

Who governs? Academic decision-making in U.S. four-year colleges and universities, 2000-2012

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Abstract

This study compares the explanatory power of two models of academic governance: dual and managerial control. The research is based on characterizations by chief academic officers of the primary decision makers involved in 13 types of recurrent academic decisions. We examine change between responses to surveys fielded to U.S. four-year colleges and universities in 2000 and 2012. We find limited support for the dual control and the managerial control models in both years. As an alternative to the two dominant conceptual models, we develop an empirically grounded classification based on multidimensional scaling and cluster analysis. In each year we find high faculty participation and management-dominant clusters. The other identified clusters do not map well on to either of the two dominant conceptual models. Given these results, we argue that configurational analysis should be used as a supplement to future studies monitoring the incidence of dual and managerial control in academic governance.

Keywords: academic governance, dual control, managerial control, faculty participation

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Introduction

Following the founding of the American Association of University Professors (AAUP) in 1915 and the Berkeley faculty revolt of 1919¹, the governance of leading U.S. four-year colleges and universities gradually developed in the direction of a dual pattern in which senior administrators maintained primary responsibility for fund raising, budgetary allocations, strategic planning, and administrative appointments, while faculty members maintained primary responsibility for curriculum, educational policies, and standards for professional evaluation (AAUP et al., 1966; Corson, 1960). The dual control model follows from a conception of colleges and universities as collegial institutions. The model fuses managerial and professional forms of control (Freidson, 1985, chap. 7), allocating responsibility for overall institutional direction to managers, but preserving the responsibility of faculty professionals for those areas closest to their core technical expertise as teachers and researchers. Prior to the era of shared governance, most U.S. colleges and universities were governed by strong presidents, chosen and supported by boards of trustees. These presidents exercised control over all aspects of the academic enterprise, including what professors could and could not say in the classroom (see Hofstadter & Metzger, 1955).

The development of the dual pattern, often referred to as “shared governance,” was greatly encouraged by the professionalization of the faculty in the post-World War period. Jencks and Riesman (1968) described this “academic revolution” as marked by the growth of membership in disciplinary associations, the creation of national labor markets controlled by the disciplines, and the development of expectations that college teachers would also be scholars and researchers. Undoubtedly, the postwar expansion of higher education, with a broader and

stronger core of research universities, enhanced the market power of professors and therefore their capacity to demand meaningful participation in governance (Geiger, 1993).²

As we will use the term, “dual control” comprises both a division of labor between the faculty and the administration and areas of joint responsibility. The basic principle underlying this division of labor is stated well by Freidson (1985): “The faculty has the discretionary right to determine how...resources, once granted, will be put to use but not the right to determine how those resources are to be allocated in the first place” (p. 150). Dual control further identifies areas in which faculty and administrators should have joint responsibility for decision making because they require both the faculty’s technical expertise and management’s fiduciary responsibilities.

Beginning in the mid-1990s, many writers questioned the continuing relevance of dual governance as norm and practice and offered an alternative image of academic governance which we will call “managerial control.” These writers saw control and responsibility shifting toward administrators, even in areas in which the faculty had in the past held primary responsibility (see, e.g., Coopers & Lybrand, 1995; Gumport, 1997; Waugh, 2003). The managerial control model follows from a conception of colleges and universities as increasingly adopting a corporate pattern of governance, replacing the collegial forms of earlier eras. Scholars who identified this trend also focused on the consequences of managerial control, including actions that channeled academic development along managerial-approved lines and restriction of faculty autonomy over teaching, curriculum, and conduct of research (Aronowitz, 2006; Burgan, 2006; Cooper & Lybrand, 1995; Marginson & Considine, 2000; Rhoades & Sporn, 2002; Slaughter & Leslie, 1997; Tuchman, 2009; Washburn, 2005).

Traditionally, state control and control by the academic body were much stronger in Europe, South America, and Asia than in the United States, but recently higher education institutions throughout the world have moved toward a strong executive model due to increased autonomy and the growing complexity of university operations (see, e.g., Eurydice European Unit, 2008: 33-43). As senior management assumes expanded responsibilities, including some responsibilities once clearly under the auspices of the academic body, issues of managerial versus dual control have become relevant to universities throughout the world.

Research questions

This paper poses three research questions about academic governance in the United States: (1) Does the dual control model adequately capture decision-making patterns in U.S. four-year colleges and universities? (2) Do decision-making structures reflect higher levels of managerial control over time? (3) Insofar as neither the dual nor managerial control models adequately capture patterns of decision-making, what would a more accurate representation look like?

These questions are important because previous studies have not been designed to compare the prevalence of dual or managerial control in U.S. colleges and universities or to investigate whether a better alternative to either one exists. A number of scholars who have offered theoretical characterizations of academic governance have advocated for empirical exploration of the variation of governance structures including comparisons across individual institutions housed within the same nation-state (Bleiklie & Kogan, 2007; Dobbins, Knill & Vögtle, 2011). Writers who have emphasized the development of managerial control in the U.S. often select conforming features of change at specific institutions to support their hypothesis, rather than looking at comparable measures of decision-making across a range of institutions.

Nor have these studies looked at changes over time to determine whether dual control norms are giving way to managerial control or whether, alternatively, dual control norms are holding their own or even expanding. Previous studies also have not investigated the possibility that governance structures fail to conform well to either model. We can imagine any number of structures that do not conform well to the two dominant conceptual models. We might, for example, imagine dean-centric structures or highly inclusive structures in which the great majority of decisions involve multiple actors, some from the administration and some from the faculty.

Previous studies

Only a few large-scale survey-based studies of academic governance in tertiary education have been published. Goedegebuure & de Boer (1996) surveyed 131 institutions across Europe and found that in general, faculty was less involved in governance decisions than central councils and central administrators, although patterns of shared governance were prevalent. Despite the general pattern, the authors demonstrated that there was significant variation by country. In the United Kingdom for instance, governance structures were dominated by “academics” and central administrators with very little input from faculty. In Germany, the central councils were very strong, while in the Netherlands, Denmark, and Sweden, there was a strong faculty presence. In 2008, Panova conducted an empirical analysis of governance structures in 406 higher education institutions in Russia. Panova was interested in seeing how well the existing structures matched to either “collegial” (i.e. decentralized and democratic) forms, or “hierarchical” (i.e. highly centralized) forms. Contrary to Goedegebuure and de Boer’s findings, Panova found that governance structures in Russia were mostly hierarchical.

Empirical studies examining governance in U.S. institutions of higher education since the 1970s have been largely interested in assessing the level of faculty participation in governance, and did not explicitly test dual or managerial control theories (Baldrige et al., 1974; Baldrige & Kemerer, 1976; Kaplan, 2001; Kaplan, 2004; Kissler, 1997; Tierney & Minor, 2003). In Kaplan's survey, for example, 84% of respondents reported that faculty either made or directly influenced institutional policy, and this was most likely to be true in liberal arts colleges (2004). All large-scale studies found significant levels of faculty participation.

Each of the studies also showed the existence of some management-dominant institutions. Estimates of the size of this category varied, however, depending on question wording, from "roughly half" thinking their institutions were "administratively dominated" (Baldrige & Kemerer, 1976) to approximately 25% seeing "most decisions as centralized" (Tierney & Minor, 2003) to 20% seeing "hierarchy" as the best description of how decisions are made even in educational policy (Kissler, 1997). In addition to relying on subjective descriptive language, none of the studies examined changes in decision making over time.

Data and methods

Respondents

Our research is based on data from the Colleges & Universities 2000 (C&U 2000) surveys of chief academic officers (CAOs). The respondents to the surveys are, by virtue of their job responsibilities and the scope of their activities in academic affairs (Birnbaum, 1988; Rosovsky, 1990), the campus officials most likely to have adequate knowledge of decision-making in their institutions across a wide range of decisions. In the United States chief academic officers typically have the title provost or academic vice president, and they are the second in command to the university's chancellor or president. Their responsibilities are for the

management of academic affairs, while chancellors and presidents focus to a greater degree on external relations. Some European and Asian universities do not have an analogous office to the U.S. provost or academic vice president. Instead, rectors (in Europe), chancellors (in England), and presidents (in Asia) may act as the chief academic officers, delegating specific functional areas to their deputies. However, with the growing size and complexity of higher education institutions, many universities across the world have developed analogous offices to the American provost or academic vice president. The titles of these offices vary and include: provost (e.g. University of Chile), deputy vice chancellor -- academic (e.g. University of Melbourne), vice rector for academic affairs (e.g. La Sapienza Universita di Roma), senior pro-rector (e.g. St. Petersburg State University), vice chancellor for academic affairs (e.g. University of Macao), and pro-vice chancellor (e.g. University of Delhi).

The survey was sent to CAOs of the 385 four-year colleges and universities in the C&U 2000 sample. C&U 2000 is based on a stratified random sample of U.S. four-year colleges and universities in the year 2000.³ The sample is weighted so that results are representative of the universe of four-year colleges and universities in 2000, excluding for-profits and specialized institutions. Response rates varied between the two survey years. In 2000, slightly over 300 responded; in 2012, slightly over 200 responded. Forty eight percent (183) of CAOs responded to the survey both in 2000 and in 2012 allowing for a direct comparison of a matched sample of institutions across the two survey years. However, some CAOs did not respond to all items related to decision making structures for both time points. These responses were excluded from the analysis, leaving responses from 139 CAOs in the matched sample.

Survey items

Both surveys asked CAOs to identify primary decision makers in each of 13 common and recurring academic decisions. We developed predictions about which actors would be involved in decisions from the basic principles espoused by advocates of the dual control model -- namely, that the administration should have primary responsibility and the faculty little or no responsibility for matters of budget, major new resource allocations, and selection of administrators, while the faculty should have primary responsibility and the administration little or no responsibility for matters of curriculum, educational policy, and departmental self-governance. Where both professional expertise and commitment of resources are involved, we interpreted the dual control model as suggesting that faculty and administration should have joint responsibility for decision making.

The 13 decisions we studied included six in which the dual control model, as we interpret it above, would predict primary administrative responsibility and limited faculty involvement: (1) selection of deans, (2) control of replacement positions for departing senior faculty, (3) control of replacement positions for departing junior faculty, (4) determination of departmental budgets, (5) decisions about program consolidations and closings, (6) determination of faculty course loads. They included three decisions in which the dual control model would predict primary faculty responsibility and limited administrative involvement: (1) addition of new courses to the curriculum, (2) determination of program emphases at the departmental level, (3) hiring of departmental support staff. They also included four decisions in which the dual control model would, as we interpret it, predict joint faculty-administrative responsibility: (1) selection of department chair people, (2) evaluation of faculty for promotions, (3) determination of new college or university-wide academic initiatives, and (4) planning for new interdisciplinary programs.

The surveys asked respondents to mark “at which level or levels decisions are primarily made,” and it noted that respondents should mark as many levels as apply. The surveys emphasized that respondents should mark only those actors who share “a primary role” in decision making. On the surveys in a well-marked and highlighted box, we defined “a primary role” as “those who would expect to be involved in negotiations over actual commitments of resources.” The surveys explicitly stated that “primary role” does not refer to every actor “consulted at some time during the process of decision making.” By using this phrasing we intended to encourage respondents to focus on those actors who had a formal role in decision-making. The question allowed respondents to mark as many as six types of actors for each of the decisions: (1) governing and/or coordinating boards, (2) central administration, (3) deans, (4) departmental faculty, (5) academic senate committees, and (6) other. In our analyses, we excluded the other category, because it was marked just four percent of the time and those who did mark it identified a wide range of other actors.

It is important to emphasize that CAO responses are cognitive maps of how decision making occurs, not ethnographic accounts. They represent typified versions of a reality that may in some concrete instances be much less clearly structured or structured in idiosyncratic ways. At the same time, relative to previous survey-based studies our approach has the virtue of asking respondents, not for general assessments of whether faculty or administrators are involved in decision making, but rather about the specific actors involved in 13 specific types of decision making. It offers a more fine-grained approach to the study of decision-making than other survey-based studies of U.S institutions of higher education have offered.

Evaluating the dual and managerial control models

We first assessed the 13 items for evidence of dual control by examining the proportion of CAOs who chose administrators-only, faculty-only, or joint responsibility responses. To be categorized as administrators-only, the decision had to be marked as including administrators (i.e. board, central administration, and/or dean) but no faculty (i.e. departments and/or academic senates). To be categorized as faculty-only, the decision had to be marked as including faculty, but no administrators. When decisions were marked as including both administrators and faculty, they were coded as joint responsibility. We used the liberal criterion of 50% or more of respondents in one of the three categories (i.e. administrators-only, faculty-only, or joint responsibility) as an indicator of a normative pattern across the sample, while recognizing that strong norms would be associated with more stringent fit criteria. We then compared the responses to the predictions of the dual control model as we interpreted it above.

We then examined the items for evidence of institutions fitting the model of managerial control. This examination required thinking not about the distribution of actors across decisions, but rather about the number of decisions made exclusively by administrators. We assumed that managerial control is evident only when a comparatively large number of decisions were said to be made by administrators only (i.e. by some combination of board, central administration, and deans) relative to the decision norms in the sample. We first looked at the central tendency (specifically the median due to skewness) of decisions made only by administrators. We then identified institutions in which twice as many or more decisions than this norm were made by administrators-only. We characterized these latter institutions as “managerially controlled.” Although the criterion we used is not stringent, we regard it as a reasonable approach, given that the median number of administration-only decisions was low in 2000, just four, and that very

few institutions were identified by their CAOs as making more than nine of 13 decisions by administrators only.

Configurations of governance structures

Because we find limited support for the dual and managerial control models, we also developed an empirically-grounded approach to studying CAO's representations of governance structures. We use the term "configurations" to denote the particular patterns of primary actors our respondents marked in the 13 decisions. These configurations, represented by clusters of institutions, provide a picture of similarities and differences among institutions in decision-making across all 13 decisions.

We used multidimensional scaling and cluster analysis to generate clusters of institutions with similar governance patterns. The multidimensional scaling approach uses relational data (how similar or "close" in decision making each case is to every other case in the sample) in order to identify underlying latent dimensions of governance. For instance in our sample, one of the latent dimensions appears to be the number of actors involved in a decision. One can think of how this property of governance can be independent of the actual types of actors involved. Institutions are then clustered into groups that are similar to each other along all of the latent dimensions discovered.

We began by creating distance (i.e. dissimilarity) matrices for each decision. Each of the 13 distance matrices displayed a distance value for every pair of universities in our sample. Lower values meant that universities in a given pair were "close" or similar in the types of actors responsible for making a particular decision. We used an ordinal scale running from 1 to 5 with the academic senate coded as 1, departmental faculty coded as 2, deans coded as 3, the central administration coded as 4, and the governing board coded as 5. The categories are ordered such

that higher values on the scale correspond to decision makers with an increasingly higher level of administrative responsibility. The lower the value of the decision maker, the more their interests reflect those of the faculty. In a sense, we have created a semantic differential reflecting those decision makers with the interest of the faculty at one end, and those with the interests of management and administration at the other. Boards have ultimate responsibility in most higher education institutions and typically have the lowest level of interaction with faculty members. Central administration has executive authority in day-to-day operations of the university as a whole, and is mostly composed of non-faculty members. Deans are middle management and exercise authority in their colleges, but are more likely to be active faculty members than officers of central administration. Departments have operational authority in many institutions over decision making bearing exclusively on their departments, and decisions are made almost exclusively by active faculty members. In the United States, academic senates vary considerably in their influence and authority. In some cases they have juridical authority over areas of faculty welfare, curriculum, and educational policy; in other cases they may be nearly moribund. Birnbaum (1989, p. 423) observed, “Academic senates are generally considered to be the normative organizational structure through which faculty exercise their role in college and university governance at the institutional level.” Because academic senates are the decision makers that most broadly reflect the interests of faculty we have placed them at the bottom of the ordinal scale. This placement is also appropriate given that some academic senates in the U.S. exercise very little or no authority in governance.

To calculate the distance between any two universities on a given decision, the algorithm first determines whether their responses are identical matches. If they are, $D_{AB} = 0$. If not,

$$D_{AB} = \frac{1}{4} \sqrt{\frac{\sum_{ij}(a_i - b_j)^2}{mn}}$$

where D_{AB} is the distance between institution A and B in decision making, a_i is the value of each level of decision making marked present by institution A , b_j refers to the value of each level of decision making marked present by institution B , m is the total number of levels marked present by institution A , and n is the total number of levels marked present by institution B . The equation sums over i from 1 to m and over j from 1 to n . The multiplier of $\frac{1}{4}$ is included to normalize the distance measure so that it ranges between 0 and 1, 1 being the maximum distance between schools on a decision. We then entered the 13 distance matrices into a weighted multidimensional scaling program using the PROXSCAL algorithm to determine the coordinates of multidimensional space in which distinctive governance configurations could be identified. Each school was represented as a point in the multidimensional space. The weighted multidimensional space algorithm spread schools in space in a way that was consistent with the distance matrices. We then clustered schools into groups based on how close they were to each other in this space using the k-means method⁴.

Results

Dual control

In 2000 we found nine of the 13 decisions met our liberal fit criterion for adherence to the dual control model of governance (i.e. at least 50% of respondents identifying actors consistent with the expected pattern). More than half of respondents listed only administrators (i.e. boards, central administration, and/or deans) as the primary decision makers on five of the 13 decisions: (1) selection of deans, (2) control of replacement positions for departing senior faculty, (3) decisions about program consolidations and closing, (4) selection of department chairs, and (5) control of replacement positions for departing junior faculty. These included four of the decisions we anticipated would be primarily the responsibility of administrators, but not two

others: determination of departmental budgets and determination of faculty workloads. Half or more of respondents listed only faculty (i.e. departments or senate) as primary decisions makers on two of the 13 decisions: (1) determination of programmatic emphases at the department level, and (2) hiring of departmental staff. The 50% threshold was not met for a third decision we anticipated as involving faculty only: addition of new courses. More than half of respondents listed both administrators and faculty as primary decision makers on three of the decisions we expected to be joint responsibilities: (1) evaluation of faculty for promotion, (2) planning for new interdisciplinary programs, and (3) planning for new campus-wide initiatives. The 50 percent threshold was not met for the fourth decision: selection of department chairs.

[Insert Table 1 Here]

The dual control model provided a somewhat better guide to the 2012 data. Eleven of the 13 decisions fit our expectations using the 50% fit criterion. More than half of respondents listed only administrators as the primary decision makers on all six of the decisions expected to be decisions made by administrators. Two of the three expected faculty-only decisions met the criterion, as did three of the four expected joint responsibility decisions.

In sum, fit with the dual control model was satisfactory, particularly in the 2012 data, using the liberal 50% criterion. Fit in this sample becomes much less satisfactory when we raise the criterion. In 2000 only one of 13 decisions received as many as two-thirds of responses in the normative category derived from the model, and only three of 13 met this two-thirds level in 2012. We characterize the level of support we found for the dual control model as increasingly satisfactory with time at the 50% level but unimpressive using more stringent fit criteria.

Managerial control

By a strict measure of managerial control -- 12 or 13 decisions made exclusively by administrators -- only one percent of institutions would be characterized as managerially-controlled in either 2000 or 2012. Less stringent measures may consequently be a more realistic guide to the incidence of managerial control. In 2000 nearly one-fourth of CAOs (21%) said that administrators-only were involved in eight or more of the 13 decisions, or twice the 2000 norm. In 2012 slightly more than one-fourth of CAOs (27%) said that administrators-only were involved in this many decisions. The change of 6% over the 12-year period was not statistically significant at $p < 0.05$. When we raised the criterion for managerial control to nine decisions or more made by administrators only, the percentages in the managerially-controlled category fell to 14% and 17%, respectively, and again the change over time was not statistically significant.

We characterize the support for the managerial control model as very limited. Even using the non-stringent criterion of eight or more decisions made by administrators only, we found that less than one-third of institutions in either year fell into the managerially-controlled category. More stringent criteria led to sharp reductions in the proportion of managerially-controlled institutions.

Configurational analysis

Given the unimpressive fit of both the dual and managerial control models, it seemed desirable to take an alternative, empirically-grounded approach to the study of governance structures. Such an approach allows us to see decision-making patterns among institutions, as identified by their CAOs, without forcing them into preconceived typologies.

In the multidimensional scaling analysis, we determined that a four-dimensional solution was most appropriate in both years based on an examination of plots displaying normalized raw stress values. Stress values correspond to the difference between the configuration of the

institutions in multidimensional space and the set of distance matrices that this scaling process is attempting to approximate using latent dimensions. The objective is to find a small enough stress value (acceptable fit to the relational data in the distance matrices) that also has a reasonable number of latent dimensions. Each additional dimension added inevitably improves the fit, however, with the addition of a fifth dimension, the negative slope on the plot displaying normalized raw stress transitioned to a flatter slope at which point each additional dimension yielded marginal returns.⁵ We then clustered institutions in this multidimensional space using the k-means method. Satisfactory clustering solutions yield interpretable clusters with cases spread relatively evenly between clusters. The coefficients of the agglomeration schedule tell us roughly the average amount of variance of distance/dissimilarity between cases in each cluster. Using a plot of the coefficients from the agglomeration schedule, we determined that a four-cluster solution was optimal for the 2000 data. The same approach suggested a five-cluster solution in 2012. However, our inspection of the clusters indicated that two of the clusters were very similar to one another. We eliminated this redundancy by adopting the four-cluster solution.

We refer to the four 2000 clusters as A1-A4 and the four 2012 clusters as B1-B4. The first clusters in both years (A1, B1) can be characterized as representing the “standard academic pattern” marked by high levels of administrator involvement in decisions, some degree of faculty involvement, and average levels of joint responsibility. While clusters characterized largely by their high level of administrator involvement and normative levels of joint decision making were evident in both 2000 and 2012, the character of these clusters differed slightly between the two time points. The 2012 cluster (B1) exhibited higher levels of inclusivity and more joint responsibility, consistent with our finding of a somewhat better fit for the dual control model in

2012. In both years slightly more than one-quarter of the sample institutions fit this “standard academic pattern.” In both survey years we also find “high faculty participation” (A2, B2) and “management-dominant” (A3, B3) clusters. While the continuity between these clusters is notable across the two survey years, their character again changes subtly over time. Greater inclusivity, marked by multiple decision makers and stronger deans, becomes more characteristic of the high faculty participation cluster in 2012. By contrast, very low levels of inclusivity, marked by single decision makers and little joint responsibility, becomes more characteristic of the management-dominant cluster in 2012. In both years the high faculty participation and the management-dominant clusters included about one-quarter of the sample each. The number of institutions in the high faculty participation cluster grew a little between 2000 and 2012, while the number in the management-dominant cluster declined slightly.

The remaining two clusters represent perhaps the most interesting -- and certainly the least expected – governance structures. Cluster A4 can be characterized as a “high campus participation” cluster in which deans and senates are particularly prominent actors. This cluster disappears in 2012 and is replaced by a “low campus participation” cluster in which deans and departments have particularly limited representation in decision-making but academic senates retain an above average level of participation. The increasing average number of administrator-only decisions we found between 2000 and 2012 may be substantially due to the rise of this “low campus participation” cluster.

[Insert Table 2 Here]

Table 2 summarizes the governance characteristics of each cluster configuration for 2000 and 2012. Table 2 displays the average level of decision making (board being coded 5, central administration 4, deans 3, departmental faculty 2, and faculty senate being coded 1), average

number of administrators-only, faculty-only, and joint decisions, average number of participants involved in each decision, and the average number of each type of decision maker involved by cluster.

Discussion

The introduction of the configurational approach offers an important alternative to existing conceptual models. We find this configurational approach to be illuminating in several ways. Arguably, it provides a more accurate representation of actual patterns of decision making than the existing conceptual models are able to achieve. Certainly the clusters that emerged from this analysis did not conform neatly to the division between dual and managerial control. This is partly because inclusivity of decision making is an important dimension in the patterns we found, together with dimensions indicative of division of labor and hierarchy. This high/low participation dimension becomes very important in the 2012 data, dividing two relatively participatory clusters (B1, B2) from two low-participation clusters (B3, B4). It is also partly because some configurations simply do not fit either model well. A high campus participation cluster marked by strong deans and senates, for example, is not captured by either a dual or a managerial control model. The configurational analysis also shows clearly how the paradoxical finding of a better fit for both dual and managerial control over time can be possible. It is possible because some institutions have migrated toward a more participatory structure, while others have migrated toward a less participatory, managerially- dominated structure. We can see evidence for these movements through the changing shapes of the A1, B1 and A4, B4 clusters over time.

Although configurational analysis adds value to studies of academic governance, we would not advocate abandoning efforts to measure the incidence of dual or managerial control.

Dual control is important to the future of academe as an alternative, relatively collegial form of organization when compared to the more hierarchical governance forms typical of corporations and states. Dual control consequently remains an ideal worth monitoring. Similarly, the incidence of managerial control deserves continued monitoring because it addresses meaningful concerns about the adoption of corporate governance models in the historically more collegial institutions of academe. The contest between dual and managerial control models consequently remains of interest, even though, judging from the results of our research, these models do not capture very precisely the range of governance patterns in academe nor the complexity of the changes that have occurred in these patterns over time. For this reason, configurational analysis should become an essential supplement to all future studies of academic governance, even if it does not replace the conceptual models that have informed debate and discussion over the last several decades.

Conclusion

In this study we examined evidence for the dual and managerial control models of governance in U.S. higher education institutions. In addition, we offered an alternative empirically grounded approach that revealed some of the complexities of academic governance that should be employed in future research.

Our research makes three contributions to the study of academic governance. First, it provides evidence that dual and managerial control models only partially reflect patterns of decision-making in U.S. four-year colleges and universities, as reported by CAOs, the academic officials who are typically in the best position to describe the forms of governance at their institutions. Second, and paradoxically, our research provides evidence that the fit for both the dual control and the managerial control models improved between 2000 and 2012. Levels of

participation in decision-making increased in some sectors of academe during the period at the same time levels of concentration in decision making increased in other sectors. Third, the research provides evidence that an empirically-grounded approach to the study of governance is a meaningful supplement to studies based on existing conceptual models. This configurational approach allowed us to identify clusters of institutions that do not fit the dominant conceptual models well.

¹ The Berkeley faculty revolt of 1919 was a protest of the faculty against the autocratic Berkeley President Benjamin Ide Wheeler. The revolt led to the development of an academic senate with institutional responsibility over curriculum and educational policy, one of the first instances of formalized shared governance in the U.S.

² The AAUP delivered an influential endorsement of dual governance in its 1966 “Statement on the Government of Colleges and Universities” (AAUP et al., 1966). In this statement the AAUP and two other major higher education associations endorsed the principle that “differences in the weight of each (institutional) voice...should be determined by reference to the responsibility of each component for the particular matter at hand” (p. 136) and allocated to the faculty “primary control” over “curriculum, subject matter and methods of instruction, research, faculty status, and aspects of student life that relate to the educational process” (p. 139).

³ We excluded specialized institutions (such as seminaries, art institutes, and business colleges) from the sample, as well as for-profit institutions. The sample population includes more than 100 each of doctoral-granting, masters’-granting, and baccalaureate-granting institutions. It includes over-sampling of research universities and selective liberal arts colleges.

⁴ The k-means method picks cluster centers from randomly distributed points in the multidimensional space. Using Euclidean distance the program adds the observation (in our

case, schools) in space nearest to the cluster centers in that cluster. It then recalculates the cluster center and chooses the next closest observation. This is an iterative process in which the average cluster centers are recomputed with the addition of new observations to each cluster.

⁵To examine the fit of our weighted multidimensional scaling output, we used stress values and Tucker's coefficient of congruence. At four dimensions, the normalized raw stress value (0.07) and the coefficient of congruence (0.96) were nearly identical for both years and indicated a good fit.

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Table 1: Dual Control Predictions and Results for 13 Academic Decisions by Year^a

	<u>2000</u>	<u>2012</u>
<i><u>A. Predicted as Faculty-Only Primary</u></i>		
Dept. Program Emphases [†]	Faculty-only (54%)	Faculty-only (65%)
Hiring Dept. Staff	Faculty-only (50%)	Faculty-only (46%)
Adding New Courses	Joint Resp. (49%)	Faculty-only (55%)
<i><u>B. Predicted as Administration-Only Primary</u></i>		
Selection of Deans	Admin-only (78%)	Admin-only (81%)
Replacement of Sr. Faculty	Admin-only (59%)	Admin-only (69%)
Program Consolidations/Closings	Admin-only (56%)	Admin-only (62%)
Replacement of Jr. Faculty	Admin-only (57%)	Admin-only (68%)
Course Loads	Admin-only (48%)	Admin-only (60%)
Dept. Budgets [†]	Joint Resp. (46%)	Admin-only (57%)
<i><u>C. Predicted as Joint Responsibility Primary</u></i>		
Evaluation for Promotion	Joint Resp. (63%)	Joint Resp. (57%)
Planning Interdisciplinary	Joint Resp. (58%)	Joint Resp. (52%)
New Initiatives	Joint Resp. (57%)	Joint Resp. (50%)
<u>Selection of Chairs</u>	<u>Admin-only (53%)</u>	<u>Admin-only (61%)</u>

Source: Colleges & Universities 2000 Survey of Provosts and Academic Vice Presidents

^aBolding indicates items in which responses varied from those predicted by the dual control model.

[†]p < 0.10 (two-tailed t-test for significant change across years)

Table 2: Governance Characteristics by Configuration

<i>Configuration (2000)</i>	<i>Avg. Lvl. Decision Making</i>	<i>Avg # Adm.-only Decisions</i>	<i>Avg. # Fac.-only Decisions</i>	<i>Avg. # Joint Decisions</i>	<i>Avg. # Decision Makers</i>	<i>Avg. # Board Decisions</i>	<i>Avg. # C. Admin. Decisions</i>	<i>Avg. # Dean Decisions</i>	<i>Avg. # Dept. Decisions</i>	<i>Avg. # Ac. Sen. Decisions</i>
A1	3.06*	5.04	1.70*	6.26	2.12	1.58†	8.41*	9.21*	7.78	0.63*
A2	2.56*	2.65*	3.23†	7.12†	1.96	0.22*	5.00*	7.89	8.57*	3.75*
A3	3.09*	6.62*	2.72	3.66*	1.60*	0.90	6.82	6.25*	6.10*	0.71*
A4	2.84	4.36	2.04	6.60	2.27*	0.91	7.83	9.76*	7.96	3.08*
<i>Mean</i>	2.91	4.83	2.41	5.76	1.97	0.93	7.08	8.18	7.50	1.88

A1 – Standard Academic Pattern; A2 – High Faculty Participation; A3 – Management-Dominant; A4 – High Campus Participation

† p < 0.10, * p < 0.05

<i>Configuration (2012)</i>	<i>Avg. Lvl. Decision Making</i>	<i>Avg # Adm.-only Decisions</i>	<i>Avg. # Fac.-only Decisions</i>	<i>Avg. # Joint Decisions</i>	<i>Avg. # Decision Makers</i>	<i>Avg. # Board Decisions</i>	<i>Avg. # C. Admin. Decisions</i>	<i>Avg. # Dean Decisions</i>	<i>Avg. # Dept. Decisions</i>	<i>Avg. # Ac. Sen. Decisions</i>
B1	3.01*	4.53*	1.64*	6.83*	2.19*	1.51*	8.40*	9.08*	7.83*	1.70
B2	2.72*	3.40*	2.33	7.27*	2.08*	0.64	5.87	8.90*	8.96*	2.66†
B3	3.04*	8.07*	2.69	2.23*	1.42*	0.26*	5.79	6.79	4.69*	0.96*
B4	2.89	6.33	3.94*	2.73*	1.46*	0.91	5.89	4.30*	5.52*	2.37
<i>Mean</i>	2.93	5.71*	2.68	4.61*	1.77*	0.84	6.52	7.16*	6.61*	1.88

B1 – Standard Academic Pattern; B2 – High Faculty Participation; B3 – Management-Dominant; B4 – Low Campus Participation

† p < 0.10, * p < 0.05