# The Effects of Social Structure on the 2002 Elections for State Representatives in the United States

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The elections for state legislators that were held in the United States in 2002 are interesting in two respects. First of all, they were more competitive than any of the state legislative elections in the past forty-eight years. The Democratic Party had had more seats in state legislatures than the Republican Party had since the changes of legislators following the 1952 elections. However, the tables were turned in 2002. Republicans had more seats in the state legislatures than did Democrats even though the difference in the number of occupied seats between the GOP and the Democratic Party was narrow (Figure 1).

Secondly, the 2002 elections were rare midterm elections because the percentage of state legislators belonging to the president's party increased after the elections. The presidents' parties had tended to experience declines in the number of seats in state legislatures after midterm elections (Storey and Rose 2002, 12). The 2002 elections are an exception to this rule. Only the 2002 and 1990 elections resulted in an increase in the percentages of seats of the presidents' parties in both state Senates and Houses (Table 1).

What determined the results of the 2002 elections? As explained above, the 2002 elections for state legislators were rare midterm elections in terms of a win for the president's party. It has been pointed out that President George W. Bush's popularity at that time gained votes for Republican candidates for state legislators (Storey and Rose 2002, 12). This view may be correct, though the president's popularity does not completely explain why the 2002 elections provided the president's party with more state legislative seats than before the midterm elections. As Table 2 shows, Dwight D. Eisenhower, John F. Kennedy, Ronald Reagan, and Bill Clinton were popular in the second halves of 1954, 1962, 1986, and 1998, respectively. However, the percentages of the presidents' parties' state senators and state
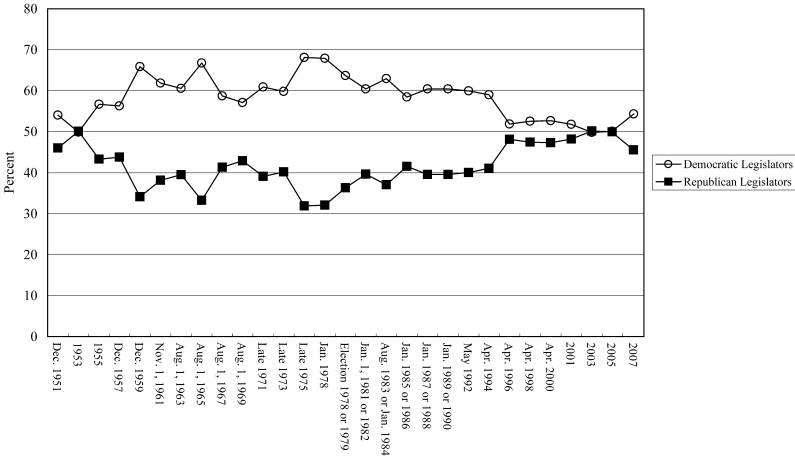
Note: The numbers are percentages of Democratic or Republican legislators in both Democratic and Republican legislators.

Democratic-Farmer-Labor legislators in Minnesota are regarded as Democrats.

Source: The Council of State Governments. 1952–1968. *The Book of the States*. Volumes 9–17. Chicago: The Council of State Governments.

The Council of State Governments. 1970–2003, 2005, and 2007. *The Book of the States*. Volumes 18–35, 37, and 39. Lexington: The Council of State Governments.

Figure 1.　Percentages of Democratic and Republican State Legislators

representatives after the 1954 and 1962 elections, and the percentages of the presidents' parties' state representatives after the 1986 and 1998 elections declined.

Campbell (2003) referred to President Bush's approval rating in explaining why the president's party won the 2002 congressional elections. However, he also pointed out that there had been a variety of degrees of influences of presidents' approval ratings on midterm elections for Representatives.　He enumerated other causes that yielded the Republican Party's success in the elections, suggesting that factors besides the president's popularity could affect election results.

Then, what factors besides the president's popularity significantly affected the results of the state legislative elections?　Voter behavior is one of the obvious factors affecting election results.　Therefore, it is necessary

Table 1. Percentages of Democratic or Republican State Legislators Before and After Midterm Elections

Year of Midterm Election	President	President's Party	Before or After	Democratic Senators	Republican Senators	Democratic Representatives	Republican Representatives	Democratic Legislators	Republican Legislators
1954	Dwight D. Eisenhower	Republican	Before	50.2	49.8	49.8	50.2	49.9	50.1
			After	56.3	43.7	56.8	43.2	56.7	43.3
1958	Dwight D. Eisenhower	Republican	Before	58.7	41.3	55.5	44.5	56.2	43.8
			After	66.5	33.5	65.7	34.3	65.9	34.1
1962	John F. Kennedy	Democratic	Before	65.1	34.9	60.8	39.2	61.9	38.1
			After	62.8	37.2	59.8	40.2	60.5	39.5
1966	Lyndon B. Johnson	Democratic	Before	68.0	32.0	66.3	33.7	66.7	33.3
			After	59.6	40.4	58.4	41.6	58.7	41.3
1970	Richard Nixon	Republican	Before	56.1	43.9	57.5	42.5	57.1	42.9
			After	59.5	40.5	61.4	38.6	60.9	39.1
1974	Gerald Ford	Republican	Before	60.4	39.6	59.6	40.4	59.8	40.2
			After	67.8	32.2	68.2	31.8	68.1	31.9
1978	Jimmy Carter	Democratic	Before	67.9	32.1	67.9	32.1	67.9	32.1
			After	65.6	34.4	63.0	37.0	63.7	36.3
1982	Ronald Reagan	Republican	Before	61.4	38.6	60.0	40.0	60.4	39.6
			After	62.5	37.5	63.1	36.9	62.9	37.1
1986	Ronald Reagan	Republican	Before	61.2	38.8	57.5	42.5	58.5	41.5
			After	60.7	39.3	60.4	39.6	60.4	39.6
1990	George H.W. Bush	Republican	Before	61.3	38.7	60.1	39.9	60.4	39.6
			After	61.0	39.0	59.6	40.4	59.9	40.1
1994	Bill Clinton	Democratic	Before	58.9	41.1	59.0	41.0	59.0	41.0
			After	52.3	47.7	51.7	48.3	51.9	48.1
1998	Bill Clinton	Democratic	Before	51.5	48.5	52.9	47.1	52.5	47.5
			After	52.3	47.7	52.8	47.2	52.7	47.3
2002	George W. Bush	Republican	Before	51.5	48.5	51.9	48.1	51.8	48.2
			After	49.1	50.9	50.1	49.9	49.8	50.2
2006	George W. Bush	Republican	Before	49.7	50.3	50.2	49.8	50.1	49.9
			After	52.6	47.4	55.1	44.9	54.4	45.6

Note: Dotted numbers signify that percentages of seats of the presidents' parties in the major parties' seats increased after midterm elections.
Source: The Council of State Governments. 1954–1968. *The Book of the States*. Volumes 10–17. Chicago: The Council of State Governments. The Council of State Governments. 1970–2003, 2005, and 2007. *The Book of the States*. Volumes 18–35, 37, and 39. Lexington: The Council of State Governments.

Table 2.　Approval Ratings of the Presidents and

President	Party	Approval					
		Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Dwight D. Eisenhower (1953–54)	R	–	68	–	71	68	–
Dwight D. Eisenhower (1957–58)	R	–	–	60	58	52	54
John F. Kennedy (1961–62)	D	–	–	77	78	79	–
Lyndon B. Johnson (1965–66)	D	66	62	59	61	58	–
Richard Nixon (1969–70)	R	68	–	61	66	53	–
Richard Nixon (1973–74)	R	27	31	27	28	25	26
Gerald Ford (1974)	R						
Jimmy Carter (1977–78)	D	56	57	55	47	–	40
Ronald Reagan (1981–82)	R	53	49	49	47	46	–
Ronald Reagan (1985–86)	R	62	63	64	–	63	62
George H. W. Bush (1989–90)	R	70	71	80	73	68	68
Bill Clinton (1993–94)	D	48	52	54	53	50	51
Bill Clinton (1997–98)	D	59	56	59	69	63	67
George W. Bush (2001–02)	R	87	86	84	82	81	76
George W. Bush (2005–06)	R	37	42	–	–	–	–

Note: The table shows the approval ratings of the presidents for one year before the midterm elections
　　 and in the month when the midterm elections were held.
　　 If two or more opinion surveys on approval ratings of the president were conducted in a month,
　　 An opinion survey that started late in a month and ended early in the next month is regarded as
　　 A percentage of the president's party's state legislators means a percentage of state legislators who
　　 Dotted numbers signify that percentages of seats of the presidents' parties in the major parties'

Source: Gallup, George H. 1972. *The Gallup Poll: Public Opinion 1935–1971*. New York: Random House.
　　 Gallup, George H. 1978. *The Gallup Poll: Public Opinion 1972–77*. Wilmington: Scholarly
　　 Gallup, George H. 1979. *The Gallup Poll: Public Opinion 1978*. Wilmington: Scholarly Resources
　　 Gallup, George H. 1982. *The Gallup Poll: Public Opinion 1981*. Wilmington: Scholarly Resources
　　 Gallup, George H. 1983. *The Gallup Poll: Public Opinion 1982*. Wilmington: Scholarly Resources
　　 Gallup, George H. 1984. *The Gallup Poll: Public Opinion 1983*. Wilmington: Scholarly Resources
　　 Gallup, George, Jr. 1987. *The Gallup Poll: Public Opinion 1986*. Wilmington: Scholarly Resources
　　 Gallup, George, Jr. 1988. *The Gallup Poll: Public Opinion 1987*. Wilmington: Scholarly Resources
　　 Gallup, George, Jr. 1991. *The Gallup Poll: Public Opinion 1990*. Wilmington: Scholarly Resources
　　 Gallup, George, Jr. 1992. *The Gallup Poll: Public Opinion 1991*. Wilmington: Scholarly Resources
　　 Gallup, George, Jr. 1996. *The Gallup Poll: Public Opinion 1995*. Wilmington: Scholarly Resources
　　 Gallup, George, Jr. 1999. *The Gallup Poll: Public Opinion 1998*. Wilmington: Scholarly Resources
　　 Gallup, George, Jr. 2003. *The Gallup Poll: Public Opinion 2002*. Wilmington: Scholarly Resources
　　 Gallup, Alec M. and Frank Newport, eds. 2006. *The Gallup Poll: Public Opinion 2005*. Lanham:

Percentages of Presidents' Parties' State Legislators

Rating							Senators of the President's Party	Representatives of the President's Party
May	June	July	Aug.	Sep.	Oct.	Nov.		
64	61	–	70	–	–	(63 in Dec.)	49.8%→43.7%	50.2%→43.2%
–	–	–	–	56	–	52	41.3%→33.5%	44.5%→34.3%
73	71	66	67	62	–	74	65.1%→62.8%	60.8%→59.8%
54	–	56	51	48	–	48	68.0%→59.6%	66.3%→58.4%
57	–	61	55	56	–	57	43.9%→40.5%	42.5%→38.6%
25	28	24	24					
			71	50	53	47	39.6%→32.2%	40.4%→31.8%
43	–	40	–	56	–	52	67.9%→65.6%	67.9%→63.0%
44	–	–	41	42	42	43	38.6%→37.5%	40.0%→36.9%
68	61	63	61	61	63	–	38.8%→39.3%	42.5%→39.6%
65	67	63	74	74	66	58	38.7%→39.0%	39.9%→40.4%
51	46	43	43	39	42	46	58.9%→52.3%	59.0%→51.7%
64	60	61	64	62	63	66	51.5%→52.3%	52.9%→52.8%
77	70	76	68	66	67	63	48.5%→50.9%	48.1%→49.9%
–	–	–	–	–	–	–	50.3%→47.4%	49.8%→44.9%

the result of the survey conducted earlier or earliest is shown in the table.
the first opinion survey in the latter month.
belonged to the president's party in Democratic and Republican legislators.
seats increased after midterm elections.

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to focus on voters when examining who wins an election. The 2002 elections for state legislators could have involved mobilizers that made electors vote for candidates of the president's party. Social cleavages and social networks are factors that can mobilize voters. Such factors could influence the results of the 2002 state legislative elections more than the other midterm elections because the 2002 elections did not accord with the president's party's defeat in midterm elections. Scholars have explained that social cleavages and social networks prompted people to support a certain party or to participate in political activities. The social structure composed of social cleavages and social networks may unify people to vote for candidates of a certain party.

Some researchers have indicated that election systems determined the results of elections for members of state legislatures. For example, different tendencies were seen in the results of elections between single-member districts and multi-member districts (Moncrief and Thompson 1992). However, according to state government websites that show the results of the state upper house elections and lower house elections, the state governments did not change their state legislative election systems with only single-member districts to systems with multi-member districts, or their election systems involving multi-member districts to systems with only single-member districts between the 2002 elections and their previous elections. This article focuses on voters, not election systems.

Literature on Elections for State Legislators

Some scholars have tried to empirically reveal the determinants of the results of elections for members of state legislatures, and have expressed insights that this article can develop further.

Stonecash (1999) attempted to prove that voter income influenced which party won state House elections in districts. The subjects of his study were members of state Houses as of January 1994 in all of the states except Nebraska, which had nonpartisan state legislative elections. Probit and lambda were employed as the methods of the analysis in order to reveal the influence of income on which party won in the district. The results of the analysis showed that voters in low-income districts tended to vote Demo-

cratic across the nation and that states remarkably showed various degrees of income's influence over election results.　Stonecash was interested in how constituents' income influenced election results rather than whether there were other significant factors that played a role in determining election results.

　Lubin and Voss (2000) confirmed the relationship between racial composition and competition between the Democratic Party and the Republican Party in state legislative elections.　Data was obtained from the elections that were held in ten southern states from 1990 to 1998.　The method of the analysis was logit because the dependent variable of whether or not a winner in a district was a Democrat was dichotomous.　The results showed that Democratic candidates were apt to be successful in districts with fewer European-American people and that districts with few African-American dwellers tended to yield Democratic state representatives in states that included the Appalachian Mountains.　Lubin and Voss paid attention to the South because they were interested in the implication of race on the election results in the southern states that created majority-minority districts.

　Hogan (2003) revealed the influence of districts' characteristics and legislative institutions over contestation and competition between Democratic candidates and Republican ones in state legislative elections.　Contestation signifies whether both Democratic and Republican members stood as candidates for state legislators in a district, while competition means how close the numbers of votes for Democratic and Republican candidates were.　He used the data on state legislative elections held in thirty states from 1994 to 1996.　His methods of analysis for research on competition were OLS analysis.　The dependent variable of competition was 100 minus the percentage of the successful candidate's votes in votes for Democratic and Republican candidates.　The independent variables could be divided into two groups: district features and legislative institutions.　The independent variables of districts' features were social diversity, partisan diversity, populations, and the districts' urbanism.　Social diversity in a district was measured by focusing on the residents' income, work, education, age, and race.　The partisan diversity in a district was gauged in terms of the residents' race, income, education, and work.　The results of the analysis

showed that not only legislative institutions but also a district's features influenced the elections.　Social diversity and political diversity were significant in the analysis of competition.　However, it was not clear how significantly the individual elements of social diversity or political diversity, such as income, work, education, age, and race, contributed.

The studies described above make certain points that should be attended to before explaining the research design of the present article.　First of all, these studies except for Stonecash's limited the number of states whose legislative elections were objects of studies.　The present article used data regarding as many states as possible.　Districts' characteristics that are significant determinants of an election result in a single state or region composed of some states might not be significant in an analysis of legislative elections throughout the entire whole country.　If the object of study is a general tendency common to all of the state elections in the United States rather than to a certain area within the country, data from as many states as possible should be included in the study.

Secondly, the research of Stonecash, and Lubin and Voss focused on which party won in a district.　The present article employed the percentage of votes for a party in a district as representative of the voters' preference in the district.　Although it is appropriate to regard the party that wins an election as indicative of the voters' choice, it is more precise to examine what percentage of voters in a particular district are expressive of the will of a political party.

Thirdly, the literature has focused on elements that led to a party's wins in state legislative elections.　This is an important point of view for researchers examining state legislative elections.　However, there can be other cogent ways to explain election results.　As Hogan showed, one of is to investigate what caused huge or narrow margins in the elections.　Social cleavages and social networks may function not only as mobilizers of voters that support a certain party but also as builders of strong bases that produce one-sided victories.　The present article tried to examine voting percentages for Republican candidates, or conversely for Democratic candidates, and voting margins for Democratic candidates and Republican candidates.

Fourthly, although the studies described above found factors that influ-

enced election results, such factors are not necessarily the only ones that determine election results. Districts' characteristics such as voters' income, race, work, education level, age, and a district's urbanism may be important in determining the reasons for the election of Democratic or Republican candidates in districts. However, other factors could have affected the 2002 state legislative elections. The analysis described in the present article examined potential determinants which have been the subject of earlier studies as well as factors that have been previously overlooked.

Fifth, the literature on state legislative elections has not always been sensitive to distinctions between social cleavages and social networks that can be determinants of state legislative elections. In other words, the previous studies have not paid enough attention to relationships between social cleavages and social networks that can influence election results. Thus, the present study employed a model that takes into account the relationships between social cleavages and social networks. Furthermore, research regarding how social cleavages influence politics and how social networks affect politics do not necessarily take social networks and social cleavages together into consideration, as shown below. Although this article recognizes that social cleavages or social networks are individually useful in explaining politics, it develops an analytical model for examining politics by combining the two concepts.

The present study employed an analysis that addressed the five points mentioned above. This analysis used data from as many states as possible and assumed that a variety of factors affected the election results in order to reveal what determined the vote percentages for a party in a district and what influenced the degree of one-sided elections. This article also tried to clarify the relationship between social cleavages and social networks themselves.

Research Design

Literature on Social Cleavages Influencing Politics

Social cleavages may affect results of elections for state legislators. Some empirical studies have revealed social cleavages that significantly affected presidential or congressional elections. It has been explained that

people who belong to a certain cleavage tend to support either the Democratic Party or the Republican Party.

Brooks and Manza (1997) explained that while race, religion, class, and gender were social cleavages that determined results of nine presidential elections held from 1960 to 1992, race was in particular a critical determinant of the elections. One of Brooks and Manza's findings was that African-Americans tended to vote for Democratic candidates rather than Republican candidates.

Stonecash and Lindstrom (1999) regarded class as an essential social cleavage in their analysis that employed family income as an indicator of class. They argued that voter income was a factor that influenced the results of elections for members of the House of Representatives held from 1962 to 1996. Low income families showed a tendency to support the Democratic Party. Moreover, Stonecash and Lindstrom pointed out that class and race at the district level did not have a strong correlation. Analysis that controlled for race revealed a negative correlation between family income and support for the Democratic Party.

Miller and Lockerbie (1992) revealed determinants of voting behavior in presidential elections and partisan self-identification in 1956, 1972, and 1984. They conducted multiple regression analyses with the dependent variables of voting for the Democratic candidate and of supporting the Democratic Party, and with the independent variables of African-American, low income, union member, blue-collar worker, working-class identification, and so on. The results of their analyses showed that race and income were the social cleavages that determined the election results. The independent variables of Black, low income, and union member were statistically significant at the 0.05 level for elections in 1972 and 1984. Blacks, a low-income group, and union members tended to vote for Democratic candidates for president and to support the Democratic Party. The independent variable of blue-collar worker was not statistically significant in the three years for the analysis of presidential votes and in 1956 for the analysis of party identification. Working-class identification was not a determinant of presidential votes in 1972 and 1984 and of party identification in 1972.

Manza and Brooks (1999) showed the predicted probabilities of prefer-

ring Democratic candidates to Republican ones in the 1960 through 1992 presidential elections for groups of cleavages. It can be said that race was the cleavage within which groups clearly held different preferences. More than ninety percent of African-Americans favored Democratic candidates in 1960 through 1992. However, religion, class, and gender did not express differences in preference for presidential candidates among internal groups. Jews and people with no religious affiliation were exceptional religious groups because more than fifty percent of the members of these two groups preferred Democratic candidates in 1960 through 1992. The majority of liberal Protestants, moderate Protestants, conservative Protestants, and Catholics supported Democrats in some years and backed Republicans in other years. The groups in the class cleavage which included professionals, managers, routine white-collar employees, self-employed, skilled workers, and nonskilled workers were also volatile in their support of either Democrats or Republicans.

The above review of the literature suggests that race and class are social cleavages which may be significant in state legislative elections. While people's job types do not appear to be influential determinants of their political behavior and political thought, income as an expression of class can influence which party's candidate people vote for or which party people support. In the present study, a model that considered social cleavages the basis of voting behavior was constructed. One of possible reasons why some social cleavages did not significantly influence people's political behavior and thought is because social networks are more effective in politics than are those social cleavages. It is thus necessary to take social networks into consideration.

Literature on Social Networks Influencing Politics
Even though race and class influence voting behavior, there may be variations in election results in districts composed of similar social cleavages. Social networks, that is, linkages among people that have similar affinities in society, encourage people to act. Studies focusing on social networks seem helpful in specifying factors that may significantly influence the results of elections for state legislators.

A study conducted by La Due Lake and Huckfeldt (1998) showed that some elements of social networks facilitated political participation among network members. Their study focused on levels of education as a factor that facilitates political participation among social network members. The analysis revealed that in the 1992 presidential election a high level of education functioned as a promoter of the development of social networks and of inducing network members to go to the polls. Income, employment, race, and age, as well as education, promoted the formation of social networks. People who earned more money, were employed, were racial minorities, or were older, tended to be members of organizations. People with higher levels of education were prominent in creating resources for increasing political expertise and providing information useful for political participation.

Several studies have revealed elements that stimulate the formation and behavior of social networks, though such studies have not demonstrated that these elements promote the political activities of network members. However, such elements can influence which candidate people vote for in state legislative elections. It is meaningful to take a look at these elements here.

Beggs, Haines, and Hurlbert (1996) compared personal networks in rural areas and personal networks in urban areas. They found that rural networks were apt to have more durable memberships, a higher proportion of kin and neighbors, more members, and more intense relations among members than do urban networks.

O'Donnell (1983) explained that children influence their parents' social networks. Parents seek the support and companionship of other parents with young children. New mothers have contacts with acquaintances that attended childbirth education classes and women that have infants and live in their neighborhoods. Preschoolers offer their parents opportunities for participating in their neighborhoods. Parents with preschoolers often join in community-based children's programs. Preschools give parents chances to meet other parents. Parents of school-aged children also participate in neighborhood and community-based activities. The parents join in churches, schools, and other voluntary organizations that offer children's programs.

Stueve (1983) argued that the elderly are active members of social networks. The elderly not only receive help from people but also offer other people support. This mutual help leads the elderly to engage in social networks. The elderly are members of networks formed by their kin. Longer life expectancy makes it possible for the elderly to be in contact not only with their children and grandchildren but also with their great-grandchildren, siblings, and elderly children. The elderly are also members of social networks that friends, neighbors, and voluntary groups build. They become incorporated into communities through these social networks.

Giranda, Luk, and Atchison (1999) also examined the social networks of the elderly. One of their points of interest was the degree of elderly people's involvement in networks. Four kinds of networks were examined in the analysis: family networks, friendship networks, confidant networks, and mutual support networks. The study participants were grouped into four categories: aged persons with no living children, aged persons with no children living near their parents, aged persons with one child living near their parents, and aged persons with two or more children living near their parents. A noteworthy result of the analysis is that there no significant differences were observed in the degree of the aged people's involvement in friendship networks among the four categories of the respondents. The elderly tended to be more involved with family, confidant, and mutual support networks if they had more children. However, friendship networks did not subscribe to this tendency. Moreover, the degree of involvement in friendship networks was higher than the degrees of involvement in confidant and mutual support networks, and as high as the degrees of involvement in family networks. These findings indicate that the elderly cultivate friendships and build networks even on the part of aged persons who have few kin. Similarly, the qualitative data reported by Mac Rae (1992) revealed that childless elderly women tended to participate in social networks consisting of close friends.

Cochran (1990) enumerated social-structural factors that determined membership in social networks. These factors are education, job, income, house ownership, race, and family structure. A high level of educational

attainment offers people jobs by which they earn much money.　Jobs promote the formation of social networks, and even persons with low-income jobs can easily become members of social networks through their place of employment.　Large income makes it possible for people to own houses and move to areas in which neighboring with residents is feasible. Cochran also pointed out that there were only a limited number of cross-racial networks.　Separation of network membership exists in terms of race.　The family structure that Cochran regarded as a significant factor was one- or two-parent families.　Single parents utilize fewer social resources that are helpful in building and maintaining social ties than do parents in two-parent families.

　Ajrouch, Antonucci, and Janevic (2001) showed how the characteristics of social networks differed between African-Americans and European-Americans in Detroit.　Their analysis revealed that European-Americans joined larger social networks than did African-Americans.　Not only race but also marital status, gender, education, and age affected the size of social networks.　Married people, females, those more educated, and younger people were found inclined to have larger social networks.　Race also influenced frequency of contact with network members though age attenuated this influence.　African-Americans came in more contact with network members than did European-Americans while this tendency weakened as people became older.　Moreover, married people, females, those less educated, and younger people tended to have more contact with network members.

　Carroll and Teo (1996) explained the characteristics of social networks that managers constructed.　Comparison with nonmanagers revealed that managers tended to belong to more clubs and societies, to have more co-workers and higher proportions of co-workers in social networks, to have more close ties and higher proportions of close ties, and to be members of larger networks than did nonmanagers.

　Tagliaventi and Mattarelli (2006) empirically explained that different groups of professionals construct linkages with each other in sharing knowledge.　They presumed that each professional group forms a community of practice.　Members of the community jointly own working practices and values.　Professional groups in different organizations constitute

networks.　Members of the networks also share professional skills and values.　Tagliaventi and Mattarelli conducted ethnographic research of a hospital unit in order to prove this supposition.

The studies of social networks described above enumerated factors that may influence election results.　Those factors include education, employment, urbanization, having young children, being elderly, family structure, and house ownership besides income, job type, race, and sex, which are regarded as factors concerning social cleavages.　This article also included elements whose influence over the formation of social networks has been illustrated in previous studies.

Method of Analysis

As shown above, scholars have used social cleavages or social networks to explain political phenomena.　The present study assumes that social cleavages and social networks function together as mobilizers of votes.　Social cleavages are divisions of people in accordance with their social statuses while social networks are social linkages that people construct.　It can be said that although the former is a state, the latter is an action or the product of an action.　A single segment of a social cleavage can include people who vote for a particular candidate as well as people who do not vote for that candidate.　This is in part because a social network influences its members but is powerless over nonmembers even though its members and nonmembers belong to the same segment of a social cleavage.　This article supposes that social cleavages and social networks have connections with each other.

For this study, two path analyses were conducted in order to explain how social cleavages and social networks influenced the elections for state representatives in 2002.　The subject of the analyses was the elections for representatives of state Houses held in the U.S. states in 2002.　Nebraska was excluded from the analyses because Nebraska had no candidates in the 2002 elections who belonged to political parties.　It was impossible to use social cleavages or social networks to explain which political party obtained votes.　Louisiana, Mississippi, New Jersey, and Virginia did not hold general elections for state legislators in 2002.　Therefore, the elections for lower house members in these four states may not be influenced by factors

that affected the 2002 elections in other states, such as the president's popularity. Kansas, New Mexico, and South Carolina did not hold general elections for state senators in 2002 but held elections for lower house members. In order to employ data from as many states as possible, the analysis was conducted using data regarding elections for members of the lower houses.

The unit of analysis was each district. Data concerning social cleavages and social networks of all the counties contained in a district were regarded as the district's data.

The analysis excluded districts in which a Democrat or a Republican did not stand as a candidate in order to compete with his or her hostile major party's candidate for the seat, or in which the number of candidates was the same as or fewer than the number of lower house members expected to be elected. Analysis of lower house members had more cases than the analysis of state senators because lower house elections had more districts in each state than did state senator elections. The numbers of Democratic and Republican state lower house members as of 2001 are, respectively, 2,810 and 2,604. The numbers of Democratic and Republican state lower house members as of 2003 are, respectively, 2,694 and 2,687 (The Council of State Governments 2002, 2003). Although Democratic lower house members outnumbered Republican lower house members after the 2002 elections, the numbers of Democratic and Republican lower house members became close after the elections.

One of the two analyses intended to disclose how social cleavages and social networks influenced the degree of one-sidedness of votes in a district. The other analysis aimed to reveal how social cleavages and social networks affected votes obtained by a candidate or candidates of the Republican Party in a district. The former analysis employed as a variable the percentage of votes for candidates of a major party whose votes were more than the other major party's ones in the total votes for candidates of the Democratic Party and the Republican Party. The latter analysis used as a variable the percentage of votes that Republican candidates gained in total votes cast for both Republican and Democratic candidates. These analyses regarded Democratic-Farmer-Labor candidates in Minnesota and Demo-

cratic-NPL candidates in North Dakota as Democrats. If the votes were re-counted, the re-counted numbers were used for the analyses.

The first analysis attempted to determine which social cleavage or social network could offer a political party a large sum of votes in the elections. The analysis used two variables of social cleavages, race and class, and three variables of social networks.

The variable of race showed a degree of uniformity. Districts' degrees of uniformity in race were considered the sum of the squared proportions of five racial categories, White, Black, Native Alaskan, Asian and Pacific Islander, and Hispanic or Latino. While the degree is high when people of a certain racial group constitute a large majority in a district, the degree tends to be low when the numbers of people of five racial groups are alike in a district.

The variable of class was the principal component scores that indicated the residents' degree of wealth. The scores were calculated by principal component analysis using the variables of personal income per capita and of percentage of managers and professionals in civilian employees sixteen years of age or older. The principal component analysis employed a correlation matrix. Table 3 shows the components' eigenvalues. The first principal component had an eigenvalue of more than 1.000. The contribution ratio of the first principal component was .897. According to the eigenvectors shown in Table 4, the first principal component was named the wealthy.

The variables of social networks were the principal component scores that were calculated using variables of education, urbanization, having young children, the elderly, family structure, house ownership, and employment or, conversely, unemployment. To be exact, the variables were the

Table 3. Total of Explained Variance for Variables of Class

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.794	89.690	89.690	1.794	89.690	89.690
2	.206	10.310	100.000			

Table 4.　Component Matrix for Variables of Class

| | Component |
	1
Income	.947
Managers and Professionals	.947

percentage of people with bachelor's degrees or higher among those twenty-five years of age or older, population density, percentage of people seventeen years old or under, percentage of people sixty-five years of age or older, average number of family members, percentage of those who owned the houses they lived in, and unemployment rate.　It is easier to grasp the influence of social networks by using some variables that are obtained by combining seven indicators of social networks than by using all seven variables of social networks.　Because social networks can overlap, uniting some indicators of social networks diminishes the complexity of the analysis.　As Table 5 shows, the first, second, and third principal components had eigenvalues of more than 1.000.　The contribution ratio of the first through third principal components was .792.　The eigenvectors shown in Table 6 could make it possible to determine the first, second, and third principal components as young family, rural area, and the unemployed, respectively.

Table 5.　Total of Explained Variance for Variables of Social Networks

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.288	32.688	32.688	2.288	32.688	32.688
2	1.836	26.224	58.912	1.836	26.224	58.912
3	1.420	20.279	79.192	1.420	20.279	79.192
4	.502	7.175	86.367			
5	.377	5.391	91.757			
6	.332	4.736	96.494			
7	.245	3.506	100.000			

Table 6.　Component Matrix for Variables of Social Networks

	Component		
	1	2	3
Bachelors	.231	−.619	−.604
Population Density	.204	−.737	.454
Children	.811	.425	.042
The Elderly	−.827	.081	.324
Family Members	.784	.367	−.045
Owned Houses	−.404	.756	−.225
Unemployment	.272	.125	.830

The following are the hypotheses for the first analysis.　A high degree of uniformity in race causes a one-sided result in an election.　High personal income per capita and the inclusion of many managers and professionals lead to the formation of networks that also produce a high degree of one-sidedness in an election result.　A district that includes many bachelors or that with a low population density yields networks among residents that can be mobilizers of votes for a certain candidate.　Households with children, the elderly, or many family members form networks via family members.　A district which contains many owned houses or employed workers produces a mass of votes for a candidate through networks formed in communities or workplaces.

As explained above, a social cleavage is a state of society, while a social network is people's action or a product of people's action.　Therefore, a social cleavage influences the formation of a social network.　The first path analysis premised relations among the social cleavages and the social networks shown in Figure 2.

The second analysis of votes for Republicans also included five variables that were presumed to influence voting.　Two of the five variables were related to social cleavages.　They included the percentage of European-Americans in the total population and the principal component scores concerning wealth, that is, the same scores as the first path analysis employed.　Three other variables were the principal component scores that
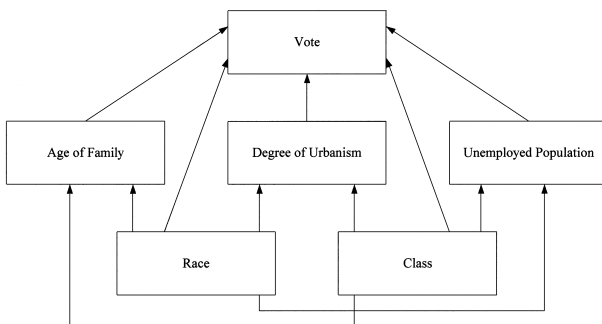
Figure 2.　Model for Analysis

represented education, urbanization, having young children, the elderly, family members, house ownership, and unemployment, which the first path analysis employed.

The studies referred to above did not indicate that managers and professionals were regarded as stable predictors of which party people backed, that people with bachelor's degrees or higher were apt to vote for Republicans, or that families with young children, aged members, many members, or their own houses tended to support the Republican Party.　In this sense, the variables concerning these factors may not be useful in the second analysis of votes for Republicans.　However, the second analysis employed these variables in the same way as did the first analysis, because it was necessary to use the variables that represent the same social cleavages and social networks in order to compare the two roles of social cleavages or social networks, that is, the collection of a massive number of votes for either party and the acquisition of votes for a particular party.

The hypotheses of the second analysis are as follows.　Whites and high earners are inclined to cast ballots for Republican candidates.　People in areas whose population density is low tend to have close contact with each other and to vote for Republican candidates.　A low unemployment rate makes people support Republican candidates because of a lower degree of dissatisfaction concerning economic matters.　The second analysis also premised the relations among the social cleavages and the social networks that were shown in Figure 2.

Data regarding the results of the elections for state House representatives

held in 2002 came from websites of the state governments.   *2004 County
and City Extra* (Gaquin and DeBrandt 2004) has each county's data describ-
ing total population in 2002, the percentages of Whites, Blacks, American
Indians and Alaska Natives, Asians and Pacific Islanders, and Hispanics or
Latinos in 2002, the number of people employed in 2000, the percentage of
managers, professionals, and related occupations in 2000, the percentage of
those holding bachelor's degrees or higher in 2000, land area in square kilo-
meters in 2000, the percentages of populations in age brackets in 2002, the
number of households in 2000, the number of occupied housing units in
2000, the percentage of owner-occupied housing units in 2000, the size of
the civilian labor force in 2002, and the number of unemployed persons in
2002.   *2005 County and City Extra* (Gaquin and DeBrandt 2005) includes
each county's data regarding total personal income in 2002.   As explaind
above, data concerning social cleavages and social networks of all the coun-
ties included in a district were regarded as the district's data.   Table 7
shows the average and the standard deviation of each data set.

Table 7.   Statistical Summary of Variables

Variable	Mean	Standard Deviation
Votes for the Republican Party	49.4	16.0
Votes for the Party that Obtained More Votes	63.0	9.2
Whites	79.1	18.3
Racial Unification	71.0	18.6
Personal Income	30,478.1	7,874.6
Managers and Professionals	33.1	6.2
Bachelor's Degrees or Higher	24.1	8.7
Population Density	516.0	2,086.1
0–17 Years Old	24.7	2.5
65 Years Old and Over	12.7	3.0
Family Members	2.6	0.2
Owned Houses	68.1	9.0
Unemployment	5.4	1.7

Results of Analyses

Table 8 presents the results of the path analysis including the variable of the election's degree of one-sidedness.　The variables of race, rural area, and the unemployed had higher absolute values of standardized coefficients than did the variables of wealth and the age of the family.　The standardized coefficients of these three variables could not support the hypotheses concerning them, which were that the percentage of votes for a successful party in a district would be higher if the degree of racial uniformity was higher, the degree of urbanism was lower, or there were more employed people.　However, the results of the analysis did show that a district with low racial uniformity, high urbanism, or many unemployed people tended to gave a party one-sided victory.　Although the standardized total effect of the variable concerning race was also high, the sign of the standardized total effect was negative.　The signs of the variable of the wealthy and that of young family supported the hypotheses regarding class, the presence of

Table 8.　Results of Analysis of Votes for Winning Party

Chi-Square	Degrees of Freedom	Probability Level	Squared Multiple Correlation for Variable of Vote
696.598	3	<.001	.115
Variable	Standardized Coefficient	p	
Vote ← Racial Uniformity	−.121	<.001	
Vote ← The Wealthy	.054	.045	
Vote ← Young Family	.085	<.001	
Vote ← Rural Area	−.145	<.001	
Vote ← The Unemployed	.196	<.001	
Variable	Standardized Total Effect		
Vote ← Racial Uniformity	−.258		
Vote ← The Wealthy	.034		

children, and the number of family members.　　Namely, a higher social class, families with children, or families with many members were apt to form a base that produced massive votes for a certain party.

　　The results of the analysis of votes for the Republican Party are elucidated in Table 9.　　The variables regarding Whites and rural area had relatively high absolute values of standardized coefficients in the five variables that were assumed to influence voting.　　The standardized total effect of the variable of Whites was also high and positive.　　Republican candidates tended to succeed in districts that had many European-Americans, that were depopulated, or that had many owned houses.　　Although the variables of young family and of the unemployed had lower absolute values of standardized coefficients than the variables of Whites and rural area, the standardized coefficients of the two variables were significant at the five percent level.　　Their coefficients show that Republican candidates were apt to win in districts with many children, many family members, low unemployment rates, or many people who had bachelor's degrees or higher.

Table 9.　Results of Analysis of Votes for the Republican Party

Chi-Square	Degrees of Freedom	Probability Level	Squared Multiple Correlation for Variable of Vote
755.136	3	<.001	.155
Variable	Standardized Coefficient	p	
Vote ← Whites	.270	<.001	
Vote ← The Wealthy	.046	.077	
Vote ← Young Family	.070	.002	
Vote ← Rural Area	.259	<.001	
Vote ← The Unemployed	−.107	<.001	
Variable	Standardized Total Effect		
Vote ← Whites	.314		
Vote ← The Wealthy	−.051		

One of the remarkable differences between the results of the first analysis and those of the second analysis was the number of significant variables whose coefficients' signs could reasonably explain the relation with the variables of votes.　The analysis of one-sidedness revealed that the variables of wealth and young family were significant at the five percent level and that class and networks including children or family members were effectual in forming firm bases for a certain party.　The analysis of votes for Republicans made it clear that the signs of the coefficients of the variables of Whites, young family, rural area, and the unemployed could reasonably explain how Republican candidates obtained votes.　Namely, social cleavages and social networks could have more influence on which party residents voted for than on how solid a party's base was.

Discussion

The two analyses described above revealed how social cleavages and social networks influenced the results of elections for state House representatives held in 2002.　As Table 9 shows, Whites had the most influence over votes for Republican candidates.　However, Table 8 indicates that high racial uniformity could not lead to one-sided victories.　Therefore, the analyses in this study reveal race's function in collecting votes for a particular party.　Lubin and Voss (2000) found that racial composition in districts tended to affect whether the Democratic Party or the Republican Party won the state legislative elections in ten southern states.　The findings in this article support Lubin and Voss's argument and show that a relationship between races and parties winning in districts tended to exist across the nation.

Table 8 shows that high social class tended to cause one-sided victories in certain districts.　Stonecash (1999) found that low-income districts tended to lead to success by Democrats across the nation.　Social class had the other function of gathering massive numbers of votes for a party.

Hogan (2003) found that social diversity and political diversity, as measured by income, work, education level, age, and the race of a district's inhabitants, influenced degree of competitiveness of an election.　However, his findings did not show which elements of diversity were especially influ-

ential, as could the present study that revealed the elements that affected an election's competitiveness.

The results of the analyses in this article raised some questions regarding the roles of social cleavages and social networks in elections.   First, while high racial uniformity in a district did not necessarily cause a high degree of one-sidedness in an election result, the question arises as to why racial group had the most important effect on the victories of Republican candidates.   Second, it may be sought to interpret why social networks in rural areas and social networks of employees tended to offer Republican candidates a victory and not construct a solid base for a party regardless of political ideology.

The first question concerns the effect of race on election results.   The second analysis revealed that Whites tended to vote for Republican candidates and that the variable of Whites was the most influential in determining voting rates for Republican candidates.   These findings are consistent with results of the analysis reported by Brooks and Manza (1997), who showed that racial cleavage was the most influential cleavage that determined voting behavior in presidential elections.   However, the first analysis did not disclose that the degree of racial uniformity in a district affected the degree of the one-sidedness of an election result.   As Table 10 shows, it cannot be said that racial uniformity significantly influenced the percentage of votes for a candidate or candidates whose party won in a district even if its racial uniformity falls into only two categories, White and non-White, rather than five categories, White, Black, American Indian and Alaska Native, Asian and Pacific Islander, and Hispanic or Latino.

Table 11 shows relationship between the percentages of Whites in districts and the percentages of votes for Republican candidates and Democratic candidates in the districts.   Although the highest average percentage of votes for Republican candidates was 53.2 in the districts whose percentages of Whites were more than ninety percent, the highest percentage of votes for Democratic candidates was 76.8 in the districts whose percentages of Whites were twenty percent or below.   While the lowest average percentage of votes for Republican candidates was 23.2 in districts whose percentages of Whites were twenty percent or below, the lowest average

Table 10.　Results of Analysis of Votes for Winning Party (Racial Uniformity with Two Categories)

Chi-Square	Degrees of Freedom	Probability Level	Squared Multiple Correlation for Variable of Vote
659.845	3	<.001	.105

Variable	Standardized Coefficient	p	
Vote ← Racial Uniformity	−.066	.003	
Vote ← The Wealthy	.060	.027	
Vote ← Young Family	.120	<.001	
Vote ← Rural Area	−.163	<.001	
Vote ← The Unemployed	.215	<.001	

Variable	Standardized Total Effect
Vote ← Racial Uniformity	−.192
Vote ← The Wealthy	.053

percentage of votes for Democratic candidates was 46.8 in districts whose percentages of Whites were over ninety percent.　This means that Republican candidates tended to obtain fewer votes in districts with a certain percentage of Whites than Democratic candidates in districts that had the same percentage of non-Whites.　This may be a reason that while the percentages of Whites in districts influenced the percentages of votes for the Republican candidates, degrees of racial uniformity did not affect the percentages of votes for candidates whose party obtained more votes than did the other party.　It can thus be said that a difference existed in the degree of uniformity of voting behavior among racial groups.

　　The second question is related to how election results are influenced by population density, number of owned houses, unemployment rates, and people with bachelor's degrees or higher.　The variables of rural area and the unemployed showed a positive coefficient and negative coefficient, respectively, on votes for Republican candidates.　However, the former

Table 11. Race and Votes for Republican and Democratic Candidates

	Percentage of Whites in District									
	0.0-10.0%	-20.0%	-30.0%	-40.0%	-50.0%	-60.0%	-70.0%	-80.0%	-90.0%	-100.0%
Average Percentage of Votes for Republican Candidate	–	23.2	31.9	36.1	37.7	43.4	49.5	48.5	51.1	53.2
Average Percentage of Votes for Democratic Candidate	–	76.8	68.1	63.9	62.3	56.6	50.5	51.5	48.9	46.8
Number of District	0	16	7	101	151	113	209	511	520	1,003

Note: Each percentage of Whites and each average percentage of votes for the Democratic or Republican candidate or candidates in a district were rounded off to one decimal place.

showed a negative coefficient on the degree of one-sidedness while the latter showed a positive coefficient. Population density, number of owned houses, unemployment rates, and people with bachelor's degrees or higher were not found to be predictors of the percentage of votes for the winning party but indicators of the percentage of votes for the Republican Party. This means that the four indicators for social networks tended to obtain votes for Republicans rather than promote the formation of social networks that brought about massive numbers of votes regardless of ideology. It can be said that social networks which were comprised of rural people, people living in owned houses, employees, and bachelors or doctors were apt to support the Republican Party.

Conclusion

This article revealed how social cleavages and social networks functioned in the United States' 2002 state House elections. Whites tended to support Republican candidates. Race was the most reliable predictor of which party people voted for. However, the degree of racial uniformity in a district was not necessarily related to the degree of one-sidedness of a district's election result. One reason for this can be the difference in the degree of uniformity of voting behavior among races. Non-Whites showed a tendency to express a higher degree of unity in casting votes than did Whites. Moreover, this study made it clear that social networks formed in rural areas or in workplaces contributed to attracting votes for the Republican Party rather than to securing a massive number of votes for a certain party regardless of political ideology.

As explained at the outset, the number of Republican state legislators increased over the number of Democratic state legislators after the 2002 state legislative elections. The analysis in this article revealed that districts with many Whites produced victories for Republican candidates. Race was the most reliable indicator of which party won the election in a particular district. However, the average percentages of votes for Republicans in votes for the two major parties were about fifty in districts where more than sixty percent were Whites. The average percentage of votes for Republicans was slightly more than fifty even in districts in which more than eighty

percent of its residents were Whites. Because there were many districts where more than eighty percent of residents were Whites, many Republicans were elected. However, the Republican winners did not generally enjoy one-sided victories in such districts. In this respect, the results of the 2002 state legislative elections did not necessarily show the Republican Party's unshaken strength to be supported by a single racial group.

REFERENCES

Ajrouch, Kristine J., Toni C. Antonucci, and Marry R. Janevic. 2001. "Social Networks among Blacks and Whites: The Interaction between Race and Age." *Journal of Gerontology: Social Science*. 56B (2): S112–S118.

Beggs, John J., Valerie A. Haines, and Jeanne S. Hurlbert. 1996. "Revisiting the Rural-Urban Contrast: Personal Networks in Nonmetropolitan and Metropolitan Settings." *Rural Sociology*. 61 (2): 306–325.

Brooks, Clem and Jeff Manza. 1997. "Social Cleavages and Political Alignments: U.S. Presidential Elections, 1960 to 1992." *American Sociological Review*. 62 (6): 937–946.

Campbell, James E. 2003. "The 2002 Midterm Election: A Typical or an Atypical Midterm?" *PS*. 36 (2): 203–207.

Carroll, Glenn R. and Albert C. Teo. 1996. "On the Social Networks of Managers." *Academy of Management Journal*. 39 (2): 421–440.

Cochran, Moncrieff. 1990. "Environmental Factors Constraining Network Development." In *Extending Families: The Social Networks of Parents and Their Children*, ed. Moncrieff Cochran, Mary Larner, David Riley, Lars Gunnarsson, and Charles R. Henderson, Jr. New York: Cambridge University Press.

The Council of State Governments. 2002 and 2003. *The Book of the States*. Volumes 34 and 35. Lexington: The Council of State Governments.

Gaquin, Deirdre A. and Katherine A. DeBrandt. 2004. *2004 County and City Extra: Annual Metro, City, and County Data Book*. Lanham: Bernan Press.

Gaquin, Deirdre A. and Katherine A. DeBrandt. 2005. *2005 County and City Extra: Annual Metro, City, and County Data Book*. Lanham: Bernan Press.

Giranda, Melanie, James E. Luk, and Kathryn A. Atchison. 1999. "Social Networks of Elders without Children." *Journal of Gerontological Social Work*. 31 (1/2): 63–84.

Hogan, Robert E. 2003. "Institutional and District-Level Sources of Competition in State Legislative Elections." *Social Science Quarterly*. 84 (3): 543–560.

La Due Lake, Ronald and Robert Huckfeldt. 1998. "Social Capital, Social Networks, and Political-Participation." *Political Psychology*. 19 (3): 567–584.

Lubin, David and D. Stephen Voss. 2000. "Racial Redistricting and Realignment in Southern State Legislatures." *American Journal of Political Science*. 44 (4): 792–810.

Mac Rae, Hazel. 1992. "Fictive Kin as a Component of the Social Networks of Older People." *Research on Aging*. 14 (2): 226–247.

Manza, Jeff and Clem Brooks. 1999. "Group Size, Turnout, and Political Alignments and the Development of U.S. Party Coalitions, 1960–1992." *European Sociological Review*. 15 (4): 369–389.

Miller, Arthur and Brad Lockerbie. 1992. "The United States of America." In *Electoral Change: Responses to Evolving Social and Attitudinal Structures in Western Countries,* ed. Mark Franklin, Tom Mackie, and Henry Valen. Cambridge, New York, and Oakleigh: Cambridge University Press.

Moncrief, Gary F. and Joel A. Thompson. 1992. "Electoral Structure and State Legislative Representation: A Research Note." *The Journal of Politics*. 54 (1): 246–256.

O'Donnell, Lydia. 1983. "The Social Worlds of Parents." In *The Ties That Bind: Men's and Women's Social Networks*, ed. Laura Lein and Marvin B. Sussman. Binghamton: The Haworth Press.

Stonecash, Jeffrey M. 1999. "Political Cleavage in U.S. State Legislative Houses." *Legislative Studies Quarterly*. 24 (2): 281–302.

Stonecash, Jeffrey M. and Nicole R. Lindstrom. 1999. "Emerging Party Cleavages in the House of Representatives, 1962–1996." *American Politics Quarterly*. 27 (1): 58–88.

Storey, Tim and Gene Rose. 2002. "GOP #1 First Time in 50 Years." *State Legislatures*. 28 (10): 12–17.

Stueve, Ann. 1983. "The Elderly as Network Members." In *The Ties that Bind: Men's and Women's Social Networks*, ed. Laura Lein and Marvin B. Sussman. Binghamton: The Haworth Press.

Tagliaventi, Maria Rita and Elisa Mattarelli. 2006. "The Role of Networks of Practice, Value Sharing, and Operational Proximity in Knowledge Flows between Professional Groups." *Human Relations*. 59 (3): 291–319.