From Political Pathways to Senate Folkways:

Electoral Reform and Careerism in the U.S. Senate, 1868-1944

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Abstract

The 17th Amendment removed the responsibility for selecting senators from state legislatures and awarded it to voters. Scholars have argued that voters' ability to sanction their senators for poor performance *ex post* was an important mechanism influencing senators' legislative activities. In this study, I focus on voters' ability to screen their senators *ex ante*. Using new data on senators' political experiences, I show that the onset of direct elections led to an increase in the professionalization of pre-Senate careers. I then use sequence analysis methods originally developed to study DNA sequences to identify the major career paths to the Senate between 1868 and 1944. Differences in pre-Senate career paths help explain which senators were assigned to the Senate's most valued committees. These findings offer important revisions to past scholarship concluding that direct elections had minimal effects on the composition of the Senate and that political recruitment is unrelated to legislative behavior.

Keywords: American political development, Congress, electoral system reform, political careers, sequence analysis, Seventeenth Amendment, U.S. Senate

Scholars have long recognized the agency problem posed by republican forms of government, where a small number of individuals are selected by ordinary citizens to make decisions on their behalf (Miller and Stokes 1963). The principal-agent relationships embedded in republican institutions are most likely to succeed when elected officials have the *ability* and *incentives* to make decisions that are in the best interests of their constituents. The Framers attended to both conditions in designing the U.S. Senate (for a detailed discussion, see Gailmard and Jenkins 2009), providing mechanisms for the *ex ante* screening of agents (Fearon 1999) and the *ex post* sanctioning of public officials whose performance is unsatisfactory (Ferejohn 1986).

In limiting the size of the Senate and assigning to state legislatures the power to choose its members, the Framers anticipated that *ex ante* screening would result in the selection of the most enlightened citizens, whose "firmness might seasonably interpose against impetuous councils" (Madison 1966 [c. 1787], p. 194). Presumably, senators would be men of wide-ranging political experience held in high esteem by their fellow citizens. By the early 20th century, however, enough citizens had become dissatisfied with the electoral system institutions the Framers had given them. In 1912, Congress passed the 17th Amendment providing for direct election of senators and sent it to the states for ratification. Following ratification in 1913, ordinary citizens rather than state legislators would get to decide on senators' qualifications.

The 17th Amendment implemented the most significant change in how senators are selected in history. Until recently, scholars downplayed the consequences of direct elections (Riker 1955; Daynes 1971; Brandes Cook and Hibbing 1997). In recent years, however, there has been a revival of scholarly interest in the 17th Amendment's effects on senators' legislative activities (Bernhard and Sala 2006; Wawro and Schickler 2006; Meinke 2008; Gailmard and Jenkins 2009). These studies focus on one aspect of the onset of direct elections – the

replacement of state legislatures with statewide electorates as the principals responsible for monitoring and sanctioning senators' performance.

While scholars have provided compelling evidence for the importance of this change in how senators are sanctioned, less research has been done on the reform's impact on how senators are screened, i.e., recruitment. The studies that have been conducted offer little evidence that the 17th Amendment altered incoming senators' political experiences (Daynes 1971; Brandes Cook and Hibbing 1997). Scholars have also been unable to connect senators' political experiences to the competition for influence inside the Senate. While some scholars, such as Matthews (1960), argue that "professional" politicians are best-equipped to adapt to the internal norms, or "folkways," of the Senate, empirical research has yet to verify this relationship.

This study examines the impact of the 17th Amendment on pre-Senate careers and assesses the effects of differences in senators' political experiences on the competition for influence inside the Senate. I argue that the effects of this change in the *ex ante* screening of senators has been underappreciated. Using new data on the political experiences of senators who served between 1868 and 1944, I demonstrate that the onset of direct elections led to an increase in the professionalization of pre-Senate careers. I also find that differences in pre-Senate career paths were a factor in one key aspect of the competition for influence – the assignment of senators to valued committee posts.

These findings offer important revisions to past scholarship concluding that direct elections had minimal effects on the composition of the Senate (Daynes 1971; Brandes Cook and Hibbing 1997) and that political recruitment is unrelated to legislative behavior (Matthews 1984). Uncovering these relationships, I argue, requires that scholars attend to the theoretical implications of electoral system institutions for the *ex ante* screening of public officials. It also

requires more comprehensive data on and different methods for analyzing legislators' political experiences than is used in existing studies of legislative careers. In particular, this is the first study to use sequence analysis methods originally developed to study DNA sequences (Macindoe and Abbott 2004) to identify the major career paths to high offices like the U.S. Senate. These methods hold much promise for improving scholars' ability to develop meaningful measures of legislators' political experiences.

This paper proceeds as follows. First, I review past research on the 17th Amendment and the impact of pre-Senate political experiences on senators' committee assignments. Next, I describe my theory and propose hypotheses that connect the onset of direct elections to changes in the professionalization of pre-Senate careers and connect differences in pre-Senate career paths to the Senate committee assignment process. I then describe the data and procedures I used to compile my measure of pre-Senate professionalization and identify the principal career paths to the Senate. I use these measures to assess the impact of the 17th Amendment on pre-Senate careers and the effects of differences in senators' political experiences on their committee assignments. In the final section, I discuss the implications of my findings for current debates about electoral system reforms and legislative behavior more generally.

The 17th Amendment, Political Experience and Committee Assignments

In the decades following the ratification of the 17th Amendment, a consensus emerged that this dramatic change in how senators are selected had registered little impact on either Senate personnel or practices. Writing in 1906, Haynes observed how a succession of graft and bribery scandals involving aspiring candidates and state legislatures had reduced public confidence in the Senate and the indirect election mechanism devised by the Framers. When the

Amendment was finally passed by a reluctant Senate and sent to the states for ratification in 1912, proponents of direct elections for senators looked forward to a sea change in representation and responsiveness. Three decades later, Haynes (1938) commented on the naïve predictions of revolutionary change. Haynes' observations were later confirmed by others (Riker 1955; Daynes 1971), who found that the 17th Amendment had few discernible effects on senators' political experiences or legislative activities.

For a while, these impressions were the last word on the 17th Amendment. In recent years, however, scholars have renewed their attention to its myriad effects. Several studies examine the impact of direct elections on Senate turnover (Bernhard and Sala 2006; Wawro and Schickler 2006). Others focus on the legislative activities of senators. Bernhard and Sala (2006), for example, argue that senators facing reelection trials shifted their ideological positions to better appeal to less partisan statewide constituencies. Inside the chamber, Meinke (2008) finds that directly elected senators were more likely to engage in visible activities, such as roll call participation and bill introduction. Schiller (2006), in contrast, argues that senators engaged extensively in bill introduction and other activities to broaden their popular base of support well before the 17th Amendment. Gailmard and Jenkins (2009) find that senators' roll call records were more responsive to statewide electorates following the 17th Amendment.

These studies of senators' legislative activities mostly focus on how the onset of direct elections altered the *ex post* sanctioning mechanisms for disciplining unsatisfactory performance. That is, senators changed their behavior because voters, rather than state legislatures, were now responsible for rewarding or punishing their performance. Scholars have paid less attention to *ex ante* screening mechanisms, i.e., how changes in the composition of senators contributed to changes in legislative activity. And, the little research that does examine the effects of the 17th

Amendment on senators' political experiences is inconclusive. The most detailed studies of this relationship (Daynes 1971; Brandes Cook and Hibbing 1997), for example, come to no firm conclusions about whether direct elections increased incoming senators' political experiences.

The lack of evidence linking the 17th Amendment to pre-Senate political experiences and, by extension, pre-Senate political experiences to senators' legislative activities poses a theoretical puzzle. On the one hand, as Brandes Cook and Hibbing (1997) argue, a record of public service ought to attract voters to a greater degree than it attracted state legislators. The limited size of state legislatures under indirect elections facilitated particularistic exchanges between Senate candidates and state legislators. Under this system, professional politicians – those who make their living from politics and have spent a large proportion of their working lives serving in public offices – enjoyed few advantages. Changing to a system where senators had to win the support of statewide electorates, however, ought to have favored politicians with experience in appealing to voters. Indeed, a strong record of public service was more likely to resonate with voters than one's personal popularity with party elites.

On the other hand, practices like the public canvas, whereby Senate incumbents publicized which state legislative candidates supported their reelection, might have induced senators to stay in tune with voters before the 17th Amendment (Riker 1955; Stewart 1992). In this sense, voters might have been getting the senators they wanted and scholars should expect to observe no change in pre-Senate political experiences with the onset of direct elections. That said, if senators' activities before direct elections already reflected the preferences of voters, how can the evidence of changes in senators' legislative activities following reform be explained?

One possibility is that there are meaningful differences in the types of senators selected by state legislators and voters, but that existing measures of political experience have failed to

detect them. Indeed, the few studies that consider pre-Senate political experience use crude measures of it. In their study of the effects of the 17th Amendment on pre-Senate careers, for example, Brandes Cook and Hibbing (1997) use a four-valued variable indicating whether senators held no public office, a local-, a state-, or a federal-level office. Such measures, which capture neither the amount of public service nor differences in the content of pre-Senate careers, do not offer ideal tests of the causes or consequences of political experiences.

Even if a link between the 17th Amendment and pre-Senate political experiences could be established, it is unclear whether and how differences in the political experiences of incoming senators affect outcomes inside the Senate. Scholars have long recognized the absence of evidence linking legislators' recruitment experiences to their behavior in office (Matthews 1984). In this study, I examine how senators' political experiences affect the competition for influence inside the Senate. Specifically, I focus on one aspect of this competition: the assignment of senators to committees. Much past research attests to the importance of committee service to the Senate career (Polsby 1968; Polsby, Gallaher and Rundquist 1969; Price 1977). Moreover, as Sinclair (1988, p. 277) writes, "the distribution of valued committee positions provides the single best observable indicator of the distribution of influence in Congress."

Previous research on Senate committee assignments emphasizes the effects of seniority (Bullock 1985), electoral and partisan considerations (Sinclair 1988; Brady et al. 1989; Arnold 2001), formal rules changes (Davidson 1990) and the personal characteristics of senators (Canon and Stewart 2001). Few studies assess the effects of incoming senators' political experiences. Those that do so use measures that fail to systematically account for differences in the content of pre-Senate careers. Matthews (1960), for example, uses descriptive statistics, interviews and first-hand observation to support his claims about the asymmetric distribution of power in the

Senate, where "professionals" dominated the most powerful committees. Canon and Stewart (2001) find that previous service in the U.S. House is associated with better committee portfolios, but its effects are small compared to those for seniority, region and party loyalty.

In this study, I use new data on pre-Senate careers to overcome deficiencies in existing measures of senators' political experiences. These data reveal that the political experiences of incoming senators did change with the onset of direct elections. These changes are consistent with the theory that voters used *ex ante* screening to realize their preferences for more professional politicians. To determine whether senators' political experiences affected the competition for influence inside the Senate, I use sequence analysis techniques to identify the main pathways to the Senate. The results of this analysis indicate that differences among senators in the number, type and order of offices they occupied can be reduced to a small number of pre-Senate career paths. These career paths can be empirically connected to senators' success in attaining coveted committee posts. In the next section, I elaborate my theory and hypotheses relating the 17th Amendment to changes in the composition of the Senate, and linking pre-Senate career paths to senators' committee assignments.

Hypotheses

My predictions about the effects of the 17th Amendment on pre-Senate political experiences can be stated simply. First, I expect the 17th Amendment to lead to an increase in the professionalization of pre-Senate careers. The rationale for this prediction is twofold. First, it is likely that highly professionalized politicians will be better vote-getters than less professionalized politicians or amateurs (e.g., those with no political experience at all). Indeed, congressional scholars have consistently found that candidates with previous experience in

elective offices do better in congressional elections than candidates who lack such experience (Jacobson 1989; Carson and Roberts 2005). Candidates who have held an elective office have experience running election campaigns. They are also likely to be better known than candidates who have never held an elective office. The value of these attributes is magnified in statewide contests, where name recognition, organization and campaign skills are crucial.

Second, as Brandes Cook and Hibbing (1997) argue, it is likely that voters were more favorably disposed to professional politicians than were state legislators. It is perhaps easy to see why state legislators might prefer less experienced politicians. Professional politicians are more likely than less professional or amateur politicians to have established, independent bases of political support. Such politicians might be tempted to follow their own office-based and policy goals rather than faithfully represent the preferences of state legislative majorities. Indeed, increased independence inside the Senate is exactly what Gailmard and Jenkins (2009) predict and find in their study of senators' roll call voting before and after the 17th Amendment.

Why might voters prefer more professional politicians? One reason stems from the environment that produced the 17th Amendment. Reformers took advantage of lurid stories of cozy relationships between special interests and state legislatures, as well as a few high profile corruption cases involving individual senators to galvanize support for direct elections (Haynes 1938). To voters, office-based professional politicians might have been a welcome change compared to the wealthy and, in some instances, corrupt senators selected by state legislatures. Another reason voters might prefer professional politicians is that experience can act as a proxy for future effectiveness. Voters have less capacity to monitor and assess the effectiveness of senators than state legislatures. Lacking more specific information, voters might have taken a senator's resume as a signal of likely success inside the Senate.

As Riker (1955) and others point out, however, many states were already electing senators in statewide elections prior to passage of the 17th Amendment. Indeed, the amendment merely applied reforms adopted by individual states to all Senate elections. Even after 1914, there were exceptions to this uniformity. In cases where a Senate incumbent failed to serve out his or her term, some states allowed governors or state legislatures to appoint a successor. Thus, a significant number of senators after 1914 were appointed rather than elected. Because I believe direct elections, rather than passage of the amendment, is the mechanism driving pre-Senate professionalization, I expect the relationship between direct elections and professionalization to be even stronger than the relationship between the 17th Amendment and professionalization.

Though voters might expect that professional politicians will be more effective advocates inside the Senate, the relationship between pre-Senate professionalization and the achievement influence inside the chamber is not straightforward. One might predict that experienced politicians, men like Senate Majority Leader Alben Barkley, a former prosecuting attorney, judge and congressman from Kentucky who Matthews' (1960) cites as an exemplar of the professional politician, would be well-equipped to identify and gain entry to the Senate's centers of power, including its standing committees. However, the Senate attracts many experienced politicians and many are unable to translate past triumphs into a successful Senate career. One example is Herbert Lehman, who arrived in the Senate after a long and distinguished career of public service that included four terms as Governor of New York. Lehman became well-known for his speeches against McCarthyism, but he achieved few legislative successes and retired after his first term, frustrated by the Senate's procedures and norms.

These examples suggest that the type of pre-Senate experience, rather than just the amount of pre-Senate experience or senators' level of professionalism, is what matters. What

types of pre-Senate experience might translate into successful Senate careers? I predict that the experiences that are likely to be most beneficial are those that help incoming senators learn and adapt to the "folkways" of the Senate. Specifically, senators with previous legislative experience are likely to possess greater awareness of the committee system and its importance for achieving influence inside the chamber, and will be more effective at lobbying for good assignments. In this regard, previous service in the U.S. House should be particularly beneficial. Former House members have had an opportunity to observe the Senate's internal norms, and are likely to be known by other senators, including those who assign senators to committees. Previous service in a state legislature should also be helpful, although perhaps less so than House experience. By implication, senators with no previous political experience – the amateurs identified by Matthews (1960) – have none of these advantages and will be less likely than other senators to receive coveted committee posts.

A few studies of the committee assignment process have recognized the potential value of pre-Senate experience, including House service (Canon and Stewart 2001). It is unclear, however, whether just the simple incidence of service in a particular office, the amount of time spent there, an individual's absolute amount of public service or some relative level of pre-Senate professionalization is associated with building a successful Senate career. Ideally, scholars would like to know what the major career paths to the Senate are and determine whether one or more of these are predictive of success inside the chamber, including assignment to the Senate's best committees. Unfortunately, existing datasets do not provide sufficient information to perform such analyses. In the next section, I describe a new dataset that includes such information and the set of procedures I used to measure pre-Senate professionalization and

identify the major career paths to the Senate. These measures allow me to test my hypotheses about the effects of the 17th Amendment and the consequences of pre-Senate experience.

Data and Measurement of Pre-Senate Political Experience

The data used in this study consist of complete career sequences and other relevant information for 832 individuals who began their Senate careers between 1868 and 1944. My primary source of information is the *Biographical Directory of the United States Congress.* The *Directory* describes the background, employment history, and public accomplishments of the more than 12,000 individuals appointed or elected to the U.S. Congress. I focus on the 1868-1944 period, which scholars have identified as a formative era that saw the emergence of the modern Senate (Matthews 1960; Rothman 1968; Ripley 1969). For each of the 832 senators who began service in this period, I collected detailed information on their office-holding experiences and merged this with existing datasets on senators' backgrounds, service activities (specifically, party loyalty on roll call votes and committee assignments), constituency characteristics and institutional settings.

The procedures used to assemble the sequence of public and private offices held by each senator encompassed three steps. In Step 1, biographical information was transferred from the *Directory* to a database file. Each office that a senator held was entered, with start and end dates recorded for each instance of public service. In Step 2, public offices were further assigned one of 20 values from a typology of local, state and federal offices.[1] Each office type was given a letter code to distinguish it from other types. Service in a state legislature, for example, was denoted by the letter "R." Years with no public service were coded "P," for private-sector activity. In Step 3, the sequence of offices was constructed by assembling an "office-year string"

for every office in the pre-Senate career. Each string consists of a letter code for the office repeated once for each year the office was occupied. If a senator served in the state legislature for four years, then the string "RRRR" would be added to the sequence. The office-year strings were then concatenated in the order the offices were occupied to form a final career sequence.

This new dataset of career sequences enables me to calculate precise measures of pre-Senate professionalization and conduct more detailed analyses of the content of pre-Senate careers than those offered by existing studies of congressional careers. To measure each senator's level of pre-Senate professionalization, I calculated the proportion of pre-Senate career years spent in public office – equivalent to the number of years spent in public office divided by the total number of years in the pre-Senate career.[2] This variable captures differences among senators in their pre-Senate political experiences, with larger proportions indicating higher levels of professionalization. I use this measure as the dependent variable in my analyses to assess the impact of the 17th Amendment on pre-Senate political experiences.

Figure 1, which plots senators' previous office-holding experiences and median levels of professionalization across six intervals in the 1868-1944 period, illustrates the benefits of more precise measurement. The dashed line shows the percent of senators who held any public office before reaching the U.S. Senate. This measure, the most widely used indicator of pre-congressional experience, changes little between 1868 and 1944. In contrast, the solid line plotting the median level of pre-Senate professionalization indicates that political experience was increasing during this period. The trend depicted by the long-dashed line, which plots the same measure for senators elected by state legislatures or statewide electorates, is even more pronounced. The median elected senator spent 40 percent of pre-Senate career years in public

office at the beginning of 1868-1944 period. By the end, the median senator was spending two out of every three years (67 percent) in public office.

[Figure 1 about here]

The hypotheses stated above also make predictions about how the content of pre-Senate careers should affect senators' committee activities. Rather than create a series of dichotomous variables to measure different aspects of senators' political experience, I use sequence analysis methods to identify the main paths that senators followed to the office. Sequence analysis refers to a body of methods that take whole sequences of events as units of analysis, rather than treat each event as an individual data point. They are well-adapted to the problem of assessing differences among complex sequences of events – in this case, office-holding events – and have been used in many applied settings (see Abbott and Tsay 2000). Specifically, I used an optimal matching algorithm to calculate a matrix of distances that capture differences among senators in the number, type and order of offices they occupied prior to reaching the Senate. These distances were then analyzed using cluster analysis to identify meaningful groupings, i.e., career paths. The details of these two procedures – the application of the optimal matching algorithm, and cluster analysis of pre-Senate career sequences – are presented in the Appendix.

Pre-Senate Career Paths

The results of the sequence analysis indicate that pre-Senate careers can be grouped into a relatively small number of career paths. Table 1 describes a clustering solution that partitions the 832 pre-Senate career sequences into seven principal paths to the Senate. Interestingly, these paths suggest that pre-Senate careers are distinguished both by differences in the types of public offices held and the length of service. The first path, labeled *Amateur*, consists of 132

individuals who reached the Senate with little or no previous political experience at all. Three other paths, labeled *Legislator*, *State Legislator*, and *U.S. House*, identify groups of senators who reached the office after stints in mostly legislative offices. Two paths, *State Executive* and *Judge*, describe pre-Senate careers dominated by executive and judicial offices. Finally, there is a heterogeneous group, labeled *Administrator*, which includes individuals who became senators following stints in administrative and law enforcement offices at different levels of government.

[Table 1 about here]

These seven pre-Senate career paths differ in the number and type of public offices occupied by individuals and the extent of pre-Senate public service. As shown in Table 1, the mean number of offices ranges from 0.51, for *Amateur*, to 4.05, for *Judge*. The third column of the table indicates the percent within each path that held elective office before reaching the Senate. This measure of political experience is frequently used by scholars (Jacobson 1990; Carson and Roberts 2005). However, it does a poor job of accounting for pre-Senate political experiences. Former legislators and state executives all held elective office before reaching the Senate, while less than one quarter of amateurs did. About half of former administrators and 70 percent of judges did so. Thus, a binary measure of pre-Senate experience obscures differences both within the group of senators who never held elective office and among those who did so.

The fifth and sixth columns of Table 1 report the number and percent of years of the pre-Senate career spent in public office. The latter is the measure of pre-Senate professionalization described above. Apart from those in the *Amateur* category who spent little time in public office, those following the *Legislator* path spent the least while those following the *Judge* path spent the most time in public office. Like the binary measure, however, a simple calculation of years spent in public office obscures important differences in pre-Senate political experiences. For

example, senators following the *Administrator* and *State Executive* paths spent similar amounts of time in public office before reaching the Senate, but the types of offices (local, state and federal versus state only, appointed versus elective) they occupied differ markedly. Those in the *U.S. House* and *State Legislator* categories were also the most professionalized. Those in the *Amateur*, *Legislator* and *Administrator* were the least professionalized.

Overall, these results reveal important differences in pre-Senate political experiences. These differences have been ignored by scholars, mostly because the data needed to uncover them have not been readily available. The negative correlation between the *Amateur* path and the indicators of previous elective office (e.g., the amount and percent of time spent in public office) and the positive correlation between the *State Legislator* and *U.S. House* paths with these same indicators attest to the validity of the constructs used in this study. The pre-Senate professionalization and career path constructs converge with other measures of political experience where they ought to theoretically. Thus, in the analysis of senators' committee activities below, I use dummy variables for the *Amateur*, *State Legislator* and *U.S. House* career paths to test my hypotheses about the effects of pre-Senate political experience.

Research Design and Data Analysis

To assess the effects of the 17th Amendment on pre-Senate professionalization, I use a control series regression discontinuity design. The dependent variable in this analysis is the proportion of pre-Senate career years spent in public offices.[2] This variable captures differences among senators in their pre-Senate political experiences, with larger proportions indicating higher levels of professionalization. Because it is likely that an individual's status (i.e., public or private) in one year is related to his status in other years, I use an extended beta-binomial model

in lieu of ordinary least squares. This model accounts for potential "group" effects across years within individual careers, and is appropriate where the dependent variable is a proportion summarizing the outcome of individual trials that are not necessarily independent (King 1989; Palmquist 1999).

My main independent variable in this analysis is a dummy variable, *17th Amendment*, that indicates the onset of direct elections for senators. This variable takes the value 1 for individuals serving after ratification of the 17th Amendment and 0 for everyone else. Unfortunately, this variable imperfectly captures the electoral mechanism I predict is responsible for increasing pre-Senate professionalization. Following ratification, most senators reached the office by winning a statewide election. Others, however, were appointed. Moreover, even before passage of the 17th Amendment, a number of states were already electing their senators in statewide elections. Thus, I run a similar extended beta binomial model replacing *17th Amendment* with two dummy variables. One variable, *Direct Election*, takes the value 1 for individuals who reached the Senate by winning a binding statewide election and 0 for everyone else. A second, *Appointed*, takes the value 1 for individuals who were appointed to fill vacancies left by senators who failed to serve out their term and 0 for everyone else.

Of course, it is possible that factors other than this change in how senators were selected contributed to professionalization during this period. To minimize the threat to validity posed by these alternative explanations, I assembled a control series of House incumbents. That is, for individuals serving in the U.S. House between 1868 and 1944, I compiled complete pre-House career sequences and calculated the proportion of years spent in public office. These House incumbents serve as a useful control group because they served contemporaneously with my Senate sample and, thus, were exposed to these other factors. However, as non-senators, their

careers ought to have been relatively immune from the influence of the 17th Amendment. I also compiled a second control series of governors who began service between 1868 and 1944. These governors also serve as a useful control group because they represented the same statewide constituencies as the senators in my dataset.[3]

I also include control variables to account for other relevant differences between my treatment and control groups. These include a variable, *Age at Entry*, which denotes age upon reaching the Senate. Older first-time senators typically have lengthier pre-Senate careers. I also created a variable that counts the years since a senators' home state was admitted to the union. Scholars have used this variable, *State Age*, to measure the strength of state party organizations (Mayhew 1986), with older states having more developed party systems. These states might have been home to a greater number of experienced politicians. I define a dummy variable, *South*, for senators representing the 11 states of the former confederacy, as previous work has found that Southern senators were disproportionately experienced politicians. Rounding out the controls is a variable, *Trend*, that takes the value 0 for those whose first year of service was 1868, 1 for those who first served in 1869, 2 for 1870 and so on. This variable accounts for any systematic increase in professionalization due to other factors that occurred during this period.

Modeling Committee Assignments in the Senate

To investigate whether pre-Senate political experiences contributed to the success of senators in achieving influence inside the chamber, I developed two models of the Senate committee assignment process. Specifically, I created two dependent variables. The first, which I label *Big Four*, takes the value 1 if a member received an assignment to one of four prestige committees – Appropriations, Commerce, Finance and Rules – and 0 otherwise. Scholars have

identified these as the most sought after committees in this period (Haynes 1938; Brady et al. 1989). If a senator served on any of these committees in a particular congress, *Big Four* is coded 1. The second dependent variable, *Top 10*, takes the value 1 if a senator served on any of the 10 best committees in a particular congress, and 0 otherwise.[4] The top 10 list comes from Haynes (1938) and is consistent with empirical studies that measure the value of serving on various Senate committees during this period (Canon and Stewart 2001).

My main independent variables in these analyses are three dummy variables describing pre-Senate career paths. The variable *Amateur* takes the value 1 if a senator followed this path to the Senate, and 0 otherwise. Two additional variables, *U.S. House* and *State Legislator*, identify senators who followed these two paths to the Senate. Senators who followed other career paths form the omitted category in these models. In addition, I include the *17th Amendment* variable described above to test for the effects of this important change in how senators are selected. Following ratification of the 17th Amendment, it is likely that assignment to these important committees became a more valuable asset for reelection-minded senators.

I include several controls to account for other factors that affected how senators were assigned to these valued committees. Previous research has established that the Senate committee assignment process is highly constrained (Haynes 1938; Sinclair 1988; Canon and Stewart 2001). The most important constraint is the seniority system. Once on a committee, senators are rarely removed involuntarily. Ascension to committee chairmanships also follows the seniority rule, i.e., the senator with the longest committee tenure is awarded the chair. Similarly, senators with seniority in the chamber are given special consideration in the assignment process. Other factors aside, a senator is more likely to receive a good assignment

the longer he serves in the chamber. In my models, seniority is represented by *Seniority*, which takes the log transformation of the number of congresses served by each senator.[5]

A second source of constraint is congress-to-congress turnover in Senate and committee personnel. With senators holding near property rights to committee posts, new assignments can only be given where vacancies occur. Senators serving during periods of high turnover have a better shot of attaining a coveted assignment. Even in these instances, however, the aggregate number of vacancies tells only part of the story. There must be vacancies within one's political party. It does a senator little good if the number of vacancies is high, but those vacancies must be filled by the other party. I created a variable, *Vacancies*, that counts the number of seats vacated by departing members of each senator's own party. In the first model, *Vacancies* counts own-party Big Four vacancies. In the second, *Vacancies* counts own-party Top 10 vacancies.

Finally, a third source of constraint is the norm of geographic representation. By rule, two senators from the same state are not allowed to serve together on important committees. To account for this, I created a variable, *State Other*, which counts the number of Big Four and Top 10 seats occupied by the state's other senator. More assignments for one senator meant fewer opportunities for the other. To my knowledge, this is the first study to account for the second and third constraints on Senate committee assignments. That is, while many studies include controls for the amount of time a senator has served in the chamber, none adequately account for how many seats are actually available to each individual senator.

Following past studies of the Senate committee assignment process (Sinclair 1988; Arnold 2001; Canon and Stewart 2001), I include several controls to account for relevant characteristics of individual senators and the constituencies they represent. These include a variable to assess each senator's party loyalty as reflected in roll call votes from the previous

congress. Unlike other studies, I standardize loyalty by party and congress. Presumably, what matters is each senator's loyalty relative to co-partisans serving contemporaneously, not the absolute level of loyalty. Senators in their first term are assigned a loyalty score of 0; that is, they are considered to be no more and no less loyal than the average senator of their party.

I also include a variable, *Age*, denoting the age of each senator during the congress of record. As above, *South* denotes members representing the 11 states of the former Confederacy. I define a variable, *Lawyer*, to identify senators who had private-sector experience as an attorney – a valuable asset for lawmakers – before reaching the Senate (Canon and Stewart 2001). I also include *Trend* to account for any systematic increase in the probability of being assigned to an important committee due to other factors over the period of study. Past work on the Senate identifies two occurrences that suggest the probability of assignment was increasing. First, in 1904, Republican senators extracted a promise from Nelson Aldrich to award each of the party's members at least one important committee assignment. Second, in 1921, the Senate abolished 41 of its 75 standing committees. In 1946, the Legislative Reorganization Act further reduced the number of standing committees. In many instances, members of abolished committees were reassigned to the committees that remained, including the Big Four and Top 10 committees.

My analyses of the Senate committee assignment process depart from the methods and procedures used in existing studies in three additional ways. First, rather than estimate my model for all senators in each congress, I exclude senators who began service before 1868 or after 1944. Thus, only the 832 senators for whom I have detailed measures of pre-Senate political experience are included. Second, I further limit my analyses to those senators serving in their first eight congresses. The reason for this has to do with the hypotheses stated above and the nature of the seniority system. If pre-Senate experience matters in this process, it is likely to

matter earlier rather than later in a senator's career. That is, due to the seniority system, every member who remains in the chamber long enough will be assigned to an important committee, regardless of other factors. Far fewer senators achieve these assignments in the first part of their Senate career. Third, following Canon and Stewart (2001), I start my analyses with the 49th congress (1883), when the Senate adopted its current rule of making assignments for entire congresses. Previously, senators were reassigned to committees at the beginning of each session.

Results: Direct Elections and Pre-Senate Professionalization

The results of the control series regression discontinuity design support my hypotheses about the effects of the 17th Amendment in general, and the impact of direct elections in particular. Table 2 displays the results from five extended beta binomial models of pre-Senate professionalization. Models 1, 2 and 3 assess the effects of the 17th Amendment and my control variables on the levels of professionalization among incoming House members, governors and senators, respectively. Consistent with my hypothesis, the coefficient for *17th Amendment* is positive and significant in the Senate model. Following ratification of the 17th Amendment, the share of pre-Senate career years spent in public office increased by about 6.4 percent. During my period, the average pre-Senate career spanned 17.8 years. Following ratification, the average senator could be expected to spend an additional 1.14 years in public office before reaching the Senate. With an average length of public service of 7.8 years prior to the 17th Amendment, the increase in the number of years spent in public office would constitute approximately 14 percent.

As expected, the effect of *17th Amendment* is smaller for the House control series, which analyzes 4,802 pre-House careers. It is positive, but its magnitude (4.0 percent) is smaller than the effect on senators. The positive coefficient in the House model likely reflects the lingering

effects of ballot and primary reforms, which most states adopted prior to 1914. Similarly, the effect of *17th Amendment* is trivially small (1.0 percent) and not significant for the governor control series, which analyzes 1,007 pre-gubernatorial careers. Taken together, these results indicate that the 17th Amendment did affect the professionalization of pre-Senate careers. Political experience increased abruptly for senators following ratification, but pre-House and pre-gubernatorial careers were substantially less affected.

[Table 2 about here]

The results in Table 2 for Models 4 and 5, which separate senators into three groups – those selected by state legislatures, those elected by voters and those appointed by others – confirm my prediction that direct elections, not the passage of the 17th Amendment itself, were responsible for increasing pre-Senate professionalization. The coefficient for *Direct Election* is positive and statistically significant ($p < .05$). The onset of direct elections is associated with an increase in the share of pre-Senate career years spent in public office of 6.9 percent. When I drop the *Trend* variable, which is not significant in Model 3 and is likely influenced by direct elections, the effect of *Direct Election* is 11.7 percent. For the average senator, this increase in the level of pre-Senate professionalization translates into an additional 2.1 years in public office, or an increase in the number of years spent in public office of 27 percent.

The coefficients for *South* and *State Age* suggest that regional differences and the activities of state party organizations were not strong drivers of pre-Senate professionalization between 1868 and 1944. The pre-Senate careers of Southerners appear to be no more professionalized than those of their non-Southern colleagues. The positive and significant coefficient for *State Age* indicates that older states, which tended to have more established party

systems, usually produced more professionalized senators. But the effect is substantively small – approximately half a percentage point for every one-year increase in *State Age*.

Results: Pre-Senate Careers and Senate Committee Assignments

The results of my analyses of the Senate committee assignment process support my hypotheses about the effects of differences in pre-Senate political experiences. Table 3 contains the results of two models, one predicting assignment to the Senate's four prestige committees – Appropriations, Commerce, Finance and Rules – and the other predicting assignment to the Senate's Top 10 committees (Haynes 1938). Consistent with my hypothesis, senators who reached the office with little or no previous political experience were less likely to be assigned to important committees. Changing *Amateur* from 0 to 1 results in a large and statistically significant reduction (-.11) in the probability of assignment to a Top 10 committee. This change is particularly large relative to the baseline probability of being assigned to a Top 10 committee (.80). Overall, the chance that an amateur would be assigned to a Big Four committee was about 85 percent of the chance a senator from the omitted category would receive such an assignment. Those in the *Amateur* category were also less likely than members of the omitted category to be assigned to a Big Four committee, although the effect is not statistically significant.

[Table 3 about here]

Senators whose pre-Senate careers were dominated by service in the U.S. House were significantly more likely to be assigned to the Senate's important committees. Changing *U.S. House* from 0 to 1 increases the probability of assignment to a Top 10 committee by .04. This effect is small relative to the baseline probability of receiving a Top 10 assignment. However, the same change increases the probability of assignment to a Big Four committee by .13. This is

a remarkably large effect, both in absolute terms – among the controls, only the impact of *Seniority* and *17th Amendment* are larger – and relative to the baseline probability of assignment to a Big Four committee (.37). Overall, the chance that a senator following this career path would be assigned to a Big Four committee was about 35 percent greater than the chance a senator from the omitted category would receive such an assignment.

Consistent with my hypothesis, I also find significant effects for the *State Legislator* career path. Changing *State Legislator* from 0 to 1 increases the probability of assignment to a Top 10 committee by .07, although the effect is not statistically significant. However, the same change increases the probability of assignment to a Big Four committee by .25. This effect is among the largest in the model and especially large relative to the baseline probability of assignment to one of these prestigious committees. Overall, the chance that a senator following this career path would be assigned to a Big Four committee was 62 percent greater than the chance a senator from the omitted category would receive such an assignment.

Taken together, these results indicate that senators' previous political experiences did contribute to their success in receiving assignments to important Senate committees. Where the positions were especially valuable (Big Four), the effects of experience are greatest. They also testify to the analytical usefulness of the pre-Senate career paths identified by sequence analysis. These more precise measures outperform other indicators of pre-Senate political experiences. In a separate analysis (results available from author), I reran the Big Four and Top 10 models replacing the pre-Senate career paths with dummy variables for 1) any previous office-holding experience, 2) service in the U.S. House, and 3) service in a state legislature. The dummies for any previous office-holding experience and service in a state legislature were insignificant in

both models. The dummy for U.S. House service was significant in the Big Four (and smaller than the effects of *U.S. House* above), but not the Top 10 model.

Importantly, the effects of senators' political experience remain even after accounting for other factors that shaped the Senate's committee assignment process during this period. Here, the effects of *17th Amendment* are especially noteworthy. Following ratification, senators in the first phase of their Senate career (i.e., eight terms or fewer) were substantially more likely to receive an important assignment. The probability of receiving a Big Four assignment went up by .25, a two-thirds increase in the chance of receiving one of these coveted posts. What explains the democratization of the assignment process? Previous work on the Senate identifies several moments, such as in 1904, when less senior senators pressed their colleagues to open up the process. But it offers few explanations for the timing of these episodes or why senior senators would concede the issue. One possibility, consistent with the evidence presented here, is that the 17th Amendment, which increased pre-Senate professionalization and made senators individually responsible for their own reelection prospects, made previous levels of inequality inside the chamber more difficult to sustain.[6]

The results in Table 3 also support the portrayal of the Senate committee assignment process as incredibly constrained. Not surprising, the variable *Seniority* has large effects in both models. Changing this variable from a senator serving three congresses to one serving five increases the probability of receiving a Top 10 assignment by .22. The same change generates a .23 increase in the probability of receiving a Big Four assignment. The coefficients for *Vacancies* and *State Other*, which account for other constraints, are also large and statistically significant. Changing *Vacancies* from the 25th to 75th percentile (3 to 9 Big Four vacancies) changes the probability of assignment to a Big Four committee by .08. Thus, turnover in Senate

personnel might benefit an up-and-coming senator, but only if it occurs within his or her party. The negative and significant coefficient for *State Other* in the Big Four model suggests that serving beside a well-placed senior senator had its drawbacks. Changing *State Other* from the 25^{th} to 75^{th} percentile (0 to 2 Big Four seats) changes the probability of assignment to a Big Four committee by -.05. Interestingly, these same considerations were less important determinants of assignment to a Top 10 committee.

The controls for senators' geographic constituencies and individual characteristics also provide a few findings of note. In particular, they provide weak evidence that loyalty to one's party (as measured by a senator's roll call record from the previous congress) increases the probability of receiving a valued committee assignment. The effects of *Loyalty* are substantively small (.01) and insignificant in both models. Similarly, there is little evidence that region, age or private-sector legal experience were important determinants of senators' assignments.

Overall, my results offer strong evidence that pre-Senate political experiences helped determine the success of senators in attaining assignments to the Senate's valued committees. Moreover, pre-Senate political experiences appear to matter most for assignments to the Senate's Big Four committees, the most coveted posts in the chamber. These results are impressive given the highly constrained nature of the Senate committee assignment process. Even after accounting for the effects of seniority, the number of vacancies, seats occupied by a state's other senator and the democratization of the process, pre-Senate career paths were important. These experiences helped some and inhibited others in achieving influence inside the chamber.

Conclusion

The results described above confirm the existence of two relationships in the pre-World War II Senate. The first relationship, between 17th Amendment reform and pre-Senate professionalization, indicates that the onset of direct elections was a crucial factor shaping pre-Senate careers. The second relationship, between pre-Senate career paths and senators' success in attaining important committee assignments demonstrates that senators' political experiences contributed to the achievement of influence inside the chamber. Both sets of findings are at odds with previous scholarship, which finds that the implementation of direct elections had minimal effects on Senate personnel (Daynes 1971; Brandes Cook and Hibbing 1997), and that previous political experience matters little for behavior in office (Matthews 1984).

Why are my findings different? One difference, I argue, lies in how past studies measure pre-Senate political experiences and the more comprehensive data and measurement techniques employed here. Rather than rely on summary indicators that can obscure as much as they reveal about senators' political experiences, I assembled complete office-holding sequences for every senator and used sequence analysis methods to: 1) calculate the number and proportion of pre-Senate career years spent in public office, and 2) identify the main career paths to the Senate. My argument is not that these are perfect measures of experience, but simply that they better capture the main distinctions in how members of the Senate reached this important office.

Though my results are at odds with previous work on the effects of the 17th Amendment on pre-Senate careers and the effects of political recruitment on legislative behavior, they are consistent with recent studies on the effects of direct elections on senators' legislative activities. Ratification of the 17th Amendment changed the strategic environment for senators, who altered their roll call voting and bill introduction practices (Bernhard and Sala 2006; Meinke 2008; Gailmard and Jenkins 2009). Presumably, these changes reflected senators' desires to appeal to

the mass publics who now controlled their electoral fates. Implicitly, my results further support the claim that the kinds of senators that state legislators and voters wanted could be quite different. Theoretically, there is every reason to expect that voters' would use their ability to *ex ante* screen senators to realize their preferences for particular types of Senate candidates. Given their relatively low capacity to monitor the performance of incumbent senators, using direct elections to select good agents makes theoretical sense.

My results indicate that voters were indeed more likely to favor the kinds of office-based professional politicians described by Matthews (1960) following the implementation of direct elections for senators. To voters, such individuals might have seemed like a breath of fresh air compared to the long line of wealthy and, in some instances, corrupt legislators selected by parochial state legislatures. In any case, this new breed of officeholder was likely to be a more effective advocate inside the Senate. Given their past experiences, many senators reached the office already acquainted with legislative "folkways." And they used this knowledge to gain a leg up in the competition for influence inside the chamber.

That voters tended to favor professional politicians after the 17th Amendment does not mean that voters will always do so or that greater political experience is a panacea for democratic legislatures. Today, both houses of Congress and many state legislatures are dominated by the same types of office-based politicians described here. Nonetheless, public confidence in them has slipped. In the minds of many voters, professional politicians are responsible for the problems plaguing these bodies. Indeed, several private organizations and prominent elected officials have recently called for repeal of the 17th Amendment. In an age where anti-politician fervor reigns mostly unchecked, it is worth recalling the effects that past and present institutional configurations have had on the personnel and performance of the Senate.

Appendix: Sequence Analysis Procedures

The sequence of offices for each senator was constructed by assembling an "office-year string" for every office in the career. Each string consists of a letter code for the office repeated once for each year the office was occupied. If a member served four years in the U.S. House of Representatives, the string "HHHH" would be added to the sequence. For each senator, these strings were then concatenated in the order of offices occupied to form a final career sequence. Finally, to simplify the presentation, I omit spells of non-public office-holding here. Thus, the pre-Senate career sequences analyzed here consist of strings of public offices only.[7]

Figure A1 shows pre-Senate career sequences for two senators in the dataset, George Frisbie Hoar (R-MA) and Tasker Oddie (R-NV). The sequence for George Hoar combines three office-year strings. Hoar was a lawyer who began his political career in 1852, when he was elected to the Massachusetts House of Representatives ("R"). Hoar also served in the state senate in 1857 ("R"). After more than a decade out of politics, Hoar was elected to the U.S. House in 1868. He was reelected three times and served eight years ("HHHHHHHH"). While in the House, Hoar served on the Electoral Commission appointed by Congress to decide the 1876 presidential election. In 1877, he was elected by the Massachusetts General Court to the U.S. Senate, where he served until his death in 1904.

Tasker Oddie was a farmer and miner before beginning his political career with a two-year stint as district attorney of Nye County ("UU"). Subsequently, he was elected to the state senate, where he served from 1903 to 1906 ("RRR"). Following a hiatus from politics, Oddie was elected Governor of Nevada in 1911, and served until 1915 ("GGGG"). In 1920, Oddie was elected to the U.S. Senate, where he served two terms. He was a casualty of the Democratic surge in 1932. Rather than seek public office elsewhere, Oddie resumed his mining pursuits.

Insert Figure A1 here.

Optimal Matching

The problem of measuring differences (i.e., distances) between sequences is solved by a dynamic programming technique called optimal matching (OM). In the version of OM used here, two basic operations are used to transform one sequence into another. The first operation, *replacement*, involves replacing one element with another element. For example, with a simple replacement of the letter "O" for the letter "E," the sequence "PSYCHE" is transformed into "PSYCHO." The second operation, *insertion-deletion*, involves inserting or deleting an element from a sequence. Deleting the letter "G" from "GLOVE" transforms this sequence into "LOVE." Conversely, "LOVE" can be transformed into "GLOVE" with the insertion of the letter "G." Insertion and deletion are equivalent operations and are collectively called *indel*.

The difference (or distance) between two sequences is a function of the number of these operations. Two sequences that require a large number of replacements and indels to transform one into the other are said to be further apart (i.e., more different) than two sequences that require a small number of operations. For complex sequences, there is typically more than one way to effect a transformation. The minimum distance, defined in terms of the number of basic operations needed to transform one sequence into another, is referred to as the *edit* or Levenshtein distance (Levenshtein 1966).

Figure A1 provides a solution for transforming the Oddie sequence into the Hoar sequence. The first operation involves inserting element "R" (state legislative) at the beginning of the Oddie sequence, to compensate for Hoar's longer pre-Senate career. In steps 2 and 3, element "U" (state law enforcement) is replaced with "R" and "H" (U.S. House). Steps 4 through 6 involve replacements of "R" with element "H." Finally, steps 7 through 10 involve

replacements of element "G" (governor) with "H." One question that must be answered in calculating a pairwise distance for these two careers is whether the costs of these different replacement operations will be equal. Should the replacement of a state legislative with a House position, for example, be weighted the same as one involving a gubernatorial office and a House position? Another question that must be answered is whether these replacement costs will be the same as or different from the cost of adding an additional year of state legislative service to the Oddie sequence. The answers to these two questions give shape to sequence comparison.

Optimal Matching with Substitution Costs

Specifying substitution costs is the crucial theoretical component of sequence analysis. In setting costs, researchers must rely on substantive knowledge of the subject matter. While the absolute magnitude of the costs does not matter, the relative costs of replacement and indel operations give structure to sequence comparison. The OM algorithm is an exploratory tool. Used properly, it can illustrate patterns in sequence data that are difficult to find through traditional methods. Like all statistical methods in the social sciences, however, these tools of are no substitute for knowledge of the phenomena being studied (Macindoe and Abbott 2004).

Past studies of political careers differentiate public offices by level of government (e.g., local, state, and federal) and the tasks or functions that an incumbent performs (e.g., administrative, executive, judicial, law enforcement and legislative). I adopt these two primary distinctions in setting substitution costs here. In particular, I first assume that any two offices with identical job types can be substituted for each other at no cost. However, any substitution of one job type with another incurs a basic penalty of 1. Thus, any two local administrative jobs are substitutable at no cost; but substituting a local administrative with a local law enforcement

job entails a cost of 1. Second, I assume that transitions within each level of government are easier to achieve than transitions between levels of government. Thus, an additional cost of 1 is assigned to replacements of: 1. a federal with a state job, 2. a federal with a local job, or 3. a state with a local job. Finally, I assume that transitions between jobs with similar functions are easier to achieve than transitions involving jobs with dissimilar functions. Thus, I assign an additional cost of 1 to replacements that involve transitions between administrative, executive, judicial, law enforcement and legislative functions.

In addition to the replacement costs (which vary from 0 to 3) described above, each indel operation was assigned a cost of 1.5, or one-half of the most costly replacement. Setting the indel cost too low would render the other costs superfluous, as any replacement can be effected via one deletion and one insertion. So, for example, the cost of replacing a local legislative post (B) for a cabinet position (C), as unlikely a transition as one can imagine, is set at 3 (the basic replacement cost of 1, an additional cost of 1 for the transition between levels of government, and an additional cost of 1 for the transition between functions). The same transformation can be accomplished by deleting B and inserting C. Similarly, the cost of replacing a federal judicial post with a state judicial post is set at 2 (1 for changing job types plus 1 for changing levels).

Using the OM algorithm, I calculated the minimum cost of transforming one sequence into another for every pair of pre-Senate career sequences (345,696 pairwise combinations!!). The algorithm returned a matrix of distances that captures differences in the pre-Senate careers of all 832 individuals in the dataset. Since pre-Senate careers vary substantially in length, the unstandardized distances are heavily influenced by disparities in sequence lengths. The potential distance between a short and long sequence is greater than for two sequences of equal length. I correct for this problem by dividing each pairwise distance by the length of the longest sequence

in the dataset (44 years). These standardized distances, which capture basic differences in pre-Senate political experiences, form the raw material for the cluster analysis described below.

Cluster Analysis of Pre-Senate Careers

The distances returned by the OM algorithm are the input data for standard cluster analysis and multi-dimensional scaling programs, which facilitate the recovery of relevant groupings or dimensions in the data. The distances described above were analyzed using Ward's hierarchical clustering method (1963). The procedure begins with each of the 832 pre-Senate careers in its own cluster or group. Pre-Senate careers are then successively joined until a single cluster with all 832 members is reached. At each joining of one senator or group of senators with another, Ward's method minimizes the information loss that results. Each possible pair of clusters is considered; the procedure selects the cluster that minimizes the error sum of squares defined by the following formula: $ESS = \Sigma^{n}_{i=1}(x_i - x_{mean})^2$. This error sum of squares criterion distinguishes Ward's method from other agglomerative clustering techniques (Everitt 1993).

The cluster analysis program produced a dendrogram (not shown) that identifies clusters for the 832 pre-Senate careers in the dataset. It is possible to see how various clusters are combined at each joining or stage of the analysis. The two-group solution, for example, divides the senators into a group with long stints of previous House service and a large residual category. The four-group solution keeps the House cluster intact and divides the residual cluster into three groups: 1) those with little political experience (amateurs), 2) those whose pre-Senate careers are dominated by either state legislative or judicial service, and 3) those having a mix of local, state and federal administrative and law enforcement offices. These are meaningful distinctions that begin to illuminate the primary differences among the various career paths to the Senate.

One drawback of cluster analysis procedures is that they do not identify an optimal number of groups. Scholars have devised several techniques, usually referred to as stopping rules, to assist in the selection of the optimal number of groups. Of the stopping rules proposed by scholars, the Calinski-Harabasz pseudo-F index (Calinski and Harabasz 1974) and Duda-Hart Je(2)/Je(1) and t^2 statistics (Duda and Hart 1973) have gained wide acceptance, outperforming other measures in Monte Carlo studies (Milligan and Cooper 1984). Larger values of pseudo-F, especially those indicating local maxima, and the combination of large values of Je(2)/Je(1) and small values of t^2, especially those indicating local minima, indicate more distinct clustering.

I compared stopping rule statistics for 19 possible grouping solutions for the 832 pre-Senate careers. Unfortunately, these stopping rules do not provide a conclusive answer to the number of groups question. In looking at the Calinski-Harabasz pseudo-F index, the values peak at the two- and four-group solutions. On the Duda-Hart index, the seven-group solution appeared to best describe the data. This solution has a high Je(2)/Je(1) value and constitutes a local minima. Taken together, these various measures suggest that the four- and seven-group solutions are superior to alternative solutions nearby.

Which alternative is best? For descriptive purposes, a more detailed accounting, such as the seven-group solution (a slight elaboration of the four-group solution), better characterizes the salient differences among pre-Senate careers during this period. In this study, I focus on the seven-group solution described in Table 1. A good case could also be made for the four-group solution as well. Ultimately, whether a more inclusive or parsimonious solution is best will depend on the research questions being pursued. Here, I am mostly interested in establishing that differences in pre-Senate career paths existed and that they varied over time and affected the competition for influence inside the Senate.

Endnotes

[1] Political offices are classified based on level (national, state and local) and function (administrative, executive, law enforcement, legislative and judicial). This produces 15 office types. I add separate codes for governors, diplomats, and mayors. Members of the House and Senate are separated, as are presidents and cabinet members, giving me 20 office types.

[2] I mark the first year spent in public office as the start of the pre-Senate career. Those who reach the U.S. Senate without first occupying a public office are coded as having a proportion of zero. This seemed simpler than adopting an arbitrary starting point, e.g., 25 years of age. The results are similar if one does adopt a uniform starting point.

[3] The procedures used here are similar to those used by Cox and McCubbins (2005) in their study of the effects of Reed's Rules.

[4] The top 10 committees during this period are Agriculture, Appropriations, Commerce, Finance, Foreign Relations, Judiciary, Military Affairs, Naval Affairs, Post Office and Roads, and Rules.

[5] The log transformation consumes fewer degrees of freedom than temporal dummies. The substantive findings do not change if one uses temporal dummies or a linear term instead.

[6] Consolidation of the Senate's committees in 1921 and 1946 also contributed. Seats were added to committees that remained, with more senators serving on important committees than before.

[7] This decision reflects several considerations. First, there is less information on private activity than public office-holding. Thus, it is often difficult to assess just what types of work senators were engaged in. Second, were such data available, it is unclear how private activities ought to be coded – distinct codes for lawyers, laborers, insurance salesmen, the unemployed? Third, previous research has focused exclusively on public office-holding. I hope to address the issue of private activity in future work.

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Table 1. Description of Pre-Senate Career Paths

Career Path	*N*	Offices	Elected	Yrs. Public Service	% Yrs. Public Service	Description	Sample Career
Amateur	132	0.51	21.21	0.53	17.96	Few Offices or None	S
Legislator	142	2.57	100.00	5.30	43.79	Short, State Legislative or U.S. House	RRS
Administrator	237	3.02	59.07	9.59	50.04	Local, State or Federal Admin., Law Enf.	AAAAS
State Executive	95	2.83	100.00	7.56	53.79	Governor or Statewide Elected	GGGGS
Judge	40	4.05	72.50	17.15	65.50	State or Federal Judicial	WWWWWWWS
State Legislator	46	3.02	100.00	13.82	70.42	Long, State Legislative	RRRRRRRRS
U.S. House	140	3.26	100.00	15.19	71.33	Long, U.S. House	HHHHHHHHHHS

Note: Numbers in the third through sixth columns are cluster means. A = State Administrative; G = Governor; H = House; R = State Legislative; S = Senate; W = State Judge.

Table 2. Extended Beta Binomial Models of Pre-Congressional and Pre-Gubernatorial Professionalization

Independent	HOUSE	GOVERNOR	SENATE		
Variables	Model 1	Model 2	Model 3	Model 4	Model 5
Age at Entry	-.029*	-.039*	-.031*	-.031*	-.031*
	(.002)	(.004)	(.004)	(.004)	(.004)
State Age	.000	.001	.002*	.002*	.002*
	(.000)	(.000)	(.001)	(.001)	(.000)
South	.075[t]	.031	.060	.068	.049
	(.045)	(.090)	(.100)	(.100)	(.100)
17th Amendment	.163*	.043	.260[t]		
	(.070)	(.140)	(.153)		
Direct Election				.281*	.476*
				(.139)	(.099)
Appointed				.029	.152
				(.128)	(.112)
Trend	.021*	.017*	.009	.011*	
	(.003)	(.006)	(.006)	(.005)	
Constant	1.135*	31.873*	1.341*	1.293*	1.363*
	(.105)	(5.65)	(.241)	(.240)	(.238)
Gamma	.307*	.316*	.324*	.322*	.325*
	(.008)	(.018)	(.020)	(.020)	(.020)
Log likelihood	-34267.76	-9637.75	-8875.03	-8873.84	-8875.85
Pseudo R2	.145	.135	.139	.139	.139
N	4802	1007	832	832	832

NOTE: Numbers are extended beta-binomial coefficients with standard errors in parentheses. Asterisk (*) indicates coefficients are significant at the .05 level. [t] indicates coefficient is significant at the .10 level.

Table 3. Logit Models of Assignment to Important Senate Committees

Independent Variables	Big Four	Top 10	*Changing* *from*	*to*[a]	*Changes prob. of* *Big Four by*	*Top 10 by*
Seniority (Log)	1.142* (.102)	1.612* (.125)	3	5	**.239** (.187, .286)	**.223** (.170, .282)
Vacancies	.061* (.011)	.010 (.008)	3 / 10	9 / 25	**.084** (.058, .112)	.026 (-.012, .070)
State Other	-.113* (.030)	.134* (.034)	0 / 1	2 / 5	**-.050** (-.075, -.023)	**.085** (.042, .138)
Loyalty	.112 (.074)	.124 (.082)	-.15	.57	.018 (-.008, .043)	.014 (-.005, .034)
Amateur	-.281 (.232)	-.643* (.235)	No	Yes	-.059 (-.166, .042)	**-.118** (-.218, -.033)
U.S. House	.530* (.218)	.285 (.221)	No	Yes	**.130** (.024, .233)	.040 (-.019, .103)
State Legislator	1.051* (.269)	.598 (.369)	No	Yes	**.257** (.130, .372)	.076 (-.015, .159)
17th Amendment	.799* (.257)	1.476* (.290)	No	Yes[b]	**.255** (.182, .320)	**.132** (.092, .179)
South	-.345 (.206)	.244 (.222)	No	Yes	-.074 (-.153, .020)	.034 (-.031, .093)
Age	-.011 (.009)	.014 (.009)	50	62	-.030 (-.083, .023)	.027 (-.007, .064)
Lawyer	-.288 (.169)	.098 (.181)	No	Yes	-.063 (-.140, .015)	.015 (-.043, .069)
Trend	.015 (.014)	-.005 (.016)				
Constant	-1.885* (.530)	-1.613* (.590)				
Log likelihood	-1707.70	-961.08				
Pseudo R2	.157	.257				
N	2946	2946				

NOTE: Numbers in columns labeled Big Four and Top 10 are logit coefficients with standard errors clustered by senator in parentheses. The baseline probabilities of assignment, i.e., when 17th Amendment is set to "No," and other variables are set to their medians are .37 for big four, and .80 for top 10 committees. Boldface and asterisk (*) indicate differences are significant at the .05 level. Numbers in parentheses are upper and lower boundaries of the critical interval for each estimate. Probability figures and first differences generated using CLARIFY (King et al. 2000).

(a) These values correspond to the 25th and 75th percentiles.

(b) First differences reported for this variable also include the effects of changing trend from 15 to 32.

Figure 1. Share of Senators Holding Previous Public Office and Pre-Senate Professionalization by Era

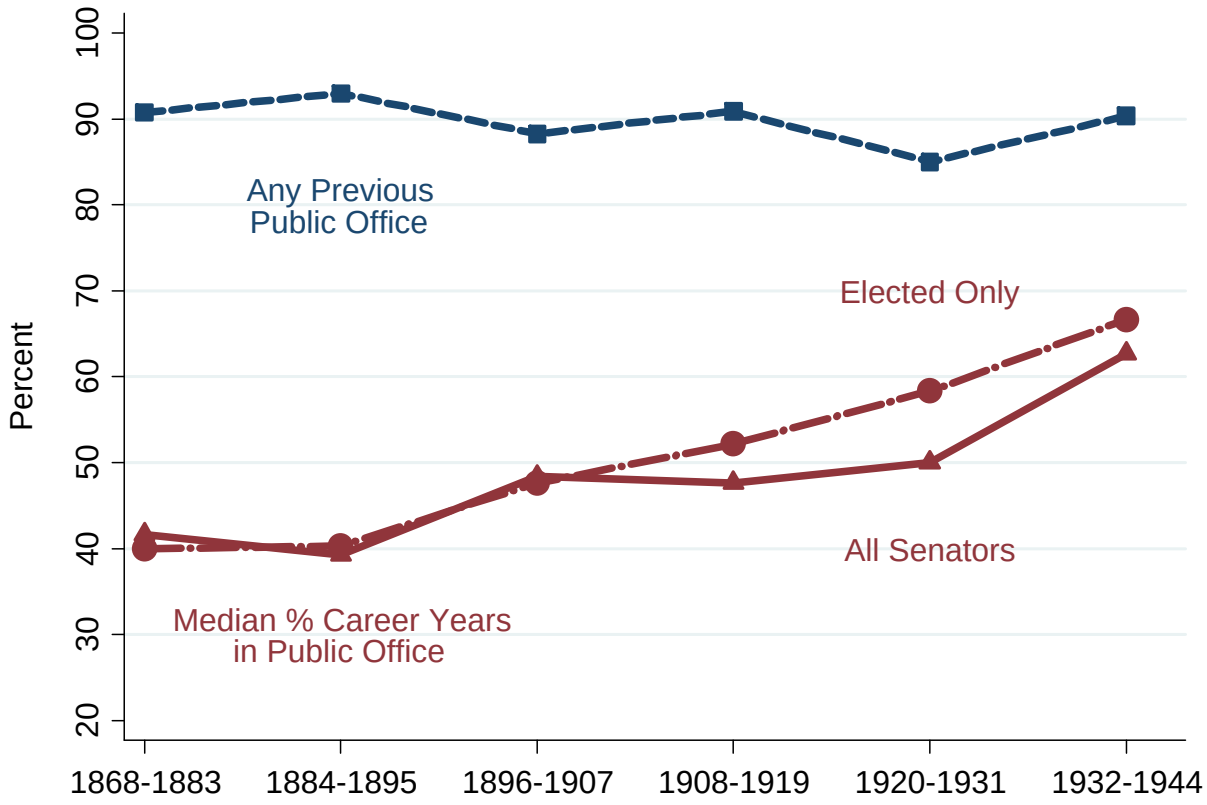

Figure A1. Alignment of Pre-Senate Career Sequences for Two U.S. Senators

George Frisbie Hoar (R-MA)

R R H H H H H H H H S

ϕ U U R R R G G G G S

Tasker Oddie (R-NV)

G = Governor; H = House; R = State Legislative; S = Senate; U = State Law Enforcement

Step 1: Insert element R
Step 2: Replace element U with R
Step 3: Replace U with element H
Step 4: Replace R with H
Step 5: Replace R with H
Step 6: Replace R with H
Step 7: Replace element G with H
Step 8: Replace G with H
Step 9: Replace G with H
Step 10: Replace G with H