SSRIC Teaching Resources

Representation in California's State Legislature

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Chapter One:
Representation and Legislative Behavior

Last Modified 8/25/2008

Introduction

How often have you heard the phrase, "No taxation without representation?" For many Americans those words stir up strong patriotic feelings of embattled colonists overthrowing oppressive British rule. When Parliament, the British legislature, levied taxes on American colonists, some opponents claimed the action was repugnant because Americans were not actually represented in Parliament, i.e. no Americans served in Parliament and none voted in parliamentary elections. Those who defended the taxes claimed that Americans were mainly English and therefore virtually represented by other Englishmen.

Although Dublin-born British parliamentarian and Whig-pamphleteer Edmund Burke supported American Independence, he rejected the idea of popular rule. In a famous speech to his Bristol constituents Burke argued that his behavior in Parliament should be informed by his knowledge and experience, allowing him to serve as a trustee of the public interest, not as a delegate for popular whim (1774).

This module offers you ways to learn more about the theory and practice of popular government. It focuses upon political representation and legislative behavior and allows you to compare representative policymaking in the California state legislature with the making of policy through the direct democratic device of the initiative process. It utilizes demographic data from the U.S. census, from election returns for the state legislature, from rollcall votes in the legislature, and from votes for and against popular initiatives.

Representation

Are Americans represented any better in their law-making bodies today than they were in the British Parliament? Only about half those

who are eligible to participate in elections for members of Congress and state legislatures actually vote. Further, we know that legislators are not representative in the sense they are like most of their constituents. Typically, they are older, whiter, richer, better educated, and more male than the average. Do those chosen to be representatives really reflect the views of the people who elect them?

In his famous work titled "Representative Government" 18th-Century British political philosopher and Utilitarian Party organizer John Stuart Mill (1861) wrote:

> The meaning of representative government is, that the whole people, or some numerous portion of them, exercise through deputies periodically elected by themselves the ultimate controlling power....

Contemporary political scientist Hanna Pitkin provides a modern examination of *The Concept of Representation* (1967). She considers several definitions of representation, all of which have something to do with the relationship between the people and their deputies, but none of which singly or in combination, adequately defines the concept. She argues that the complexity of representation is partly contained in the ideas of authorization, accountability, description, and symbolism. Some writers see a representative as one who has been *authorized* by another to act in the latter's stead. *Accountability* means representatives have to answer to the represented for their actions, usually through elections. *Description* is the idea that representatives resemble those they represent, in terms of gender, ethnicity, religion, age, income, education, etc. *Symbolism* is more emotional. It emphasizes the idea that the represented feel a representative stands for them.

For Pitkin, however, the real test is how representatives act. Representation, she says, is "acting in the interest of the represented, in a manner responsive to them" (209). This module asks you to examine the degree to which California state legislators act as representatives of the people.

Scholars have studied representation ever since they perceived a linkage between the governed and their government. Very early they pursued the study normatively (prescriptively), as Plato (c. 386 BC) did in using the Socratic method, and empirically (descriptively), as Aristotle (c. 329-325 BC) did in outlining the constitutions of Greek city-states. Normative theory asks what should be the connection

between the people and law-making. Empirical theory attempts to describe what that relationship is in practice.

For the contract theorists (Hobbes 1651; Locke 1689; Hume 1752; Rousseau 1762), the best method of representation varied, depending upon their views of the human condition and the so-called state of nature. For Madison (1788), a normativist, representation was a republican ideal. For Dahl (1956), who both describes and prescribes, representation contributes to pluralism where the public interest emerges from a struggle among special interests. For the normative critics of pluralism (Lowi 1971) interest group representation exerts a corrupting influence on good government. Since the early 20th Century students of government and politics continued to use qualitative methods to study representation but also began to use quantification in their research (Rice 1928). In 1961 Key used quantitative methods to conclude empirically that the opinions of constituents do influence legislators' votes. He claimed there is a relationship between the demographic characteristics of a legislative district and the votes cast by its representative. This module provides demographic data for you to use to replicate Key's research. Is his conclusion still valid?

From observing four state law-making bodies Wahlke and his colleagues (1962) discovered that legislators exhibited what the authors called different representational styles (delegate, trustee, and politico) and clientele roles (party, areal, pressure group, and administrative). Later they acknowledged that this taxonomy is not a device to predict legislative behavior (Eulau and Wahlke (1978). Do you find it useful to classify legislators in this manner? Which style of representation do you prefer? Should legislators be bound by the interests of their constituents? The most vocal ones? The one's that are most likely to contribute to their reelection? Should legislators study the issues, listen to all sides, and use their best judgment on how to cast their votes? Or should they act one way or the other, depending upon the issue or, perhaps, how close it is to the next election? What clientele roles can you identify in the California Legislature?

Miller and Stokes (1963) examined more than 150 congressional districts to develop their causal explanation of how opinions of voters may be transformed into rollcall votes of legislators. The key element seemed to be that most legislators are "for the people" because they are "of the people" as well as "by the people." Can you test this model with data from the module?

California's Legislature

Like the U.S. Congress and all other state legislatures except Nebraska, California's legislature is bicameral, two houses, a lower house, the assembly, and an upper house, the senate (California Constitution, Article 4, section 1).

The state is divided by statute into 80 districts of approximately equal population (*Reynolds v. Sims,* 377 U.S. 533, 1964) from which one assembly member is elected every two years. No assembly member may be elected for more than three terms. The senate is composed of 40 members elected from districts that combine two assembly districts. Senators serve for four-year terms, with half elected every two years. No senator may be elected for more than two terms (Proposition 140, November 6, 1990; however, see *Jones v Bates*, 127 F.3D 839, 844 (9th Cir. 1997)).

In order to run for a seat in the assembly or the senate one must be a U.S. citizen, a California voter (California Constitution, Article 2, section 2), a resident of California for at least three years immediately preceding the election, and a resident of the district from which one is elected for at least one year (California Constitution, Article 4, section 2).

Before a bill becomes law both houses must pass it in identical form by a recorded, rollcall vote of a majority of the membership. Then the governor must approve the bill, or if the governor vetoes it, it may become law if at least two-thirds of the membership of each of the two houses re-pass it (California Constitution, Article 4, sections 8 and 10).

In your opinion is the California legislature designed to represent the people? Do you believe this kind of organization and procedure has a positive or negative effect on the quality of laws that are passed?

The Initiative in California

Twenty-four states, including California, may make laws directly as well as indirectly (Council of State Governments 2005). In California the initiative, a means of direct, popular legislation, is considered to be a power reserved to the people when the people granted other powers to their government. The initiative involves a two-stage process, petition and election.

Today, California's initiative petition usually requires an expensive campaign funded by a large group (even public officials), who draft a proposal and circulate it to gather signatures of qualified voters. If at least five percent of those who voted for the office of governor in the most recent election sign the petition, the state secretary of state will certify the petition and place the measure on the ballot at least 131 days later (California Constitution, Article 2, section 8). Groups or individuals may initiate law at the local level with similar procedures (California Constitution, Article 2, section 11).

Then competing groups fund an even more expensive media campaign to persuade voters to vote yes or no on the proposed law (Broder 2000). If a majority of those voting on the measure at the election approves it, it becomes law. If more than one measure on the same issue pass at the same election, the one with the larger majority becomes law (California Constitution Article 2, section 10).

Do you expect that laws passed by the initiative will be more representative of the people or less representative than those passed by the legislature? Should the initiative process be modified, abolished, or retained as it is?

In Federalist No. 10 James Madison (1787) argues against direct popular lawmaking. He supports the new U.S. Constitution, which uses representation. He attempts to refute those who oppose democracy by arguing that the negative effects of popular rule can be ameliorated by representative assemblies, that the intense interests of the people, which could lead to excesses and abuses by the majority, will be dampened by passing popular passions through a representative filter. In other words, he claims that when legislators have to reconcile the different views of a large, diverse constituency, they make better laws than the people do when allowed to legislate directly.

Similarly, a number of democratic theorists prefer representation over direct democracy, not because direct lawmaking may be unwieldy with a large population but because representation allows for face-to-face deliberation (Elshtain 1995; Nino 1996; Sartori 1987). They believe that discussing public policies rather than just voting for or against them is the essential element in making good laws. What do you think?

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Representation Chapter Two -- Methodology

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In this chapter, we will discuss some statistical techniques that you will be asked to apply in the exercises in chapter 3. Almost all of these techniques require that variables be measured at least at the interval level. An exception is eta^2. For this measure, one variable must be at least interval, but the other variable may be at any level of measurement, and is usually nominal.

The Mean

The mean (μ) is a measure of "central tendency." It provides an average for a set of numbers.

The formula for computing the mean is:

$$\mu = \frac{\sum X_i}{N}$$

where

X_i = an individual value of X, and

N = the number of cases.

For example, if we add up the numbers shown in figure 2.1 and divide by 5, the result will be 10.

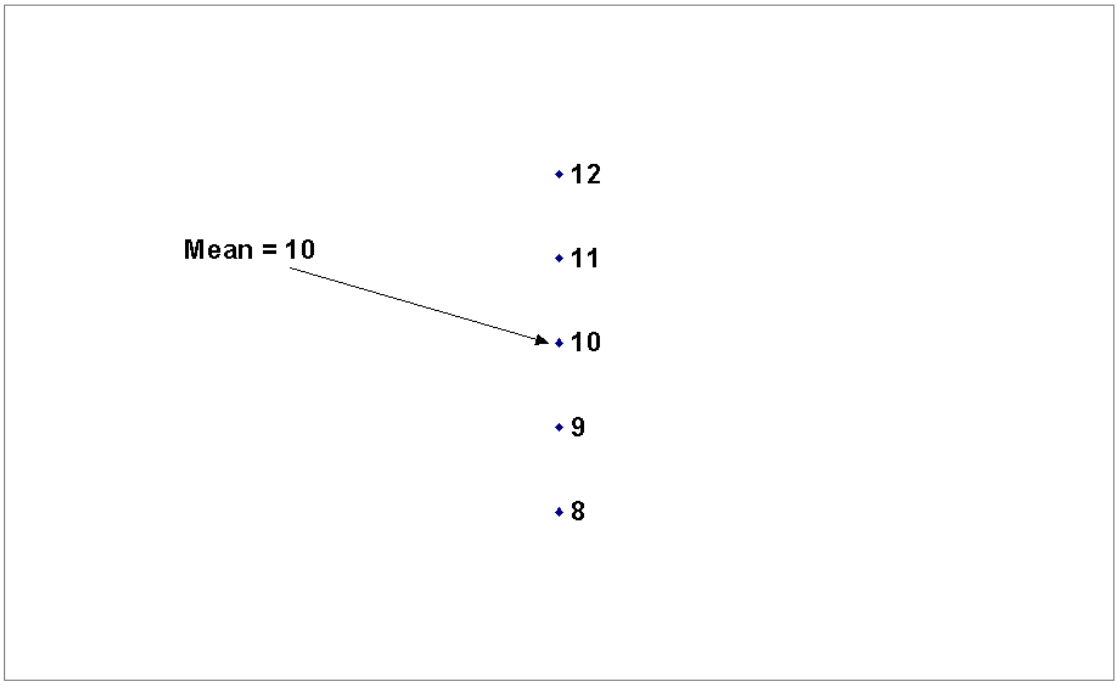

Figure 2.1

The Variance

The variance is a measure of dispersion, that is, its purpose is to show the extent to which the values of a variable are spread out rather than clustered together. Specifically, the variance is the (mean) average squared difference between the individual values of a variable and the mean value.

The formula for computing the variance (σ^2) of variable X is:

$$\sigma^2 = \frac{\sum (X_i - \mu)}{N}$$

Note: For sample data, the denominator of the formula is N-1. In this module, we will be working with the whole population of California state legislators, not with a sample. Even with sample data, the distinction in the formula makes little difference except for small samples.

Figure 2.2 shows numbers for two groups with identical means of 10. In the first group, the numbers are closer to the mean, and the variance is 2. In the second group, although the mean is the same, the numbers are more spread out, and the variance is 8.

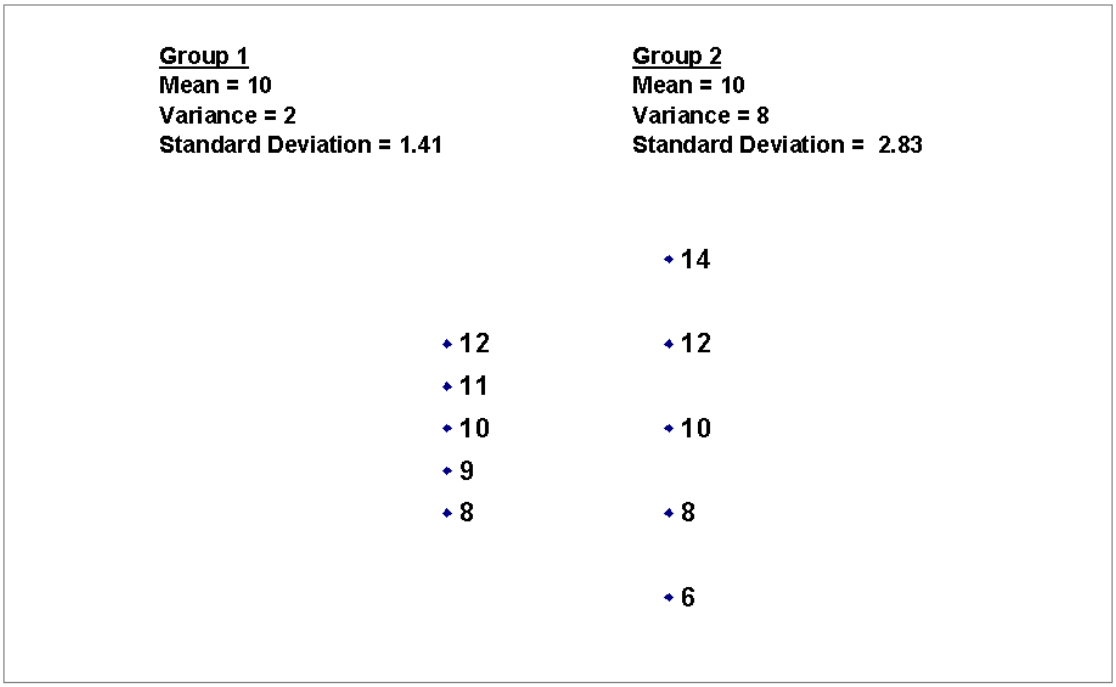

Figure 2.2

The Standard Deviation

The standard deviation (σ), like the variance, is a measure of dispersion, and is the one usually reported. It is simply the positive square root of the variance. In the examples shown in figure 2.2, the standard deviation in the first group of numbers is 1.41, while in the second group it is 2.83.

The variance and the standard deviation usually have no very obvious interpretation. This is the case here: about all we can say based on the results we have obtained is that there is more dispersion in the second group of numbers than in the first. Analyzing variance, however, is extremely important and will be the basis of much of what follows in this chapter.

COMPARING MEANS (*eta*^{2})

Eta^2 (h^2) measures the proportion of the variance in a variable that is "explained" ("determined," "predicted," "accounted for") by dividing cases into two or more groups. Eta^2 is the proportion of the variance that is *between* groups, with the rest (the "unexplained" variance) being *within* groups. In other words, its purpose is to tell us the degree to which groups are different from one another in terms of some variable.

The formula for eta^2 is:

$$\eta^2 = \frac{\sigma_X^2 - \sigma_{Xg}^2}{\sigma_X^2}$$

where

s^2_X = the total variance in X (i.e., the variance about the mean of X), and

s^2_{Xg} = the variance in X about the mean of X within each group (the *within-group* variance).

Total variance is calculated exactly as shown earlier in the chapter. Within-group variance is calculated in the same way, except that, for each case, the group mean is substituted for the overall mean in the variance formula.

Figure 2.3 shows numbers for three groups. There is clearly both between-group variance (the groups have different means) and within-group variance (there are differences among members of the same group).

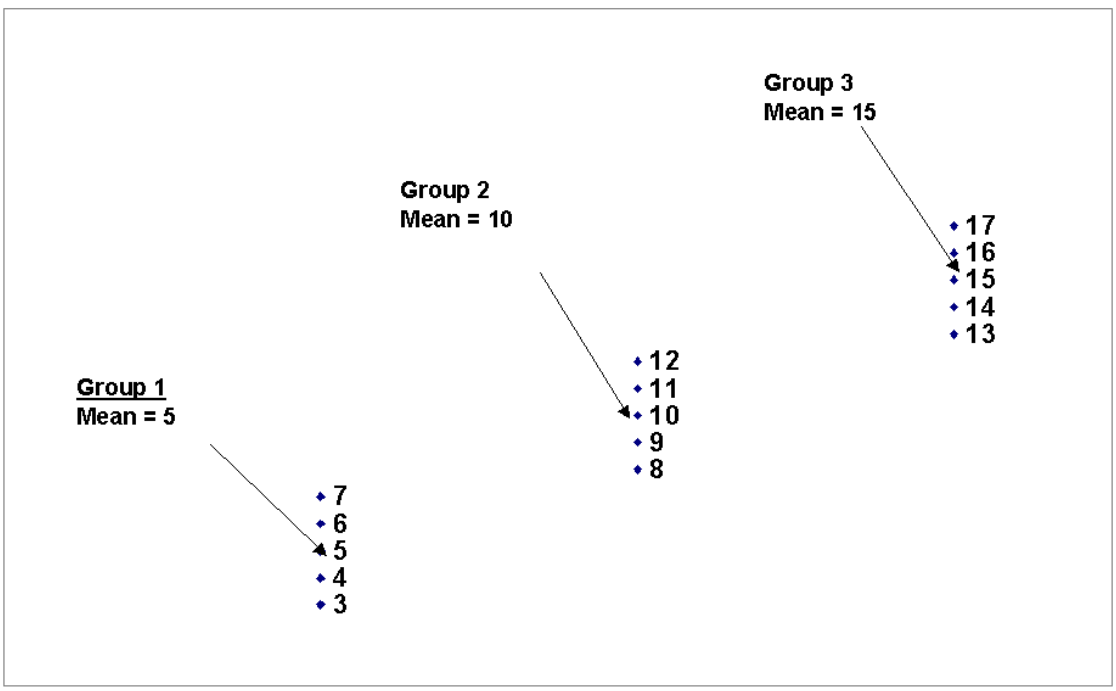

Figure 2.3

When we apply the formula for eta^2, we obtain a total variance of 18.67, and a within-group variance of 2.00. Eta^2 thus equals .89, indicating that 89 per cent of total variance reflects differences between the three groups, with within-group variance accounting for the remaining 11 per cent.

The Scatterplot (scattergram, scatter diagram)

A scatterplot is used to provide a graphic display of the relationship between two variables. The graph is set up by drawing a horizontal (X) axis along which the values of the independent variable are located, and a vertical (Y) axis along which the values of the dependent variable are located. Each case in a set of data can be placed on the graph by plotting the intersection of its coordinates on the two axes. Each case can be represented by a point. An example is shown in figure 2.4.

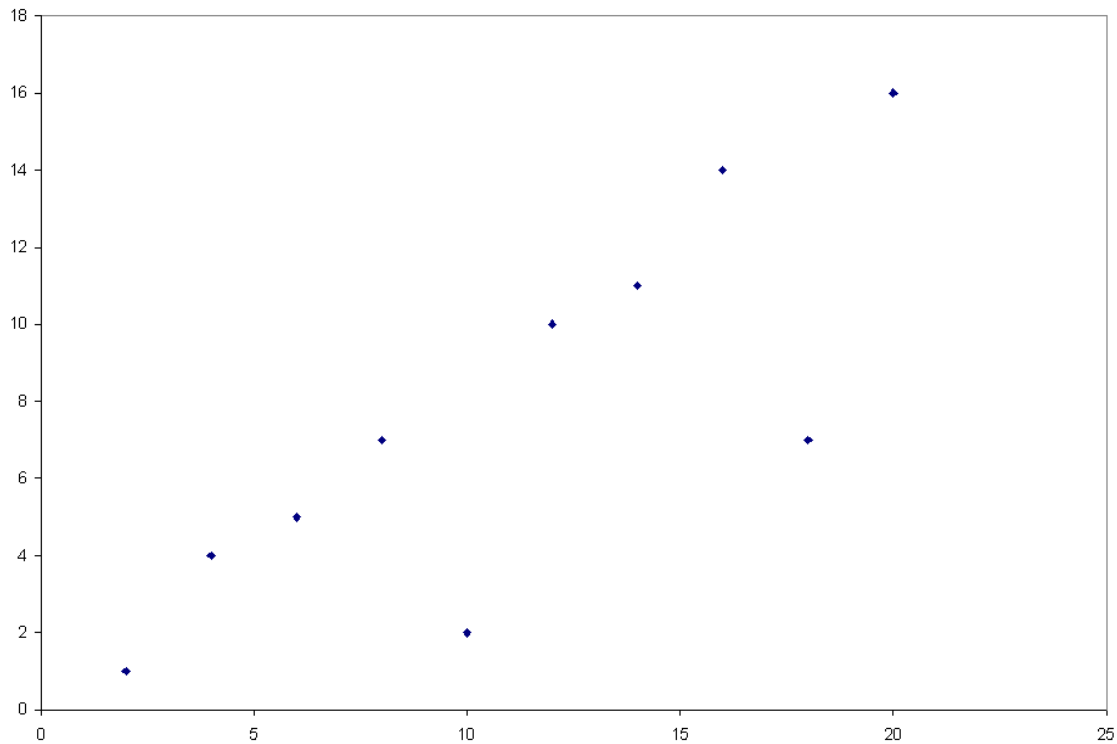

Figure 2.4

The Least Squares Equation (regression equation)

To the extent that there is a linear relationship between two variables, the scatterplot will tend to form a straight line. The least squares (regression) line summarizes this tendency. The line will have an upward slope if the variables are positively related, and a downward slope if they are negatively (inversely) related. If there is a perfect linear relationship between the two variables, the points on the graph will all fall on a straight line.

The general formula for describing any straight line is:

$$Y'_i = a + bX_i$$

where

> Y'_i=the calculated (predicted) value of the dependent variable, that is, the value that the dependent variable would have for a given value of the independent variable if it fell precisely on the line,

a=the Y intercept, that is, the point at which the line crosses the Y axis (in other words, the predicted value of the dependent variable when the value of the independent variable is zero),

b=the slope of the line, that is, the increase or decrease in the predicted value of the dependent variable associated with an increase of one unit in the independent variable, and

X_i=any value (real or hypothetical) of the independent variable.

For any scatterplot, there is one and only one "line of best fit" to the data. This is the line that has the smallest variance of points about the line. The concept of variance used here is the same as that described earlier, except that instead of looking at the average squared difference between each value of a variable and the *mean* of that variable, we are now looking at the average squared difference between the actual values of the dependent variable and the values predicted by the line of best fit. Because the line of best fit is the one that has, on average, the smallest squared deviation between the line and the points on the scatterplot (i.e., between the actual and the predicted values of Y), it is called the "least squares" line. It is also called the "regression" line.

The formulas for calculating the least squares line are:

$$b = \frac{\Sigma(X_i - \overline{X})(Y_i - \overline{Y})}{\Sigma(X_i - \overline{X})^2}$$

$$a = \overline{Y} - b\overline{X}$$

For the data in figure 2.4, the least squares equation is:

$$Y'_i = .33 + .67X_i$$

Figure 2.5 shows how this line is drawn on the scatterplot.

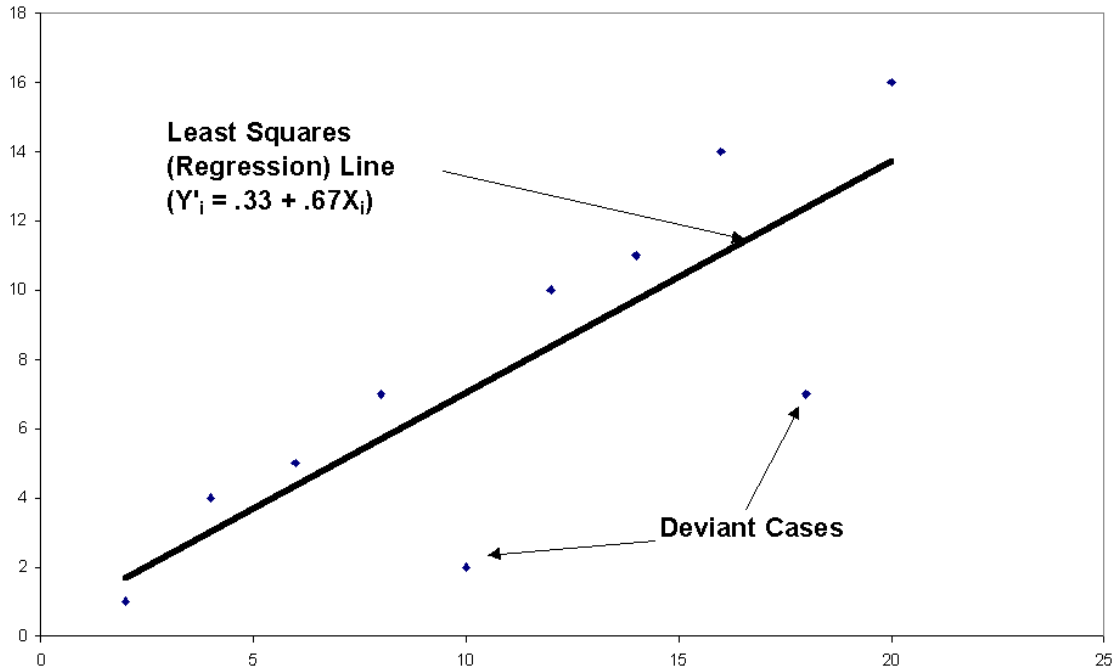

Figure 2.5

In addition to helping to uncover patterns in relationships between variables, least squares analysis can also help in isolating the exceptions to these patterns: these "deviant cases" (shown in figure 2.5) are those that have actual values for the dependent variable that are markedly different from those predicted by the equation.

The difference between the actual value and the predicted value is called the "residual." The predicted value for each case is calculated by plugging the value of the independent variable (X_i) into the least squares equation and solving for Y'_i. The residual is then computed as $Y_i - Y'_i$.

The Coefficient of Determination (Pearson's r^2)

Pearson's r^2 measures how good a job the best fitting line does. Specifically, it measures the degree to which the "residual" or "unexplained" variance (the variance about the least squares line) is smaller than the total variance (the variance about the mean) in the dependent variable. Pearson's rï¿½ has a range of from zero to one, with its value indicating the proportion of the variance in the dependent variable that is "explained," ("determined," "predicted," "accounted for") by variance in the independent variable.

The formula that we will use for r^2 is:

$$r^2 = \frac{\sigma_Y{}^2 - \sigma_{Y'}{}^2}{\sigma_Y{}^2}$$

where

$\sigma_Y{}^2$ = the total variance in Y (i.e., the variance about the mean of Y), and

$\sigma_{Y'}{}^2$ =the variance about Y', that is, about the least squares line (also called the *residual* variance, because it is the variance that is left over after accounting for the portion of the variance that is associated with that of the independent variable).

Computing the variance about the mean was covered earlier. Computing the residual variance is similar, except that, in the formula, the mean value of Y is replaced by the predicted value of Y (Y') for each value of X. For the data in figure 2.5, total variance is 22.41 and residual variance is 7.61, and so r^2 = .66.

The Correlation Coefficient (Pearson's r)

Pearson's r is the positive square root of Pearson's r^2 if the least squares line has an upward slope (that is, if the relationship is positive). It is the negative square root if the line slopes downward (that is, the relationship is negative [inverse]). Pearson's r has a range of from zero to plus or minus one. In our example, r = .81.

Pearson's r can be calculated directly, without having to first obtain Pearson's r^2. (This is, in fact, the more common procedure. For approaches similar to that used here, see William Buchanan, *Understanding Political Variables*, 4th Ed. (N.Y.: Macmillan, 1988), especially pp. 267 and 288, and Susan Ann Kay, *Introduction to the Analysis of Political Data* (Englewood Cliffs, N.J.: Prentice-Hall, 1991), pp. 47ff.) The formula for Pearson's r is:

$$r = \frac{\Sigma(X - \overline{Y})(Y - \overline{Y})}{\sqrt{[\Sigma(X - \overline{X})^2][\Sigma(Y - \overline{Y})^2]}}$$

Multiple Least Squares (Multiple regression)

Least squares analysis can fairly straightforwardly be extended to cover nonlinear least squares (which will not be covered in this module), and multiple least squares. Multiple least squares, or multiple regression, is used when there is more than one independent variable and we wish to measure the impact of each one controlling for the others, as well as the combined impact of all independent variables taken together. The *unstandardized* multiple regression equation for "n" independent variables is:

$$Y' = a + b_1 X_1 + b_2 X_2 + \ldots b_n X_n$$

It is called the unstandardized equation because the regression (b) coefficients are expressed in terms of the original units of analysis of the variables. For example, if we were trying to predict legislators' ratings by an interest group (on a scale from 0 to 100) based on the per capita income of their districts (X_1), the percent Democratic party registration in their districts (X_2), and their ages (X_3), then b_1, for example, would measure the increase or decrease in rating that would result from an increase of one dollar in per capita income, while controlling for Democratic registration and age. Similarly, b_2 and b_3 would measure (holding other variables constant) the change in rating resulting from an increase of one percent in Democratic registration and one year in legislator's age respectively.

It is also useful to calculate the *standardized* multiple regression equation:

$$Y' = \beta_1 X_1 + \beta_2 X_2 + \ldots \beta_n X_n$$

In this equation, standardized regression coefficients (b, or "beta") measure the change in standard deviations produced in the dependent variable resulting (other variables again held constant) from an increase of one standard deviation in an independent variable. It is thus possible to compare the relative importance of each independent variable by comparing their beta coefficients. In other words, you *can* compare apples and oranges! Finally, R^2, the multiple coefficient of determination, measures the proportion of variance in the dependent variable explained by all independent variables together.

Multiple least squares analysis requires that all variables be at least interval. Dichotomous variables (those with only two values, such as male-female or, for certain purposes, Democrat-Republican) are a special case. Because such variables contain only one interval (which is equal to itself) they meet the requirement for interval level measurement, and so can be introduced as independent variables in a multiple least squares equation. Such variables are called *dummy* variables. (If the *dependent* variable is a dummy variable, ordinary least squares cannot be used. Instead, logistic regression, which is beyond the scope of this module, is required.)

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Chapter Three: Analyzing Legislative Behavior

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Later in this chapter, a series of exercises will help you test the theory of representative government. But before you begin to perform those exercises you might want to arm yourself with the knowledge of how others have studied legislative behavior.

Legislative Behavior

The study of legislative behavior has proceeded on four major fronts: party, interest groups, region or area, and policy issues.

Party Behavior

Since Lowell's 1902 work, scholars have intensified their interest in systematically studying "The Influence of Party upon Legislation." Most research has confirmed Turner's (1951) conclusion that party is the dominant factor in explaining voting behavior in Congress and others have confirmed similar results in many state legislatures (Sorauf 1962; Hevasi 1975; Gove and Carlsen 1976; Kingdon 1977; Kirkpatrick 1978). Do these generalizations hold true today in the California Legislature?

Further researchers examine legislative votes for intra-party cohesion and inter-party differences (Rice 1928). They compare cohesion and conflict between two chambers of the same legislature, between one legislature in one place with another in another place or at a different time, and between one policy area and another. Jewell (1982) concludes that "Party discipline is likely to be stronger in states where each party represents a relatively homogeneous set of interests and where there are clear differences between the two sets" (6).

Can you test how California legislators actually behaved in such situations? How much partisan cohesion and conflict do you detect? Is

each party fairly unified internally while significantly different from the other party? How much party conflict should there be?

When there are differences between legislators' party positions and their constituents' interests, which way do they vote? In your opinion which way should they vote? Does it make a difference whether the legislator was elected by a lot or a little? Some researchers hypothesized that legislators who were elected by close margins and wish to be reelected are more likely to respond to their constituents' concerns, while those elected by a large amount can afford to support their party even if it means voting against their constituents interests (Pesonen, 1963; LeBlanc 1969). Fiorina rejects this notion (1974).

In one way partisan cleavages may be viewed as a manifestation of party as a coalition of interest groups. In another sense partisan differences may be compared to divisions based on other factors such as group interests, region, ideology, and policies. To what degree are the ratings of legislators by various interest groups related to the party affiliation of the legislators? Is party as strong a factor in explaining voting cleavages today as it was in the past? If not, is the reduction of party division in legislative voting associated with other factors related to the decline of party such as a weakening of strong party identification in the electorate and less party involvement in conducting campaigns and raising funds?

Interest Groups.

Since the results of the first studies of elections employing survey research (Lazarsfeld et al. 1944; Campbell et al. 1952; Campbell and Kahn 1952; Berelson et al. 1954), political scientists have hypothesized that voters behave politically as they are socially. Thus demographic characteristics of voters are often used as explanatory variables. The group basis of politics, noted early by Bentley (1908) and Odegard (1928) was rediscovered and emphasized in the 1950s (Truman 1951; Latham 1952).

Can you use the demographics and group ratings in this module to measure what influence interest groups might have on legislators? What is the difference between latent interests in the constituency and those that are manifest in the demands of organized groups? Kingdon (1977) believed that constituency interest was the first cue congressmen looked for, although they often considered other matters as well. Does the voting pattern of legislators from districts with more homogeneity of characteristics, such as ethnicity and income, differ

from the behavior of legislators whose districts are more diverse? For example, if you were a legislator, would you feel you had more independence in casting your vote if your district was heterogeneous, where there was no dominant interest, latent or manifest? If so, what other cues would you take? Do heterogeneous groups result in less representation but better laws? Is this what Madison hoped would happen?

Region or Area

During the 1970s many studies of Congress and state legislatures indicated that region or territory may generate ideological divisions that translate into legislative votes. Schneider (1979) claims the ideology (liberal, conservative, and progressive) of Congress members explains most of their voting behavior. This was especially noticeable in the U.S. Congress when Southern Democrats voted with Republicans on many matters. Normative scholars are concerned with the potential conflict between local interests and statewide or national interests. In California what areas have different interests in California? Why? Do you want your legislators to vote your interests, or should they take into account what might be best for the state or the nation as a whole?

Policy Issues

Collie (1985) points out that policy dimensions may be more pronounced in American legislatures, since following party lines is not required to maintain the regime. But in countries with parliamentary systems highly disciplined parties are necessary to maintain stable government and thereby contribute to strong party voting in the legislature. Further various studies have shown that cohesion varies from one policy to another. Lowi (1972) has concluded that the subject of a policy affects the alignment of votes on that policy, or "policies determine politics." Clausen (1973) has defined five policy areas (government management, social welfare, international involvement, civil liberties, and agricultural assistance) that he claims persist over time. Sinclair's work (1982) indicates that policy agendas change over time and voting alignments change on the same policies. What issues do you believe your legislator should consider most important? What issues are most salient to the various interests related to the demographic characteristics of the legislative districts and to the various interest groups whose ratings of legislative performance are provided in the module's data?

Now that you have some background about the substance of representation and legislative behavior you may proceed to develop your own research questions or test those posed in the following exercises.

Exercises

Accompanying this module are files called senate.por and assembly.por. These files are SPSS system files containing data for the California legislature. A codebook describing these data also accompanies the module. (Note: any analysis you do should be carried out separately for the senate and the assembly, and the results compared.)

The underlying model for these exercises is a sort of chain of causality. The political ideology of an assembly or senate district (specifically, how liberal or conservative it is) is hypothesized to be influenced by the social, economic, and demographic characteristics of the district. The partisan inclinations of a district (Democrat or Republican) is thought to result in part from both the characteristics of the district and its political ideology. The sort of person chosen for the legislature by a district (especially, his or her party) is seen as a function of its characteristics, its political ideology, and its partisan leanings. Finally, the way a member votes on roll calls is seen as influenced by all of these other factors.

1. **District ideology**

   In the codebook, you will see that there is information on how each district voted on each of fifteen propositions that appeared on the statewide ballot between 2002 and 2006. There is also a variable, DISTIDEO, that combines these fifteen variables into an overall estimate of how liberal or conservative the district is. The combined measure is an index of conservatism: it has been scaled so that, in each chamber, the member with the most conservative score is coded 100, and the member with the most liberal score is coded 0. Calculate the correlations between DISTIDEO, or any of the individual propositions, and district social, economic, and demographic characteristics (urbanism, ethnicity, type of household, education, income, home ownership -- i.e., variables WHITE through HOUSSIZE in your codebook). Examine the strongest correlations by producing scatterplots and

least squares equations, with DISTIDEO or individual propositions as dependent variables. Using multiple least squares, find out which variables are, other things being equal, the best predictors of district liberalism/conservatism.

2. **District partisanship**

Repeat the above analysis, but use Democratic registration as percent of two-party [Democratic plus Republican] registration as your dependent variable. You will need to compute this from DEMREG and REPGEG.) Now add DISTIDEO to the mix of independent variables. Which predicts registration patterns better, the social, economic, and demographic characteristics of the district, or the political ideology of the district. Does taking both factors into account give you a more complete explanation than you could get with just one?

3. **Election outcomes**

This time, use Democratic percent of two-party vote in legislative races (computed from DEMVOTE and REPVOTE) as the dependent variable. What independent variable (district characteristic, ideology, or district partisanship) best explains these election results? You probably guessed partisanship. Using multiple least squares, find out if other variables contribute anything directly to election results, or operate only indirectly through partisanship.

4. **Member characteristics**

Using the mean and eta^2, compare Democrats and Republicans in terms of district characteristics, ideology, and partisanship. To what extent do they represent different kinds of constituencies?

Repeat the analysis, but this time comparing male and female legislators and legislators of different ethnicities.

5. **Member voting behavior**

MEMIDEO measures the voting behavior of representatives with an index that combines the ratings of six different interest groups, three conservative (the California Chamber of Commerce, the California Taxpayers' Association, and the California Farm Bureau) and three liberal (the California Federation of Labor, the California League of Conservation Voters, and the California Public Interest Research Group, also known as CALPIRG). All six ratings are highly correlated, positively or negatively. For example, a member getting a high rating from one conservative group almost invariably received high ratings from the other conservative groups and low ratings from the liberal groups. The combined measure is an index of conservatism: it has been scaled so that, in each chamber, the member with the most conservative score is coded 100, and the member with the most liberal score is coded 0. Calculate the mean and standard deviation for this variable for the entire assembly or senate. Repeat, but with results broken down by party, and calculate eta^2. You will see that, all by itself, party affiliation accounts for the bulk of the variation in members' voting scores. In fact, a close examination will reveal that, in each chamber, the most conservative Democrat is more liberal than the most liberal Republican. The relationship between party and voting is so strong that there would be little point in comparing the impact of other variables with that of members' party affiliation. Party would clearly dominate the results. We can, however, reformulate the question. There is *some* variation within each party; some members within each party are somewhat more liberal or conservative than others. Again excluding the lone independent, calculate the least squares equation between MEMIDEO (dependent variable) and PARTY (independent), then compute the difference between each member's actual score and the score predicted by his or her party. This will give you a new variable, the *residual* roll call voting score.

Are there any variables in your data that help, singly or in combination, explain the variance in this newly calculated variable? That is, what accounts for why some members are more liberal or conservative than you would predict based solely on their party?

SSRIC Teaching Resources
Representation in California's State Legislature
John L. Korey, California State Polytechnic University Pomona and
JeDon Emenhiser, Humboldt State University

Codebook

Members of the California legislature as of September 1, 2007. Election and registration data: California Secretary of State (http://www.sos.ca.gov). Other district data: Bureau of the Census, 110th State Legislative District Summary Files 1 and 3. http://factfinder.census.gov/servlet/DownloadDatasetServlet?_lang=en&_ts=199826167062 .

This codebook, and the accompanying data files, are found in slightly different form in John L. Korey. *Introduction to Research Methods in Political Science: The POWERMUTT Project*. http://www.ssric.org/tr/onlinetextbooks.

Variable Name	Variable Label
district	District
pop	Population
white	Percent of population that is non-Hispanic white
black	Percent of population that is non-Hispanic African American
latino	Percent of population that Hispanic
asian	Percent of population that is non-Hispanic Asian American or Pacific Islander
native	Percent of population that is non-Hispanic Native American or Alaskan Native
other	Percent of population that is non-Hispanic of other race
multiple	Percent of population that is non-Hispanic of more than one race
ownocc	Percent of occupied housing that is owner occupied

singunit	Percent of occupied housing that is single-unit (excluding mobile homes, boats, RVs, etc.)
medianhs	Median value, owner occupied housing
urban	Percent of Population living in Urban Areas or Urban Clusters
married	Percent of households that include a married couple
marchild	Percent of households that include a married couple and one or more of their children under 18 years old
femchild	Percent of households that include a single female and one or more of her children under 18 years old
noneng	Percent of households in which the primary language is other than English
forpop	Percent of population that is foreign born
ncitpop	Percent of population that is non-US citizen
college	Percent of population over 25 with college degrees
pcincome	Per capita income
medinc	Median family income
poverty	Percent of population below poverty line
elder	Percent of population age 65 or over
houssize	Mean number of persons per household
totalreg	Total registered voters (February 10, 2007)
demreg	Registered Democrats (February 10, 2007)
repreg	Registered Republicans (February 10, 2007)
demvote	Democratic Party candidate's vote in most recent senate/assembly election

repvote	Republican Party candidate's vote in most recent senate/assembly election
prop40	Percent voting conservative on Proposition 40 (Water bonds, March 2002)
prop45	Percent voting conservative on Proposition 45 (term limits, March 2002)
prop52	Percent voting conservative on Proposition 52 (election day registration, November 2002)
prop54	Percent voting conservative on Proposition 54 (racial classification, March 2003)
prop55	Percent voting conservative on Proposition 55 (school bonds, March 2004)
prop56	Percent voting conservative on Proposition 56 (state budget, March 2004)
prop71	Percent voting conservative on Proposition 71 (embryonic stem cells bonds, November 2004)
prop72	Percent voting conservative on Proposition 72 (health care, November 2004)
prop82	Percent voting conservative on Proposition 82 (preschool education, June 2006)
prop1c	Percent voting conservative on Proposition 1C (housing bonds, November 2006)
prop1d	Percent voting conservative on Proposition 1D (education bonds, November 2006)
prop1e	Percent voting conservative on Proposition 1E (disaster/flood bonds, November 2006)
prop85	Percent voting conservative on Proposition 85 (parental notification for abortion, November 2006)
prop86	Percent voting conservative on Proposition 86 (cigarette tax, November 2006)

prop87 Percent voting conservative on Proposition 87 (alternative energy, November 2006)

distideo District voting record, statewide propositions
(first principal component of a factor analysis of district votes on the 15 propositions listed above)
0 Most liberal district in senate/assembly
100 Most conservative voting record in senate/assembly

name Member's name

party Member's party
1 Democrat
2 Republican

gender Member's gender
1 Male
2 Female

ethnic Member's ethnicity
1 Non-Hispanic White
2 African American
3 Latino
4 Asian and Pacific Islander
5 Native American

Note: Alberto Torrico's parents immigrated to the United States from Bolivia. His mother is of Japanese ancestry. He is classified here as Latino, but is a member of both the Latino and Asian and Pacific Islander caucuses.

memideo Member's voting record, 2007
0 Most liberal voting record in senate/assembly
100 Most conservative voting record in senate/assembly

Source: First principal component of a factor analysis of 2007 "scorecards" by the California Chamber of Commerce, the California Taxpayers' Association, the California Farm Bureau, the California Public Interest Research Group, the California Federation of Labor, and the California League of Conservation Voters. Note: Assemblywoman Laura Richardson (Democrat, 55th district) was elected to the U.S. House of Representatives

in a special election on August 21, 2007, and is not scored on this variable.

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