Figure 2.6. Sincere and strategic voting in two dimensions. With three alternatives, there are six types of strict preferences in two dimensions. The three cutting lines between the three pairs of alternatives determine six wedges or pie slices. Each slice corresponds to one of the preference types. If the status quo (Q) defeats the bill (B) in the final vote but loses to the amended bill, legislators who have the preferences QAB and BAQ vote differently on the initial vote between A and B if they are strategic than if they are sincere.

Even with two dimensions, however, about 15 percent of the individual votes fail to fit a simple spatial structure. This is illustrated in figure 2.7, which shows votes on the Panama Canal Treaty and on the National Science Foundation (NSF) budget. The ideal points of northern Democrats are marked by D tokens; of southern Democrats, by S; and of Republicans, by R. Some locations are so close that there is overlapping, but a particular letter always overlaps the same letter. The top panels show all the senator locations and the cutting line. The bottom panels show that there are some errors—Yea voters on the Nay side of the cutting line, and vice versa. Nevertheless, the errors tend to be close to the cutting line.

A probabilistic model accounts for this pattern. The closer a legislator is to an alternative, the more likely he is to vote for it. At one extreme, if one alternative is at the legislator's ideal point and the other alternative is very far from it, he has a probability close to one of voting for the closer alternative. At the other extreme, if the alterna-
Figure 3.3. Ideal-point and cutting-line angle estimates for selected Senate. In the top panel for each Senate, each lowercase letter represents a legislator. The bottom panel shows the distribution of cutting-line angles. The values shown by the bars sum to 100 percent. The label “Party” shows where the party-line votes were concentrated. Where relevant, “N vs S” and “Conservative Coalition” show, respectively, the concentrations of votes that were regional close to 90°. We exclude constrained roll calls because they almost always are constrained at the left or right edge of the first dimension and therefore have an angle of 90°. Including them would exaggerate the number of party-line cutting angles.

North-South splits and votes that pitted Republicans and southern Democrats against northern Democrats. Votes in the 80 bar are those with cutting lines between 80° and 90°. These votes and those in the 90 bar represent vertical cutting lines or first-dimension votes. Those in the 100 and 170 bars represent second-dimension votes. The graphs show that pure second-dimension votes are very rare.

ties, respectively. This division initially occurred because of the sharp disagreement over foreign policy regarding the French Revolution and its aftermath and Hamilton's economic program of excise taxes, tariffs, a national bank, and the payment of Revolutionary War debt of the States and the Continental Congress. Figure 3.4 covers the 5th House (1797-98), during which the infamous Alien and Sedition Acts were...
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Feeling after President Monroe toured New England in 1817 in large part to foster greater national harmony.

The effect of this period on congressional voting was dramatic. Figure 3.1 shows that roll call voting through the period fit the spatial model very poorly. With the collapse of the Federalist party, the first dimension becomes a regional dimension pits the northeastern Jeffersonians of various hues against the southern and western Jeffersonians. As we discuss in chapter 5, the first dimension largely accounts for the vote on the Missouri Compromise of 1820, which occurred largely along sectional lines. The poor fit would have been even worse were it not for such sectional votes.
The Whig/Democratic period. During the 1830s and 1840s, the first dimension reverted to a party dimension and the second dimension picked up the conflict between the North and the South over slavery. This can be seen clearly in the spatial maps of the 30th Senate (1847–48) and the 27th House (1841–42). The s token denotes the southern Democrats, and x denotes the southern Whigs. The clear separation of the southern and northern Democrats and of the southern and northern Whigs is evident. On the cutting-line angle plots, we have indicated the cutting-line angle of the North-versus-South votes (shown as “N vs S” in figures 3.3 and 3.4). Note that the cutting-

line angle for political party is now tilted toward approximately 110°. As is evident from an examination of the legislator configurations, the first dimension is primarily for the party, but it also has a slight regional component in it in that the southern and northern Whigs are slightly separated along it.

The Civil War era. The realignment of the 1850s wiped out the Whig party. It was replaced by the Republican party in the North. The Democratic party was predominantly in the South. Consequently, the first dimension, until roughly the 1870s, is concerned mainly with issues related to slavery, the Civil War, and Reconstruction. For the 35
Congress (1857–58), the southern Democrats are found to be to the left of the northern Democrats on this new first dimension. There is still some North-versus-South component in the new second dimension, but it is weak. Indeed, as is evident from the legislator configurations, a 90° cutting line separates the bulk of the southern Democrats from their northern colleagues. But since there were no southern Republicans, all the North-versus-South votes split the Democratic party.

From Reconstruction to the New Deal. In the late nineteenth century, the second dimension weakly separates the western and southern states from the northeastern states. This effect was stronger in the House than in the Senate. For example, figure 3.4 shows the 53rd House (1893–94), which came just before the realignment of the 1890s. The d tokens in the southeast quadrant are from the northeastern states. The North-versus-South votes during this period were really a case of the South plus the West against the Northeast—the regional lineup on bimetals that we discuss in chapter 5. The second dimension in this period thus involved an agrarian-industrial, or urban-rural, contrast. Representatives from the largest cities were at the bottom of the plot on the second dimension.
The three-party system of the mid-twentieth century. The period from the late New Deal until the mid-1970s saw the development of the only genuine three-political-party system in American history. The southern and northern Democrats may have joined together to organize the House and Senate, but as the plots of the 83rd Senate (1953–54) and the 80th House (1947–48) show, they were widely separated on the second dimension. This dimension picked up the conflict over civil rights. The approximate inclination of 45° for the two parties reflects the high degree of conservative-coalition voting (southern Democrats and Republicans versus northern Democrats) that occurred throughout this period on a wide variety of non-race-related matters.

In the three-party-system period, it is useful to think of a major-party loyalty dimension as defined by the axis through the space that captures party-line votes. This dimension can be thought of as ranging from strong loyalty to the Democrats to weak loyalty to either party and to strong loyalty to the Republicans. (In other periods when party cutting lines are vertical, the horizontal dimension can be thought of both a party-loyalty dimension and an economic dimension.) An axis perpendicular to the party-loyalty dimension would then express a liberal/conservative dimension that is independent of party loyalty. Votes with cutting lines that are on neither the party-loyalty axis nor the independent liberal/conservative axis represent votes in which...