" criterion, see Milton Friedman, "The Methodology of Positive Economics," in Essays in Positive Economics, ed. by Milton Friedman (Chicago: University of Chicago Press, 1953), pp. 3-44, and Ernest Nagel, "Assumptions in Economic Theory,"

American Economic Review, 53 (1963), 211-220, as well as

Otto Davis, "Notes on Strategy and Methodology for a

Scientific Science," in Mathematical Applications in Poli-

tical Science, ed. by Joseph Bernd (Charlottesville,

Virginia: University Press of Virginia, 1969). Friedman's

argument was essentially that a formal theory should not be

judged by the realism of its assumptions, but by the accuracy

of its predictions deduced from the model.

This prescriptive approach has the advantage of even-

tually enabling us to describe the actual way in which

decisions are made. As Shepsle notes of his decision making

models:

> It may be argued that as the criteria upon which
> prescriptive rules are based approach the
> criteria used by real decision makers, as the
> resources with which our theoretical decision-
> maker is endowed reflect the resources of a
> real decision-maker, and (we speculate) as the
> decisions increase in importance to the decision-
> maker, the prescriptive theory we have developed
> becomes increasingly suitable as a descriptive
> theory.

See Kenneth A. Shepsle, "Essays in the Theory of Risk-Taking"

(Unpublished Ph.D. Dissertation, University of Rochester,

1970), p. 63.

8. For a brief description of the 1958 Representation

Study, see the Guide to Resources and Services, 1976-1977

(Ann Arbor, Michigan: Institute for Social Research, 1976),

pp. 180-181. A more detailed description will be given in

chapter three.

9. For a description of Bayesian decision theory, see

for example, John Aitchison, Choice Against Chance: An

Introduction to Statistical Decision Theory (Reading,
Massachusetts: Addison-Wesley Publishing Company, 1972),
Ward Edwards and Amos Tversky, eds., Decision Making:
Selected Readings (Baltimore: Penguin Books, 1967), George
P. Box and George Tiao, Bayesian Inference in Statistical
Analysis (Reading, Mass.: Addison-Wesley Publishing Co.,
1972), Henry E. Kyburg and Howard E. Smokler, eds., Studies
in Subjective Probability (New York: John Wiley and Sons,
1965), Dennis V. Lindley, Introduction to Probability and
Statistics From a Bayesian Viewpoint, 2 vols., (Cambridge,
England: Cambridge University Press, 1965), Lindley, Making
Decisions (New York: John Wiley, 1971), Lawrence D. Phillips,
Bayesian Statistics for Social Scientists (New York: Thomas
Y. Crowell Company, 1973), John W. Pratt, Howard Raiffa and
Robert Schlaifer, Introduction to Statistical Decision
Theory (New York: McGraw-Hill, 1965), Howard Raiffa,
Decision Analysis: Introductory Lectures on Decision Making
Under Uncertainty (Reading, Mass.: Addison-Wesley Publish-
ing Company, 1968), Robert Schlaifer, Analysis of Decisions
Under Uncertainty (New York: McGraw-Hill, 1969), Samuel
Schmitt, Measuring Uncertainty: An Elementary Introduction
to Bayesian Statistics (Reading, Mass.: Addison-Wesley
Publishing Company, 1969), and Robert L. Winkler, An Intro-
duction to Bayesian Inference and Decision (New York: Holt,
Rinehart and Winston, 1972). The reference to Winkler
contains an excellent bibliography of additional articles
and texts in this area.

10. See Thomas Bayes, "An Essay Towards Solving a Problem in the Doctrine of Chances," Philosophical Transactions of the Royal Society, 53 (1763), pp. 370-418. Reprinted in Biometrika, 45 (1958), 293-315. Bayes did not present Bayes' formula in the form presently familiar to scientists, but he apparently understood how to make the same calculation. See Wayne Lee, Decision Theory and Human Behavior (New York: John Wiley, 1971), p. 47.

11. Hamburg, op. cit., p. 42.

12. When a personalistic interpretation is applied to statistics, it is called Bayesian statistics.

13. Phillips, op. cit., p. 63.

14. (London: Kegan Paul, 1926).

15. Bruno de Finetti, "Foresight: Its Logical Laws, Its Subjective Sources," translated by Kyburg and Smokler, op. cit. pp. 93-158.

16. B.O. Koopman, "The Axioms and Algebra of Intuitive Probability," Annals of Mathematics, Ser. 2, 41 (1940), 269-292, "The Bases of Probability," Bulletin of the American Mathematical Society, 46 (1940), pp. 763-774, and "Intuitive Probabilities and Sequences," Annals of Mathematics, Ser. 2, 42 (1941), 169-187.

17. I.J. Good, Probability and the Weighing of Evidence (London: Charles Griffen and Co., 1950). See also Good's more recent work, The Estimation of Probabilities: An Essay on Modern Bayesian Methods (Cambridge, Mass.: MIT Press, 1965), which includes an extensive bibliography.

18. Leonard J. Savage, The Foundations of Statistics
(New York: Wiley, 1954). A second revised edition has
been published by Dover Press (1972). See also "The Founda-
tions of Statistics Reconsidered," in Proceedings of the
Fourth Berkeley Symposium (Berkeley: University of Califor-
nia Press, 1961), pp. 575-586, Reprinted in Kyburg and
Smokler, op. cit.

19. See Henry E. Kyburg, Jr., Probability and the
Logic of Rational Belief (Middleton, Conn.: Wesleyan
University Press, 1961), Chapter 3, for a description of the
personalistic theory of probability.

20. Hamburg, op. cit., p. 12.

21. Ibid., p. 766. For a statement on the use of
objective frequencies, see R. Von Mises, "Probability: An
Objectivist View," in Elementary Statistics for Economics
and Business, ed. by Edwin Mansfield (New York: W.W. Norton
and Co., 1970), pp. 59-67. As Phillips notes in regard to
the use of subjective probabilities:

> Many statisticians have been reluctant to adopt
> Bayesian ideas because they feel that prior
> opinion is vague and incapable of being quanti-
> fied. (Phillips, op. cit., p. 53.)

However, this may be more a reflection of the complexity of
events, rather than an inability to quantify judgments.

At this time, there are a number of methods available
for measuring subjective judgments, but the question pre-
sently before theorists involves which methods should be
used. One procedure that has been investigated involves the

use of computers to decompose complex events into simple ones. See Ward Edwards, L.D. Phillips, W.L. Hayes, and B.C. Goodman, "Probabilistic Information Processing Systems: Design and Evaluation," IEEE Transactions on Systems Science and Cybernetics, SSC-4 (1968), 248-265, for more details. For examples of empirical research on the estimation of subjective probabilities by human subjects, see Lee, op. cit., Chapter 3, and Edwards and Tversky, op. cit. The results seem to indicate that while there is likely to be a good correspondence between objective and subjective probabilities, subjective probabilities do not consistently sum to 1.0, nor does the multiplication rule (see note 23) for independent events always hold. However, subjective probabilities do tend to become more consistent for adults than for a child. See Lee, op. cit., p. 65.

22. Hamburg, op. cit., p. 766.

23. The properties of objective probabilities are based on the laws of probability. These include the following: 1) probabilities cannot be less than zero nor greater than one, and the probability of a sure event is 1.0, 2) the probability of either of two mutually exclusive events occurring is equal to the sum of their individual probabilities, and 3) the probability of two joint independent events occurring is equal to the product of the probabilities of each event. For a complete description of the laws of probability, see Phillips, op. cit., Chapter 3, or most textbooks on probability theory.

24. For the derivation and proof of Bayes' theorem, see Winkler and Hays, op. cit., pp. 93-94. The general formulae for Bayes' theorem for discrete and continuous events are shown on pages 472 and 494, respectively.

25. In the continuous case, the estimation of a posterior distribution can be facilitated when the likelihood function and the prior distribution form natural conjugates. For example, if the prior distribution can be expressed as a beta distribution, then the posterior distribution is also a beta distribution. Likewise, a gamma and Poisson distribution combine to form a gamma posterior distribution, and two normal distributions form a normal posterior distribution. See Ira Horowitz, An Introduction to Quantitative Business Techniques (New York: McGraw-Hill, 1972).

26. Winkler, op. cit., p. 221.

27. Shepsle, "Essays...," op. cit., p. 56.

28. Hamburg, op. cit., p. 213.

29. Ibid., p. 697.

30. Ibid., p. 615.

31. Savage, Foundations of Statistics, op. cit., p. 9.

32. Ibid.

33. Ibid., p. 10.

34. The expected value is obtained by multiplying the value of the consequences of each act by the probabilities of each of the possible states of the world, and summing the products. One can then choose the action with the highest expected value.

35. Different utility functions may be used to indicate different values that individuals place upon different outcomes. See Winkler, op. cit., Chapter 5. It is at this point where the interpretation of what Shepsle refers to as the "risk environment" becomes significant as a factor in the selection of an optimal strategy. For a discussion of three types of utility functions (convex, concave, and linear), see Kenneth A. Shepsle, "Parties, Voters, and the Risk Environment," in Probability Models of Collective Decision Making, ed. by Richard G. Niemi and Herbert F. Weisberg (Columbus, Ohio: Charles Merrill Co., 1972), pp. 273-297, and for an earlier source, Kenneth J. Arrow, "Alternative Approaches to the Theory of Choice in Risk-Taking Situations," Econometrica, 19 (1951), 404-437.

36. There are actually a number of different decision rules that could be applied to this problem besides the maximization of expected utility. These include the maximin principle, Savage's minimax regret principle, and Hurwicz's pessimism-optimism index. For a discussion of the implications of these decision rules, see Shepsle, "Essays...," op. cit. and D.J. White, Decision Theory (Chicago: Aldine, 1969).

37. Although Bayesian procedures have not been widely applied to problems in political science, their use has increased in recent years. Besides Fiorina's application to the study of legislative decision making, (Fiorina, op. cit.), it has caught on predominantly in the area of

international politics. Examples of the application to the study of international politics include: Eugene J. Alpert, "Capabilities, Perceptions, and Risks: A Bayesian Model of International Behavior," International Studies Quarterly, 20 (1976), 415-440, J.D. Ben-Dak and K. Finsterbusch, "Bayesian Analysis: Applications for the Study of Foreign Behavior," in Patrick McGowan, ed., International Yearbook of Foreign Policy, 1974 (Beverly Hills: Sage Publications, 1974), pp. 269-306, and Patrick McGowan, "A Bayesian Approach to the Problem of Events Data Validity in Comparative and International Political Research," in Comparative Foreign Policies, ed. by James N. Rosenau (Beverly Hills: Sage Publications, 1974). For examples of the use of Bayesian decision theory in related fields, see Gudmund Iversen, "Statistics According to Bayes," in Sociological Methodology 1970, ed. by E.F. Borgatta (San Francisco: Jossey-Bass, 1970), pp. 185-199, and V.M. Rao Tummula and Richard C. Henshaw, eds., Concepts and Applications of Modern Decision Models (East Lansing, Michigan: Graduate School of Business, Michigan State University, 1975).

38. For a collection of articles illustrating the behavioral aspects of subjective decision making, see Ward Edwards and Amos Tversky, op. cit. For a discussion of the use of information, see Avner M. Porat and John H. Haas, "Information Effects on Decision Making," Behavioral Science, 14 (1969), 98-104, and Robert Radlow, "Decision Making and the Theory of Learning," in Decision and Choice: Collections

of Sidney Siegel, ed. by Samuel Messick and Arthur H. Brayfield (New York: McGraw-Hill, 1964), pp. 267-275.

39. For a discussion of rationality and its use in the social sciences, see Paul H. Conn, David B. Meltz, and Charles Press, "The Concept of Political Rationality," Polity, 6 (1973), 223-229, Arthur S. Goldberg, "Social Determinism and Rationality as Bases of Party Identification," American Political Science Review, 63 (1969), 5-25, and Herbert A. Simon, "A Behavioral Model of Rational Choice," Quarterly Journal of Economics, (1955), 99-118.

40. Kenneth A. Shepsle, "The Strategy of Ambiguity: Uncertainty and Electoral Competition," American Political Science Review, 66 (1972), 568.

41. For a summary of the spatial modeling literature, see William H. Riker and Peter C. Ordeshook, Introduction to Positive Political Theory (Englewood Cliffs, New Jersey: Prentice-Hall, 1973) and Michael Taylor, "Review Article: Mathematical Political Theory," British Journal of Political Science, 1 (1971), 339-382.

42. For additional criticisms of spatial models, see Donald Stokes, "Spatial Models of Party Competition," American Political Science Review, 57 (1963), 368-377 and Brian Barry, Sociologists, Economists and Democracy (London: Collier-Macmillan, 1970).

43. See Duncan Black, The Theory of Committees and Elections (Cambridge: Cambridge University Press, 1958) for a discussion of the importance of the median in an electoral

strategy.

44. See Note 7 for a discussion of the <u>as if</u> criterion.

45. Winkler, op. cit., pp. 74-76. The formula for a continuous probability distribution is shown in Winkler, pp. 143-145.

46. A more elaborate discussion of this example may be found in the article, Jack Hirshleifer, "The Bayesian Approach to Statistical Decision," in Edwin Mansfield, ed., op. cit., pp. 85-101.

47. Karl Borch, <u>The Economics of Uncertainty</u> (Princeton: Princeton University Press, 1968), p. 78. For n events, the uncertainty is greatest when all events are equiprobable. See Lee, op. cit., p. 265. While LaPlace's Law of Insufficient Reason has many proponents and can be legitimately used in estimating the probabilities of events, it has had its detractors. See David W. Miller and Martin K. Starr, <u>The Structure of Human Decisions</u> (Englewood Cliffs, New Jersey: Prentice-Hall, 1967), pp. 123-124. Also, Shepsle points out that its use can be criticized if one does not know the finite bounds of the events. In addition, the different descriptions of what is meant by "collectively exhaustive events," i.e., the possible states of the world, may result in different choices. See Shepsle, "Essays in the Theory of Risk-Taking," op. cit., pp. 51-54.

48. Predicting the outcome of the toss of a coin may in fact be easier than estimating the true value of the median. At least with a coin toss, one may have one chance

or more, but second chances in politics are often rare. This is often the contrast between an event that can be described by objective rather than subjective probabilities. See Savage, "Probability: A Subjectivist View," in Mansfield, op. cit., pp. 102-112.

49. Box and Tiao, op. cit., p. 21.

50. Savage, op. cit., p. 58.

51. According to research in this area, subjects appear to prefer situations in which the probabilities are well-specified than ones with ambiguous probabilities, even though they should be indifferent according to LaPlace's Principle of Insufficient Reason. See Lee, op. cit., pp. 119-122 and Savage, op. cit., pp. 57-59.

52. Theoretically, all extensive game forms of a decision making problem can be expressed in normal form if the number of moves in the game is finite. See Edna E. Kramer, The Nature and Growth of Modern Mathematics (Greenwich, Conn.: Fawcett Publications, 1970), pp. 384-387.

53. In decision theory, one does not always use this criterion to select an alternative. Other methods are available, as explained in Note 36.

54. See Alexander M. Mood and Franklin A. Graybill, Introduction to the Theory of Statistics, Second Edition (New York: McGraw-Hill, 1963), pp. 165-167.

55. See Winkler, op. cit., Chapter 5.

56. In Pruitt's study of the information needs of decision makers, it was found that individuals try to reduce

risk by collecting information on various alternatives in order to assess the advantages and disadvantages of each. Pruitt also found that once a decision was made, much more information was required to make a decision maker change his mind. See Dean G. Pruitt, "Information Requirements in Making Decisions," American Journal of Psychology, 74 (1961), 433-439.

57. We have assumed that the payoffs and losses associated with each action and state of the world are known, as determined by the decision maker's utility function. This simplifies the present model, but allows for the deduction of additional hypotheses at a later time. For example, a subjective probability distribution can be attached to the parameter representing the true value of each outcome, introducing an additional consideration of risk and uncertainty in determining the true values of the outcomes.

CHAPTER THREE

CANDIDATE DECISION MAKING

## 1.   Choice and Constituency Influence

In a campaign in which a candidate is opposed for
election and finds it necessary to take a stand on issues
that he believes concerns his constituency, he will want to
adopt a position that can raise his probability of election
to an acceptable level.  There are often three possible
choices that can be made in the selection of a policy
position:  1) he can adopt the policy position that he
perceives to be adopted by the most number of people in his
district, 2) he can adopt the policy position that best
represents his own personal policy preferences and convic-
tions, or 3) if the candidate is the incumbent, he can adopt
the same policy position he has formulated through his voting
record in the legislature.  These choices of course are not
mutually exclusive, and any candidate would be in an enviable
position if all three choices represented the same policy
position.

These three choices are components of the constituency
influence model described by Warren Miller and Donald Stokes
in their article, "Constituency Influence in Congress,"[1]
which was based on the analysis of the 1958 Representation
Study.  The primary purpose of the study was to:

> ...provide the first direct confrontation
> between the policy preferences of the
> electorate and the policy acts of its
> elected representatives.... The general
> research objective...is the study of
> conditions under which policy agreement
> between constituent policy preferences and
> congressional roll call behavior is maxi-
> mized and minimized.[2]

Two paths of constituency control were 1) for the

district to choose a representative who shared similar

attitudes so that by following his own convictions, he also

would follow his constituents' will; and 2) for the repre-

sentative to follow his perceptions of district opinion in

order to gain reelection.

The primary paths which describe the linkage between

constituency opinion and legislative behavior are shown in

Figure 3.1. Of course, additional conditions must be met

to ensure complete responsiveness. These include the

ability, as well as the opportunity, to vote on legislative

issues that reflect the policy positions that the represen-

tative desires to express. Often the pressures to vote with

one's party or in support of the administration may preclude

the representative from following his district's preferences

or his own on every vote, and vice-versa.[3] (See Figure 3.1.)

The linkage model may explain the paths of influence

from the constituency to the roll call, but it does not take

into account the activities of the representative during a

campaign. There is no reason to believe that the policy

position taken by the candidate in the campaign will be

reflected by the kinds of roll calls that a legislator may

```
              Representative's
           ↗ Attitude ↘
          ↑
Constituency's                    Representative's
Attitude                          Roll Call Behavior
                                 ↗
           ↘ Representative's  ↗
            ↘ Perception of  ↗
              Constituency's
              Attitude
```
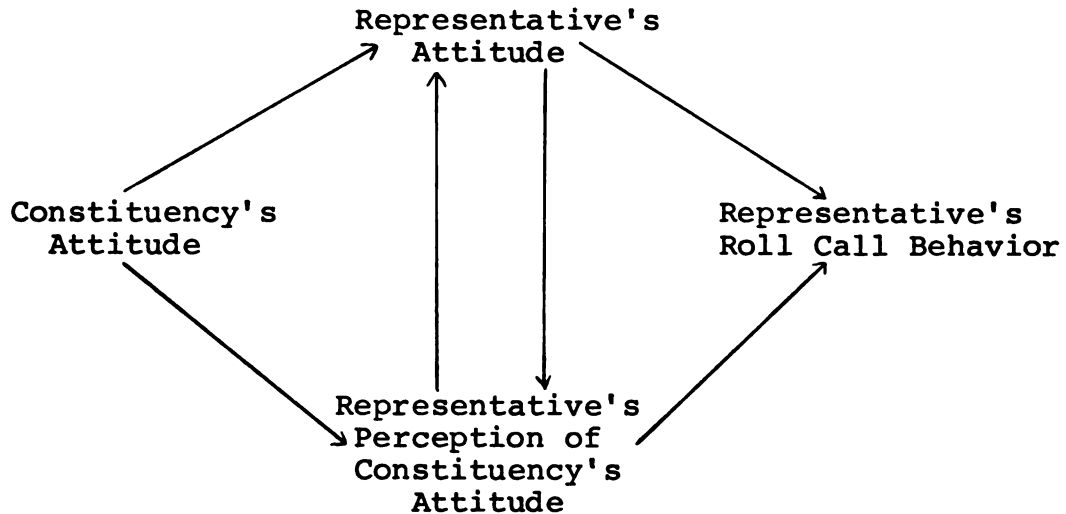
Figure 3.1

PATHS OF CONSTITUENCY INFLUENCE[4]

be expected to answer.  His campaign positions may in fact

be his "real" positions, but his roll call positions may

only reflect the idiosyncracies of the chamber's rules and

membership.  Also, if there is limited programmatic support

for candidates based on their legislative record, then an

investigation of their political behavior should not over-

look the campaign environment as a separate forum for the

airing of political views and public policies.[5]

In limiting the scope of the present study to the

campaign environment, we intend to isolate some important

variables that contribute to the behavior of the political

candidate.  As a result, the roll call behavior of the

incumbent will be of only indirect concern.  Instead, we

will focus on the decision of a candidate, who may or may

not be the incumbent, and whether he is likely to rely more

upon his perception of constituency opinion (his best estimate) or his own personal attitudes (or other considerations) in selecting a public policy position. Since the challenger of today can be the incumbent of tomorrow, it is important to explain the decisions of all the candidates, and not just the incumbents. The Miller and Stokes paradigm of constituency influence needs to be expanded to include a two phase process describing the linkage between the constituency and the candidates, as well as the constituency and its representative. If there is a significant difference in these two processes, then we will want to know why candidates "change their tune" from the campaign to the legislature. Figure 3.2 shows the revised linkage scheme. (See Figure 3.2.)

The diagram shows that in order for complete responsiveness to occur, the candidate should have a roll call record consistent with his perceptions of district opinion and comensurate with the public policy position he espouses during the campaign. Over a period of time, it may be necessary to change one's original stands, but a low correlation of one's campaign position and legislative roll call position would indicate that there was some misrepresentation of the public policy preferences of the individual. As the next election approaches, and the memories of the last campaign fade, the representative can rely more heavily on either his attitudes or his perceptions in selecting a public policy position.
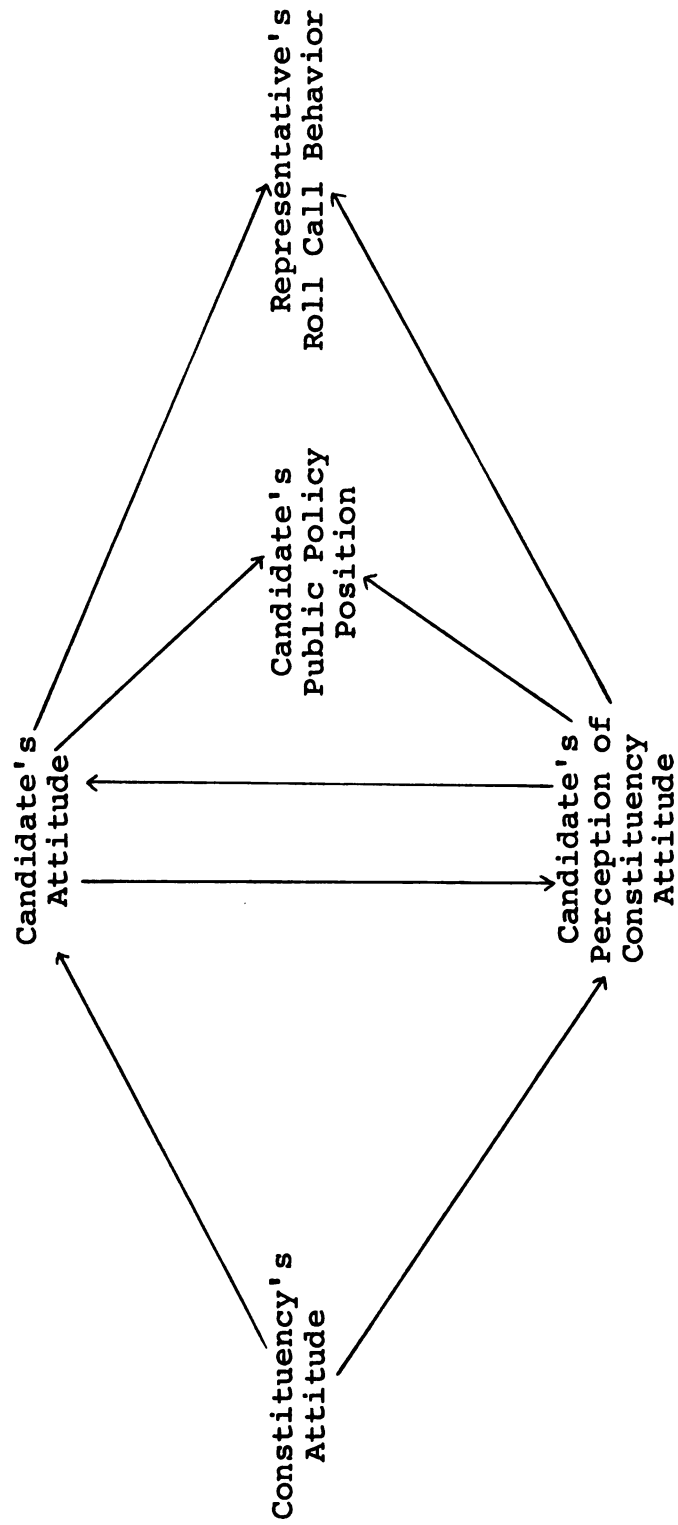
Figure 3.2

REVISED PATHS OF CONSTITUENCY INFLUENCE

2.  <u>The 1958 Representation Study</u>

In earlier chapters we have described the framework within which candidate decision making can be studied, as well as the concepts that are important in investigating this kind of problem. We now turn to a description of the data set that will be used to test the hypotheses about candidate behavior to be presented in the next section. Since the number of hypotheses that can be tested are limited by the available data, the data set is being presented at this point in order to establish the context within which the hypotheses will be tested.

In order to completely test the Bayesian model, we would need a survey of candidates that included questions about their perceptions, the means through which they received and evaluated information, their policy positions, and how their perceptions and policies changed over time. Since the resources to conduct such a survey for this study are not available, we shall instead utilize the data collected from the 1958 Representation Study. Although the study does not fulfill all our data needs, the study is quite comprehensive in its scope and can provide some important information that can be used as a basis for future investigations.

Although the Representation Study was conducted during 1958-59, it has only recently become available for public examination through the services of the Inter-University Consortium for Political Research.[6] As a result, only a few

articles based on the study have been published, mostly by the original investigators and their associates.[7] Most of the articles have been concerned with the incumbents' behavior, rather than that of the nonincumbents in the sample.[8] Despite the relatively few articles based on these data, and their primary concern with incumbents, the 1958 Representation Study remains one of the most significant studies of congressional candidates ever undertaken.[9]

The 1958 Representation Study was conducted between November 1958 and March 1959 by the Survey Research Center of the University of Michigan. It was done in conjunction with the 1958 National Election Study, which was a national sample of citizens of voting age. The Representation Study included interviews with a sample of incumbents from the 85th Congress, challengers of these incumbents, and in the case in which the incumbent did not run for reelection, the individual who was chosen to succeed the incumbent as the party's nominee (called the incumbent's successor). The sample of congressional candidates was chosen from the districts surveyed in the election study (114 districts) and in 32 other districts, for a total of 146 congressional districts.[10]

The purpose of the study was to "research the relationship between the attitudes and behavior of the electorate and the attitudes and behavior of their representatives."[11] The principal investigators, Warren E. Miller and Donald E. Stokes, were especially concerned with whether their model

of constituency influence applied to different policy areas. They collected information about the attitudes of consti- tuents (from the election study), candidates, and legisla- tors in three main issue areas: foreign affairs, social welfare, and civil rights.

The data were organized into three files: 1) a candi- date file, consisting of data on the 251 individuals inter- viewed. This group included incumbents and challengers in the 1958 congressional election, but in the districts in which the incumbents did not run for reelection, attempts were made to interview the incumbents' successors as well. This file is the one that will be used to test the hypothe- ses, since we are concerned with the candidate as the basic unit of analysis. 2) A district file, which uses the district (N = 146) as the basic level of analysis and the candidates are separated according to political party. Constituency data are also included in this file. 3) A district file, similar to the previous one, except that instead of organizing the data into Democratic and Republi- can components, they are divided according to which party controlled the congressional seat in the district.

In order to establish proportionality across the districts, a weight variable was designated for each district and another for each candidate.[12] When the candidates are used as the unit of analysis (and when constituency data are not being used), a weighting factor for each candidate must be employed. Candidates from each of the districts are

weighted by either a value of 4.0 or 7.0 for a total of
1364 (131 @ 4.0 + 120 @ 7.0):

> The candidate weights of 4 and 7 are the
> smallest whole integer values which maintain
> the original sampling probabilities given to
> congressional districts and provide a represent-
> ative sample of  congressional districts in
> the United States.[13]

The individuals sampled were distributed from 39 differ-
ent states and included 139 Democrats and 112 Republicans.
When the weights were applied, the total number reached 1364:
781 Democrats and 583 Republicans.

## Table 3.1

### TYPE OF CANDIDATE

| Variable 0005: Code | Description | Unweighted Frequency | Weighted Frequency |
|---|---|---|---|
| 0 | Incumbent Opposed in General Election | 94 | 511 |
| 1 | Incumbent Opposed only in Primary | 9 | 54 |
| 2 | Incumbent Not Opposed in General Election or Primary | 18 | 123 |
| 3 | Nonincumbent who won General Election | 26 | 137 |
| 4 | Nonincumbent who lost General Election | 94 | 493 |
| 5 | Nonincumbent who had been in Congress before | 2 | 11 |
| 6 | Incumbent who sought election to other office | 4 | 16 |
| 7 | Incumbent who retired from office | 3 | 12 |
| 8 | Incumbent defeated in Primary Election | 1 | 7 |
| | TOTAL | 251 | 1364 |

Table 3.2

TYPE OF CANDIDATE IN RELATION TO INCUMBENCY

| Variable 0007: Code | Description | Unweighted Frequency | Weighted Frequency |
|---|---|---|---|
| 00 | Nonincumbent nonsuccessor who was defeated by an incumbent successor | 6 | 30 |
| 10 | Unopposed 85th Congress incumbent who was reelected | 27 | 174 |
| 11 | Albert Thomas, Special Case of Code Ten | 1 | 7 |
| 20 | Opposed 85th Congress incumbent who was reelected | 83 | 446 |
| 30 | 85th Congress incumbent who was defeated | 10 | 61 |
| 40 | 85th Congress incumbent who did not run for Congress in 1958 | 8 | 35 |
| 50 | Incumbent successor who defeated a nonincumbent nonsuccessor | 9 | 42 |
| 60 | Incumbent successor who was defeated by a nonincumbent nonsuccessor | 5 | 26 |
| 70 | Nonincumbent nonsuccessor who defeated an incumbent | 12 | 69 |
| 80 | Nonincumbent nonsuccessor who defeated an incumbent successor | 5 | 26 |
| 90 | Nonincumbent nonsuccessor who was defeated by an incumbent | 85 | 448 |
| | TOTAL | 251 | 1364 |

The primary concern in this study is with those candidates who were opposed in the 1958 congressional elections. The categories used to select the opposed candidates are shown in Table 3.3. (See Table 3.3.)

Tables 3.4 and 3.5 show the categories of candidates by incumbency and election outcome. Since we are concerned with the popular control of public policy and the

Table 3.3

TYPE OF CANDIDATE BY COMPETITION

| Variable 0005: Code | Description | Unweighted Frequency | Weighted Frequency |
|---|---|---|---|
| 1,2,5,6,7,8 | Unopposed in General Election | 36 | 216 |
| 0,3,4 | Opposed in General Election | 215 | 1148 |
| | TOTAL | 251 | 1364 |

responsiveness of public officials, these tables provide us with some background information that will be of later use. Table 3.6 shows the distribution of opposed candidates by incumbency.

Table 3.4

TYPE OF CANDIDATE BY INCUMBENCY

| Variable 0005: Code | Description | Unweighted Frequency | Weighted Frequency |
|---|---|---|---|
| 0,1,2,6,7,8 | Incumbent | 129 | 723 |
| 3,4,5 | Nonincumbent | 122 | 641 |
| | TOTAL | 251 | 1364 |

Table 3.5

TYPE OF CANDIDATE BY ELECTION OUTCOME

| Variable 0007: Code | Description | Unweighted Frequency | Weighted Frequency |
|---|---|---|---|
| 20,50,70,80 | Won General Election | 109 | 583 |
| 00,30,60,90 | Lost General Election | 106 | 565 |
| 10,11,40 | Unopposed or Did Not Run | 36 | 216 |
| | TOTAL | 251 | 1364 |

Table 3.6

TYPE OF CANDIDATE: OPPOSED CANDIDATES BY INCUMBENCY

|  | Unweighted | Weighted |
|---|---|---|
| Incumbents | 93 | 507 |
| Nonincumbents | 122 | 641 |
| TOTAL | 215 | 1148 |

One advantage of using the 1958 congressional elections as a data base is that it was a midterm election year and presidential politics played a much less important role in influencing state and local elections.[14] Another factor is that since the party in control of the White House lost seats in the House of Representatives in 1958, we have a situation in which a large number of incumbents did not return to Congress.[15] This fact will allow us to make comparisons between the effects of incumbency and election outcome, although the relationship between them remained strong (gamma = .928). Tables 3.7 and 3.8 show the distribution of the candidates based on incumbency and election outcome.

Table 3.7

INCUMBENCY BY ELECTION OUTCOME:
OPPOSED CANDIDATES (UNWEIGHTED)

|  | Won | Lost |
|---|---|---|
| Incumbents | 89.2% (83) | 10.8% (10) |
| Nonincumbents | 21.3% (26) | 78.7% (96) |
| TOTAL | (109) | (106) |

Gamma = .936

Table 3.8

INCUMBENCY BY ELECTION OUTCOME:
OPPOSED CANDIDATES (WEIGHTED)

|  | Won | Lost |
|---|---|---|
| Incumbents | 88.0% <br> (446) | 12.0% <br> (61) |
| Nonincumbents | 21.4% <br> (137) | 78.6% <br> (504) |
| TOTAL | (583) | (565) |

Gamma = .928

## 3. The Hypotheses

Now that the theoretical and empirical foundations of the study have been presented, we can now turn to the operationalization of the two propositions presented in chapter two. To review, Proposition 1, which shall be referred to as the "uncertainty" proposition, is restated:

Proposition 1: Ceteris paribus, the smaller the variance of the subjective probability distribution of a parameter $\theta$, the more likely a candidate will consistenty choose his best estimate of $\theta$ as the true value of $\theta$.

In order to operationalize the proposition with consideration for the limitations of the Representation Study,[16] we present the following interpretations of Proposition 1:

Hypothesis 1: Ceteris paribus, candidates who believe they know how people in their district feel about the issues are more likely to adopt a policy position that is close to what they perceive to be the majority opinion in their district.

The confidence, or variance of the probability distribution of Θ, is represented by the extent to which the congressional candidate believes he knows the opinion of people in his district.  His best estimate is his perception of constituency opinion.  His policy position is the position that represents the stands on the issues that are made known to the public.  To test Hypothesis 1, for each of three issue areas, seven variables from the Representation Study are used.  Tables 3.9, 3.10 and 3.11 show each of these variables and how they were recoded.

<u>Table 3.9</u>

<u>DESCRIPTION OF VARIABLE 0095:</u>
<u>KNOWLEDGE OF DISTRICT OPINION</u>

Variable 0095:  Knowledge of District Opinion

Q:  Do you think that you know how the rank and file voters in your district feel about issues like those we've talked about?

<u>Original</u>

1. all the time
2. most of the time
3. some of the time, sometimes, some issues
4. seldom, not very often
5. none of the time, never

<u>Recoded</u>

1. (1,2) most of the time
2. (3) some time
3. (4,5) seldom

FREQUENCIES:  OPPOSED CANDIDATES

|  | Unweighted | Weighted |
|---|---|---|
| 1. most of the time | 138 | 753 |
| 2. some time | 18 | 87 |
| 3. seldom | 19 | 103 |
| TOTAL | 175 | 943 |

## Table 3.10

## DESCRIPTION OF ATTITUDE SCALES:
### VARIABLES 0042, 0054, & 0065

Variable 0042:  Foreign Policy Attitude Scale

### Frequencies*

| Unweighted | Weighted | | |
|---|---|---|---|
| 34 | 187 | 0. | Isolationist |
| 40 | 220 | 1. | Neoisolationist |
| 63 | 339 | 2. | Pro-Con |
| 43 | 223 | 3. | Neoactivist |
| 35 | 176 | 4. | Activist |

Variable 0054:  Social Welfare Attitude Scale

### Frequencies*

| Unweighted | Weighted | | |
|---|---|---|---|
| 50 | 263 | 0. | Conservative |
| 49 | 274 | 1. | |
| 12 | 63 | 2. | |
| 11 | 56 | 3. | |
| 94 | 496 | 4. | Liberal |

Variable 0065:  Civil Rights Attitude Scale

### Frequencies*

| Unweighted | Weighted | | |
|---|---|---|---|
| 59 | 344 | 0. | Conservative |
| 20 | 104 | 1. | |
| 34 | 184 | 2. | |
| 102 | 513 | 3. | Liberal |

*Opposed Candidates Only

Table 3.11

DESCRIPTION OF VARIABLES:
PERCEPTION OF DISTRICT OPINION BY ISSUE AREA

Variable 0195:   Perception of District Opinion on Foreign
                 Policy

Q:   How do people of your district feel about an active
     internationalist policy?  Would you say that...

Frequencies*

| Unweighted | Weighted | |
|---|---|---|
| 50 | 317 | 1. most of them are opposed |
| 41 | 224 | 3. they are fairly evenly divided |
| 77 | 380 | 5. most of them are in favor |
| 37 | 175 | 7. not much district opinion on this (missing data) |
| 5 | 20 | 8. don't know (missing data) |

Variable 0196:   Perception of District Opinion on Domestic
                 Issues

Q:   How do the people of your district like public power and
     public housing?  Would you say that...

Frequencies*

| Unweighted | Weighted | |
|---|---|---|
| 58 | 337 | 1. most of them are opposed |
| 51 | 264 | 3. they are fairly evenly divided |
| 70 | 358 | 5. most of them are in favor |
| 23 | 113 | 7. not much district opinion on this (missing data) |
| 4 | 22 | 8. don't know (missing data) |

Variable 0197:   Perception of District Opinion on Civil
                 Rights

Q:   How do the people of your district feel about desegre-
     gated schools and federal action to protect civil
     rights?  Would you say that...

Frequencies*

| Unweighted | Weighted | |
|---|---|---|
| 28 | 187 | 1. most of them are opposed |
| 21 | 102 | 3. they are fairly evenly divided |
| 119 | 587 | 5. most of them are in favor |
| 31 | 184 | 7. not much district opinion on this (missing data) |
| 7 | 34 | 8. don't know (missing data) |

*Frequencies for opposed candidates only.

The candidate attitude measures were based on multiple item scales, which were constructed according to the statistical procedures used to create Guttman scales. The assignment of the scale scores to individuals was done on the basis of the number of positive responses elicited by a set of questions in each of the three policy areas: foreign affairs, social welfare, and civil rights.[17]

The attitude scales represent the dependent variable, the candidates' public policy position. In their article, "Constituency Influence in Congress," Miller and Stokes used these scales to represent the congressmen's attitudes, or own personal policy preferences, separate and distinct from their roll call positions. In the campaign model we have presented here, these variables are interpreted as the candidates' public policy position and not as their own personal attitudes, although in some cases they may be the same position. Once their personal attitudes are known to the public, it is difficult to distinguish between their public and private position, or even difficult for a candidate to admit that his own public policy position is really different from what he really believes in. If they are indeed different, then their personal policy preferences are unknown and not measured by the data.

This interpretation is bolstered by the following argument. The actual wording of the questions that were used to construct the attitude scales indicates that the questions were not really asking for the candidates'

personal opinions, but for their policy positions on the issues. For example, Variable 0038 reads:

> Now I would like to ask for a brief summary of your views on certain issues. I have a number of items here and I know that many of these questions are complicated ones. But what we are interested in are the basic stands that underlie your evaluation of specific bills or policies.[18] (emphasis added)

Variable 0045 reads:

> I know that a member of the House sometimes isn't able to vote on things that really reflect his own position. How well did (have) House roll calls dealing with foreign policy allow(ed) you to express your basic position on foreign affairs when you were in the House.[19] (emphasis added)

Variable 0046 reads:

> Reasons why the roll call votes have not reflected the (congressman's) basic position on foreign affairs.[20]

The fact that the frequency for response number 3 to Variable 0046 was zero[21] (See Table 3.12) indicates that if their roll call position was different from their policy position, it was not because they were following district opinion, but because they were attempting to follow their policy position, as measured by the attitude scale. The wording of the questions thus indicates that the respondents were expressing what they believed to be their open, public positions on the issues, and not necessarily their personal policy positions that may have in fact been different from the policies they advocated in the public forum. Given this interpretation, we are unable to determine the respondents' personal attitudes, but we can investigate at least whether

## Table 3.12

### DESCRIPTION OF VARIABLE 0046

Variable 0046: Reason Why Roll Call Votes Have Not Reflected Congressman's Basic Position on Foreign Affairs

Frequency: All Candidates
Weighted

178  1. Either-Or nature of roll call votes on bills does not allow for shades of opinion, consideration of particular provisions of bills.

14  2. R's roll call votes reflected wishes of R's desire to support President, Administration, Party Leadership in House.

0  3. R's roll call votes reflected opinion in his district.

36  4. Necessity of compromise; all legislation must be a compromise.

48  5. Not much legislation in this area; Congress has not voted, has not been able to vote, on important questions in this area; policy has been decided by President, Administration.

69  6. House rules and procedure; important decisions made in standing committees, by vote of Committee of the Whole rather than by roll call votes; floor consideration of bills brief, does not deal with basic questions; too many bills in final days of session; etc.

15  7. Objective, implications of bills not always clear at time of roll call vote.

39  8. R's roll call votes have reflected tactical considerations rather than basic position, e.g., R is really for a program, but has voted against it so that it will be re-evaluated.

7  9. Other reasons.

2322  0. Inappropriate; no reasons mentioned, not congressman, etc.

their public policy positions were associated with their perception of constituency opinion.

Proposition 2, the risk hypothesis, predicts that the relationship between the perceived policy position of the district and the policy position of the candidate will be higher when there is some expected loss or risk involved in the decision. For convenience, we restate Proposition 2:

> Proposition 2: Ceteris paribus, as the risk from choosing an alternative increases, the more likely a candidate will choose his best estimate of $\theta$ as the true value of $\theta$.

To operationalize the concept of risk, the Representation Study provides a number of indicators that can represent a situation in which some expected loss could occur, if the candidate makes the "wrong" decision. Hypotheses 2 and 3 state how the idea of risk can affect the choice of a public policy position by a candidate:

> Hypothesis 2: Ceteris paribus, candidates who believe people in their district are interested in the issues are more likely to adopt a policy position close to what they perceive to be the majority position in their district.

> Hypothesis 3: Ceteris paribus, candidates who believe people in their district are aware of their stands are more likely to adopt a policy position close to what they perceive to be the majority position in their district.

These two hypotheses reflect the kind of incentives that may influence a candidate to be more responsive to what he perceives to be his district's opinion. Hypothesis 2

refers only to "issues" and Hypothesis 3 refers only to "stands," and not specific policy areas. However, we can order these items with regard to the degree to which they refer directly to a candidate's position. Clearly, Hypothesis 3 is the more personal of the two, so we would therefore expect a stronger relationship to occur than with Hypothesis 2. Also, it may very well be difficult to distinguish district interest in the issues or stands of the candidate according to issue area, since if they are interested in one issue or stand, there may be some spillover to another policy area. Table 3.13 shows the form of the variables, Variable 0094 and Variable 0169. (See Table 3.13.)

To test Hypothesis 2, the variables measuring the candidates' perceptions of constituency opinion (see Table 3.11 for Variables 0195, 0196, and 0197) and their policy positions (see Table 3.10 for Variables 0042, 0054, and 0065) are required. The relationship between these variables for each policy area is controlled by Variable 0094, "People Interested in the Issues" (Table 3.13). To test Hypothesis 3, the relationship is controlled by Variable 0169, "People in the District Know the Candidate's Stands" (Table 3.13).

These results will indicate the extent to which candidates would be more likely to adopt their perception of constituency opinion because of some possible loss that may occur. Loss has been defined as the value of the outcome that results from the choice of an alternative given a

## Table 3.13

### DESCRIPTION OF VARIABLE 0094: PEOPLE INTERESTED IN THE ISSUES, AND VARIABLE 0169: PEOPLE IN DISTRICT KNOW CANDIDATE'S STANDS

Variable 0094:  People Interested in the Issues

Q:  How many people would you say there are in your district who are really interested and who keep up to date on issues like those we've talked about?

| Original | Recoded |
|---|---|
| 1. most; 80% or over | 1. (1,2,3) most, some know |
| 2. many; 50-79% | |
| 3. some; 20-49% | 2. (4,5) none, very few know |
| 4. very few; 1-19% | |
| 5. none; 0% | |

Frequencies:  Opposed Candidates
Weighted

| | |
|---|---|
| 500 | 1. most, some know |
| 539 | 2. none, very few know |

---

Variable 0169:  People in District Know Candidate's Stands

Q:  How much do you think the people of your district know about your stands on issues like those we've talked about?

| Original | Recoded |
|---|---|
| 1. know a great deal; stands widely known | 1. (1,2,3) know a great deal and know some things |
| 2. know a good deal; stands fairly widely known | 2. (4,5) don't know at all |
| 3. know some things; stands known somewhat | |
| 4. don't know very much; stands not very well known | |
| 5. don't know anything; stands not known at all | |

Frequencies:  Opposed Candidates
Weighted

| | |
|---|---|
| 702 | 1. know a great deal and know some things |
| 317 | 2. don't know at all |

particular state of the world. Hypotheses 2 and 3 refer to
a situation in which the losses in a decision matrix are
perceived to be nonzero. We are predicting that as a candi-
date perceives increasing scrutiny or knowledge of his policy
positions by people in his district, the greater will be the
value of the loss he perceives will occur. The way in which
he can minimize that loss would be to choose his best esti-
mate of the majority opinion in his district. Therefore,
the association between his perception of district opinion
and his policy position should increase to show a strong
relationship.

The actual measurement of expected loss is difficult to
achieve from the data provided by the Representation Study,
but we can identify the relative values attributed to four
possible situations, as shown in Table 3.14. (See Table
3.14.)

Table 3.14 presents decision situations involving the
perceptions of the candidates with regard to their knowledge
of district opinion and whether they believe people are
interested in their position. $\theta_1$ and $\theta_2$ are two possible
states of the world: the median policy position on an issue
of concern to the voters in a congressional district. $A_1$ and
$A_2$ are two possible choices that a candidate can make:
$A_1$ = choose $\theta_1$ as a policy position, and $A_2$ = choose $\theta_2$ as a
policy position. The values, W, X, Y, and Z represent the
values of the possible losses. When a loss is less than
zero, the outcome is considered to be a net payoff.

## Table 3.14

### FOUR EXPECTED LOSS SITUATIONS

SITUATION 1:   EXPECTED LOSS = MODERATE TO HIGH
Assumptions:
  Candidate Knows District Opinion
  Candidate Believes People are Interested in His Position
  $P(\theta_1) > .5$,   $P(\theta_2) < .5$

|       | $\theta_1$ | $\theta_2$ |
|-------|------------|------------|
| $A_1$ | $W \leq 0$ | $X > 0$    |
| $A_2$ | $Y > 0$    | $Z \leq 0$ |

SITUATION 2:   EXPECTED LOSS = HIGH
Assumptions:
  Candidate Does Not Know District Opinion
  Candidate Believes People are Interested in His Position
  $P(\theta_1) = P(\theta_2) = .5$

|       | $\theta_1$ | $\theta_2$ |
|-------|------------|------------|
| $A_1$ | $W \leq 0$ | $X > 0$    |
| $A_2$ | $Y > 0$    | $Z \leq 0$ |

SITUATION 3:   EXPECTED LOSS = LOW
Assumptions:
  Candidate Knows District Opinion
  Candidate Does Not Believe People are Interested in His
  Position
  $P(\theta_1) > .5$, $P(\theta_2) < .5$

|       | $\theta_1$ | $\theta_2$ |
|-------|------------|------------|
| $A_1$ | $W \leq 0$ | $X \leq 0$ |
| $A_2$ | $Y \leq 0$ | $Z \leq 0$ |

SITUATION 4:   EXPECTED LOSS = MODERATE TO LOW
Assumptions:
  Candidate Does Not Know District Opinion
  Candidate Does Not Believe People are Interested in His
  Position
  $P(\theta_1) = P(\theta_2) = .5$

|       | $\theta_1$ | $\theta_2$ |
|-------|------------|------------|
| $A_1$ | $W \leq 0$ | $X \leq 0$ |
| $A_2$ | $Y \leq 0$ | $Z \leq 0$ |

NOTE:   $A_1$ = select $\theta_1$,   $A_2$ = select $\theta_2$,   and in all cases
        $P(\theta_1) = 1.0 - P(\theta_2)$.

Situation 1 in Table 3.14 shows the probability of $\Theta_1$ to be greater than .5. Thus, the decision maker is likely to choose $A_1$, assuming the values of W and Z are about equal. The amount of expected loss involved in choosing $A_1$ would be perceived to be minimized since the candidate would choose his best estimate of $\Theta_1$, which is $A_1$. We shall classify this situation as one of moderate to high expected loss.

In situation 2, the average risk involved is likely to be much greater, since $P(\Theta_1) = .5$. With no information to indicate one state of the world is more likely than another, the likelihood of making a wrong choice would be 50%. Thus the chances of losing votes would be much more likely than the previous situation, and so we would classify this as a high risk or high expected loss situation.

In situations 3 and 4, the losses are all equal to or less than zero, since the candidate perceives that people are not interested in his position. From his point of view, it would not matter which position he adopted. However, if his perception about this situation proved wrong, his losses would likely be lower if his perceived probability of $\Theta_1$ was greater than .5, as in situation 3. In situation 4, the probability of $\Theta_1$ is .5, and there is a greater chance of some loss when the choice of a policy position is based on a random choice. We therefore classify situation 3 as one of low expected loss and situation 4 as low to moderate expected loss.

These situations can be operationalized by the creation

of a new variable which takes into account the candidate's perception of district opinion and the degree to which he believes people in his district are interested in his position. The candidate's perception of district opinion is measured by Variable 0095, Knowledge of District Opinion. The perceived interest of one's constituency in policy issues is measured by a total of two indicators, Variable 0094, People Interested in the Issues, and Variable 0169, People Interested in Candidate's Stands (see Table 3.13). Tables 3.15 and 3.16 show how each of these two variables could be combined with the variable, Knowledge of District Opinion, to create a set of two new variables, "Expected Loss From Issues", and "Expected Loss From Stands."

Table 3.15

CREATION OF A NEW VARIABLE:
"EXPECTED LOSS FROM ISSUES"

|  |  | Variable 0094: People Interested in Issues | | |
|---|---|---|---|---|
| Variable 0095: Knowledge of District Opinion |  | MOST PEOPLE | SOME PEOPLE | NONE |
|  | MOST TIMES | 1) MODERATE LOSS | 2) MODERATE LOSS | 3) LOW LOSS |
|  | SOME TIMES | 4) MODERATE LOSS | 5) MODERATE LOSS | 6) MODERATE LOSS |
|  | SELDOM | 7) HIGH LOSS | 8) MODERATE LOSS | 9) MODERATE LOSS |

Table 3.16

CREATION OF A NEW VARIABLE:
"EXPECTED LOSS FROM STANDS"

Variable 0169:
People Know Candidate's Stands

Variable 0095:
Knowledge of
District Opinion

| | | MOST PEOPLE | SOME PEOPLE | NONE |
|---|---|---|---|---|
| MOST TIMES | | 1) MODERATE LOSS | 2) MODERATE LOSS | 3) LOW LOSS |
| SOME TIMES | | 4) MODERATE LOSS | 5) MODERATE LOSS | 6) MODERATE LOSS |
| SELDOM | | 7) HIGH LOSS | 8) MODERATE LOSS | 9) MODERATE LOSS |

We shall first examine Table 3.15, which defines the variable, "Expected Loss From Issues." Cell 7 best represents a case similar to situation 2 (Table 3.14), in which expected loss is high. When people are interested in the issues, but the candidate is not aware of district opinion, the risk will be at its highest.

Cell 3 represents situation 3 in Table 3.14, in which the expected loss should be at its lowest. In this case, the candidate believes he knows district opinion most of the time, but since the people in his district are perceived not to be interested in the issues, the candidate's choice of a public policy position will not greatly affect his chances of winning. This is the low expected loss case.

In the remaining cells, the expected loss can vary from

low to high. On the average, the expected loss can be considered <u>moderate</u>, so the cells have been designated with this label.

Table 3.16 illustrates the creation of the second new variable, "Expected Loss From Stands." It is formulated in the same manner as "Expected Loss From Issues." The only difference is the replacement of Variable 0094, People Interested in Issues with Variable 0169, People Know Candidate's Stands. It has the same interpretation, except it measures the expected loss (risk) perceived from situations in which the candidate believes people in his district know his stands on the issues. Although Variable 0094 and Variable 0169 are similar, it is expected that the use of "Expected Loss From Stands" will yield stronger results, since it measures to a greater extent the degree to which the candidate believes his constituents base their electoral decisions on the candidate's issue positions.

Tables 3.17 and 3.18 show the frequency distribution of cases that fall within the <u>High Loss</u>, <u>Moderate Loss</u>, and <u>Low Loss</u> categories. In an analysis, some difficulty may occur because the number of cases in the <u>High Loss</u> categories are relatively small. Therefore, the categories will be combined with the <u>Moderate Loss</u> categories. Some conceptual rigor may be lost in the recoding, but we prefer to use as much of the available data as possible to determine whether there are at least some generalized statements that can be made about candidates who are in a position to perceive low expected

loss as compared to those who perceive higher expected loss.

## Table 3.17

FREQUENCY DISTRIBUTION OF VARIABLE
"EXPECTED LOSS FROM ISSUES"    (OPPOSED CANDIDATES)

| Unweighted | Weighted | |
|---|---|---|
| 5 | 29 | High Loss |
| 82 | 445 | Moderate Loss |
| 58 | 322 | Low Loss |
| 145 | 796 | TOTAL |

## Table 3.18

FREQUENCY DISTRIBUTION OF VARIABLE
"EXPECTED LOSS FROM STANDS"    (OPPOSED CANDIDATES)

| Unweighted | Weighted | |
|---|---|---|
| 8 | 47 | High Loss |
| 100 | 550 | Moderate Loss |
| 35 | 182 | Low Loss |
| 143 | 779 | TOTAL |

To summarize, we have identified three types of expected loss for each of two variables, "Expected Loss From Issues" and "Expected Loss From Stands." These were recoded into two basic expected loss categories:  High Loss and Low Loss. This classification allows us to describe the activities of candidates who have varying confidence in their perception of district opinion.  For example, when candidates do not believe they know district opinion, but perceive people are interested in the issues and/or their stands, there is a

greater incentive for them to try to reduce the uncertainty in order to make the best possible policy decision. However, when the candidates believe they know district opinion and the people are not interested in the issues and/or their stands, their expected loss is perceived to be low. As a result, there is less incentive to collect new information and also less concern with trying to follow district opinion. This discussion leads us to a statement of the next hypothesis:

> Hypothesis 4: Ceteris paribus, candidates who perceive themselves to be in a High Expected Loss situation are more likely to adopt a policy position close to what they perceive to be the majority position in their district than those who perceive themselves to be in a Low Expected Loss situation.

This hypothesis can be tested using the variables "Expected Loss From Issues" and "Expected Loss From Stands" as control variables, with the candidates' policy positions in each of the three issue areas as the dependent variables, and their perception of district opinion as the independent variable. We expect that the results obtained from the latter variable may be more decisive since it more directly concerns the citizens' perception of the candidate, rather than just the issues.

This discussion has concerned the actions of a candidate when he perceives some degree of expected loss. As defined earlier, expected loss is equivalent to risk. We have used the phrase "expected loss" interchangeably with

"risk", but favored the former in order to distinguish it from the following interpretation involving risk as an expected loss of an investment, rather than as an expected loss of votes.

In a campaign, a candidate may be in one of the following three situations: 1) the nominee of the majority party in a safe district, 2) the nominee of the minority party in a safe district, and 3) the nominee of a party in a competitive district. The expected loss, or risk, is now defined as the expected loss of an investment. This includes all the tangible and intangible resources spent in order to attain political office, including investments made in previously held offices which served as stepping stones for higher office.

The investments made by candidates in each of these three situations are expected to vary. In the first case, the majority party candidate is likely to have the most investment to lose. Often one has to spend considerable time and money to win the party's nomination and a defeat in the general election would likely be a considerable loss not only to the majority candidate, but to his party as well.

In the second case, the minority party candidate is not likely to invest as much in the race, since his chances of success are slim. It is indeed rare for a candidate to quit his job or go heavily into debt to run in a contest he is likely to lose. This assumes of course that the minority party candidate's goal is the nuclear office and is not

making the race for some other goal, such as appointment to

a prestigious post by a high elected official of his party.

The nature of the investment made by a majority party

candidate is likely to be much higher than a minority party

candidate. The expected losses of the two types of candi-

dates will also differ and therefore, according to the

model, their selection of a public policy position will also

differ in the manner described by Hypothesis 5:

> Hypothesis 5:  Ceteris paribus, in noncompetitive
> districts, the greater the risk, the
> more likely candidates who are opposed
> in the election will adopt a public
> policy position close to what they
> perceive to be the majority position
> in their district.

Risk is defined in this case as expected loss of an

investment and is operationalized by Variable 0159, Percep-

tion of Party Strength. Table 3.19 describes the variable

and outlines the recoding procedures. (See Table 3.19.)

The risk perceived by candidates in competitive dis-

tricts is classified as "competitive risk", in order to

distinguish it from the ordinal risk associated with the

two types of candidates from noncompetitive districts. In

competitive districts, there is likely to be a mixture of

candidates with different levels of investment, but these

levels cannot be determined from the available data.

Therefore, we are not attempting to compare the risk of

candidates in competitive districts with those in noncompe-

titive districts. Essentially, more factors can be con-

trolled by comparing the level of risk within each of the

Table 3.19

DESCRIPTION OF VARIABLE 0159:
PERCEPTION OF PARTY STRENGTH

Variable 0159:  Perception of Party Strength

Q:    How about the relative strength of the parties in the
      district.  Over the years, has the district been a safe
      district, a fairly close district, or what?

Original

0. safe Democratic district
1. fairly safe district; usually goes Democratic
2. fairly close; Democrats usually have edge
3. fairly close district; goes back and forth
4. fairly close district; Republicans usually have edge
5. fairly safe district; usually goes Republican
6. safe Republican district

Recoded

High Risk:     A Republican who answers 5,6
               A Democrat who answers 0,1

Low Risk:      A Republican who answers 0,1
               A Democrat who answers 5,6

Competitive    A Republican who answers 2,3,4
Risk:          A Democrat who answers 2,3,4

Frequencies:  Opposed Candidates

| Unweighted | Weighted | |
|---|---|---|
| 61 | 322 | High Risk |
| 80 | 422 | Low Risk |
| 56 | 317 | Competitive Risk |
| 197 | 1061 | TOTAL |

two types of districts. However, while comparisons can be made within noncompetitive districts, the data are not available to identify high and low risk candidates in competitive districts.

If some comparison could be made between the expected loss of investment perceived by candidates in competitive districts and those in noncompetitive districts, we might expect that on the average the "competitive risk" might fall somewhere between "high risk" and "low risk." The average level of risk for candidates in competitive districts is an empirical question, but we can at least compare the association between the candidates' perceptions of district opinion and their policy positions for each level of risk (high, low, competitive) to determine if the ordinal scale has some validity.

In Hypothesis 5, we controlled the basic relationship between a candidate's perception of district opinion and his public policy position by type of district (competitive or noncompetitive) and by type of risk (high risk, low risk, and competitive risk). We can go one step further by controlling for expected loss of votes to give us our final hypothesis:

> Hypothesis 6: Ceteris paribus, when controlling for expected loss of votes, the higher the risk (expected loss of investment), the more likely candidates who are opposed in the election will adopt a public policy position close to what they perceive to be the majority position in their district.

This is consistent with the previous hypothesis, but emphasizes the importance of risk in determining the candidates' policy positions. "Expected loss of votes" was originally defined as risk and the second interpretation of risk was "expected loss of investment." By controlling for both types of risks we would expect a confirmation of the predicted stronger association for the high risk rather than the low risk situation. Again we speculate that competitive risk, when controlled by expected loss of votes, will result in a level of association between the candidates' perception of district opinion and their public policy position that lies somewhere between the high risk and low risk values.

The expected loss of votes in Hypothesis 6 can be operationalized by using the previously defined variable, "Expected Loss From Stands", shown in Table 3.16. The expected loss of investment has also been previously defined in Table 3.19.

4.   Summary

This chapter has described the operationalization of the uncertainty and risk propositions first presented in chapter two. From these two propositions, we proceeded to formulate six hypotheses that could be tested using data from the 1958 Representation Study.

The 1958 Representation Study is the only major study of congressional candidates that attempted to measure candidates' perceptions of their district, their opposition in

the campaign, the effectiveness of their campaign activities, and in the case of incumbents, their congressional activities. It is an ambitious study, encompassing 146 congressional districts and 251 incumbents and challengers. Since there was a long delay in making the data available to the public, researchers have only recently begun to analyze its findings.

It is recognized that there are some problems inherent in the secondary analysis of survey data. Nevertheless, the advantages of using these data to test portions of the Bayesian model appear to outweigh any disadvantages. First of all, as Fiorina states, "...since these data are all that are available, we will accept them as sound..."[22] At present there is no evidence to dispute the reliability of the data. Also, as long as we do not attempt to correlate constituency opinion with the candidate file data, we avoid the criticism that the small size of the sample of constituents in each congressional district (up to 17 per district) is unreliable for generalizing about constituents' true preferences. The candidate data are the primary focus of this research.

Finally, since a model is an interpretation of a theory, there is more than one interpretation that can be used to operationalize a set of hypotheses. The Miller and Stokes data represent one interpretation and it is an empirical question whether it is the most valid and reliable one. Nevertheless, it is recognized that additional tests will be needed, based on other data, in order to confirm the truth

value of the hypotheses.  In order to do this, it is necessary to try to falsify the hypotheses, as Popper recommends,[23] and that is the subject of the next chapter.

CHAPTER THREE

NOTES

1. *American Political Science Review*, 57 (1963), 45-56. See also the article by Stokes and Miller, "Party Government and the Saliency of Congress," *Public Opinion Quarterly*, 26 (1962), 531-546.

2. Warren E. Miller, "Majority Rule and the Representative System of Government," in *Cleavages, Ideologies, and Party Systems*, ed. by E. Allardt and Y. Luttunen (Helsinki: Transactions of the Westermarck Society, 1964), pp. 345-346.

3. See, for example, John Jackson, *Constituencies and Leaders in Congress* (Cambridge: Harvard University Press, 1974), as well as the earlier works of Julius Turner and Edward Schneier, *Party and Constituency: Pressures on Congress*, rev. ed. (Baltimore: Johns Hopkins Press, 1971) and Wayne Shannon, *Party, Constituency and Congressional Voting* (Baton Rouge: Louisiana State University Press, 1968).

4. Miller and Stokes, "Constituency Influence in Congress," *American Political Science Review*, 57 (1963), 50.

5. Stokes and Miller, op. cit., and Stanley R. Freedman, "The Saliency of Party and Candidate in Congressional Elections: A Comparison of 1958 and 1970," in *Public*

<u>Opinion and Public Policy</u>, ed. by Norman R. Luttbeg, rev.

ed. (Homewood, Illinois: Dorsey Press, 1974), pp. 126-131.

6. The official title of the survey is <u>The 1958</u>

<u>American Representation Study:  Congressmen and Consti-</u>

<u>tuents</u>, (SRC 433). The first printing of the codebook for

the <u>District File</u> is August 1971 and for the <u>Candidate File</u>,

1970.

7. Miller and Stokes have been working on a manuscript,

<u>The Structure of Representation</u>, but in a 1974 communication

with Professor Stokes, he indicated that "Our manuscript is

not yet in a form that you could draw much substance from

it."

8. The primary articles based on the 1958 Representa-

tion Study include:  Miller, op. cit., Miller and Stokes,

op. cit., Stokes and Miller, op. cit., Stokes, "Compound

Paths in Political Analysis," in <u>Mathematical Applications</u>

<u>in Political Science V</u>, ed. by James Herndon and Joseph L.

Bernd (Charlottesville, Virginia:  University of Virginia

Press, 1970) (revised in <u>American Journal of Political</u>

<u>Science</u>, 18 (1974), 191-214), Stokes, "Electoral System and

Representation:  United States and the United Kingdom,"

paper presented for delivery at the 1967 Annual Meeting of

the American Political Science Association, Chicago,

Illinois, September, 1967, David R. Segal and Thomas B.

Smith, "Congressional Responsibility and the Organization of

Constituency Attitudes," in <u>Political Attitudes and Public</u>

<u>Opinion</u>, ed. by Dan Nimmo and Charles Bonjean (New York:

David McKay, Inc., 1972), pp. 562-568, and Charles F. Cnudde and Donald J. McCrone, "The Linkage Between Constituency Attitudes and Congressional Voting Behavior: A Causal Model," American Political Science Review, 60 (1966), 66-72. A dissertation based on the Representation Study is Helmut Norpoth, "Sources of Party Cohesion in the United States House of Representatives" (Unpublished Ph.D. Dissertation, University of Michigan, 1974). See also his article, "Explaining Party Cohesion in Congress: The Case of Shared Policy Attitudes," American Political Science Review, 70 (1976), 1156-1171.

9. Other studies of congressional candidates include: Robert Huckshorn and Robert Spencer, The Politics of Defeat (Amherst: University of Massachusetts Press, 1971), David Leuthold, Electioneering in a Democracy (New York: John Wiley, 1968), John Kingdon, Candidates for Office (New York: Random House, 1968), Jeff Fishel, Party and Opposition (New York: David McKay, Inc., 1973), and Charles S. Bullock, III, "Candidate Perceptions of Causes of Election Outcome," paper presented at the 1973 Annual Meeting of the American Political Science Association, New Orleans, 1973. Although these studies were quite ambitious, none matched the large sample of the Representation Study.

10. The original sample was 151 districts, but no candidate or incumbent interviews were obtained for 4 districts, so they were dropped. Constituency data were available from 114 districts.

11. See <u>Study Description</u>, SRC Codebook 433.

12. For information on the sampling and weighting procedures used in the study, see Miller and Stokes, op. cit., and Stokes, "Electoral System and Representation," op. cit.

13. See <u>Study Description</u>, SRC Codebook 433.

14. For the factors influencing outcomes of midterm elections, see Edward R. Tufte, "Determinants of the Outcomes of Midterm Congressional Elections," <u>American Political Science Review</u>, 69 (1975), pp. 812-826, and James E. Pierson, "Presidential Popularity and Midterm Voting at Different Electoral Levels," <u>American Journal of Political Science</u>, 19 (1975), 683-694.

15. For the 86th Congress, there was a net change of +49 Democrats and -47 Republicans, taking into account special elections and appointments between elections. Source: <u>Congressional Quarterly Weekly Report</u>, 32 (November 9, 1974), p. 3105.

16. Limitations of the data source are essentially those which are inherent in the use of most kinds of secondary data. These include the fact that rarely does one find that the original researchers have asked the questions in their survey according to the requirements of other analysts. Also, secondary analysis allows for the increased chance of error in coding and interpretation. A strict test of the Bayesian model will have to wait until a future time, but meanwhile, the Miller and Stokes data provide the closest

means, as well as the best means available for testing the model. For a discussion of the issues involved in the secondary analysis of survey data, see Herbert H. Hyman, Secondary Analysis of Sample Surveys (New York: John Wiley, 1972).

17. Three additional variables that can indicate an expected loss situation based on the relative importance attached to the three issue areas of foreign affairs, social welfare and civil rights will be introduced in the next chapter. They are not presented at this time because they are less directly related to constituents' interests. Instead, they deal with how important the candidates perceive these issue areas to be of importance to the voters.

18. Candidate File Codebook, 1971, p. 28.

19. Ibid., p. 31.

20. Ibid.

21. The frequencies for the equivalent question with regard to the social welfare and civil rights issue areas were also zero.

22. Morris P. Fiorina, Representatives, Roll Calls, and Constituencies (Lexington, Mass.: Lexington Books, 1974), p. 18.

23. Karl R. Popper, The Logic of Scientific Discovery (New York: Harper and Row, 1968), Chapter 4.

## CHAPTER FOUR

## THE ANALYSIS OF UNCERTAINTY AND RISK

### 1.  Introduction

According to the Bayesian model, uncertainty and risk
are important motivating factors which influence the deci-
sion making by candidates in an election campaign.  Two
propositions relating to uncertainty and risk were opera-
tionalized to permit us to state six hypotheses that could
be tested using the 1958 Representation Study.  These
hypotheses describe the conditions under which candidates
are more likely to follow their best estimate of the state
of the world.  The state of the world in this case is the
true policy position which lies at the median of the voter's
policy preference distribution.

The analysis is divided into basically two parts.  The
first concerns an investigation of the perceived uncertainty
of the candidates and the kinds of sources they were likely
to depend upon for information.  The second part involves
the testing of the six hypotheses dealing with uncertainty
and risk and their effect upon the candidates' policy
positions.

Throughout this chapter, we will be using two addition-
al independent variables as controls:  incumbency and elec-
tion outcome.  Research has shown that incumbents are likely

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to have different perceptions and expectations from non-incumbents and these differences can be illuminated by controlling for incumbency.[1] Election outcome has not been a theoretical concern, because we have not included voters' perceptions in the model. Therefore, we cannot predict electoral outcomes, but we can determine whether the election results reflect the candidates' desires to win election by attempting to follow district opinion. In a representative democracy, candidates are expected to mirror their constituents' opinions, but, as we have seen, the incentive is not always present, nor is complete representation always possible to achieve. By examining the candidates' choice of a public policy position according to the results of the 1958 election, we can obtain some evidence to determine whether the people are sending to Congress candidates who are at least trying to be representative of what they perceive to be their district's majority opinion. A more detailed consideration of the responsiveness issue will be presented in the next chapter.

## 2. The Statistical Analysis

As a prelude to the statistical analysis to follow, some discussion concerning the use of the statistical measures is in order.

Most of the data in the 1958 Representation Study were either on a nominal or an ordinal scale of measurement.[2] Some researchers find this no hindrance in making the

necessary assumptions and hunches to permit the use of
statistics normally reserved for interval scale data. In
fact, Shively believes,

> One mark of a good researcher should be that
> he boldly seeks out all chances—not just the
> obvious ones, not just the safe ones—to raise
> the level of measurement in his work.[3]

By the "safe ones" he means measuring at a level at
which we can be relatively confident of the things we say
about the results, and at the cost of saying less interest-
ing things about the variables being measured.[4]

The positions of both social scientists and statisti-
cians do not indicate clear agreement on this point.
Abelson and Tukey, for example, have examined the problem
of assigning metric values to an ordinal scale, but found
the problem was often that "When we say we only know rank
order, we actually know more than this, but don't know how
to express what else it is we know."[5]

Blalock has discussed this problem with regard to
scale construction:

> These examples should be sufficient to indicate
> that it is often not a simple matter to decide
> what type of scale can legitimately be used.
> Ideally, one should make use of a data-
> gathering technique that permits the lowest
> levels of measurement, if these are all the
> data will yield, rather than using techniques
> which force a scale on the data.[6]

The use of a particular scale is important because it
establishes bounds on the appropriateness of statistical
operations,[7] hence, we will be guided by Galtung's advice:

> But in the measurement of correlation or
> agreement, the rule is invariably that the
> lowest level determines what coefficient
> to use.[8]

The reasoning behind such cautious behavior is well

stated by Singh:

> ...often times it is neither reasonable nor
> necessary to treat ordinal variables as
> interval variables and for that matter the
> practice can be quite reasonable under most
> circumstances.  It is not being suggested
> that we abandon our approach toward mathema-
> ticization but it should be kept in mind that
> a faith blended by trust in mathematical
> jargon rather than the logic of mathematics
> is no panacea for constructing causal models.
>
> It might be added that the process of mathema-
> ticization and for that matter use of higher
> levels of statistical techniques is not only
> commendable but a necessary first step toward
> our eventual goal of theory construction from
> axiomatic and deductive perspectives.  But we
> must be aware of what our inputs are in con-
> structing such models.[9]  (emphasis added)

Since the data from the Representation Study consisted

mostly of nominal and ordinal data, it would therefore be

advisable to use only the statistical techniques appro-

priate for these levels.  This would preclude the use of

regression analysis, since nominal and ordinal scales[10] do

not permit mathematical operations on their values.[11]

The data from the Representation Study were analyzed

by employing the  Crosstab  and Frequency Programs of the

Statistical Package for the Social Sciences, version 6.02.[12]

In the following tables, the statistic that will be

reported is Goodman and Kruskal's Gamma.[13]  Gamma is usually

used to measure the association between two ordinal variables

and is symbolized by:

$$Gamma = \frac{P - Q}{P + Q}$$

Where P = the number of concordant pairs
Q = the number of discordant pairs

A concordant pair exists if in a contingency table a case falls below and to the right of another case, and a discordant pair exists if a case falls below and to the left of another case.[14]

In comparing various ordinal measures of association, Buchanan commented that the use of gamma has an advantage in that it can vary from -1.0 to +1.0, so as to create some uniformity in our measures, and because it is sensitive to limited, curvilinear or triangular associations, where other measures, such as tau-c, are not.[15]

Singh compared five measures of association to Kruskal's criteria that a measure should have, and found that gamma was able to satisfy these criteria: 1) simplicity of interpretation, 2) reasonable sensitivity to form of distribution, and 3) relative simplicity of sampling theory.[16] Gamma therefore seems to be an adequate and appropriate measure to be applied to the kind of data present in the Representation Study.

There is, however, one note of caution that needs to be considered in the use of gamma. This is the case in which the unequal size of the marginals of the independent variable causes a distortion of the value of gamma. As Bruner states,

> A relationship that is large when column
> marginals are equal may shrink when they
> are not. And a relationship that looks
> small when marginals are grossly unequal,
> may be large when they are equalized.[17]

Bruner explained that when one is working with an

implied causal hypothesis, which is concerned with the

effect of group differences, especially in terms of condi-

tional probabilities, comparisons of gamma between tables

may be interfered with by distortions due to marginal

disparity.[18] Gamma is not affected by column-marginal

disparity in two-column tables, but in others, it is

necessary to transform the cell frequencies by equiweight-

ing. Equiweighting maintains the same column percentages,

but provides new column total raw frequencies. The formula

for equiweighting is as follows:

$$a'_{ij} = a_{ij}(1/c)(N/n_j)$$

Where $a_{ij}$ = the cell frequency before equiweighting
      $a'_{ij}$ = the new cell frequency after equiweighting
        $c$ = the number of categories in the indepen-
           dent variable
      $n_j$ = the column total before equiweighting of
           the column in which a cell is located
       $N$ = the total number of cases in the table.[19]

Each new cell frequency can then be used to recalcu-

late gamma in order to eliminate variations of gamma as a

result of column-marginal disparities, which is important

when one is

> asking a quasi-experimental question, one about
> the conditional probability of the various
> dependent outcomes for each category of the
> independent variable,[20]

and not when one is

asking about the causal impact of differences in the independent variable upon the dependent outcome for the whole sample.[21]

This procedure of equiweighting the gammas will be performed on the tables presented herein, excluding those that are primarily illustrating association, rather than causation, and those in which no controls have been added to the tables. However, in order to present the gammas in an orderly fashion, the original gammas will be given, and in cases where the equiweighted gammas are relevant and significantly different will they be shown and presented in footnotes in the appropriate tables. The gammas are calculated using the SPSS Crosstab routine and the equi-weighted gammas are produced from a desk calculator.

## 3. Uncertainty, Information and Effort

In this section, we shall investigate the perceived uncertainty of the opposed candidates in the 1958 congressional elections and how the candidates acted within their environment to deal with this uncertainty. Of particular interest will be an examination of the effort that they may have made to decrease uncertainty about district opinion, especially in light of any expected losses from making decisions under uncertainty.

The first factor to be considered is the perceived uncertainty within the campaign environment. Uncertainty has been proposed as an important intervening variable that can be used to explain candidates' policy positions.

Before examining these positions, we would first like to know if different kinds of candidates are more uncertain than others. For example, is uncertainty related to incumbency, election outcome, and the number of times a candidate has run for office? (See Tables 4.1, 4.2, 4.3, and 4.4.)

Table 4.1 presents the gamma associations of the relationship between Variable 0005, Knowledge of District Opinion, and variables indicating incumbency, the election outcome, and the number of times the candidate ran for office. Tables 4.2, 4.3 and 4.4 present the frequency distributions exhibited by these relationships. The question asked by Variable 0005 was, "Do you think that you know how the rank and file voters in your district feel about issues like those we've talked about?" The results show that incumbents were more likely to know district opinion "most of the time," while nonincumbents were seldom likely to know how people in their district felt about the issues.

Among winners and losers, the relationship is stronger, with winners more likely to perceive knowledge of district opinion most of the time and losers more likely not to perceive knowledge of district opinion compared to the winners. The relationship between knowledge of district opinion and times ran for office is the weakest of the three, but indicates that of the candidates in the "seldom" category, 65.5% had never run for Congress previously.

## Table 4.1

### KNOWLEDGE OF DISTRICT OPINION BY INCUMBENCY, ELECTION OUTCOME AND THE NUMBER OF TIMES A CANDIDATE RAN FOR CONGRESS

Variable 0095 Knowledge of District Opinion By:

|  | Opposed Candidates |
|---|---|
| Incumbency | .47 (N = 943) |
| Election Outcome | .57 (943) |
| Times Ran for Congress | .37 (890) |

## Table 4.2

### KNOWLEDGE OF DISTRICT OPINION BY INCUMBENCY: CONTINGENCY TABLE

Variable 0095 Knowledge of District Opinion By
Variable 0005 Incumbency

| Knowledge of District Opinion | Incumbency | |
|---|---|---|
|  | Incumbents | Nonincumbents |
| Most of the time | 87.5% (N = 392) | 72.9% (361) |
| Some times | 10.7% (48) | 7.9% (39) |
| Seldom | 1.8% (8) | 19.2% (95) |
|  | 100% (448) | 100% (495) |

## Table 4.3

### KNOWLEDGE OF DISTRICT OPINION BY ELECTION OUTCOME: CONTINGENCY TABLE

Variable 0095 Knowledge of District Opinion By
Variable 0007 Election Outcome

| Knowledge of District Opinion | Election Outcome | |
|---|---|---|
| | Winners | Losers |
| Most of the time | 88.9% (455) | 69.1% (298) |
| Some times | 8.0% (41) | 10.7% (46) |
| Seldom | 3.1% (16) | 20.2% (87) |
| | 100% (512) | 100% (431) |

## Table 4.4

### KNOWLEDGE OF DISTRICT OPINION BY NUMBER OF TIMES A CANDIDATE RAN FOR OFFICE (CONGRESS): CONTINGENCY TABLE

Variable 0095 Knowledge of District Opinion By
Variable 0254 Number of Times a Candidate Ran for Office (Congress)

| Knowledge of District Opinion | Times Ran For Office | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 8+ | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| Most of the time | 83.9% (73) | 100 (40) | 100 (41) | 100 (36) | 100 (43) | 88.6 (93) | 76.2 (48) | 66.4 (79) | 74.7 (266) |
| Some times | 16.1 (14) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 7.6 (8) | 6.3 (4) | 21.8 (26) | 9.8 (35) |
| Seldom | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 3.8 (4) | 17.5 (11) | 11.8 (14) | 15.4 (55) |
| | 100% (87) | 100% (40) | 100% (41) | 100% (36) | 100% (43) | 100% (105) | 100% (63) | 100% (119) | 100% (356) |

These findings help support our thesis that candidates with more experience are likely to be more confident about knowing district opinion. In addition, it appears that the voters elected a group of candidates who perceived themselves to be somewhat more likely to know district opinion than the ones previously elected.

The next question is concerned with whether candidates that perceive the possibility of some expected loss occurring from their decisions differ according to incumbency, election outcome, and the number of times they ran for Congress. We can answer this by examining the relationship of each of these three variables with the two variables measuring expected loss, which were developed in chapter three. These variables were "Expected Loss From Issues" and "Expected Loss From Stands." The former was based on a combination of Variable 0095, Knowledge of District Opinion and Variable 0094, People Interested in the Issues. Variable 0094 asked the question, "How many people would you say there are in your district who are really interested and who keep up with the issues like those we talked about?" Candidates were divided into three categories and later recoded into two: low expected loss and high expected loss. Similarly, Variable 0095, Knowledge of District Opinion, was combined with Variable 0169, People in District Know Candidate's Stands, which asked the question, "How much do you think people of your district

know about your stands on issues like those we've talked
about?" to produce two additional expected loss categories
of high and low expected loss.

These two variables do not measure expected loss by
issue area, but only to the extent to which candidates
believe their constituents are "interested in the issues"
or "aware of their stands." In order to obtain some
measure of expected loss according to the issue areas of
foreign affairs, social welfare and civil rights, we can
combine Variable 0202, Importance of Issues to Voters with
Variable 0095, Knowledge of District Opinion, to create
three new variables: Expected Loss From Foreign Affairs,
Expected Loss From Social Welfare, and Expected Loss From
Civil Rights. These variables measure the amount of loss
perceived when the candidates' knowledge of district opinion
is combined with their perception that people in their
district place some importance on these issues. The pro-
cedure for creating these three new variables is shown in
Table 4.5. (See Table 4.5.)

To summarize, the concept of expected loss is now
operationalized by five different variables: 1) Expected
Loss From Issues represents a situation in which a candi-
date may perceive to be in a position to lose votes because
people in his district are interested in the issues,
2) Expected Loss From Stands represents the case in which
the perceived loss may result from people knowing or being
aware of the candidate's stands on the issues, 3) Expected

## Table 4.5

### CREATION OF NEW VARIABLES:
### "EXPECTED LOSS FROM FOREIGN AFFAIRS,"
### "EXPECTED LOSS FROM SOCIAL WELFARE ISSUES,"
### AND "EXPECTED LOSS FROM CIVIL RIGHTS ISSUES"

Variable 0202:   Importance of Election Issues in District:

Q:   Would you say that any of these broad categories of
     issues were particularly important to the voters in your
     district in the election?  What were they?

00. No; None; or Not Opposed in Either Primary or Election
10. Yes, Foreign Affairs
20. Yes, Domestic Issues
30. Yes, Civil Rights Issues
40. Yes, Foreign Affairs and Domestic Issues
50. Yes, Foreign Affairs and Civil Rights
60. Yes, Domestic Issues and Civil Rights
70. Yes, All Three Categories:  Foreign Affairs, Domestic
        Issues, and Civil Rights
80. Yes, Not Available Which Category

---

Reclassification:

| Variable 0095 Knowledge of District Opinion | Issue Area* | |
|---|---|---|
| | Important | Not Important |
| Most of the time | Moderate Loss | Low Loss |
| Some times | Moderate Loss | Moderate Loss |
| Seldom | High Loss | Moderate Loss |

---

| Frequencies: | Expected Loss From: | | | | | |
|---|---|---|---|---|---|---|
| | Foreign Affairs | | Social Welfare | | Civil Rights | |
| | Unw. | Weighted | Unw. | Weighted | Unw. | Weighted |
| High Exp. Loss | 3 | 15 | 1 | 4 | 1 | 4 |
| Mod. Exp. Loss | 44 | 245 | 65 | 359 | 47 | 236 |
| Low Exp. Loss | 97 | 526 | 78 | 423 | 96 | 546 |

---

*The "Important" and "Not Important" categories were created
for each of the three issue areas according to the responses
to Variable 0202.  For example, for Foreign Affairs, the
"Important" category included all those who responded 10,40,
50, and 70.  The "Not Important" category included those who
responded 00,20,30, and 60.  Code 80 was a missing data
category.

Loss From Foreign Affairs represents a possible loss

situation when foreign affairs is believed to be an impor-

tant issue among the voters, 4) Expected Loss From Social

Welfare represents a possible loss situation when social

welfare issues are believed to be important to the voters,

and 5) Expected Loss From Civil Rights can occur when

civil rights issues are important to the voters.  Tables

4.6, 4.7, and 4.8 show the relationship of these measures

of expected loss to 1) incumbency, 2) election outcome,

and 3) the number of times a candidate ran for office.

(See Tables 4.6, 4.7, and 4.8.)

In Table 4.6, the highest association is Expected

Loss From Civil Rights and Incumbency.  The negative asso-

ciation indicates that incumbents were more likely to

perceive low expected loss than nonincumbents.  Nonincum-

bents were more likely to perceive some expected loss.

In Table 4.7, the highest association is again the

one with Expected Loss From Civil Rights.  The interpre-

tation is that winners were more likely to perceive lower

expected loss than the losers.

Similarly, in Table 4.8, the strongest association is

with Expected Loss From Civil Rights, in which candidates

who had more experience running for office were more

likely to perceive low expected loss when people in their

district were perceived to consider civil rights an

important issue.

Table 4.6

EXPECTED LOSS BY INCUMBENCY

| | Opposed Candidates | |
|---|---|---|
| | Gamma | (N) |
| Expected Loss From Issues | -.04 | (796) |
| Expected Loss From Stands | .21 | (779) |
| Expected Loss From Foreign Affairs | -.24 | (786) |
| Expected Loss From Social Welfare | .11 | (786) |
| Expected Loss From Civil Rights | -.52 | (786) |

Table 4.7

EXPECTED LOSS BY ELECTION OUTCOME

| | Opposed Candidates | |
|---|---|---|
| | Gamma | (N) |
| Expected Loss From Issues | .08 | (796) |
| Expected Loss From Stands | .35 | (796) |
| Expected Loss From Foreign Affairs | -.10 | (786) |
| Expected Loss From Social Welfare | .29 | (786) |
| Expected Loss From Civil Rights | -.32 | (786) |

Table 4.8

EXPECTED LOSS BY NUMBER OF TIMES CANDIDATE RAN FOR OFFICE

| | Opposed Candidates | |
|---|---|---|
| | Gamma | (N) |
| Expected Loss From Issues | -.05 | (747) |
| Expected Loss From Stands | .19 | (744) |
| Expected Loss From Foreign Affairs | -.09 | (737) |
| Expected Loss From Social Welfare | -.02 | (737) |
| Expected Loss From Civil Rights | -.40 | (737) |

It appears that although civil rights was perhaps an important and volatile issue in their districts, incumbents, winners and those with campaign experience perceived themselves in a low expected loss situation, compared to non-incumbents, losers, and inexperienced campaigners. Of course, if the candidates' perceptions are wrong and they presume low expected loss and don't worry about their positions on civil rights, the result could be their defeat. However, it appears that on this issue above the others, the incumbents, winners, and experienced campaigners are more likely than their counterparts to perceive they know district opinion most of the time and that people in their district don't think civil rights is an important issue. There may be a number of reasons for this, one of which may be the fact that the election was decided on other issues which were kept alive by the incumbents to avoid discussing civil rights or because the incumbent had well represented his district in this area and there was low expected loss because a large majority was perceived to agree with his voting on this issue. Challengers may perceive more expected loss because of their perception that civil rights is indeed an important issue that could be potentially dangerous if they do not accurately perceive majority opinion.

With the other issues, the majority position may be less clear to the incumbent and so we find less of a distinction between the experienced and less experienced

candidates.

The next topic to be discussed after this considera-
tion of the uncertainty and risk perceived by the candi-
dates involves the type of sources the candidates relied
upon for information. The Bayesian model is based on the
assumption that more information is preferred to less infor-
mation and that candidates who are less informed will be
more likely to seek information until its cost becomes
prohibitive or the election interrupts his search. The
model does not predict which sources the candidates would
rely upon, but based on what we have learned about the
difference between the perceptions of incumbents and non-
incumbents, winners and losers, and experienced and unex-
perienced campaigners, it is possible that some empirical
generalizations can be gleaned from the data.

The 1958 Representation Study does not include an
extensive analysis of attempts by the candidates to collect
information, but there is some information that may prove
useful. There are two potential drawbacks. One is the
fact that the survey is of course a one-shot case study and
no comparisons can be made to determine whether some source
of information changed their perceptions. The second is
that these questions were posed to candidates after the
election, so it is difficult to be able to determine the
causal direction of the empirical generalizations. Also,
the "congratulation-rationalization" effect discovered by
Kingdon may operate, causing the winners and losers to change

their perceptions based on the election outcome.[22]  Never-theless, the data may provide some interesting results that could be generalized to similar types of candidates and indicate some important avenues of future research.

The sources of information that candidates were asked about included newspapers, public opinion polls, people in their party organization, personal contacts, (and for incumbents only, their mail).  Table 4.9 shows the questions that were asked and the responses received.  Table 4.10 shows the relationship between dependence on each of these sources with incumbency, election outcome, and the times a candidate ran for office.[23]  (See Tables 4.9 and 4.10.)

The results in Table 4.10 show a positive relationship for newspapers and a negative relationship for people in the party organization and personal contacts.  This means that incumbents, winners, and frequent campaigners were more likely to depend on newspapers than nonincumbents, losers, and people running for Congress for the first time.  On the other side, these latter types were more likely to rely on people in their party organization and on their personal contacts than were the incumbents, winners, and frequent campaigners.  There was no difference in their use of polls or dependence on their mail.

These findings appear to be consistent with Kingdon's research in which the candidates seemed to be suspicious of the party organization as a source of information because party workers tended to overestimate the candidates'

## Table 4.9

### DESCRIPTION OF VARIABLES IDENTIFYING
### SOURCES OF CAMPAIGN INFORMATION

Variable 0120:   Dependence on Newspapers

Q:   How much do you depend on newspapers and editorials
     to tell you what opinion is in your district on
     issues like these?

Frequency:   All Candidates
Weighted
| | |
|---|---|
| 71 | 1. Very much; chief way of finding out what opinion is |
| 244 | 2. Quite a bit |
| 246 | 3. Somewhat |
| 420 | 4. Not very much |
| 290 | 5. Not at all |
| 93 | 9. NA |

---

Variable 0121:   Dependence on Public Opinion Polls

Q:   How much do you use opinion polls to measure district
     opinion?

Frequency:   All Candidates
Weighted
| | |
|---|---|
| 62 | 1. Very much; chief way of finding out what opinion is |
| 76 | 2. Quite a bit |
| 151 | 3. Somewhat |
| 212 | 4. Not very much |
| 792 | 5. Not at all |
| 71 | 9. NA |

---

Variable 0123:   Dependence on People in the Party
     Organization

Q:   How much do you depend on people in the party
     organization to measure district opinion?

Frequency:   All Candidates
Weighted
| | |
|---|---|
| 137 | 1. Very much; chief way of finding out what opinion is |
| 186 | 2. Quite a bit |
| 246 | 3. Somewhat |
| 293 | 4. Not very much |
| 403 | 5. Not at all |
| 99 | 9. NA |

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## Table 4.9 (Cont'd)

Variable 0125:  Dependence on Personal Contacts

Q:  How much do you depend on personal contacts to measure district opinion?

<u>Frequency:  All Candidates</u>
<u>Weighted</u>

| | | |
|---|---|---|
| 912 | 1. | Very much; chief way of finding out what opinion is |
| 205 | 2. | Quite a bit |
| 67 | 3. | Somewhat |
| 74 | 4. | Not very much |
| 14 | 5. | Not at all |
| 92 | 9. | NA |

Table 4.10

## DEPENDENCE ON INFORMATION SOURCES BY INCUMBENCY, ELECTION OUTCOME, AND NUMBER OF TIMES A CANDIDATE RAN FOR OFFICE

A. Dependence on Source By Incumbency:

| Source: | Opposed Candidates | |
|---|---|---|
| | Gamma | (N) |
| Newspapers | .43 | (1091) |
| Public Opinion Polls | .11* | (1106) |
| People in the Party Organization | -.44 | (1071) |
| Personal Contacts | -.61 | (1075) |

B. Dependence on Source By Election Outcome:

| Source: | Opposed Candidates | |
|---|---|---|
| | Gamma | (N) |
| Newspapers | .38 | (1087) |
| Public Opinion Polls | .03* | (1102) |
| People in the Party Organization | -.27 | (1067) |
| Personal Contacts | -.49 | (1071) |

C. Dependence on Source By Number of Times a Candidate Ran For Office:

| Source: | Opposed Candidates | |
|---|---|---|
| | Gamma | (N) |
| Newspapers | .28 | (1017) |
| Public Opinion Polls | -.03 | (1032) |
| People in the Party Organization | -.36 | (1000) |
| Personal Contacts | -.43 | (997) |

*Chi-square value for this table is not significant at .05 level of significance.

popularity and election chances.[24] The more experienced

candidates are likely to know this while such contacts may

help give the nonincumbents the encouragement and confidence

that is welcomed in an uphill race against an incumbent.

Nevertheless, the incumbent may be more skeptical of per-

sonal contacts through experience. As Kingdon quotes one

candidate, "People are friendly and nice, but you can't

rely on it for votes."[25] On the campaign trail, many people

will be polite, but often the number of friendly voters who

speak to the candidates can exceed the number of votes they

receive in the election. An incumbent may know this situa-

tion well, as everyone after the election claims to be the

one to contribute to the candidate's victory:

> I've never met people while I was campaigning
> who weren't going to vote for me, and you never
> meet people afterward who voted against you.[26]

If incumbents do not depend on sources that tend to be

unreliable, then is their perceived knowledge of district

opinion related to the sources they do depend on? Table

4.11 displays the relationship between Variable 0095,

Knowledge of District Opinion, and the candidates' depen-

dence on each source of information. (See Table 4.11.)

Candidates who believe they are likely to know

district opinion most of the time are more likely to

depend on newspapers and public opinion polls. Since

newspapers and especially public opinion polls are likely

to be more reliable than the other sources, they may have

some influence on the perceptions of the candidates,

Table 4.11

DEPENDENCE ON INFORMATION SOURCES BY KNOWLEDGE
OF DISTRICT OPINION

| | Opposed Candidates | |
| --- | --- | --- |
| Source: | Gamma | (N) |
| Newspapers | .39 | (917) |
| Public Opinion Polls | .49 | (920) |
| People in the Party Organization | -.13* | (888) |
| Personal Contacts | -.10 | (905) |

* Chi-square value for this table is not significant at .05
  level of significance

although we cannot verify this as the true causal direction.

When we control for incumbency and election outcome,
the results shown in Table 4.12 were obtained. (At this
point we are dropping the use of Variable 0254, Number of
Times a Candidate Ran for Congress, since it has tended to
mirror the results obtained from the other two control
variables.) (See Table 4.12.)

The largest changes in the relationship between
dependence on a source and knowledge of district opinion
when controlling for incumbency occur for dependence on
public opinion polls and people in the party organization.
For the former, the incumbents were much more likely to
depend on polls when they felt they knew district opinion.
There was also an increase in a positive direction for
dependence upon people in the party organization among
incumbents, but the $x^2$ value for that table was not
significant.

Table 4.12

DEPENDENCE ON INFORMATION SOURCES BY KNOWLEDGE
OF DISTRICT OPINION CONTROLLED FOR
INCUMBENCY AND ELECTION OUTCOME*

A.  Incumbency

| Source: | Opposed Candidates | |
| --- | --- | --- |
| | Incumbents | Nonincumbents |
| Newspapers | .37 (434) | .27 (483) |
| Public Opinion Polls | .60 (440) | .43 (480) |
| People in the Party Organiza-<br>tion | .32 (419)** | -.18 (476) |
| Personal Contacts | .01 (429) | .17 (476) |

B.  Election Outcome

| Source: | Opposed Candidates | |
| --- | --- | --- |
| | Winners | Losers |
| Newspapers | .33 (498) | .28 (419) |
| Public Opinion Polls | 1.00 (504) | .39 (416) |
| People in the Party Organiza-<br>tion | .06 (490)** | -.15 (398) |
| Personal Contacts | -.21 (486)** | .22 (419) |

* It is appropriate to use the equiweighted gammas when one
is stating a causal hypothesis in terms of conditional
probabilities.  Although some causal inferences can be
made from these data, we are not testing any causal
hypotheses at this time, but merely showing the associa-
tion between variables.  Therefore, in Tables 4.11, 4.12,
4.13, and 4.14, we are interpreting the original gammas.

**The chi-square values for these tables are not significant
at the .05 level of significance.

When the relationship is controlled by election out-come, public opinion polls appear to be a more popular source for winners. Dependence on personal contacts shows a reversal of the direction of the relationship shown for incumbency. This may tend to give support to our earlier statements about the reliability of these sources. It seems that the more reliable the source of one's information, the more likely are his chances of winning. Winners, for example, tended to rely less on personal contact than the losers, but much more on public opinion polls, which tend to be more objective.

We have considered the relationships between the dependence on sources and knowledge of district opinion, which gave us an indicator of uncertainty, and controlled them by incumbency and election outcome. The effect of risk can be observed by cross-tabulating the candidates' depen-dence on sources with the expected loss variables, which measure the risk when people are believed to be interested in the issues, when they are believed to be aware of the candidates' stands, and when they believe any of the three policy areas involve important issues. Table 4.13 shows the gamma values for these relationships. (See Table 4.13.)

The significance of the civil rights area shows up again. The negative gammas are interpreted to mean that candidates who perceived low expected loss were more likely to depend on newspapers and public opinion polls. Only dependence on personal contacts showed a strong positive

## Table 4.13

### EXPECTED LOSS BY DEPENDENCE ON INFORMATION SOURCES

| Dependence on Newspapers By: | Opposed Candidates |
|---|---|
| Expected Loss From Issues | .19 (770) |
| Expected Loss From Stands | .11 (753) |
| Expected Loss From Foreign Affairs | .03 (760) |
| Expected Loss From Social Welfare | -.16 (760) |
| Expected Loss From Civil Rights | -.47 (760) |

| Dependence on Public Opinion Polls By: | |
|---|---|
| Expected Loss From Issues | .06 (777) |
| Expected Loss From Stands | -.08 (760) |
| Expected Loss From Foreign Affairs | -.32 (771) |
| Expected Loss From Social Welfare | -.04* (771) |
| Expected Loss From Civil Rights | -.45 (771) |

| Dependence on People in the Party Organization By: | |
|---|---|
| Expected Loss From Issues | .30 (741) |
| Expected Loss From Stands | .21 (731) |
| Expected Loss From Foreign Affairs | .11 (735) |
| Expected Loss From Social Welfare | .02* (735) |
| Expected Loss From Civil Rights | .04* (735) |

| Dependence on Personal Contacts By: | |
|---|---|
| Expected Loss From Issues | .07 (766) |
| Expected Loss From Stands | -.20 (745) |
| Expected Loss From Foreign Affairs | -.11* (752) |
| Expected Loss From Social Welfare | -.17* (752) |
| Expected Loss From Civil Rights | .43 (752) |

*The chi-square values for these tables are not significant at the .05 level of significance.

gamma value. Generally, though, the results indicate a
very weak association between dependence on sources and
risk. The next step is to control for incumbency and
election outcome, as shown in Table 4.14. (See Table 4.14.)

For incumbency, the most changes were produced in the
area of expected loss from civil rights issues. A negative
gamma is interpreted to mean that when expected loss was
low, candidates were more likely to depend on the sources
indicated. Incumbents were more likely to follow this
pattern than nonincumbents for dependence on newspapers,
public opinion polls, and people in their party organiza-
tion when expected loss from civil rights was the indepen-
dent variable. Only in the use of personal contacts did
nonincumbents show a positive association of dependence
with high expected loss.

This trend appears also in the following cases:
dependence on newspapers by expected loss from stands and
domestic issues; dependence on public opinion polls and
expected loss from foreign affairs and domestic issues.
In general, incumbents show a greater association between
low risk and high dependence on sources and nonincumbents
are characterized by higher risk and greater dependence on
sources. Since the causal sequence of these factors is
difficult to determine from the data, no definite conclu-
sions can be drawn, but the results of these associations
at least indicate that the incumbents use what they
perceive are reliable sources from experience and this

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## Table 4.14

### DEPENDENCE ON INFORMATION SOURCES BY EXPECTED LOSS CONTROLLED FOR INCUMBENCY AND ELECTION OUTCOME

| Dependence on Newspapers By: | Incumbency | | Election Outcome | |
| --- | --- | --- | --- | --- |
| | Incumbents | Nonincumbents | Winners | Losers |
| Expected Loss From Issues | .30 (349) | .14 (421) | .45 (416) | -.14 (354) |
| Expected Loss From Stands | -.34 (360) | .29 (393) | -.23*(410) | .20 (343) |
| Expected Loss From Foreign Affairs | .10 (335) | .10 (425) | .14 (405) | -.07*(355) |
| Expected Loss From Social Welfare | -.46 (335) | .07*(425) | -.47 (405) | .14 (355) |
| Expected Loss From Civil Rights | -.65 (335) | -.19 (425) | -.45 (405) | -.42 (355) |

| Dependence on Public Opinion Polls By: | Incumbents | Nonincumbents | Winners | Losers |
| --- | --- | --- | --- | --- |
| Expected Loss From Issues | .18*(359) | -.03 (418) | .12*(426) | .01 (351) |
| Expected Loss From Stands | -.08 (370) | -.10 (390) | .05 (420) | -.13 (340) |
| Expected Loss From Foreign Affairs | -.41 (349) | -.24*(422) | -.57 (419) | -.14*(352) |
| Expected Loss From Social Welfare | -.23 (349) | .14*(422) | -.04*(419) | .01*(352) |
| Expected Loss From Civil Rights | -1.00 (349) | -.22*(422) | -.79 (419) | -.29 (352) |

## Table 4.14 (Cont'd)

### Dependence on People in the Party Organization By:

| | | | | |
|---|---|---|---|---|
| Expected Loss From Issues | .09*(334) | .41 (407) | .37 (408) | .29 (333) |
| Expected Loss From Stands | -.05*(345) | .37 (386) | .16 (402) | .33 (329) |
| Expected Loss From Foreign Affairs | -.06 (324) | .20 (411) | .14 (401) | -.01*(334) |
| Expected Loss From Social Welfare | -.04*(324) | .09*(411) | .12*(401) | -.01*(334) |
| Expected Loss From Civil Rights | -.32 (324) | .09*(411) | -.03*(401) | .04*(334) |

### Dependence on Personal Contacts By:

| | | | | |
|---|---|---|---|---|
| Expected Loss From Issues | .07 (348) | .05*(418) | .34 (408) | -.77 (358) |
| Expected Loss From Stands | -.16 (359) | -.07 (386) | -.03*(402) | -.16*(343) |
| Expected Loss From Foreign Affairs | -.24*(334) | -.20*(418) | -.11*(397) | -.27*(355) |
| Expected Loss From Social Welfare | -.14*(334) | -.14*(418) | -.05*(397) | -.24*(355) |
| Expected Loss From Civil Rights | .06*(334) | .54 (418) | .32*(397) | .48*(355) |

*The chi-square values are not significant at the .05 level.

helps them confirm their perceptions of low expected risk when their campaign began. Nonincumbents, who would be likely to start their campaigns with a higher degree of risk, would be more likely to want to change their situation by depending more on their favorite sources. Thus, the effect of incumbency on increasing the gammas in a negative direction and decreasing the negative gammas (or making them indicate a more positive relationship) may be accounted for by the starting perceptions of risk: incumbents, perceiving low risk, seeking information, and nonincumbents, perceiving high risk, also seeking information. The explanation has some basis since, for example, the gamma for expected loss from civil rights and incumbency is -.52, indicating low risk is perceived by incumbents and high risk for non-incumbents.

The gamma for election outcome and expected loss from civil rights is -.32, so we would not expect such a pronounced change in the partials, and this appears to be the case as shown in Table 4.14. The most interesting results show that when winners perceived low expected loss from issues, they were less likely to depend on these sources than those who perceived high expected loss. Also, losers who perceived low expected loss from issues were more likely to depend on personal contacts.

On the whole, there are no predominant trends from the data based on election outcome. However, the comparison between incumbency and election outcome helps to underline

the value of a theoretical framework. We are examining the decision making in a campaign from the viewpoint of the candidates and we are able to make some generalized statements about the class of individuals we have identified as incumbents and nonincumbents. Election outcome is instead determined by the voters and is based on their perceptions. We would therefore expect to be able to explain the data for incumbency rather than for election outcome, since the theory tells us what we should look for in the data. Election outcome serves as a comparison to indicate to us what types of candidates people are electing to office. If there are indeed differences between the two sets of data, with the effects of incumbency easier to explain than those of election outcome, it is tempting to speculate that since winners become incumbents, there might be something in the nature of the legislative process that neatly orders the behavior of these candidates so that their actions become more predictable. If this is so, then the discovery of a theory which can explain their decision making processes is very much a desirable objective.

4. Policy Positions, Uncertainty, and Risk

One important aspect of responsiveness is that the candidates believe that people care about certain issues and that their constituents' knowledge of the candidates' stands will affect the outcome of the election. Before we begin to test the uncertainty hypotheses, we will try to

determine the extent to which the candidates believed that the issues and their stands affected their chances of winning.

The Representation Study included one question that asked the nonincumbents to assess their chances of election. Table 4.15 contains the exact wording of the question and the possible responses.

## Table 4.15

DESCRIPTION OF VARIABLE 0206 ESTIMATED CHANCE OF VICTORY

Variable 0206: Estimated Chance of Victory
                 (Nonincumbents only)

Q: When you decided to run, what did you think your chances were of winning?

Frequency:
Weighted

| | |
|---|---|
| 63 | 1. Thought had excellent, very good chance of winning |
| 119 | 2. Thought had good chance |
| 148 | 3. Thought had some chance |
| 140 | 4. Thought had little chance |
| 130 | 5. Thought had no chance at all |
| 764 | 9. Don't know, Inapp., NA |

In addition, we were able to determine the extent to which all opposed candidates felt people in their district knew them as a person. (See Table 4.16.) As a result, we can make a comparison, at least among nonincumbents, of the association of their estimated chances of election and

1) how well they believe people know their stands and

2) how well they believe the people know the candidate as a person. Table 4.17 shows the results of this comparison.

Table 4.16

DESCRIPTION OF VARIABLE 0170 PERCEIVED DISTRICT KNOWLEDGE
OF CANDIDATE AS A PERSON


Variable 0170:   Perceived District Knowledge of Candidate
as a Person

Q:   How much do you think people in your district know
about you as a person?

Frequency:   All Candidates
Weighted

| | | |
|---|---|---|
| 311 | 1. | Know a great deal; very widely known |
| 485 | 2. | Know a good deal; fairly widely known |
| 192 | 3. | Know some things; known somewhat |
| 218 | 4. | Don't know very much; not very well known |
| 8 | 5. | Don't know anything; not known at all |
| 150 | 9. | Don't know or NA |


Table 4.17

PERCEIVED CONSTITUENT KNOWLEDGE OF CANDIDATE'S STANDS
AND KNOWLEDGE OF CANDIDATE AS A PERSON BY
ESTIMATED CHANCE OF WINNING ELECTION

| | Opposed Nonincumbent |
|---|---|
| Variable 0169 People Know Candidate's Stands By Variable 0206 Estimated Chance of Winning Election: | .45 (530) |
| Variable 0170 People Know Candidate as a Person By Variable 0206 Estimated Chance of Winning Election: | .22 (559) |

The gammas of .45 and .22 indicate that the nonincumbents associated their chances of winning more with constituent knowledge of the candidates' stands than with knowledge of the personal qualities of the candidates. This helps to indicate the relative importance that the issues and the policy positions of the candidates are perceived to have in the campaign, at least among nonincumbents. Although comparable data for incumbents were not available, the nonincumbents are likely to be relatively less known for both their stands and their personal characteristics than the incumbent. The data indicate that, at least at first, candidates believe that their stands are the more important influence on their election chances.

With some knowledge that candidates believe that their issue positions are related to their chances of electoral success, we shall proceed to test the three hypotheses that deal with the effect of uncertainty on candidates' policy positions. These hypotheses were operationalized from the propositions originally introduced in chapter two and derived from the Bayesian decision making model. The 1958 Representation Study is the source of the data used to test these hypotheses. Also, only the data for opposed candidates will continue to be reported, since the model is concerned only with the majority of candidates who have the postulated goal of winning the general election by defeating a challenger. Since there is likely to be very

little uncertainty about the winner and practically no risk involved in the election of an unopposed candidate, the inclusion of this type of candidate in the analysis would be inappropriate.

Each of these hypotheses are concerned with the policy positions adopted by the candidates in the areas of foreign affairs, social welfare (also called domestic issues), and civil rights. In most cases, the hypotheses predict when the association between the candidates' perceptions of district opinion and their public policy positions will be higher or lower. The important factors of uncertainty and risk are the conditional control variables which will determine the type of change in this basic relationship, with the candidates' policy position as the dependent variable, and their perception of district opinion as the major independent variable. Table 4.18 presents the gamma values of this relationship for each of the three issue areas. Tables 4.19, 4.20, and 4.21 show the distribution of the cases in the contingency tables. (See Tables 4.18, 4.19, 4.20, and 4.21.)

Hypothesis 1 is stated as follows and the results from its test appear in Table 4.22. (See Table 4.22.)

> Hypothesis 1: Ceteris paribus, candidates who believe they know how people in their district feel about the issues are more likely to adopt a policy position that is close to what they perceive to be the majority opinion in their district.

Table 4.18

CANDIDATES' POLICY POSITION BY
PERCEPTION OF DISTRICT OPINION

|  | Opposed Candidates |
|---|---|
| Variable 042 Foreign Affairs Policy Position By Variable 195 Perception of District Opinion on Foreign Affairs: | .43 (914) |
| Variable 054 Social Welfare Policy Position By Variable 196 Perception of District Opinion on Social Welfare: | .42 (959) |
| Variable 065 Civil Rights Policy Position By Variable 197 Perception of District Opinion on Civil Rights: | .51 (876) |

Table 4.19

FOREIGN AFFAIRS POLICY POSITION BY
PERCEPTION OF DISTRICT OPINION

| Variable 042: Policy Position | Variable 195: Perception of District Opinion | | |
|---|---|---|---|
|  | Most Opposed | Evenly Divided | Most in Favor |
| Isolationist | 92 29.0% | 12 5.4% | 27 7.2% |
| Neo-Isolationist | 89 28.1% | 54 24.1% | 38 10.2% |
| Pro-Con | 75 23.7% | 77 34.4% | 123 33.0% |
| Neo-activist | 32 10.1% | 58 25.9% | 103 27.6% |
| Activist | 29 9.1% | 23 10.3% | 82 22.0% |
| TOTAL | 317 100% | 224 100% | 373 100% |

Table 4.20

SOCIAL WELFARE POLICY POSITION BY
PERCEPTION OF DISTRICT OPINION

| Variable 054:<br>Policy Position | Variable 196:<br>Perception of District Opinion | | |
|---|---|---|---|
| | Most<br>Opposed | Evenly<br>Divided | Most in<br>Favor |
| Conservative | 125<br>37.1% | 42<br>15.9% | 48<br>13.4% |
| | 105<br>31.2% | 48<br>18.2% | 63<br>17.6% |
| | 14<br>4.2% | 18<br>6.8% | 16<br>4.5% |
| | 7<br>2.1% | 37<br>14.0% | 12<br>3.4% |
| Liberal | 86<br>25.5% | 119<br>45.1% | 219<br>61.2% |
| TOTAL | 337<br>100% | 264<br>100% | 358<br>100% |

Table 4.21

CIVIL RIGHTS POLICY POSITION BY
PERCEPTION OF DISTRICT OPINION

| Variable 065:<br>Policy Position | Variable 197:<br>Perception of District Opinion | | |
|---|---|---|---|
| | Most<br>Opposed | Evenly<br>Divided | Most in<br>Favor |
| Conservative | 124<br>66.3% | 23<br>22.5% | 81<br>13.8% |
| | 14<br>7.5% | 7<br>6.9% | 72<br>12.3% |
| | 7<br>3.7% | 19<br>18.6% | 112<br>19.1% |
| Liberal | 42<br>22.5% | 53<br>52.0% | 322<br>54.9% |
| TOTAL | 187<br>100% | 102<br>100% | 587<br>100% |

Table 4.22

CANDIDATES' POLICY POSITION BY PERCEPTION OF DISTRICT
OPINION CONTROLLED FOR KNOWLEDGE OF DISTRICT OPINION

| | Variable 0195 Knowledge of District Opinion | | |
| --- | --- | --- | --- |
| | Knows Most of the Time | Knows Some Time | Seldom Knows |
| Foreign Affairs (.43)* | .52 (608) | -.13 (71) | .18 (69) |
| Social Welfare (.42)* | .59 (610) | .61 (79) | -.37 (88) |
| Civil Rights (.51)* | .65 (587) | .56 (69) | -1.00 (64) |

*These numbers are the gamma values of the basic relation-
ship between the candidates' policy position and their
perception of district opinion as shown in Table 4.18.
They are presented here for purposes of comparison.

The hypothesis is tested by controlling the basic

relationship shown in Table 4.18 by Variable 0195, Knowledge

of District Opinion. The hypothesis is supported by the

fact that for each issue area the gammas increased when the

opposed candidates believed they knew how people in their

district felt about the issues. Also, those who believed

they seldom knew district opinion were much less likely to

follow their perception of district opinion. These results

provide evidence for the validity of the decision matrix, in

which the knowledgeable (or confident) candidates would be

expected to follow district opinion and the "ignorant"

candidates would assume a more randomized strategy, and that

is what has occurred here.

The results for the case in which the candidate

believes he knows district opinion some of the time warrants

some discussion. For foreign affairs, candidates were not

likely to follow district opinion, but were very likely to do so for social welfare and civil rights. First, the relatively small N for this category (and the "Seldom Knows" category as well) prompts some questions of reliability, but the testing of the other hypotheses may indicate whether the basic trends are correct. Second, it appears that the perceived relative importance of the issues is a potential source of influence in determining the candidates' policy position. Foreign affairs has traditionally been the issue area in which politicians have been given more discretion by their constituents in choosing a policy position. This may explain the gamma of -.13 compared to the larger values of .61 and .56 for social welfare and civil rights, respectively. The effect of the perceived importance of these issues on the candidates' policy positions will be examined further in regard to the risk hypotheses. We now turn to the testing of Hypothesis 2.

> Hypothesis 2:    Ceteris paribus, candidates who
>                  believe people in their district are
>                  interested in the issues are more
>                  likely to adopt a policy position
>                  close to what they perceive to be the
>                  majority position in their district.

By combining the categories of "most people interested" and "some people interested" to keep the number of cases in the cells at a high enough level for analysis, the results in Table 4.23 were obtained. (See Table 4.23.) The hypothesis is supported by the fact that the gamma values are higher than the original relationship shown in Table 4.18

## Table 4.23

CANDIDATES' POLICY POSITION BY PERCEPTION OF DISTRICT
OPINION CONTROLLED BY PERCEPTION OF PEOPLE'S
INTEREST IN THE ISSUES

| | Variable 0094 People Interested in the Issues | |
|---|---|---|
| | People Interested** | People Not Interested |
| Foreign Affairs (.43)* | .49 (411) | .41 (420) |
| Social Welfare (.42)* | .54 (394) | .27 (478) |
| Civil Rights (.51)* | .66 (410)*** | .40 (397) |

* These values are the gammas for the original relationship between candidates' policy position and their perception of district opinion, originally shown in Table 4.18.

** This category is based on the combination of the categories: "Most People Interested" and "Some People Interested."

***When equiweighted, this gamma value becomes .60. The change for the other gammas is only slight.

for the case in which people are perceived to be interested in the issues. When the candidates perceive people are not interested in the issues, the values decline, as expected.

Again, the weakest area is foreign affairs, which shows the least significant change in gamma from the original value of .43. Before passing judgment on the application of the model to the area of foreign affairs, we should examine the results of Hypothesis 3. As stated earlier, we would expected that since the phrase "interested in the issues" did not specifically refer to the candidate, we would expected that when we control for the degree to which people are perceived by the candidate to be interested in his stands, that we would be able to capture more of the

concept of risk into the analysis. Hypothesis 3 is stated as follows:

Hypothesis 3:   Ceteris paribus, candidates who believe people in their district are aware of their stands are more likely to adopt a policy position close to what they perceive to be the majority opinion in their district.

Table 4.24

POLICY POSITION BY PERCEPTION OF DISTRICT OPINION
CONTROLLED BY PERCEPTION OF PEOPLE'S KNOWLEDGE OF
CANDIDATES' STANDS

| | Variable 0169 People in District Know Candidates' Stands | |
|---|---|---|
| | People Know Stands | People Don't Know Stands |
| Foreign Affairs (.43)* | .47 (587) | .15 (222) |
| Social Welfare (.42)* | .49 (607) | -.04 (245) |
| Civil Rights (.51)* | .69 (563) | .13 (224) |

*These values are the gammas for the original relationship between candidates' policy position and their perception of district opinion, originally shown in Table 4.18.

Table 4.24 shows the results when the basic relationship is controlled by Variable 0169, People in the District Know the Candidates' Stands. The categories of "Know a Great Deal" and "Know Some Things" are combined into one category, "People Know Stands." The gammas reflect exceptionally well the expected relationship when the candidate perceives that people in his district know something about his issue positions.

The results are especially striking because the gammas for the "People Don't Know Stands" category show almost no

relationship between the candidates' perception of district opinion and their own policy positions. Only when they perceive that the people are aware of their stands do they adopt a policy position consistent with their perception of district opinion. This appears to be especially true regarding civil rights issues, which were of particular concern during the 1958 congressional elections.

These results signify that when candidates perceive that there is some potential loss of votes as a result of some knowledge acquired by their constituents, they will adopt a policy position that coincides more closely with their perception of district opinion. Hypothesis 4 operationalizes the concept of expected loss, which considers not only the constituents' perceived knowledge, but also the candidate's confidence in their knowledge of district opinion.

> Hypothesis 4: Ceteris paribus, candidates who perceive themselves to be in a High Expected Loss situation are more likely to adopt a policy position close to what they perceive to be the majority position in their district than those who perceive themselves to be in a Low Expected Loss situation.

Table 4.25 shows the original relationship between the candidates' perceptions of district opinion and their public policy position on each of the three issue areas, controlled by each of the five variables that were created to measure expected loss. (See Table 4.25.) For each of the expected loss variables, the categories of High and

## Table 4.25

## CANDIDATES' POLICY POSITION BY PERCEPTION OF DISTRICT OPINION CONTROLLED BY EXPECTED LOSS

| | Expected Loss | |
| --- | --- | --- |
| | High** Expected Loss | Low Expected Loss |
| **A. Expected Loss From Issues:** | | |
| Foreign Affairs (.43)* | .50 (373) | .56 (262) |
| Social Welfare (.42)* | .43 (365) | .47 (284) |
| Civil Rights (.51)*[a] | .64 (363) | .56 (249) |
| **B. Expected Loss From Stands:** | | |
| Foreign Affairs | .48 (486) | .33 (130) |
| Social Welfare | .52 (506) | .30 (126) |
| Civil Rights[b] | .70 (462) | .45 (123) |
| **C. Expected Loss From Each Policy Area:** | | |
| Foreign Affairs | .50 (222) | .51 (400) |
| Social Welfare | .53 (326) | .42 (338) |
| Civil Rights[c] | .54 (201) | .69 (402) |

---

\* These values are the gamma values for the original relationship between the candidates' policy position and their perception of district opinion, originally shown in Table 4.18.

\*\*The High Expected Loss category combines the responses to the High Expected Loss and Moderate Expected Loss categories.

a,b,c:  When the gammas for these categories are equi-weighted, the following gammas result:

      a.  .57,  .55
      b.  .61,  .51
      c.  .40,  .77

Moderate Expected Loss were combined because of the small number of cases in the High Expected Loss category.

The results show that there was not much change in the original relationship when controlling for Expected Loss From Issues. For each issue area, the relationship is slightly enhanced, indicating that to some extent the control is a conditional causal factor.

When the control variable Expected Loss From Stands is introduced, the relationship predicted by the hypothesis occurs. The values for the High Expected Loss category are all higher than the original gammas and the Low Expected Loss gammas are all lower (except when the equiweighted gammas for civil rights are considered).

The last part of the table shows the controls of Expected Loss From Foreign Affairs, Social Welfare, and Civil Rights. These results do not appear to present conclusive evidence in support of Hypothesis 4.

It would certainly have been preferable to have a variable that could directly measure expected loss (risk), but it is noteworthy that among the variables in the survey that are available, the one that does appear to best measure the extent to which candidates perceive themselves to be in a potentially risky situation is the one that provides the best results. This speaks well for the utility of theory development, especially since formal models can direct us to appropriate kinds of data that are necessary to test our hypotheses and tell us what the results are

likely to mean. The problem we face here is the limited availability of the data that measure precisely that which we would like to measure. Nevertheless, as long as we can recognize the limitations and try to work within them, the preliminary results of this study can have important implications in terms of the direction of future research.

The empirical research itself is important, because different measures of the same kinds of variables can extend the original interpretation of the model and provide additional richness to the research and the implications of its findings. For example, we have interpreted expected loss to be an indicator of risk, but risk, in a more general sense, can represent the possible loss of an investment rather than just a possible loss of votes. Hypothesis 5 enables us to broaden the interpretation of risk and provide some justification to the pursuit of the various effects that risk can have in other kinds of political decisions, such as running for higher office, running for reelection, or retiring from office.

Hypothesis 5: Ceteris paribus, in noncompetitive districts, the greater the risk, the more likely candidates who are opposed in the election will adopt a public policy position close to what they perceive to be the majority position in their district.

We classified candidates who ran for office representing the majority party in a noncompetitive district as being in a High Risk situation, since they had the most to lose (although they were most likely to win). Minority

party candidates were in a Low Risk situation because they were likely to have made less of an investment in running for an office they did not have much chance of winning. Table 4.26 shows the gammas for these situations.

Table 4.26

CANDIDATES' POLICY POSITION BY PERCEPTION OF DISTRICT OPINION CONTROLLED BY RISK: NON-COMPETITIVE DISTRICTS

| | Risk | |
| --- | --- | --- |
| | High Risk | Low Risk |
| Foreign Affairs (.43)* | .48 (278) | .23 (282) |
| Social Welfare (.42)* | .68 (283) | .09 (334) |
| Civil Rights (.51)* | .81 (258) | .41 (293) |

*These values are the gammas for the original relationship between candidates' policy position and perception of district opinion, as shown in Table 4.18.

For all three issue areas, the results show an increase in the basic relationship between the candidates' policy positions and their perception of district opinion for majority party candidates in the High Risk category. In the Low Risk category, the gammas decline sharply. This means that majority party candidates are very likely to follow district opinion while minority candidates' policy positions show very little relationship (except for civil rights) to their perception of majority opinion in their district.[27]

Thus far, we have controlled the basic relationship by expected loss of votes (Hypothesis 4) and by expected loss

of investment (Hypothesis 5). The sixth hypothesis controls

for both types of risks and these results are shown in

Tables 4.27 and 4.28. (See Tables 4.27 and 4.28.)

> Hypothesis 6: Ceteris paribus, when controlling for
> expected loss of votes, the higher the
> risk (expected loss of investment),
> the more likely candidates who are
> opposed in the election will adopt a
> public policy position close to what
> they perceive to be the majority
> position in their district.

Tables 4.27 and 4.28 show the relationship between the

candidates' policy position on an issue and their perception

of district opinion, controlled by risk (expected loss of

investment) and expected loss of votes (which was an alter-

native definition of risk). To measure expected loss of

votes, we are using "Expected Loss From Stands", since this

was found to be a good measure of risk. The first table

contains cases in the noncompetitive districts and the

second one contains those in competitive districts.

Unfortunately, the number of cases in the Low Expected

Loss category in Table 4.27 has dropped to the point where

it is difficult to make any reliable judgments about the

results in that part of the table. Observing the values

in the High Expected Loss section, we see the hypothesis

is confirmed for both social welfare and civil rights. In

both of these cases, the basic relationship increased for

the High Risk category and decreased for the Low Risk

category. Compared to the results in Table 4.26, which

tested Hypothesis 5, the gamma for social welfare increased

from .68 to .72 (High Risk) and from .81 to .85 for civil

Table 4.27

CANDIDATES' POLICY POSITION BY PERCEPTION OF DISTRICT OPINION
CONTROLLED BY RISK AND EXPECTED LOSS: NONCOMPETITIVE DISTRICTS

| | High Expected Loss* | | Low Expected Loss* | |
|---|---|---|---|---|
| | High Risk** | Low Risk** | High Risk** | Low Risk** |
| Foreign Affairs (.43)*** | .40 (196) | .36 (107) | .64 (19) | .15 (75) |
| Social Welfare (.42)*** | .72 (201) | .02 (140) | -1.00 (19) | .37 (74) |
| Civil Rights (.51)*** | .85 (179) | .42 (99) | 1.00 (19) | .45 (82) |

* This variable measures expected loss from people in their district knowing the candidates' stands on the issues.

** The High Risk category consists of candidates from the majority party, and the Low Risk category includes those of the minority party.

***These values are the gammas for the original uncontrolled relationship between the candidates' policy position and their perception of district opinion.

## Table 4.28

### CANDIDATES' POLICY POSITION BY PERCEPTION OF DISTRICT OPINION CONTROLLED BY EXPECTED LOSS FROM STANDS: COMPETITIVE DISTRICTS

|  | Expected Loss From Stands | |
|---|---|---|
|  | High Expected Loss | Low Expected Loss |
| Foreign Affairs (.43)* | .75 (157) | .07 (25) |
| Social Welfare (.42)* | .69 (146) | .00 (18) |
| Civil Rights (.51)* | .74 (158)** | --- (7) |

* These are the gamma values for the original relationship between candidates' policy position and their perception of district opinion, as shown in Table 4.18.

**When equiweighted, this gamma is .55. The other gammas remain almost the same.

rights (High Risk). For the Low Risk categories, the gamma for social welfare decreased from .09 to .02 and for civil rights, it increased slightly from .41 to .42. Although these changes are not very significant, we find that two independent measures of risk reveal the type of relationship expected under the rubrics of the Bayesian model of decision making. In this case, the two measures may be interpreted as alternative causes of the policy positions of the candidates.

In the competitive districts, as shown in Table 4.28, there are the problems of comparing the two expected loss categories and also dividing the candidates into a high and low risk category. As previously stated, we have no means of classifying candidates in competitive districts according to the level of investment that may be lost, so this

table does not control for expected loss of investment, but merely divides the candidates in the competitive districts according to their expected loss from stands. As a result, we note the increased values of gamma for all three issue areas compared to the original relationship. These results seem to confirm Hypothesis 6, at least for noncompetitive districts, and to some extent for competitive districts.

This ends the testing of the hypotheses that were operationalized from the propositions derived from the Bayesian decision making model. We close the chapter with a summary of these results and some conclusions.

## 5. Summary

This chapter was devoted to the testing of the six hypotheses developed in chapter three by operationalizing the propositions deduced from the Bayesian model of candidate decision making. The first part of the analysis concerned an investigation of the perceptions of the candidates with regard to their knowledge of district opinion. This led to the investigation of the information sources depended upon by the various types of candidates during the campaign. Finally, we were concerned with the effect that our measures of risk and uncertainty had upon candidates' selection of a public policy position in the areas of foreign affairs, social welfare, and civil rights.

As a whole, the results appeared to fit well within the framework of the Bayesian decision model. The more

experienced candidates believed themselves to be more knowledgeable about district opinion and they were also the ones more likely to follow their perceptions of district opinion in choosing a policy position. The inexperienced candidates, i.e., the nonincumbents, were found to be less confident about their knowledge of district opinion and were not as likely to follow their perceptions of district opinion in adopting a public policy position.

Both types of candidates are considered to be rational, because they have based their decisions on the information available to them during the campaign (or even before they began campaigning). Incumbents have had a longer opportunity to collect and revise information, so they are more likely to follow their perceptions of district opinion. They may not be correct in their estimates of the majority opinion in their district, but as long as they <u>believe</u> they are correct, and base their actions on these beliefs, they can be considered rational, and their actions can be explained and predicted by the model.

The significance of these results lies in the fact that the Bayesian model has not been disproved or falsified. Although some qualifications may be needed to explain candidate behavior in certain policy areas, the Bayesian model appears to be an effective way of looking at political behavior in order to derive a set of lawlike generalizations. For example, the original conception of a candidate making a decision in light of the uncertainty of the true value of

campaign parameters and the possibility of expected losses if the "best" decisions are not made remains viable. In essence, risk and uncertainty have been shown to be important factors influencing candidates' choices and these findings have provided support for a new perspective for the study of political decision making.

In the next chapter, we will deal with the implications of these findings in more detail by relating them to previous research. In addition, we will consider the significance of these results for the popular control of public policy by citizens by examining these results with the voting behavior of the winners in the 1958 elections.

CHAPTER FOUR

NOTES

1. See Majorie R. Hershey, <u>The Making of Campaign Strategy</u> (Lexington, Mass.: Lexington Books, 1974) and John W. Kingdon, <u>Candidates for Office: Beliefs and Strategies</u> (New York: Random House, 1966), as well as the discussion of the literature in chapter one.

2. For a discussion of the theory of measurement, see S.S. Stevens, "Scales of Measurement," in <u>Handbook of Experimental Psychology</u>, ed. by S.S. Stevens (New York: John Wiley, 1951), Chapter 1, pp. 23-30. A more recent statement of Stevens' views can be found in "Measurement, Statistics, and the Schemapiric View," <u>Science</u>, 161 (1968), 849-856. See also Abraham Kaplan, <u>The Conduct of Inquiry</u> (Scranton, Pa.: Chandler Publishing Co., 1964) and Clyde H. Coombs, "Theory and Methods of Social Measurement," in <u>Research Methods in the Behavioral Sciences</u>, ed. by Leon Festinger and Daniel Katz (New York: Holt, 1953), Chapter 11.

3. W. Phillips Shively, <u>The Craft of Political Research</u> (Englewood Cliffs: Prentice Hall, 1974), p. 76.

4. Ibid.

5. Robert P. Abelson and John W. Tukey, "Efficient

Conversion of Non-Metric Information into Metric Information," in Quantitative Analysis of Social Problems, ed. by Edward R. Tufte (Reading, Mass.:  Addison-Wesley, 1970), p. 417.  See also Sanford Labovitz, "The Assignment of Numbers to Rank Order Categories," American Sociological Review, 35 (1970), 515-525, Roger N. Shepard, "Metric Structures in Ordinal Data," Journal of Mathematical Psychology, 3 (1966), 287-315, and Edward R. Tufte, "Improving Data Analysis in Political Science,"  World Politics, 21 (1969), 641-654.

6.   Hubert M. Blalock, Jr., Social Statistics (New York:  McGraw-Hill, 1972), p. 24.

7.   See Cletus J. Burke, "Measurement Scales and Statistical Models," in Bernhardt Lieberman, ed., Contemporary Problems in Statistics (New York:  Oxford University Press, 1971) pp. 92-101, for a discussion of some of the issues related to statistics and measurement.  The problem is often whether the user of statistical techniques understands the limits imposed by his measuring devices and not by the statistics.  As Hays states, "The road from objects to numbers may be easy, but the return trip from numbers to properties of objects is not," William L. Hays, Statistics for the Social Sciences (New York:  Holt, Rinehart and Winston, 1973), p. 294.

8.   Johan Galtung, Theory and Methods of Social Research (New York:  Columbia University Press, 1967), p. 294.

9. B. Krishna Singh, "Sampling Theory and Ordinal Measures of Association: A Sociological Perspective and a Critique," Proceedings of the American Statistical Association, Social Statistics Section, 1973, p. 410.

10. For a critique of the use of ordinal variables in interval level models, see T.P. Wilson, "Critique of Ordinal Variables," in Causal Models in the Social Sciences, ed. by Hubert M. Blalock, Jr. (Chicago: Aldine-Atherton, 1971), pp. 415-431, and Raymond N. Morris, "Multiple Correlation and Ordinally Scaled Data," Social Forces, 48 (1970), 299-311.

Some of the data could be used in multiple regression analysis in the form of dummy variables, however, one does lose precision when one or more independent variables are represented in this manner, since the standard error is likely to increase. See Kul B. Rai and John C. Blydenburgh, Political Science Statistics (Boston: Holbrook Press, 1973), p. 233, and Daniel B. Suits, "Use of Dummy Variables in Regression Equations," Journal of the American Statistical Association, 52 (1957), 548-551, which is the classic paper in this area.

Alternatively, Boyle suggests that under certain conditions dummy variables can be used in a multiple regression analysis to avoid equal interval assumptions or ordinal variables. See Richard P. Boyle, "Path Analysis and Ordinal Data," American Journal of Sociology, 75 (1970), 461-480.

11. By assuming that the data in the 1958 Representation Study were interval, rather than categorical data, and by applying the technique of path analysis, some methodological problems were identified that evoked a lively debate in the literature. See Charles F. Cnudde and Donald J. McCrone, "The Linkage Between Constituency Attitudes and Congressional Voting Behavior: A Causal Model," American Political Science Review, 60 (1966), 66-73, Hugh D. Forbes and Edward R. Tufte, "A Note of Causation in Causal Modeling," American Political Science Review, 62 (1968), 1264-1269, and Forbes and Tufte, "Communications to the Editor," American Political Science Review, 62 (1968), 1270-1271.

12. See Norman H. Nie, C. Hadlai Hull, Jean G. Jenkins, Karin Steinbrunner, and Dale H. Bent, Statistical Package for the Social Sciences (New York: McGraw-Hill, 1975).

13. See Leo A. Goodman and William H. Kruskal, "Measures of Association for Cross Classifications," Journal of the American Statistical Association, 49 (1954), 732-763. See also their "Measures of Association for Cross-Classifications, II: Further Discussion and References," Journal of the American Statistical Association, 54 (1959), 123-163. Subsequent articles on the appropriateness of statistics in contingency table analysis have appeared and the research in this area is continuing. See, for example, Herbert L. Costner, "Criteria for Measures of Association," American Sociological Review, 30 (1965), 341-353,

Herbert F. Weisberg, "Models of Statistical Relationship," American Political Science Review, 68 (1974), 1638-1655, and Jere Bruner, "What's the Question to That Answer?: Measures and Marginals in Crosstabulation," American Journal of Political Science, 20 (1976), 781-804.

14. See David C. Leege and Wayne L. Francis, Political Research (New York: Basic Books, 1974), Chapter 10 for an explanation of how gamma is calculated.

15. William Buchanan, "Nominal and Ordinal Bivariate Statistics: The Practitioner's View," American Journal of Political Science, 18 (1974), 625-646. Roughly speaking, Buchanan states that "A gamma of .6 or above is high and one below .2 is not worth attention unless the data fall into some particularly meaningful pattern." Ibid., p. 638.

16. Singh, op. cit., pp. 409-411.

17. Bruner, op. cit., p. 791.

18. Ibid.

19. Ibid., p. 794.

20. Bruner, op. cit., p. 108.

21. Ibid.

22. John W. Kingdon, Candidates for Office: Beliefs and Strategies (New York: Random House, 1966).

23. Miller and Stokes tried to create an index of the effort made by the candidates to rely upon various sources (Variable 0126). It was an additive index, with each source counted equally. No relationship between this variable and the three variables in Table 4.10 was found.

These results are not surprising, since there was really no theoretical justification for weighting them equally, especially since there are so many qualitative differences among these sources.

24. Kingdon, op. cit., pp. 93-94.

25. Ibid., p. 97.

26. Ibid., p. 102.

27. These results are especially interesting because they are counter-intuitive to what is known as the "marginality hypothesis." This will be discussed in more detail in chapter 5. See Morris P. Fiorina, Representatives, Roll Calls, and Constituencies (Lexington, Mass.: Lexington Books, 1974), Chapter 5.

CHAPTER FIVE

RESPONSIVENESS, REPRESENTATION, AND ROLL CALLS

1.   Introduction

We have been concerned with the effect of risk and uncertainty on the relationship between candidates' policy positions and their perception of district opinion.  Our results have shown that greater uncertainty is likely to make candidates less likely to follow their perceptions of district opinion and candidates that perceive higher risks are also more likely to follow district opinion.  In this chapter, we will be concerned with the analysis of these results in relation to the extent to which they indicate the responsiveness of candidates to constituency opinion. First, the effects of incumbency and election outcome will be examined, followed by a discussion of the significance of the risk hypotheses.  Finally, the last step of the policy linkage process will be studied by showing the relationship of the incumbents' roll call votes to their campaign positions and their perceptions of district opinion.

2.   Incumbency, Election Outcome, and Policy Positions

In the study of the responsiveness of candidates to majority opinion, we are interested in whether the politi- cians who are elected to office are likely to try to

represent their constituents by following their perceptions of district opinion. The evidence has indicated that most candidates in the 1958 Representation Study acted as if they were rational in deciding on a public policy position by considering the effect of uncertainty and risk on their decisions. In addition, we would like to know if the voters elected (or reelected) candidates who were the most likely to follow district opinion. Table 5.1 shows the original gamma values for the association between candidates' policy positions and their perception of district opinion, and then presents the gammas when the data are controlled for incumbency and election outcome. We can then compare the levels of association between the opposed incumbents of the 85th Congress and the new set elected to the 86th Congress. (See Table 5.1.)

The opposed incumbents of the 85th Congress were more likely to follow district opinion than the nonincumbents. Taking the election results into account, the gammas show that the winners were also much more likely to follow district opinion than the losers. Of course, many incumbents were reelected, so the similarities in the two tables were not totally unexpected, but the most interesting fact is that the citizens continued to send to Congress candidates that were more likely to follow district opinion. Even though the candidates may not be correct in their perceptions of district opinion, the close association between their own policy positions and their perception of district

## Table 5.1

### POLICY POSITION BY PERCEPTION OF DISTRICT OPINION CONTROLLED BY INCUMBENCY AND ELECTION OUTCOME

Policy Position By Perception of District Opinion:
Opposed Candidates

|                 |            |
| --------------- | ---------- |
| Foreign Affairs | .43 (914)  |
| Social Welfare  | .42 (959)  |
| Civil Rights    | .51 (876)  |

Policy Position By Perception of District Opinion
Controlled By Incumbency:

|                 | Incumbents  | Nonincumbents |
| --------------- | ----------- | ------------- |
| Foreign Affairs | .57 (444)   | .32 (470)     |
| Social Welfare  | .68 (439)   | .13 (520)     |
| Civil Rights    | .61 (397)   | .44 (479)     |

Policy Position By Perception of District Opinion
Controlled By Election Outcome:

|                 | Winners     | Losers      |
| --------------- | ----------- | ----------- |
| Foreign Affairs | .53 (512)   | .30 (398)   |
| Social Welfare  | .65 (496)   | .13 (459)   |
| Civil Rights    | .70 (451)   | .30 (421)   |

opinion is a good indicator of their reelection possibi-
lities.

This relationship can be examined further by control-
ling for expected loss of votes and expected loss of
investment, which were the two concepts used to measure
the degree of perceived risk. First, Table 5.2 shows the
effect of controlling for Variable 0169, People Know Candi-
date's Stands. This variable was used to indicate whether
candidates who believed that people were knowledgeable about
their positions on the issues were more likely to follow
district opinion because people were scrutinizing the
candidates' positions. (See Table 5.2.)

Incumbents who perceived that people in their district
were aware of their stands were more likely to follow
district opinion than those candidates who did not believe
people were knowledgeable about their stands. Nonincum-
bents showed the same pattern, except for social welfare
issues, where the associations were weak. Some caution
should be taken in assessing the significance of the "Don't
Know" categories, since the number of cases is fairly low.
Among the winners, the gammas are comparable to the values
for the incumbents, except the 1.00 for the civil rights
category, which is probably the result of the small N (46)
in that category. On the whole, there are no extreme
differences between incumbents and winners and between non-
incumbents and losers.

## Table 5.2

### POLICY POSITION BY PERCEPTION OF DISTRICT OPINION CONTROLLED FOR PEOPLE KNOW CANDIDATES' STANDS AND BY INCUMBENCY AND ELECTION OUTCOME

Policy Position By Perception of District Opinion By
People Know Candidates' Stands By Incumbency:

|  | Incumbents | | Nonincumbents | |
|---|---|---|---|---|
|  | Know Stands | Don't Know Stands | Know Stands | Don't Know Stands |
| Foreign Affairs (.43)* | .58(331) | .26(62) | .32(256) | .05(160) |
| Social Welfare (.42)* | .70(332) | -.28(59) | .15(275) | -.17(186) |
| Civil Rights (.51)* | .69(315) | .30(41) | .71(248) | .08(183) |

Policy Position By Perception of District Opinion By
People Know Candidates' Stands By Election Outcome:

|  | Winners | | Losers | |
|---|---|---|---|---|
|  | Know Stands | Don't Know Stands | Know Stands | Don't Know Stands |
| Foreign Affairs (.43)* | .54(391) | .12(63) | .29(192) | .20(159) |
| Social Welfare (.42)* | .65(392) | .04(56) | .11(211) | -.18(189) |
| Civil Rights (.51)* | .76(361) | 1.00(46) | .58(198) | .04(178) |

*These gamma values are the relationships between the policy position and the candidates' perception of district opinion.

Interestingly, most incumbents (about 85%) and most winners (also about 85%) believed people were aware of their stands, while only 60% of the nonincumbents and less than 55% of the losers felt the same way. This could possibly be the result of the recognition that usually accompanies incumbency, but the net effect is that the incentives for nonincumbents to follow district opinion are not as apparent as those for incumbents, who are likely to feel that they have more to lose since they believe more people are aware of their stands. In sum, what promotes responsiveness among candidates is present mostly for incumbents, and lacking among nonincumbents. Incumbents have the most to lose and are more knowledgeable (they believe) of district opinion. They take the safe route by following their perceptions of district opinion. Nonincumbents don't have as much to lose and are less likely to know district opinion, as the data indicate, so their rational strategy is more randomized, and they are less likely to follow their perceptions of district opinion. The net policy implication is that if citizens want to have responsive representatives, they should choose those that have the greatest incentives for following district opinion, and these candidates are likely to be the incumbents. This suggests Senator Robert Byrd's definition of politics as "...the art of putting people under obligation to you."[1]

Table 5.3 shows the effect of controlling for the expected loss variables of "Expected Loss From Stands,"

"Expected Loss From Foreign Affairs," "Expected Loss From
Social Welfare," and "Expected Loss From Civil Rights."
The High and Moderate Loss categories are combined because
of the small number of cases in the High Expected Loss
category.  The table also compares the relationships by
incumbency and election outcome.  (See Table 5.3.)

For incumbents, those who perceived moderate or high
expected loss were more likely to follow district opinion
than those who perceived low expected loss.  This was true
for nonincumbents in the areas, with social welfare being
the exception.  The gammas for the High Expected Loss
categories are also lower for the nonincumbents, which may
reflect the difference between these two groups with regard
to the level of risk involved--the incumbents having the
most to lose, the nonincumbents the least.

Comparing incumbents to the winners, there does not
appear to be much difference among those in the High Expected
Loss categories.  The Low Expected Loss category has too
few cases to be significant.

Examining the difference between incumbents and
winners for the expected loss categories for each issue area,
we see that only in foreign affairs did the gammas decrease
for the High Expected Loss category.  The Low Expected Loss
category showed a major change only in the civil rights area,
from a gamma of .54 to .76.

These results indicate that, first of all, incumbents
are more likely to follow district opinion and that voters

## Table 5.3

#### POLICY POSITION BY PERCEPTION OF DISTRICT OPINION BY EXPECTED LOSS FROM STANDS AND FROM ISSUE AREAS, CONTROLLED BY INCUMBENCY AND ELECTION OUTCOME

Policy Position By Perception of District Opinion By Expected Loss From Stands Controlled By Incumbency: Opposed Candidates

|  | Incumbents | | Nonincumbents | |
|---|---|---|---|---|
|  | High Expected Loss | Low Expected Loss | High Expected Loss | Low Expected Loss |
| Foreign Affairs | .58 (268) | .37 (51) | .36 (218) | .17 (79) |
| Social Welfare | .66 (269) | -.23 (48) | .30 (237) | .56 (78) |
| Civil Rights | .78 (255) | .37 (37) | .63 (207) | .48 (86) |

Policy Position By Perception of District Opinion By Expected Loss From Foreign Affairs, Social Welfare, and Civil Rights, Controlled By Incumbency: Opposed Candidates

|  | Incumbents | | Nonincumbents | |
|---|---|---|---|---|
|  | High Expected Loss | Low Expected Loss | High Expected Loss | Low Expected Loss |
| Foreign Affairs | .92 (92) | .48 (209) | .21 (130) | .52 (191) |
| Social Welfare | .78 (162) | .30 (155) | .21 (164) | .47 (183) |
| Civil Rights | .87 (62) | .54 (223) | .39 (139) | .80 (179) |

Table 5.3 (Cont'd)

Policy Position By Perception of District Opinion By Expected Loss
From Stands Controlled By Election Outcome:  Opposed Candidates

| | Winners | | Losers | |
| --- | --- | --- | --- | --- |
| | High Expected Loss | Low Expected Loss | High Expected Loss | Low Expected Loss |
| Foreign Affairs | .48 (317) | .49 (48) | .51 (169) | .36 (82) |
| Social Welfare | .67 (314) | .09 (45) | .22 (192) | .40 (81) |
| Civil Rights | .82 (290) | 1.00 (38) | .49 (172) | .43 (85) |

Policy Position By Perception of District Opinion By Expected Loss
From Foreign Affairs, Social Welfare, and Civil Rights,
Controlled By Election Outcome:  Opposed Candidates

| | Winners | | Losers | |
| --- | --- | --- | --- | --- |
| | High Expected Loss | Low Expected Loss | High Expected Loss | Low Expected Loss |
| Foreign Affairs | .66 (127) | .51 (237) | .33 (95) | .43 (163) |
| Social Welfare | .77 (200) | .39 (169) | .01 (126) | .49 (169) |
| Civil Rights | .76 (100) | .76 (231) | .26 (101) | .61 (171) |

are likely to elect representatives who do try to follow district opinion, especially in regard to an issue that is likely to have a high degree of salience among the citizens. Foreign affairs during this era was not likely as salient an issue as civil rights, and the data in Table 5.3 seem to mirror this assessment.

Table 5.4 shows the results from controlling for the other risk indicator, the variable measuring the expected loss of investment, and comparing incumbency to election outcome. The High Risk category is composed of majority party candidates in a safe district, and the Low Risk category contains the minority party candidates in safe districts. The candidates from the competitive districts are included in an additional column, but are not controlled for risk. (see Table 5.4.)

The analysis is limited by the increased number of cells with too few cases, but there does not appear to be much change between the gammas for High Risk incumbents and High Risk winners, which have sufficient cases to be significant. In the competitive districts, the gammas for social welfare decreased slightly and increased for civil rights from .40 to .58. The nonincumbents from competitive districts had low associations between candidates' policy positions and their perceptions of district opinion, and the gammas for the losers show that the citizens rejected candidates from competitive districts who were not too likely to follow district opinion.

Table 5.4

POLICY POSITION BY PERCEPTION OF DISTRICT OPINION BY RISK
(NONCOMPETITIVE DISTRICTS) CONTROLLED BY INCUMBENCY
AND ELECTION OUTCOME: OPPOSED CANDIDATES

Policy Position By Perception of District Opinion By Risk Controlled By Incumbency

|  | Incumbents | | Nonincumbents | |
|---|---|---|---|---|
|  | High Risk | Low Risk | High Risk | Low Risk |
| Foreign Affairs | .51 (215) | 1.00 (25) | .40 (63) | .24 (257) |
| Social Welfare | .70 (220) | 1.00 (25) | .42 (63) | .06 (309) |
| Civil Rights | .82 (206) | ---- (18) | .90 (52) | .49 (275) |

Policy Position By Perception of District Opinion By Risk Controlled By Election Outcome

|  | Winners | | Losers | |
|---|---|---|---|---|
|  | High Risk | Low Risk | High Risk | Low Risk |
| Foreign Affairs | .43 (253) | .62 (61) | .64 (25) | .13 (221) |
| Social Welfare | .69 (258) | .64 (57) | .00 (25) | -.01 (277) |
| Civil Rights | .83 (240) | -.36 (40) | -- (18) | .51 (253) |

Note: The gammas for competitive district candidates, not controlled by Risk are as follows:

|  | Incumbents | Nonincumbents | Winners | Losers |
|---|---|---|---|---|
| Foreign Affairs | .60 (170) | .37 (113) | .64 (163) | .38 (116) |
| Social Welfare | .77 (163) | -.29 (110) | .67 (149) | .24 (120) |
| Civil Rights | .40 (142) | .31 (111) | .58 (143) | .06 (106) |

As far as responsiveness is concerned, we did not determine whether the winners actually represented their constituency better than the set of incumbents before them, but we did determine whether or not they were likely to adopt policy positions close to what they perceived to be the majority position in their districts. Incumbents and winners were more likely to follow district opinion than the nonincumbents and losers, indicating that they may have had rational reasons for doing so. Indeed, even incumbents in safe districts were likely to follow district opinion. The model explains that this is because of the high expected loss of investment that would occur if they did not reflect district opinion. When there are rational reasons not to follow district opinion, such as in low expected loss (of votes or of investment) situations, candidates expectedly do not follow district opinion. Instead, they may feel free to either adopt their own personal attitudes (if they differ from the majority opinion), or second, they may be obligated to follow the dictates of their party organization and its activist supporters, who may not represent the mainstream of opinion in the district. Third, as the model suggests, they may be uncertain about district opinion and may not be very confident about their own estimates of district opinion. Therefore, they would rely much less on their perceptions and select some other possible position.

Although it cannot be confirmed from the data we have, there may be an important underlying explanation for some of

the negative values for the low loss and low risk categories when controlling for incumbency and election outcome. For the hypotheses tested in chapter four, the prediction for these categories was no relation between policy position and perception of district opinion. The results generally coincided with our prediction and rarely were there any negative values at all. However, when we control for incumbency and election outcome, a number of negative associations do arise. As stated previously, the theory does not predict any relationship for incumbency or election outcome, but the results may be worth investigating. These negative values (in Tables 5.2, 5.3, and 5.4) may represent cases in which candidates consciously chose to adopt policy positions other than those perceived to be majority opinion in order to satisfy other groups or individuals in the district that have a special influence upon the candidate. Another reason may be that the negative correlations represent the positions of candidates who were unable to moderate their positions adopted during a primary campaign. This point is related to the problem that a candidate may have in his campaign: to maximize votes or maximize resources from supporters who have preferences that conflict with the majority of the voters. These factors may indicate the nature or significance of the negative gamma values and thus be an important area for future research, since these questions go beyond the scope of this study.

## 3.  Marginality and Responsiveness

One of the more interesting implications of the results in chapter four concerns the effect of the perceived competitiveness of the district on the relationship between candidates' perceptions of district opinion and their policy positions.  The study of the effect of electoral margins on political behavior has a long history, going back at least as far as MacRae's study of the Massachusetts House of Representatives,[2] but, as first mentioned in chapter one, the results of some of these studies have often been contradictory and confusing.[3]  The Bayesian decision model, however, presents a perspective for examining the decisions of candidates from marginal (competitive) districts and safe (noncompetitive) districts.  In this section we intend to show how the results of our study can help ameliorate the seemingly contradictory findings of previous efforts.

A recent reappraisal of the literature on the effect of marginality on constituency influence was published by Fiorina,[4] who applied his decision-theoretic model to the study of this question.  In his article, Fiorina discussed the following generalization that is prominent in the constituency influence literature:

> The marginality hypothesis:  the less confident the representative is about his chances to be re-elected, the more he votes in accordance with the interests of his constituency.[5]

Fiorina concluded that many of the researchers who found the marginality hypothesis to be true were "not

justified by the data they analyzed."[6] This was primarily

because the questions asked by the researchers were not

answered by the data. In fact, Fiorina concluded, "only

Miller's research[7] bears directly on the question of

constituency influence on safe versus marginal represen-

tatives."[8] As a result, the contradiction between Miller's

findings, which work against the marginality hypothesis, and

those of previous researchers, is reconciled.

However, Miller's findings, which were based on the

1958 Representation Study, appear to be counterintuitive to

the marginality hypothesis, which predicts that legislators

from safe districts are less likely to follow district

opinion because their seats are safe and they "can concern

themselves with a broader state interest."[9] It also pre-

sumes that legislators from competitive districts would

feel more pressure to pay heed to constituents' interests,

since their seats would be vulnerable to challengers.

Instead, Miller found that congressmen from safe districts

presented a more balanced voting record between the

influences of constituency and party interests. They were

also found to represent their majority party constituents

better than the marginal district congressmen (for social

welfare and civil rights), which tends to disprove the

marginality hypothesis.[10]

Although the marginality hypothesis could not explain

these results, they nevertheless fit well within Fiorina's

model,[11] for his hypotheses describe the voting decisions

of legislators according to the size and number of groups
in their district to which the congressmen are obliged to
respond. Although the marginality hypothesis may be
"intuitively reasonable," its explanatory power is quite
limited when compared to data that could be used to test it.

Actually, the marginality hypothesis is not all wrong,
because it does rely upon the condition that legislators
want to represent their constituents most accurately when
there is the greatest risk. The problem therefore lies in
the conceptualization of what is meant by risk. Proponents
of the marginality hypothesis have presumed that candidates
in marginal districts perceive the greatest risk, and
therefore are more likely to follow district opinion than
legislators from noncompetitive districts. Taken from the
viewpoint that each legislator is the basic unit of analysis,
this is not necessarily true, since the perceptions of each
legislator are likely to be different. Taken a step further,
we cannot strictly compare legislators from safe and com-
petitive districts and say one group is going to be more
responsive than another. Instead, we have to examine their
perceptions of risk and uncertainty and divide 'them into
high and low risk groups and then make comparisons. As we
saw in chapter four, there is a difference in responsiveness
within noncompetitive districts, and we can only presume
that this may very well be the case within competitive
districts as well.

If we examine the difference between candidates from marginal and safe districts according to the degree to which they are likely to select policy positions which coincide with their perceptions of district opinion, we find the results shown in Table 5.5.

### Table 5.5

POLICY POSITION BY PERCEPTION OF DISTRICT OPINION
CONTROLLED BY DISTRICT COMPETITIVENESS:
OPPOSED CANDIDATES

|  | All Opposed Candidates | Noncompetitive | Competitive |
|---|---|---|---|
| Foreign Policy | .43 (914) | .33 (560) | .55 (283) |
| Social Welfare | .42 (959) | .43 (617) | .41 (273) |
| Civil Rights | .51 (876) | .60 (551) | .36 (253) |

Candidates from noncompetitive districts are more likely to follow district opinion primarily on civil rights issues, while candidates from competitive districts are more likely to follow district opinion on foreign affairs issues. When we controlled for expected loss of investment, as in Table 4.26, we found that the candidates in the non-competitive districts showed a remarkable difference. The high risk candidates increased their support of district opinion and low risk candidates decreased their support of district opinion. As an imperfect indication of high risk candidates in competitive districts, we can look at the gammas for incumbents from competitive districts, origi-nally shown in Table 5.4 and displayed again in Table 5.6.

## Table 5.6

### POLICY POSITION BY PERCEPTION OF DISTRICT OPINION CONTROLLED BY RISK FOR NONCOMPETITIVE DISTRICTS AND BY INCUMBENCY FOR COMPETITIVE DISTRICTS: OPPOSED CANDIDATES

|  | Noncompetitive Districts | | Competitive Districts | |
|---|---|---|---|---|
|  | High Risk | Low Risk | Incumbents | Nonincum. |
| Foreign Affairs | .48 (278) | .23 (282) | .60 (170) | .37 (113) |
| Social Welfare | .68 (283) | .09 (334) | .77 (163) | -.29 (110) |
| Civil Rights | .81 (258) | .41 (293) | .40 (142) | .31 (111) |

The comparison between incumbents and nonincumbents in competitive districts suggests that (if we assume for the moment that the incumbents perceive high expected loss of investment and nonincumbents perceive low expected loss of investment), it is the risk they perceive rather than the marginality of the district itself that causes this difference in the gammas between the two groups. Merely to examine the gammas between the competitive and noncompetitive districts tell us very little, since the competitive district candidates showed a higher association for foreign affairs, noncompetitive district candidates showed a higher association for civil rights, and the gammas were about the same for social welfare (Table 5.5). However, when we break down the candidates into categories measuring the perception of risk, the striking differences appear. The conclusion we can draw from this is that it is not so much the marginality of the district, but the candidates' perception of how much risk and uncertainty is present.

We can examine the effect that the perceived chance of election has upon candidates by controlling the relationship between candidates' perceptions of district opinion with their policy positions by their estimated chance of election, measured by Variable 206. This question, "When you decided to run, what did you think your chances were of winning?" was asked only of nonincumbents in the survey, but the results in Table 5.7 are quite instructive.

Table 5.7

POLICY POSITION BY PERCEPTION OF DISTRICT OPINION
CONTROLLED BY ESTIMATED CHANCE OF WINNING ELECTION:
OPPOSED NONINCUMBENTS

Policy Position By Perception of District Opinion
Controlled By Variable 206, Estimated Chance of
Winning Election:

| | Estimated Chance of Winning | | |
| | Good Chance | Some Chance | Little Chance |
|---|---|---|---|
| Foreign Policy (.32)* | .54 (144) | .28 (133) | .05 (156) |
| Social Welfare (.13)* | .60 (141) | -.32 (126) | .09 (212) |
| Civil Rights (.44)* | .47 (145) | .28 (116) | .56 (184) |

*These gammas are the ones representing the relationship between policy position and perception of district opinion for opposed nonincumbents.

We see that when the candidates believed their chances of election were good, they were very likely to match their perceptions of district opinion with their public policy positions. The relationship appears to be linear for foreign policy and curvilinear for civil rights and to some extent for social welfare. The point is that we cannot make valid generalizations about constituency influence by

relying solely on the competitiveness of the district. As
we have seen here, at least for the nonincumbents, the
perception of a good chance of winning the election
increased the gammas as compared to nonincumbents as a
whole.

The validity of the marginality hypothesis therefore
lies not in its statement of the effect of marginality as
an objective measure, but as a subjective one, which cuts
across the conceptual boundaries between safe and marginal
districts. It is the candidates and the legislators that
perceive the marginality and merely observing the margin of
the vote is not enough to determine the safeness of a
district. We are arguing therefore that the marginality
of the district is not the overriding factor that it may
appear to be regarding constituency influence, but that
other factors that indicate the degree of risk and uncer-
tainty, subjectively perceived by the candidate or legis-
lator, should be examined.

The significance of the Bayesian model is well illus-
trated by this example, because it allows us to perceive
the nature of candidate (as well as legislator) decision
making within an entirely new perspective. The marginality
hypothesis appears intuitively reasonable: legislators who
are in more danger of losing their seats are more likely to
follow district opinion. However, it has not been properly
measured, because researchers have been concerned with
identifying marginal and safe districts by objective

criteria and not subjectively. The marginality hypothesis has thus suffered from incomplete conceptual development, especially because it is not accompanied by a conceptual framework. The Bayesian model instead points the way toward the type of data that are needed to test the model and what the results are likely to mean within a larger context. This interpretation of the marginality hypothesis helps to emphasize the utility of the subjective decision making approach to the study of political behavior. It recognizes that there is a need to reconceptualize our ideas about political behavior in many areas and to be more concerned with studying the perceptions of political actors and learning more about how they collect and interpret the information they use to formulate their perceptions and beliefs about the states of the world. Politicians may not actually think in terms of a decision matrix and expected losses, but the results from this study seem to indicate there is strong reason to believe that they act as if they have made similar calculations.

4.  Incumbency, Election Outcome, and Roll Call Positions

To complete the examination of the linkage process involving the perceptions of the candidates and their choice of a public policy position, we turn to the final step in that process, the casting of roll call votes by the successful candidates. If the candidates who win the election attempt to be truly responsive, then there should be a strong positive association between their perception

of district opinion and their roll call behavior. Also, if candidates do not misrepresent themselves in an election campaign, then their public policy positions should be strongly and positively associated with their roll call behavior.

The data from the Representation Study included a set of roll call scales created from votes cast by the incumbents during the 85th Congress.[12] Table 5.8 shows the frequencies of the responses to the roll call scales for the areas of foreign affairs, social welfare, and civil rights. (See Table 5.8.)

Scale scores for the 86th Congress would have been preferable, since the linkage process involves the winning candidate casting his votes in the new Congress. Nevertheless, we do not expect that the roll call scales for the 85th Congress would cause any great variations in the results. The data for the gamma associations between the roll call scales and perception of district opinion and between the public policy positions of the candidates who were the incumbents and of those incumbents who won the election are shown in Table 5.9.[13] Figure 5.1 shows the paths of the relationships, and for easier reference, Figures 5.2, 5.3, and 5.4 are presented to illustrate the causal relationships that are expected to hold, with the accompanying gammas.

## Table 5.8

### FREQUENCIES FOR ROLL CALL SCALE ITEMS: FOREIGN AFFAIRS, SOCIAL WELFARE, AND CIVIL RIGHTS

Variable 0364:  Foreign Policy Roll Call Scale

| Weighted Frequency | Code | | |
|---|---|---|---|
| 126 | 00. | No Positive Responses | Conservative |
| 134 | 01. | One Positive Response | |
| 7 | 02. | Two Positive Responses | |
| 0 | 03. | Three Positive Responses | |
| 25 | 04. | Four Positive Responses | |
| 7 | 05. | Five Positive Responses | |
| 11 | 06. | Six Positive Responses | |
| 35 | 07. | Seven Positive Responses | |
| 86 | 08. | Eight Positive Responses | |
| 67 | 09. | Nine Positive Responses | |
| 161 | 10. | Ten Positive Responses | Liberal |

Variable 0362:  Social Welfare Roll Call Scale

| Weighted Frequency | Code | | |
|---|---|---|---|
| 150 | 0. | No Positive Responses | Conservative |
| 40 | 1. | One Positive Response | |
| 69 | 2. | Two Positive Responses | |
| 30 | 3. | Three Positive Responses | |
| 28 | 4. | Four Positive Responses | |
| 47 | 5. | Five Positive Responses | |
| 58 | 6. | Six Positive Responses | |
| 111 | 7. | Seven Positive Responses | |
| 122 | 8. | Eight Positive Responses | Liberal |

Variable 0363:  Civil Rights Roll Call Scale

| Weighted Frequency | Code | | |
|---|---|---|---|
| 197 | 0. | No Positive Responses | Conservative |
| 7 | 1. | One Positive Response | |
| 21 | 2. | Two Positive Responses | |
| 7 | 3. | Three Positive Responses | |
| 32 | 4. | Four Positive Responses | |
| 54 | 5. | Five Positive Responses | |
| 378 | 6. | Six Positive Responses | Liberal |

Table 5.9

ROLL CALL SCALES BY PERCEPTION OF DISTRICT OPINION
AND BY PUBLIC POLICY POSITION

Incumbents:  85th Congress

| | Roll Call By Perception | Roll Call By Policy Position | Policy Position By Perception |
|---|---|---|---|
| Foreign Affairs | .80 (409) | .55 (462) | .57 (444) |
| Social Welfare | .60 (400) | .59 (472) | .68 (439) |
| Civil Rights | .71 (378) | .83 (485) | .61 (397) |

Winners:  Relected 85th Congress Representatives

| | Roll Call By Perception | Roll Call By Policy Position | Policy Position By Perception |
|---|---|---|---|
| Foreign Affairs | .76 (365) | .50 (411) | .53 (512) |
| Social Welfare | .56 (342) | .63 (407) | .65 (496) |
| Civil Rights | .77 (335) | .90 (424) | .70 (451) |

PUBLIC POLICY
POSITION

A

B

PERCEPTION OF
DISTRICT OPINION

ROLL CALL
BEHAVIOR

C
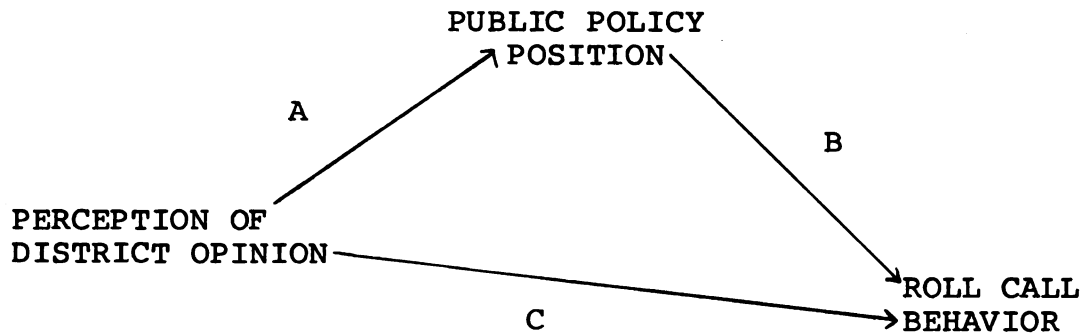
## Figure 5.1

CAUSAL RELATIONSHIP OF PERCEPTION OF DISTRICT OPINION
TO PUBLIC POLICY POSITION AND ROLL CALL POSITION

PUBLIC POLICY
POSITION

.57
(.53)

.55
(.50)

PERCEPTION OF
DISTRICT OPINION

ROLL CALL
BEHAVIOR

.80
(.76)

## Figure 5.2

GAMMA VALUES FOR RELATIONSHIP OF PERCEPTION OF
DISTRICT OPINION TO PUBLIC POLICY POSITION AND
ROLL CALL POSITION:  FOREIGN AFFAIRS*

*These values are for opposed incumbents of the 85th
Congress.  The numbers in parentheses are for those
incumbents who won the election in 1958 to the 86th
Congress.

PUBLIC POLICY
POSITION

.68
(.65)

.59
(.63)

PERCEPTION OF
DISTRICT OPINION

ROLL CALL
POSITION

.60
(.56)

### Figure 5.3

GAMMA VALUES FOR RELATIONSHIP OF PERCEPTION OF
DISTRICT OPINION TO PUBLIC POLICY POSITION AND
ROLL CALL POSITION: SOCIAL WELFARE *

PUBLIC POLICY
POSITION

.61
(.70)

.83
(.90)

PERCEPTION OF
DISTRICT OPINION

ROLL CALL
POSITION

.71
(.77)
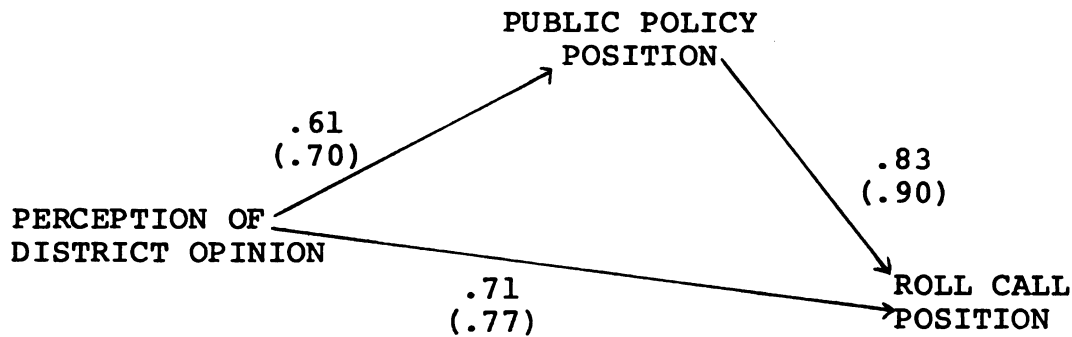
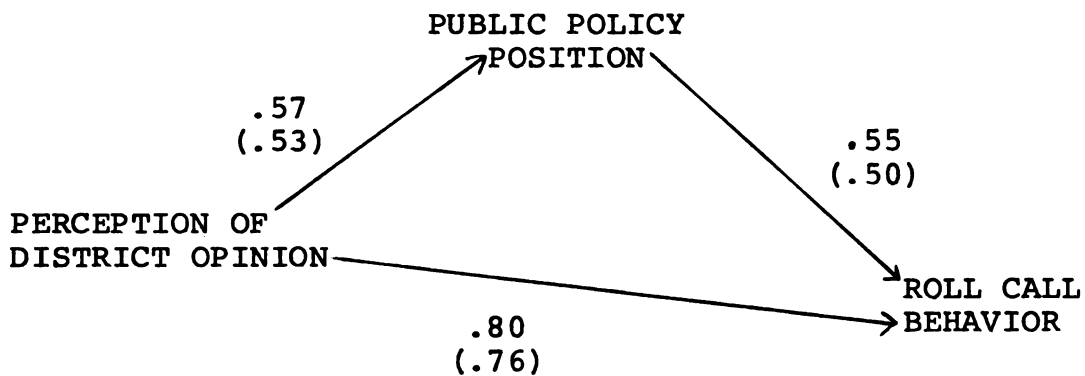### Figure 5.4

GAMMA VALUES FOR RELATIONSHIP OF PERCEPTION OF
DISTRICT OPINION TO PUBLIC POLICY POSITION AND
ROLL CALL POSITION: CIVIL RIGHTS*

*These values are for opposed incumbents of the 85th
Congress. The numbers in parentheses are for those
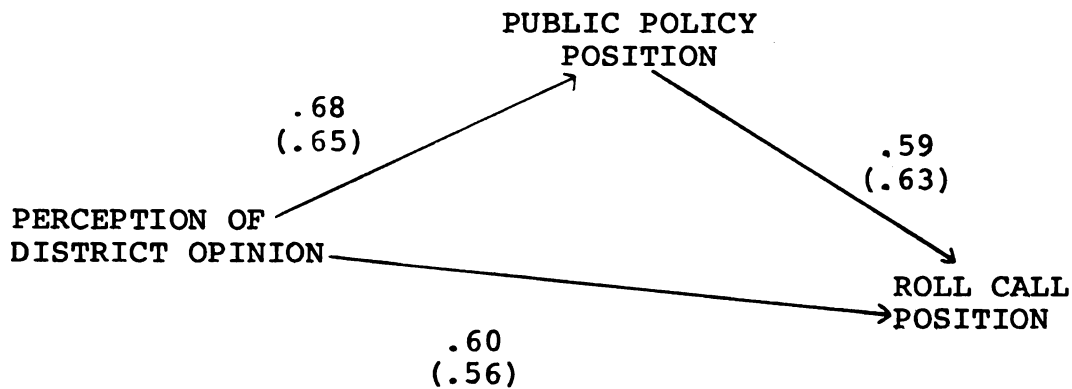incumbents who won the election in 1958 to the 86th
Congress.

If the incumbent candidates attempted to be responsive, the gammas should be high for at least paths A and C, as shown in Figure 5.1. That is, the representatives are adopting their policy positions in their campaign or in the legislature so as to closely coincide with their perceptions of district opinion. Path B represents the linkage between their public policy position as publicly stated and their roll call position. Since it is not always possible for a legislator to vote his policy position, these data will indicate to what extent the citizens have elected representatives who vote according to their public policy positions.

In foreign affairs, the relationship is highest for path B, the linkage between perception of district opinion and roll call position. It appears that the incumbents are not as likely to vote their public policy position as well as their perception of district opinion. In the end, the incumbents seem to be representing their constituents, to the degree the representatives correctly perceive district opinion.

On social welfare issues, the incumbents best represent their constituents through the adoption of public policy positions that are close to their perception of district opinion, but this association declines when carried on to the incumbents' roll call voting. An explanation for this may be that since there are so many complex issues involved in social welfare, it may not be possible for representatives to be able to vote according

to their perceptions of district opinion. That is, the
alternatives that are placed before them may not exactly
coincide with what they believe their constituency wants
and they are therefore unable to vote their perceptions of
district opinion.

For civil rights, the strongest association is between
roll call voting and policy position, indicating that incum-
bents vote according to their announced stands. The second
strongest association is between their perception of district
opinion and their roll call position. All the gammas in
this area are high, but the gamma of .83 especially shows
that the linkage between the incumbents' stated policy
position and their roll call voting is very strong.

If we examine the difference in the gammas for the
incumbents who ran for reelection and those who won the
election, we see that the gammas declined slightly in the
area of foreign affairs, but probably not enough to be
significant. In the area of social welfare, they stayed
basically stable, but increased the most for civil rights
issues. Again, the saliency of the issue may have had
some effect on these gammas, since it was likely that civil
rights issues were the most salient, and foreign affairs
the least.

This discussion helps to show that there may be some
important differences between the campaign environment and
the legislative arena. There are obvious differences with
regard to the fact that incumbents must campaign against a

designated opponent and employ a variety of multi-media
techniques to get their message across to the voters. In
the legislature, the incumbents' opponents may very well be
only themselves, since their record will establish the
ammunition which could be used by opponents in the next
campaign. There are also differences in the kinds of choices
that can be made in the legislature and in the campaign.
A comparison of Fiorina's subjective decision making model[14]
with the one presented in this study serves to illustrate
these differences. In fact, Fiorina seems to agree that
legislative and campaign decision making should be studied
within different contexts:

> We argue that there is no necessary correlation
> between a representative's relative positions
> in the legislative arena and in the constituency
> arena.[15]

This study can therefore provide a means of linking the
two arenas in order to achieve a more complete understanding
of the dimensions of legislative decision making. That is,
instead of formulating models that include only legislative
behavior, the models should include some provision for
accounting for campaign policy positions, since incumbents
must face the voters when their public policy positions do
not coincide with their roll call positions. Responsiveness
is thus not merely the linkage between perception and roll
call, but also between perception, policy position, and roll
call. And, according to results shown here, we can state
the generalization that the more salient the issue, the more

likely the candidate's policy position in the campaign will be the most important indicator of that candidate's roll call vote on that issue. In this regard, civil rights was the most salient and foreign affairs was the least salient issue.

Responsiveness appears to occur in either case, for the incumbent's roll call positions were strongly associated with either their perception of district opinion or their public policy position. Incumbents are likely to be more responsive, because, according to our model, they have the most to lose, and they are more likely to believe they know district opinion, so they vote their perceptions. The consequence is that as long as incumbents are likely to believe they are well informed and have a good chance to win re-election, they are likely to continue to try to be responsive to what they perceive to be the majority opinion in their district.

This concludes the examination of the data. Chapter six will present an assessment of the significance of these results, as well as some discussion of the strengths and weaknesses of the study.

CHAPTER FIVE

NOTES

1.  Martin Tolchin, "Byrd Persuasive as Senate Chief,"
The New York Times, 27 March 1977, p. 44.

2.  Duncan MacRae, Jr., "The Relation Between Roll Call
Votes and Constituencies in the Massachusetts House of
Representatives," American Political Science Review, 46
(1952), 1046-1055.

3.  Morris P. Fiorina, Representatives, Roll Calls and
Constituencies (Lexington, Mass.: Lexington Books, 1974),
Chapter 1.  See also his "Electoral Margins, Constituency
Influence, and Policy Moderation: A Critical Assessment,"
American Politics Quarterly, 1 (1973), 479-498.

4.  Ibid.

5.  Ibid., pp. 494-495.

6.  Ibid., p. 494.  These studies include the
following: MacRae, op. cit., Thomas Dye, "A Comparison of
Constituency Influences in the Upper and Lower Chambers of
a State Legislature," Western Political Quarterly, 14
(1961), 473-481, Samuel Patterson, "The Role of the Deviant
in the State Legislative System: The Wisconsin Assembly,"
Western Political Quarterly, 14 (1961), 460-473, and
P. Personen, "Close and Safe State Elections in Massachu-
setts," Midwest Journal of Political Science, 7 (1963),

54-70.

7.   Warren E. Miller, "Majority Rule and the Repre-
sentative Systems of Government," in Mass Politics, ed. by
E. Allardt and S. Rokkan (New York:   Free Press, 1970),
pp. 284-311.

8.   Fiorina, op. cit., p. 486.

9.   W. Crane and M. Watts, State Legislative Systems
(Englewood Cliffs, New Jersey:   Prentice-Hall, 1968), p. 87.

10. Fiorina, op. cit., p. 485.

11. Miller, op. cit., pp. 356-376.

12. For a detailed description of the scale items and
the creation of the scales, see Footnote 6 in the Candidate
File, 1958 Representation Study Codebook, SRC No. 433.

13. The statistics reported in Table 5.9 are different
from those reported by Miller and Stokes in their article,
"Constituency Influence in Congress," American Political
Science Review, 57 (1963), 45-56.   This difference is that
here we are considering only the opposed incumbents and not
the entire sample of incumbents from the study.   Also, we
are using gamma as a measure of association, while Miller
and Stokes chose to make the assumption that the ordinal
data could be interpreted as interval data, which is an
assumption that attracted some criticism (see chapter four
of this work).   The statistics presented here can actually
help to broaden their analyses since they did not publish
the correlations for all paths of the linkage process for
foreign affairs and social welfare issues.

14. Fiorina, <u>Representatives, Roll Calls and Constituencies</u>, op. cit.

15. Fiorina, "Electoral Margins, Constituency Influence...", op. cit., p. 495.

CHAPTER SIX

MODELS, DECISIONS, AND REPRESENTATION:   AN ASSESSMENT

1.    Introduction

In chapter one, we stated that this study was concerned
with determining the extent to which a rational choice model
could explain and predict the behavior of political actors
in order to develop a set of lawlike generalizations.  These
generalizations could then contribute to the development of
a formal deductive theory of political behavior.  In addi-
tion, by addressing the question of rationality versus the
desire for a representative government, we could make some
statements, based on these results, about the responsiveness
of public officials to citizen preferences.  This final
chapter offers an assessment of this research in terms of
its contribution toward theory development in political
science and its implications for electoral control of
public policy.

We will begin by briefly reviewing the major aspects of
the Bayesian decision model and the results from the hypo-
thesis tests.  Next, the results will be examined in light
of previous research, followed by a discussion of the
significance of this research for a representative
democracy.

## 2.   A Bayesian Analysis of Political Choice

The Bayesian approach to decision making has in the
last twenty years become widely accepted in its application
to business management problems as a means for making
optimal or "best" estimates, based on subjective as well
as objective information.  Only recently has this approach
been considered by social scientists as a tool of discovery
for developing lawlike generalizations about social and
political behavior.[1]

The model has been shown here to be an appropriate means
of using all available information in order to make decisions
under conditions of risk and uncertainty.  In political
science, rational choice models have often made the assump-
tion of perfect information to develop determinative models
or have relied upon objective probability models for
developing hypotheses that predict the likelihood of events.[2]
The Bayesian model can be considered more appropriate in
many circumstances because it relies upon not only objective
probabilities, but also on subjective probabilities based
on the perceptions of political actors.  The individual is
still the unit of analysis, but instead of presuming that
all individuals are exposed to the same quantity and quality
of information, the Bayesian model allows for analyses which
compensate for variegated interpretations of information by
different types of individuals.  These people may perceive
high or low uncertainty and high or low risk, which will
affect their political decisions.  The Bayesian model is

therefore a powerful alternative decision making model, because of its ability to include all available information and revise individuals' subjective estimates based on new information.

The reconceptualization of political problems that have been studied by political scientists have proved to be quite fruitful.  For example, Fiorina's[3] study of legislative voting behavior not only opened new avenues of research, but was able to advance the study of constituency influence by indicating how apparent contradictions in the literature could be discovered and explained through this approach and by generating a set of nonobvious hypotheses.

Fiorina's model, however, was concerned only with legislative decision making and no clues were given as to how legislators formulated their estimates of the states of the world, or how various levels of risk and uncertainty were likely to affect their decisions.  In this study, we have applied the Bayesian framework to the study of campaign decision making and the kinds of policy decisions candidates are likely to make in a situation involving risk and uncertainty.  We contended that in order to describe the complete process of constituency influence, it was necessary to develop a two-stage model, with the first stage linking the constituents with the candidates in a campaign, and the second, as investigated by Miller and Stokes,[4] linking the constituents with their representatives, the winners of the campaign.  Since candidates are subject to different kinds

of constraints and pressures in a campaign in comparison
to the legislative arena, what the candidates promise their
constituents is not always what they are able to (or maybe
even want to) deliver through legislative voting behavior.
By studying campaign policy making in a separate model, we
can work toward identifying the important factors that
influence public policy, which can in turn provide a better
description of the overall process of representation. Then
the relationship between the policy positions of the politi-
cian qua candidate and politician qua legislator could be
more thoroughly investigated, and a determination made as to
why winning candidates' policy positions do not coincide with
their legislative voting behavior.

We developed a subjective decision making model similar
to Fiorina's in many respects, and developed concepts
relevant to campaign behavior. However, we went beyond his
basic framework to consider hypotheses related to uncer-
tainty as a process in which candidates would try to seek
information about the world in order to increase their
confidence in their estimates of district opinion. The
desire for a model to include the concept of uncertainty
was expressed by Shepsle:

> Not included [in his paper], for example, are
> any manifestations of uncertainty in candidate
> decision making except as they arise in the
> game context of strategy selection. Thus, it
> was supposed that there is no uncertainty in
> candidate information about voter preferences
> or strategy constraints. It would be of great
> interest to incorporate questions of this sort.

> Moreover, it should be emphasized that the results in this paper depend upon highly restrictive assumptions. Increased mathematical generality, then is a first order concern.[5]

The model we developed was presented in a simplified form, but increased mathematical generality could easily be achieved by considering continuous, rather than discrete distributions. Also, our assumptions regarding candidate information was not overly restrictive, since perfect information was not assumed, only that some candidates were likely to be more confident about their knowledge than others. Thus, what we have done has been to present a new approach to the study of political behavior, which, when applied to decision making situations, can develop new kinds of testable hypotheses that can encompass a broader area of concern than present research currently affords.

It has the advantage of a formal deductive system, since it is based on a well developed set of mathematical structures. Therefore, our main task is to interpret these structures in political science terms and test the hypotheses to determine whether individuals act as if they follow the decision calculus of Bayesian decision theory when making political decisions.

Chapter three presented an interpretation of the Bayesian model by describing how candidates in a political campaign are likely to make a decision regarding an optimal policy position that would minimize their expected loss under uncertainty. The goal was to test the propositions

derived from the Bayesian model which described the effect of risk and uncertainty on candidates' policy positions. To operationalize and test these propositions, we relied upon the data supplied by the 1958 Representation Study, conducted by Miller and Stokes. The analysis was restricted by the fact that the survey did not contain questions that specifically asked for the exact kinds of information that were desired for a critical test of the propositions. Consequently, we had to use the questions that best approximated the concepts described in the model and thus formulated a set of hypotheses based on the information available from the study.

Among the drawbacks in using the data were the usual problems of secondary analysis of survey data. Also, the time frame in which the survey was conducted did not allow control for all internal validity factors and the complete establishment of causal relationships, as in the situation of dependence on sources for information. Despite these caveats, the data set remains an outstanding source of information about candidate perceptions, including nonincumbent challengers as well as incumbents. To date, no major survey has attempted to duplicate the thoroughness, size, or scope of this survey. It is an important source of information that had gone largely untapped because its public release was delayed until about 1971. The first set of publications authored by the principle investigators are now considered classics and are frequently cited in the

literature.[6] Therefore, it is justifiable to first consider
the data that are available to determine the goodness of
fit of the model before additional resources are expended.[7]
In this way, the development of a theory can be based on a
set of accumulated knowledge, acquired through various
interpretations of the model. That is, if the model holds
up well against a less than perfect interpretation, then
this portends even more satisfactory results when additional
tests are performed.

In considering the appropriateness of a secondary
analysis of a data set, one should consider the results of
the hypothesis tests before making a definite judgment.
That is, one should not be critical of the assumptions of
a model (which include the interpretation of the validity
of the questions posed in the survey) until the predictions
of the model can be compared to reality. In this respect,
the 1958 Representation Study provides some very encouraging
results that point toward the value of the Bayesian decision
making model as applied to the study of campaign decision
making.

When the hypotheses were tested, the following results,
briefly stated, were obtained:

> 1) Opposed candidates who perceive to know how people
> in their district felt about the issues were more
> likely to follow their perceptions of district opinion
> than those who seldom knew district opinion.

2) Opposed candidates who perceived that people in their district were interested in the issues were more likely to follow their perceptions of district opinion than those who believed people were not interested.

3) Opposed candidates who perceived people in their district were more likely to know the candidates' stands on the issues were more likely to follow their perceptions of district opinion than those who believed people did not know the candidates' stands.

4) Opposed candidates who perceived high expected loss of votes from perceiving people in their district were aware of their stands were more likely to follow district opinion than those who perceived low expected loss.

5) Opposed candidates in noncompetitive districts who were in a high expected loss of investment category (majority party candidates) were more likely to follow district opinion than those in a low expected loss category (minority party candidates).

These findings were based on the uncertainty and risk propositions that were derived from the Bayesian model. The uncertainty proposition predicted that greater uncertainty would influence candidates to be less likely to adopt their perceptions of constituency opinion since they would be less confident that their perceptions would be correct in identifying the true value of a campaign parameter. The

risk proposition stated that candidates who perceived greater risk (expected loss) would have a greater incentive to minimize their expected loss by more closely following district opinion as they perceived it.

Whenever the best available indicators of risk and uncertainty were tested, the results confirmed that the variables representing risk and uncertainty were important conditional control variables that frequently enhanced the difference between candidates in the high and low categories. The results varied somewhat according to the particular issue area, but the overall pattern was that when the variables of risk and uncertainty were considered, the difference between the categories of candidates increased.

These results help to establish the validity of this approach to studying political decision making. Fiorina was only able to test his model indirectly, and although we do not consider this the best possible test of the Bayesian model, we have been able to go two steps further than Fiorina: 1) we have provided a relatively more direct test of a subjective decision making model with good results and 2) we have described not only an optimal or preferred choice, but have also described the process of making the choice by considering that candidates act as if they followed Bayes' theorem to revise their estimates of the true state of the world. This model could also be applied to other kinds of campaign decisions involving unknown parameters.

With regard to the second point, Fiorina described $\underline{C}$, the probability that a group in a legislator's district cared about the way a legislator voted on a particular issue. In Chapter 4 of his book, he described the process by which a legislator might estimate the value of $\underline{C}$, instead of considering $\underline{C}$ as a given, which was Fiorina's assumption throughout most of his discussions.[8] He stated that $\underline{C}$ was a function of group organization, group cohesion, intensity of preference, and a representative's past voting record.[9] Just as we were able to show how candidates could estimate the probability of $\Theta$, Fiorina's legislators could be shown to estimate $\underline{C}$ in the same way, by employing Bayes' theorem. If the data were available to operationalize Bayes' theorem, one could estimate the value of $\underline{C}$, which could then be revised after each vote cast by the legislator. As a result, the difficulty that Fiorina discussed in regard to measuring $\underline{C}$ may not be as burdensome a task as he proposed:

> Enough has been written in this section to indicate the dimensions of the problem we face, and why we began by taking estimates of $\underline{S}$ and $\underline{C}$ as givens. The questions raised will be topics of future research for a rather lengthy future. Isolating the major variables affecting group strength and concern should not be terribly difficult. But theorizing about the relationships among them and carrying out the measurements necessary for empirical estimation pose no easy task. Yet if the $\underline{S}_j$ and $\underline{C}_j$ are important variables in a representative's voting decision problem, then eventually we must face up to these problems.[10]

Our point is that it may be possible to estimate $\underline{S}_j$ (group strength) and $\underline{C}_j$, not by considering all the factors

that Fiorina discussed, but instead by reconceptualizing the problem in terms of subjective probabilities and the use of Bayes' theorem. Estimates of group strength or the degree to which a group is concerned about legislative behavior could be revised according to new information, either subjective or objective.

The research presented in this study thus builds upon the analysis of Fiorina and, by testing a set of related hypotheses, provides additional confirmation of the utility of studying subjective decision making processes in a political environment. In addition, it has helped to explain Miller's findings, which were contradictory to the results of other studies dealing with constituency influence,[11] and therefore contributes to a body of empirical literature as well. It also provides a conceptual linkage between political behavior in a campaign environment and legislative behavior. Both have their roots in constituency influence, yet few studies have attempted to consider both as being part of a larger process of decision making. Our study, along with Fiorina's, helps substantiate the feasibility of studying both processes within one kind of theoretical framework, instead of considering each environment as entirely separate and deserving independent analyses. As a result, greater explanatory hypotheses about political behavior could be developed.

With the exhibition of the utility of the Bayesian decision making model in the context of both the legislative

and campaign environments, we would expect that more research will be devoted to this area in the future. The present model can be expanded to consider additional hypotheses based on new assumptions, either more or less restrictive, but the collection of appropriate interview data must remain a high priority as well. Our purpose was to show how a subjective decision making model could be used to conceptualize and explain candidate decision making under conditions of risk and uncertainty. In the process, we have provided a more realistic model, while hopefully maintaining the flexibility and precision to qualify as an important tool of discovery.

3. Toward a Representative Democracy

One of the four conditions for a strong linkage between constituency attitudes and public policy was that winners must vote in accordance with their pre-election attitudes. To help achieve responsiveness, these attitudes must at least be in accordance with their perceptions of constituency opinion. In investigating these necessary requirements for a representative democracy, we found that representatives do attempt to follow district opinion, despite whatever ignorance or disinterest is attributed to the voting public.

We found that of the opposed candidates, the incumbents were more likely to follow what they perceived to be the opinion of a majority in their constituency than nonincumbents, and winners were more likely to do the same as

compared to the losers. Also, incumbents and winners who perceived people in their district were aware of the candidates' stands on the issues were more likely to follow district opinions than nonincumbents and losers, respectively. These results indicate that among the candidates studied, representation is likely to occur, not only in the sense that candidates who are incumbents follow their perception of district opinion, but also because citizens continue to elect candidates who are more likely to follow district opinion. Incumbents are therefore likely to be winners and both groups showed a high association between their campaign policy positions and their perceptions of district opinion.

There is, of course, no absolute level that determines what is an "acceptable" level of representation, but what is important is that incumbents and winners compared to the nonincumbents and losers, are relatively more concerned with following district opinion. The results also showed that the level of association is likely to be higher when the issue is perceived to be more important than the others, as shown in the area of civil rights.

Although these representatives appear to be following their perceptions, their actual motives may not be entirely altruistic. This is apparent because in cases where there was shown to be low expected loss, candidates were not very likely to follow their perceptions of district opinion. Only when the stakes are high or when they perceive some

electoral loss as a result of being unaware of constituency opinion, do they exhibit a higher association of their policy positions with their perceptions of district opinion. It appears that as long as representatives and candidates in a campaign believe that the people are concerned about the stands of their representatives, politicians will more likely be responsive.

These results coincide well with Fiorina's conclusions that:

> Instead, in a world of uncertainty, representatives may find it rational to act as if constituents were watching, mass constituency ignorance to the contrary notwithstanding.[12]

In sum, responsiveness occurs because candidates and representatives perceive, rightly or wrongly, that the citizens or groups in their districts care. The question, though, is why? Why do they believe people care, and do our results imply that nonincumbents and losers don't care? The theory we have presented cannot account for the perceptions that candidates or representatives formulate, it only describes how those perceptions are formed. However, we can speculate that the reason is because of a self selection process that occurs during the electoral process. Kingdon and others[13] have found a difference between the perceptions of winners and losers and how the outcome of an election is likely to influence their perception of the voters and of themselves. In Kingdon's study, the winners in his sample developed complimentary beliefs about the voters and the

losers developed rationalizations for their losses. Kim
and Racheter[14] investigated this "congratulation-rationali-
zation" effect and found that other factors besides election
outcome were possibly more important in determining candi-
dates' attitudes. These included competitiveness, career
socialization, and political ambition.

Fishel, Huckshorn and Spencer, and Leuthold[15] have
also investigated the losers in congressional elections,
but no one clear explanation emerges to shed light on the
reason why nonincumbents would be less receptive to
following district opinion. However, the problem may not be
serious as far as the prospects for a representative democ-
racy are concerned. Since nonincumbents occasionally win
office and are then likely to follow district opinion, it
may actually be the winning that evokes a sense of responsi-
bility that nonincumbents do not perceive as strongly until
after they are in office. Once in office, the risks of the
game increase, there is suddenly more to lose and there is
the possibility, however remote, that the citizens may
defeat them in the next election. Incumbents have a greater
chance of reelection, but they are not unbeatable. In order
to exhibit some control over the course of events, incum-
bents may perceive that they should at least try to follow
district opinion in order to reduce the uncertainty of their
electoral chances. Nonincumbents may not perceive the policy
positions to be as crucial a factor as organizational or
financial resources are in order to reduce their uncertainty

about their chances of election. As Downs[16] indicated, when the party in power must declare its policies first, under uncertainty, the party out of power need only wait until their opponents make a mistake and take the minority position on an issue. Then the party out of power can take the majority position and win the election on that one issue. It is therefore the incumbent who may perceive he is being watched, while the nonincumbent is relatively freer to take a position that is not the majority position, except on the most important ones, such as civil rights.

The implications for a representative democracy are basically good. We see that representatives are likely to follow district opinion because they perceive people in their district do care about the positions they take. The people's responsibility is therefore to inform their representatives as to the true position of the majority, whomever that may comprise.

CHAPTER SIX

NOTES

1. See Gudmund Iversen, "Statistics According to Bayes," in Sociological Methodology 1970, ed. by E.F. Borgatta (San Francisco: Jossey-Bass Publishers, 1970), pp. 185-199.

2. See William H. Riker and Peter C. Ordeshook, Introduction to Positive Political Theory (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1973) and Richard G. Niemi and Herbert F. Weisberg, eds., Probability Models of Collective Decision Making (Columbus, Ohio: Charles E. Merrill Co., 1972) for a discussion of these models.

3. Morris P. Fiorina, Representatives, Roll Calls, and Constituencies (Lexington, Mass.: Lexington Books, 1974).

4. Warren E. Miller and Donald E. Stokes, "Constituency Influence in Congress," American Political Science Review, 57 (1963), 45-56 and Stokes and Miller, "Party Government and the Saliency of Congress," Public Opinion Quarterly, 26 (1962), 531-546.

5. Kenneth A. Shepsle, "The Strategy of Ambiguity," American Political Science Review, 66 (1972), 555.

6. Miller and Stokes, op. cit. and Stokes and Miller, op. cit.

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7.  It should be noted that the major criticism of the data has been that the correlations between constituency opinion and legislators' perceptions, attitudes and voting behavior were subject to too much sampling error.  This charge is based on the small number of cases in each district, which ranged up to about 17 persons.  The present study avoids the problem completely, because we are concerned only with the perceptions and position of the candidates and do not attempt to correlate them with constituency opinion.

8.  Fiorina, op. cit., p. 83.

9.  Ibid., p. 84.

10. Ibid., p. 86.

11. See Warren E. Miller, "Majority Rule and the Representative System of Government," in Cleavages, Ideologies, and Party Systems, ed. by E. Allardt and Y. Littunen (Helsinki:  Transactions of the Westermarck Society, 1964), pp. 343-376.

12. Fiorina, op. cit., p. 124.

13. John Kingdon, Candidates for Office (New York: Random House, 1966), Robert Huckshorn and Robert C. Spencer, The Politics of Defeat (Amherst:  University of Massachusetts Press, 1971), David Leuthold, Electioneering in a Democracy (New York:  John Wiley, 1968), Jeff Fishel, Party and Opposition:  Congressional Challengers in American Politics (New York:  David McKay, Inc., 1973).

14. Chong Lim Kim and Donald P. Racheter, "Candidates' Perception of Voter Competence:  A Comparison of Winning and Losing Candidates," American Political Science Review, 67 (1973), 906-913.

15. Fishel, op. cit., Huckshorn and Spencer, op. cit, and Leuthold, op. cit.

16. Anthony Downs, An Economic Theory of Democracy (New York:  Harper & Row, 1957).

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