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Collective Bargaining in American Higher Education

by

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I Introduction

No discussion of governance in higher education would be complete without a consideration of the role of collective bargaining in higher education. Historically, most researchers interested in the subject have directed their attention to the unionization of faculty members. Given several recent National Labor Relations Board decisions that leave open the possibility that unionization of faculty in private colleges and universities may increase in the future, we discuss collective bargaining for faculty in the next section.¹

Recently, however, attention has been also directed at the unionization of two other groups in the higher education workforce. Activists on a number of campuses have pressed for academic institutions to pay their low-wage employees a *living wage* and this has brought attention to the role of staff collective bargaining in academia. In section III, we present the first empirical estimates of the impact of staff bargaining on staff salaries in higher education.

Finally, the number of public universities in which teaching assistants, and in some cases research assistants, have won the right to bargain collectively began to expand rapidly at the turn of the 21st century. A National Labor Relations Board ruling in 2001 that permitted collective bargaining for teaching assistants at New York University, led the university to be the first private university that signed a contract with a union representing teaching assistants in the following year. Building on this ruling, graduate assistant organizing campaigns are underway at a number of prestigious private universities. We address why graduates assistants are increasingly interested in organizing in section IV and present evidence on the effects of graduate student unions

¹ Courtney Leatherman (2000)

on a number of economic variables. Finally, section V presents some brief concluding remarks.

II Faculty Unions²

Statutes governing bargaining for federal and state government employees, National Labor Relations Board (henceforth NLRB) decisions governing private higher educational institutions and the Supreme Court decision in the *Yeshiva* case have heavily influenced the growth of collective bargaining for faculty in the United States. President John F. Kennedy's 1962 executive order, which permitted federal government employees limited bargaining rights, led to the signing of the first faculty contract at the U.S Merchant Marine Academy in 1968.

State governments swiftly followed the executive order and established their own laws governing collective bargaining for public employees in their states. By 1972, 37 states had passed legislation permitting their employees to bargain collectively. The first major faculty contract at a public higher education institution was at the City University of New York in 1969. A 1979 act in California giving collective bargaining rights to faculty and other employees of 4-year colleges in the state, led in 1982 to the organization of the 18,000 faculty member California State University system.

Collective bargaining for faculty in private higher education took hold in the early 1970s when the NLRB ruled that faculty were not necessarily supervisors in a case involving a branch campus of Long Island University. This case was upheld in another NLRB case involving Fordham University. However the U.S Supreme Court effectively put the brakes on private sector faculty unionization efforts in 1980 when, in the *Yeshiva*

² Our discussion on the early history of faculty collective bargaining is drawn from Education Commission of the State (1974), Howard Means and Philip Semas (1974), Carl Ladd and Seymour Lipset (1973) and National Center for the Study of Collective Bargaining in Higher Education (1997).

case, it ruled that faculty were supervisors and thus were ineligible to bargain collectively with their universities.³ Indeed, during the decade that followed, a number of institutions, including Boston University and Fairleigh Dickinson University, successfully sought to get previously approved faculty bargaining units decertified.

As a result, faculty unionization in American higher education has become primarily a public sector phenomenon. In the mid 1990s, about 38% of full-time faculty in public higher educational institutions were covered by collective bargaining agreements, while only about 6% were covered in private higher educational institutions.⁴ Collective bargaining coverage for faculty also varied widely across Carnegie Categories of colleges and universities. While over 40% of full-time 2-year college faculty were covered by collective bargaining agreements, less than 3% of faculty at liberal arts I institutions were similarly covered. Lest the reader think that faculty unionization is strictly a 2-year college phenomenon, the percentages of full-time faculty members covered at Carnegie Research, Doctorate and Comprehensive institutions were all over 20 percent at this time.

The number of faculty covered by collective bargaining agreements at public 2-year colleges in 1996 exceeded the total number of full-time faculty employed at these institutions that year, which is evidence that many part-time faculty members are also covered by collective bargaining agreements. This should not be a surprise to anyone. More generally, there has been a tendency in many academic institutions to increasingly rely on part-time faculty as a way of reducing costs. Between 1987 and 1998, the

³ *NRLB V. Yeshiva University*, 944 U.S. 672 (1980)

⁴ We compute these percentages from knowledge of whether full-time faculty in each institution were covered by a collective bargaining agreement (National Center for the Study of Collective Bargaining in Higher Education and the Professions (1997)) and used full-time faculty employment data from WebCaspar.

proportion of adjunct and other faculty employed part-time in the United States rose from 33 to 42 percent, with most of the growth occurring during the first half of the period.⁵ It is only natural that the low pay and lack of benefits that many of these positions offered would serve as a stimulus for organization of the faculty members that occupied them.

Numerous studies have been undertaken of the impact of collective bargaining coverage on faculty members' salaries relative to faculty members' salaries at academic institutions in which faculty are not covered by collective bargaining agreements. These studies suggest that at best faculty unions increase their members' average salaries by a very small percentage and some find that faculty unions have had no effect.⁶ These findings should also not be a surprise because most faculty members covered by union contracts are employed in public higher education institutions, most organized faculty in public higher education lack the legal right to strike and the two major sources of revenue that finance faculty salaries – tuition and state appropriations – are typically controlled by the legislature and the governor, not by the trustees of the state institutions. With little bargaining power and very few monopoly rents to extract, one should expect very small union impacts on faculty salaries.

Some observers have feared that faculty unions would press for across the board, rather than merit increases, and thus reduce the financial incentives that faculty have to be productive. However a careful study of faculty contracts in higher education found that, more often than not, they contained explicit provisions for merit increases⁷. Often, these contracts required that faculty groups be involved in the determination of which of

⁵ Robin Wilson (2001)

⁶ See for example, Javad Ashrat (2000), Debra Barbezat (1989), Randall Kessering (1991) and Daniel I. Rees (1993). James Monks estimates faculty union impacts of 7 to 14%, which are larger than the estimates found in other studies, but his study focused on faculty at 2-year public institutions.

⁷ Gary Rhoades (1998)

their colleagues deserved merit increases, however, this requirement is not in conflict with what proponents of a strong faculty role in governance should want.

Researchers have also attempted to ascertain the effect of faculty unions on a variety of other outcomes including research productivity, job satisfaction, turnover behavior, salary differentials across fields and the probability of obtaining tenure.⁸ In the main these studies have been cross-section in nature and have not controlled for the possibility that whether an institution's faculty members are covered by a collective bargaining agreement is not a random event. For example, if collective bargaining is more likely to be established in institutions in which faculty are poorly treated by the administration and have low salaries and high turnover rates, it is possible that even if collective bargaining leads to an improvement in faculty salaries, one might still observe a negative relationship between collective bargaining coverage and faculty salaries. However, in this example the direction of causation would run from poor salaries to faculty collective bargaining coverage, not *visa versa*. The empirical analysis we undertake in the next section attempts to correct for this problem.⁹

One question that has yet to be addressed by researchers is how faculty unions influence the system of shared governance that is in place at many institutions. Shared governance by its nature is cooperative, while collective bargaining may be

⁸ See for example, Mark Meador and Stephen Walters (1994), Jane Lillydahl and Larry Singell (1993) and Daniel Rees (1994). Rees' study, which addresses turnover, uses longitudinal data and is not subject to the criticism that follows

⁹ One study that did use longitudinal data for a set of Canadian universities, Arthur Hosios and Aloysius Siow (2001) found that the adoption of collective bargaining was associated with an increase in the senior faculty/junior faculty wage premium and a reduction in salary dispersion across fields of study. Neither result is surprising because they also found that the leaders of campus unions tended to be senior faculty who were employed in lower-paying disciplines.

confrontational.¹⁰ A hypothesis, generated by one of us after participating for many years in faculty senate meetings at an institution without faculty bargaining, is that collective bargaining may actually improve the system of shared governance, because it allows faculty participating in shared governance to focus on what is best for the institution as a whole, not solely on what is best for the faculty.

To see this consider the position of a faculty member participating on a joint faculty/administrative committee during deliberations on the institution's financial plan for the next academic year. If the average faculty salary increase has to be resolved as part of this discussion, the faculty member may focus his attention heavily on increasing this component of the budget, and not worry as much as he should about the other aspects of the budget. On the other hand, if the faculty salary increase pool is determined through collective bargaining and is not part of the budget deliberation, the faculty member can focus all of his attentions on the other aspects of the budget and more carefully consider all of the tradeoffs involved. We encourage researchers to investigate the hypothesis that the presence of a faculty union may actually improve the functioning of systems of shared governance.¹¹

III Staff Unions¹²

In 2001, a twenty-day sit-in at Harvard University brought the living-wage debate to the forefront of American consciousness. After a six-month study, the Harvard Committee on Employment and Contracting Policies, a 19 member committee of faculty,

¹⁰ This statement ignores the recent movement towards *mutual gains bargaining*, which is discussed in David Corry (2000)

¹¹ Somewhat ironically, a bill recently passed by both houses of the Washington State legislature would give faculty members at Washington's public 4-year colleges the right to bargain collectively, but only if the faculty senates at these institutions were eliminated. See Piper Fogg (2002)

¹² This section summarizes and extends materials first presented in Daniel Klaff and Ronald Ehrenberg (2002)

staff, administrators and students that had been appointed by Harvard's president as a result of the discussions to end the sit-in, recommended giving raises to the university's lowest paid employees and relying more on collective bargaining in the future to assure that the wages paid by subcontractors did not undercut local union wage scales.¹³ A three-day sit-in at the University of Connecticut that related to the living wage issue also yielded a substantive victory for campus workers. The protesters there generated an almost two-dollar increase in wages, as well as substantial improvement in benefits for many of the university's workers.¹⁴

The growth of living wage movements on almost one hundred campuses reflects the large variation in the wages paid to college and university staff across the country.¹⁵ There are many potential explanations for these salary differences, including differences in local cost of living and differences in the resources that the academic institutions have available to pay faculty and staff salaries. One other possible explanation is the influence of staff unions. There have been no studies, however, of the impact of collective bargaining on staff salaries in higher education.

This section of our paper addresses this issue. After providing some background data on the number of blue-collar and white-collar employees covered by collective bargaining agreements at American higher education institutions, we use data from a 1997-1998 study on the costs of staffing in higher education conducted by the Association of Higher Education Facilities Officers (APPA) and other sources to estimate models that explain the variation across academic institutions in salaries for a number of narrowly defined blue collar and white collar occupational groups that are employed by

¹³ Chronicle of Higher Education (January 11, 2002)

¹⁴ Chronicle of Higher Education (May 25, 2001)

¹⁵ Martin Van Der Werf (August 3, 2001)

the academic institutions' facilities divisions.¹⁶ Of primary interest to us, is the extent to which the salaries of academic staff covered by collective bargaining agreements exceed the salaries of otherwise comparable academic staff that are not covered by such agreements.

Table 1 presents data on the employment levels of blue-collar and white-collar staff members employed in American higher education in the mid 1990s, as well as the percentage of each group that was covered by a collective bargaining agreement. The percentage of blue-collar employees represented by staff unions, 42.8%, is much larger than the percentage of white-collar employees, 23.4%, represented by staff unions. Because there are many more white-collar employees, in the aggregate about 27.7% of staff at American colleges and universities were covered by union contracts in the mid 1990s.

The salary and collective bargaining coverage data used in our study come from the APPA's *1997-1998 Comparative Costs and Staffing Report for College and University Faculties*.¹⁷ This data set provided information on salary levels and collective bargaining coverage for 47 narrowly defined occupations at 193 American and Canadian colleges, universities and elementary and secondary schools. We restricted our attention to American higher education institutions that could be classified as Research, Doctoral, Masters, Baccalaureate, or Associate (2-year) institutions.¹⁸ The sample that we used consisted of 163 institutions. Table 2 presents the breakdown of the institutions in our

¹⁶ The acronym APPA is derived from the earlier name of the organization, the Association of Physical Plant Administrators of Universities and Colleges.

¹⁷ We are grateful to Joseph Lally, Director of Business Operations for Cornell's Facilities Services Division, for granting us access to these data, under the condition that we not identify the specific institutions that participated in the survey.

¹⁸ Carnegie Foundation for the Advancement of Teaching (1994) In addition to excluding Canadian and elementary and secondary institutions, we also excluded specialized United States institutions such as seminaries and conservatories.

sample by Carnegie classification and by form of control. Public institutions constitute the majority of the institutions in each Carnegie category in our sample, except for the Baccalaureate category.

We restrict our attention to the 9 occupations for which at least 115 institutions in the sample reported both an occupational salary level and whether the employees in the occupation were covered by a collective bargaining agreement. Table 3 shows the difference in the mean annual salaries of unionized and non-unionized employees for each occupation, as well as the ratio of the mean salary in an occupation for employees that were covered by union contracts to the mean salary in an occupation for employees that were not covered by a union contract. In each occupation, employees covered by a union contract earned considerably more than employees not covered by a contract, with the raw differentials in the means salaries varying across occupations from 23 to 42 percent. The differentials were largest in the skilled trades. Salaries for custodial workers, the group of employees that have been the focus of the living wage debate on many campuses were the lowest in the group and the unionized custodial workers in the sample earned about 35 percent more on average than custodial workers at academic institutions that were not covered by a collective bargaining agreement.

The estimated differences in the salaries of academic staff covered by and not covered by union contracts reported in table 3 are raw differences that do not control for characteristics of the institutions, or the areas in which the institutions are located, that might be expected to influence staff salaries independent of unionization. For example, if academic institutions whose employees were organized also had greater financial resources, or were located in higher cost of living areas, than institutions whose

employees were not organized, one would expect to observe the former paying higher salaries than the latter, even if unionization per se had no effect on the salaries of staff at academic institutions. To estimate, whether staff unions to influence salaries, it is necessary to control for the other characteristics of the institutions that might be expected to influence salaries.

To accomplish this, we estimate staff salary equations, by occupation, in which the logarithm of the annual salary paid to a staff member in an occupation at the academic institution is specified to a function of a categorical variable indicating whether the particular occupation is unionized at the institution, a vector of categorical variables indicating the Carnegie classification of the institution, a vector of other variables that vary across institutions and are expected to influence staff salaries, and a random error term. Because the dependent variable is the logarithm of salaries, the interpretation of the estimate of the coefficient of the union variable is that it is the estimated percentage by which the salaries of staff in institutions with collective bargaining for the occupation exceed the salaries of staff at institutions without collective bargaining for the occupation, after controlling for the other factors expected to influence salaries.

We include in the set of other variables expected to influence staff salaries a number of variables that influence the resources that the academic institutions have at their command out of which to pay the salaries of staff. These include the logarithm of the institution's endowment per student, the logarithm of its average undergraduate tuition and, for public institutions, the logarithm of its state and local government appropriation per student.¹⁹ In our basic specification, we also include the logarithm of

¹⁹ For public institutions this is a weighted average of its in-state and out-of-state tuitions, with the weights depending upon the fraction of its students that come from each category.

the average salary that the institution pays its full professors, under the assumption that this probably represents the best single measure of the financial capacity of the institution. Also included in this vector, to control for differences in cost of living or wage levels across areas, is the logarithm of the mean salary of custodians in the city in which the academic institution is located. When an institution was not located in a city for which we had mean custodian salary data, the mean custodian wage in the state was substituted. Finally, included in this vector is the logarithm of the average math and verbal SAT 75th percentile score for entering freshmen at the institution. This variable, as well as the Carnegie category variables were included to see if the “selectivity” of an academic institution, or its institutional type, influences the salary of its staff, once we have controlled for its financial resources.

Row (A) of table 4 presents the estimated coefficients of the collective bargaining coverage variable from our basic model. For 6 of the 9 occupations, union coverage is associated, other factors held constant, with higher salaries, with the estimated differentials being in the range of 10 to 17 percent. The differentials are the largest for several of the occupations that historically have been heavily unionized nationwide in the building trades. Relevant to the living wage debate, we observe that unionized custodians appear to earn about 10 percent more than nonunionized custodians at academic institutions, other factors held constant

The remaining rows of table 4 summarize the results of additional econometric modeling we conducted to investigate the sensitivity of the estimated union coefficient to the variables included in the analyses and to the econometric methods we utilized. A key explanatory variable included in the estimating equation that yielded the results in row A

was the logarithm of the average salary of full professors at the institution. One can easily argue that this variable should be treated as endogenous and that including it in the model may bias the estimated union coefficient. To see if the inclusion of the full professor salary variable mattered, we reestimated our equation excluding this variable from the analyses and the estimated union coefficients from this model specification are found in row B of table 4. The exclusion of the full professor salary variable from the right-hand side of the equation leads to slightly higher estimated union/nonunion differentials, with the statistically significant coefficients now ranging from 13 to 21 percent.

The estimates presented in rows A and B of table 4 treat each occupational equation as independent. They ignore the fact that there may be some omitted institutional level variables that influence the salaries of staff commonly in all occupations. For example, the union/nonunion wage advantage for an occupation at an institution may depend upon the fraction of the other staff occupations at an institution that are covered by collective bargaining agreements. Hence the wages any given staff occupation at an academic institution may depend upon the unionization of all staff occupations at the institution.

We attempted to reestimate the models underlying the collective bargaining coverage variable coefficients reported in row A, adding as an additional explanatory variable the fraction of all 9 occupations that were covered by collective bargaining agreements.²⁰ Unfortunately, when 1 of the 9 occupations was covered by a contract, the vast majority of the other occupations also were covered by a contract. Hence the coverage by union contract variable for an occupation was very highly correlated with the

²⁰ Ehrenberg and Goldstein (1975) followed a similar procedure in their study of the impact of public sector unions on the wages of different occupational categories of public employees.

fraction of the 9 occupations at the institution that were covered by union contracts. The high degree of collinearity prevented us from estimating such a model.

A second way to get at this issue is simply to treat the 9 occupational salary equations as a single system and to allow the error terms to be correlated across equations. Estimating this system using the method of seemingly unrelated regressions will increase the efficiency of our estimates, however, as long as none of the other statistical assumption was violated, the estimates reported in rows A and B of table 4 would remain unbiased.²¹

The method of seemingly unrelated regressions will increase the efficiency of the estimated coefficients only if the identical explanatory variables do not appear in each equation. In our system, the only explanatory variable that varies across occupations is whether employees in an occupation are covered by a collective bargaining agreement at an institution. We have already indicated that the fraction of occupations organized at an institution is highly correlated with whether any one of the occupations is organized across institutions. Given this fact, it is not surprising that the estimated union coefficients that we obtained when we reestimated the model by seemingly unrelated regressions (these estimates found in row C of table 4); the estimated prove to be very similar to the coefficients found in row A of the table. Any differences are probably due to sampling error since the seemingly unrelated regression model could only be estimated using data on the subset of institutions that reported occupational salary and unionization data for all 9 occupations.

Finally, our estimates of the salary advantage that staff who work in unionized academic environments have over staff who work in nonunion academic environments

²¹ The seemingly unrelated regression model was developed by Arnold Zellner (1962)

treats staff coverage by a collective bargaining agreement as being exogenous. If, for example, the institutions in which we observe staff covered by a collective bargaining agreement were initially the institutions in which staff compensation was lowest, other factors held constant, our estimates will understate the extent to which academic staff unions have improved their members compensation relative to the compensation of academic staff at institutions not covered by collective bargaining agreements.

In the absence of having a panel data set that would permit us to estimate how changes in staff salaries at academic institutions are related to changes in collective bargaining coverage, the best way to handle this problem is to use the sample selection bias correction method developed by James Heckman (1979) and Lung-fei Lee (1978). To implement this method, we estimate a probit equation for union coverage in an occupation in which union coverage is assumed to be a function of the other right-hand side variables in our salary equations, as well as the proportion of private sector employees in the state who are covered by collective bargaining agreements, the proportion of public sector workers in the state who are covered by a collective bargaining variable and the interaction of each of these variables with a variable indicating whether the academic institutions is a public or a private one.²² These interaction terms permit the impact of each of the sector coverage variables on the institution's probability of having its staff covered by union contracts to vary with the public/private status of the institution.

The estimated union coefficients that we obtained when the sample selection bias correction method was used are found in row D of table 4. In most cases these estimates

²² A table with the estimated coefficients of the union coverage equation for each occupation is available from the authors upon request.

prove to be very similar to the OLS estimates reported in row A. The estimated union coefficients for carpenters, electricians, heating and cooling technicians, painters and plumbers remain statistically significant and each coefficient is close to its value in the OLS equations. The estimated union coefficients for secretaries, groundskeepers and locksmiths are statistically insignificantly different from zero, as they were in the OLS estimation. While custodians' salaries appeared to be higher when they were covered by a collective bargaining contract in the OLS specification, the selectivity corrected estimate of the effects of unions on custodians' salaries is close to zero.

In contemplating what our findings mean, the limitations of our analyses should be kept in mind. The sample of 163 academic institutions used in our study is not necessarily representative of the population of over 3000 2- and 4-year colleges and universities in the United States. The 9 occupations whose salaries we analyze all relate to employees employed in the facilities division of America's colleges and universities and the effects that we estimate for them are not necessarily representative of the effects for staff unions that one might observe for a wider range of college and university staff employed in other areas (for example, housing and dining, athletics, academic support, student services, external relations).

Nonetheless our findings do suggest that collective bargaining coverage influences staff salaries in higher education. While student and faculty activists on campuses around the country may continue to press academic institutions to pay living wages to their lower paid staff, including custodial workers, our findings suggest that a more direct way to achieve better salaries for low-paid college and university employees is to encourage them to organize and bargain collectively. Unlike private college and

university faculty members, who are effectively precluded from collective bargaining at many institutions because of the Supreme Courts decision in the *Yeshiva* case, there is no such prohibition to prevent staff at these institutions from organizing.

IV. Collective Bargaining by Graduate Assistants

The first graduate assistant union to be recognized as a collective bargaining agent was a union of graduate students at the University of Wisconsin in 1969. As noted in section II, collective bargaining at public higher education institutions is governed by state laws and as state agencies, or state courts, ruled on the applicability of these laws to graduate assistants, collective bargaining for graduate students gradually spread at public higher education institutions. As table 5 indicates, by 1999 teaching assistants at 19 public research and doctoral universities were covered by collective bargaining agreements and, in some cases, these agreements also covered research assistants at the same campuses. Since the start of 1999 13 additional major research and doctoral universities have recognized graduate student bargaining agents, including all the campuses of the University of California

Teaching assistants at Yale University have been trying to organize and bargain collectively since 1990. The push for collective bargaining for graduate students at private universities got a major boost in February 2001 when the National Labor Relations Board ruled that graduate assistants at NYU had the legal right to form a union.²³ NYU subsequently agreed to enter into collective bargaining with the union and a contract settlement was reached in February 2002.²⁴ Organization drives have subsequently begun at many other private universities, including Brown, Columbia, Tufts

²³ Scott Smallwood (2001)

²⁴ Scott Smallwood (2002a)

and Pennsylvania; a ruling by the NLRB that Brown assistants had the right to form a union has been appealed by the university.

The formation of graduate student unions is a bit of an anomaly to economists and collective bargaining scholars. The literature on unions suggests that unions are most likely to arise in situations in which workers have long-term attachment to firms.

Graduate students do not have permanent employment relationships with the universities at which they study, so why have they increasingly become interested in unionizing?

The University of Wisconsin was a hotbed of student activism in the late 1960s when the first graduate student union was formed and undoubtedly its formation was heavily influenced by this activism. The late 60s were also a booming time in the academic market for new PhDs, with times to degree averaging 5 to 6 years in many fields and a widespread availability of good academic positions. However, since that time things have changed. As table 6 indicates, across all disciplines, median total years enrolled between the granting of baccalaureate and doctoral degrees increased by 1.5 years between 1970 and 2000. Focusing on the increase in the median degree times across all fields obscures the wide differences in the changes that occurred across fields. In particular, while median time to degree went up by less than two years in virtually all of the science and engineering fields it went up by almost three years in the humanities. Humanities, and to some extent social science, graduate students found themselves spending more hours per week as teaching assistants, and service as a teaching assistant has been shown to slow times to degree.²⁵

In addition the fraction of new PhDs finding employment, let alone employment in tenure track academic jobs, by the time they received their degrees declined

²⁵ Ronald G. Ehrenberg and Pangiotis G. Mavros (1995)

substantially. For example, less than 59% of new PhD in the humanities who received their degrees in 1998, reported having definite commitments of employment or plans for future study at the time they received their PhDs.²⁶ In some fields, such as the life sciences, at least one, and often multiple postdoctoral fellow positions, often at relatively low salaries and without benefits, became the rule, rather than the exception, before young scholars has a shot at receiving a tenure-track position.²⁷ In sum, lengthening times to degree and smaller and more distant payoffs at the end of the graduate school rainbow made highly educated graduate students a ripe target for unionization efforts.

Times to degree, the nature of support patterns while in graduate school, the relationships of graduate students to faculty, and job opportunities after receipt of the PhD vary widely across fields. Degree times are shortest in the sciences and engineering fields where many graduate students work closely with faculty as research assistants on sponsored research projects, develop research skills from this work, choose related dissertation topics and then have good employment opportunities in the nonacademic as well as academic sectors. In addition, scientists' external research funding often permits them to supplement the size of the minimum graduate student stipend specified by their universities; they have external resources to pay what is needed to attract first-rate talent. As a result, many graduate students in the physical sciences and engineering are quite happy with their graduate school experiences.

In contrast, in the humanities there is less involvement of faculty and graduate students on joint research, a greater proportion of graduate students are funding via teaching assistantships, writing a dissertation takes considerably longer, and there are

²⁶ Alan R. Sanderson et. al. (1999)

²⁷ National Research Council, (1998)

only limited nonacademic employment opportunities after receipt of the degree. Faculty members in the humanities only rarely have funds to supplement university teaching or fellowship stipends. Is it any wonder then that the push for graduate student unionization is often led by graduate students in the humanities and that often the unionization effort seeks to limit the bargaining unit to assistants (primarily teaching assistants) who are supported by university rather than also include those supported by external funds?²⁸

Most universities that have been faced by a graduate student unionization campaign have vigorously sought to oppose the formation of unions. Public universities that have had collective bargaining relationships with their faculty for many year (e.g. the UC or SUNY systems) or collective bargaining relationships with their staff (e.g. the University of Illinois at Urbana) and have not seen these relationships lead to the demise of the university still vigorously oppose graduate student organizing campaigns. So too do many private universities, a large number of presidents of major private research universities testified before the National Labor Relations Board, as well as did leaders of higher education organizations such as the Association of American Universities, the American Council on Education, and the Council on Graduate Schools, in opposition to the bid of the NYU graduate student union to be allowed to bargain collectively.²⁹

Why have these universities opposed graduate student unionization? For some it is clearly the principled belief that a system of shared governance in which the parties (students, faculty, administrators and trustees) reach decision through mutual discussions is preferred to a system of conflict. For some it is the worry that graduate student unions will try to get involved in decisions that are more properly left to the faculty and

²⁸ In both the NYU and Brown organization campaigns the union successfully sought to limit the scope of the bargaining unit in this way.

²⁹ Gordon Lafer (2001)

administration, such as the assignment of specific students to different responsibilities and faculty members. For some, it is the concern that “one size does not fit all” and that graduate assistant contracts will not allow for the wide diversity of individual arrangements that currently exist across departments within each campus. For others it is the fear that graduate student unions will impose financial costs on universities that they do not want to bear and that these costs will force them to make cutbacks in other areas, or to increase tuitions by more than they otherwise would prefer to do.

Some of these fears appear to be unfounded, at least for public universities. Public employees in many states, such as New York, are prohibited from striking. Absent the major weapon that a union has to try to impose its desired contract on management, economists predict that the likely impact of the unions on public employees compensation packages will be small. Certainly the literature discussed in section II suggests that faculty unions’ effects on their members’ salaries and benefits have been small.

To date there have been no studies of the effects of graduate student unions on economic variables but a data exchange conducted by a set of major universities provides some suggestive information. Under the condition that we would not divulge the name of any individual institution, or even the name of the data exchange, and would not present the data for any individual institution, we have been granted access to data on the salaries, compensation and costs of teaching and research assistants at a set of public universities for a number of recent years. We have grouped these universities into 4 groups. Group A consists of 16 institutions that have never had a collective bargaining relationship with graduate assistants. The second and third groups consist of four

institutions that had collective bargaining arrangements with their graduate assistants before 1995 (B) and these four institutions plus two more that first began bargaining with graduate assistants in 1995 or 1996 (B+ C). The final group consists of 7 institutions that first began bargaining with their graduate assistants during the 1999 to 2001 period (D). For simplicity, we restrict our attention to teaching assistants in what follows, but the data for research assistants yields very similar results.

Table 7 contains tabulations of the mean values of the averages, across institutions in each group, of a number of economic variables for five academic years, 1996-1997 through 2000-2001. The first panel presents the average stipends that teaching assistants received from the institutions during the academic year. Comparing the institutions where bargaining never occurred (A) to those whose graduate students were covered by collective bargaining agreements by the first year in our sample (B and B+C), we observe that the institutions without collective bargaining had slightly lower average stipends in 1996-97 but by 2001-2001, their academic year stipends averaged the highest among the three groups. Whether this reflects the inability of graduate student unions to win large salary increases for their members, differences in the tightness of the state budgets in the states in which institutions in which graduate students were organized are located and the tightness of budgets in states in which institutions with graduate students who are not organized are located, or a concerted effort by nonunion schools to raise stipends to try to encourage graduate students not to think about organizing, can not be determined from these data. What is of interest though is that the highest average stipends in each year occurred at the institutions at which graduate students organized for

bargaining only during the latter years of the period (D). Many of these institutions are located in relatively high cost of living areas, a point that we return to below.

In the second panel of data, we deduct from the stipend paid at each institution, the tuition and fees that teaching assistants who were in-state residents had to pay to the university.³⁰ This is not a perfect measure of the teaching assistants' compensation because the value to the graduate students of any university provided health insurance benefits would not be included in these numbers and health insurance coverage has often been an issue that precipitated graduate student organizing efforts. A search of the websites of all the institutions in our sample suggested that by 2001-2002 (which is after our sample period) all but two of these institutions (one from group A and one from group B) provided at least partial funding for graduate student health insurance. Nonetheless, focusing on this compensation variable provides some evidence on how graduate student unions influence tuition remission decisions.

In 1996-97, average teaching assistant compensation was higher at the nonunion institutions (A) than it was at the unionized institutions (B and B+C), which suggests, given the numbers in the previous panel, that required graduate assistant tuition payments were higher at the unionized institutions than they were at the nonunion ones. By 2000-2001, the differential had narrowed somewhat, suggesting that during the period, graduate assistants were able to win larger reductions in required tuition and fee payments at schools in which graduate students bargained collectively. Again the average

³⁰ The rules governing whether graduate assistants who were residents of other states prior to entering graduate school qualify for in-state student tuition, both while they are assistants and during other points in their graduate career vary widely across institutions. We leave consideration of union effects on these rules for another time.

compensation of graduate assistants at the group D schools, the ones that organized near the end of the period, was the highest.

In the third panel, we ask what the costs of graduate assistants are to the institutions. These costs include the stipend and the portion of the students' tuition and fees that are not collected from assistants. Some of these costs are real costs, for example, the fees that graduate students would otherwise have to pay for mandatory student health insurance coverage. Some are opportunity costs, the foregone tuition revenue that the university does not collect. Omitted from these costs are any university subsidies for benefits, such as health insurance, that the university makes for all graduate students, regardless of whether they are graduate assistants.

Viewed from this perspective, the average teaching assistant costs for the nonunion schools (group A) rose relative to the average teaching assistant costs for the schools at which graduate students were organized during the entire period (groups B and B+C), as well as relative to the average teaching assistant costs at institutions at which graduate students were organized only at the end of the period (group D). These comparisons do not provide support for the view that graduate student unions increased universities academic year costs for graduate students during the period, although we caution that they may be driven by differential rates of tuition increases at the different sets of institutions during the period.³¹

The next panel provides information on the average stipends paid to graduate students for teaching assistant responsibilities during the summer. The average summer salaries for teaching assistants at the nonunion schools started a few hundred dollars above those at the schools at which graduate students were unionized throughout the

³¹ We will investigate this point in a latter draft.

period, but wound up substantially below them by the end of the period. Hence one economic effect of graduate student unions may be to win better stipends for summer work.

Interestingly the stipends for summer teaching were highest throughout the period at the institutions at which graduate students became unionized only at the end of the period. As noted above, many of the universities in this category are located in high cost of living areas (see table 5) and a reasonable is that it is important to control for cost of living differences across areas before drawing any definitive conclusions from the comparisons presented so far.

There are several ways one might attempt to control for cost of living differences. One can use variations in the cost of rental housing across areas to proxy for differences in the cost of living; such data can be obtained from the *Census of Population* every ten years. One can use estimates of the costs of living in different areas prepared by commercial firms that advise corporations about how much to alter their executives' compensation when one relocates them across areas.³² Or, one can simply say that what is relevant is how much teaching assistants are making relative to young tenure track faculty, namely full-time assistant professors.³³ Using all three measures yield similar findings and we report only the comparisons that adjust for assistant professor salaries here.

The final panel of table 7 presents the latter set of comparisons. We find little support from these comparisons for the proposition that graduate student unions increase the salaries of teaching assistants relative to the salaries of assistant professors. Initially,

³² See for example, the cost of living comparisons for 309 U.S job markets that are provided on the World Wide Web at <http://mazerecruiters.com/job.htm> by Maze Recruiters and Associates.

³³ These data are available from the American Association of University Professors and from WebCapsar.

the ratio of average teaching assistant salary to average assistant professor salary is lowest at the institutions that never had collective bargaining for graduate assistants. However, over the period, it rises relative to the comparable ratios at universities at which graduate students bargained throughout the period. Similarly, it was highest throughout the period at the institutions that began bargaining with their graduate assistants only during the last sample year. That the ratio of graduate assistant to assistant professor salaries does not vary that much over time at these public institutions should not be too surprising – several of the graduate student contracts specify that the salary increase that their members are to receive will be equal in percentage terms to increases granted to the faculty.³⁴

Taken together the findings above suggest that the impact of graduate assistant unions on economic outcomes does not appear to be very large and that concern about the issue of graduate student unions may be overstated. Indeed attracting and retaining top graduate students is an important objective of faculty at all research universities and so the faculty is often supportive of increased stipends for graduate fellows and assistants. Concern about graduate assistant unions, for the most part, is an administrative not a faculty concern.

Of course if the cost of graduate students increases too much, it is reasonable to expect that universities will seek alternative ways of meeting their staffing needs for undergraduate courses. If graduate student unions, or the bidding up of teaching assistant

³⁴ For example, the 1999-2002 contract between the Regents of the University of Michigan and the Michigan Graduate Employees Organization (Article X) specifies the minimum percentage salary increases that graduate assistants will receive each year under the contract and then adds that if the faculty (who are not covered by a collective bargaining agreement) were to receive a greater average percentage increase in any year, then the graduate students would receive the same percentage increase. (<http://www.umich.edu/~urel/gsi-sa/contract/99-02-toc.html>). The recently signed 2002-2005 contract similarly ties graduate assistant to faculty salary increases, but the assistants are to receive a .5% smaller increase in the first year of the contract (Smallwood, 2002b)

stipends in an effort to attract the best and brightest graduate students, lead to substantially increased costs for graduate students, it is reasonable to expect that ultimately universities will shrink the size of their PhD programs and use make more use of lecturers and other non tenure track faculty to staff undergraduate courses. Another source of substitute labor is undergraduate teaching assistants. However, as the vote in favor of establishing an union for undergraduate resident hall assistants at the University of Massachusetts in March 2002 should suggest, once the line between financial aid and employment becomes blurred, academic institutions may well be subject to more organizing campaigns of undergraduate students.³⁵ Institutions that offer undergraduate teaching assistantships for academic credit, rather than for compensation, might skirt this issue, but many faculty members challenge the legitimacy of giving academic credit for work as a teaching assistant.

Similarly, if graduate student unions bid up the costs of research assistants and universities require faculty with external sources of funding to pay higher stipend levels and higher levels of tuition for graduate research assistants, faculty members may decide that they are better off employing more post doctoral fellows and permanent lab staff and fewer graduate research assistants. So one impact of graduate student unions may be smaller sized PhD programs.

One respected former university president is genuinely concerned that there may be a conflict between collegiality at universities and collective bargaining for graduate students³⁶. In addition to worrying about graduate student unions getting involved with

³⁵ Resident Assistants at UMass Vote to Unionize (2002). The Massachusetts Labor Relations Board had ruled earlier in the year that resident assistants had the right to join a union. This ruling applies only to public higher education institutions in the state.

³⁶ James J. Duderstadt (2000), pp. 94-95

issues of class size and the assignment of teaching assistants, he worries that graduate student unions may lead to some breakdowns in the faculty/student mentorship relationship and ultimately a reduction in graduate program quality.

If this were true, one might expect to see things such as time to degree and completion rates for PhD students increasing at universities that have TA unions and, as a result, possibly a decline in the quality of the applicants who apply to such programs. In contrast, if graduate student unions are seen as improving the atmosphere for students attending graduate school, graduate student unions might be expected to lead to an improvement of the quality of the applicants to such programs and a general increase in program quality. To date, no tests of these hypotheses have been conducted.

V. Concluding Remarks

The role of collective bargaining in higher education is likely to grow in the future. Most of the growth of higher education is occurring in the public sector and it is in the public sector that both faculty and staff unions are the strongest (in terms of shares of individuals who are members) and where there are the fewest legal obstacles to the continued growth of collective bargaining. The decline of faculty salaries in the public sector relative to faculty salaries in the private sector may also provide further impetus for future faculty organization issues, although the decline in public salaries has often been large in states in which faculty unions already exist. Recent NLRB decisions seem to leave open the possibility that the *Yeshiva Decision* may not apply to all private sector faculty members and thus, that possibilities may also exist for the growth of faculty unions among faculty in private colleges and universities.

While extensive research has been conducted on the impact of faculty unions on salaries, benefits, and productivity, very little is actually known about how faculty governance is influenced by the presence of faculty unions. One hypothesis, which has yet to be tested, is that by providing a means by which faculty may advocate for things (like salaries) that are explicitly important to them, faculty unionization allows faculty involved in faculty governance to evaluate things more broadly from the perspective of the institution as a whole.

The growing living wage movement on campuses, which has its roots in the notion that academic institutions have an obligation to treat their workers fairly is also likely to provide a stimulus for efforts to increase union strength among staff at these institutions. Certainly the evidence that staff unions, unlike their faculty counterparts, seem able to improve their economic positions through collective bargaining should stimulate future growth in this area.

Finally, it will likely prove difficult for most major universities to resist that tide of graduate assistant organizing activity that is sweeping the nation. These unions provide a structure under which activist students can develop leadership skills and the courts appear to be increasingly ruling in unions' favor. Our preliminary evidence that suggests that graduate student unions do not have a large impact on the economic well-being of their members is unlikely to sway die hard adherents from the notion that graduate student unions will help to alter the imbalance between graduate students and their mentors that is often alleged to exist.

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Table 1

Collective Bargaining Coverage of College and University Staff in 1994

	Total Employees	Estimated Employees in Bargaining Units	Percent Represented
White Collar	1,070,142	250,573	23.4
Blue Collar	306,335	131,232	42.8
Total	1,376,477	381,805	27.7

Sources: *Digest of Education Statistics 1994* (Washington DC: National Center for Education Statistics, 1994), pp. 228-229 (total employees); *Directory of Staff Bargaining Agents in Institutions of Higher Education* (New York NY: National Center for the Study of Collective Bargaining in Higher Education and the Professions, 1995), pp. (Employees in Bargaining Units)

Table 2

Distribution of Academic Institutions By Carnegie Category and Control in the APPA Sample

Carnegie	Funding		Total
	Private	Public	
Associate	1	13	14
Baccalaureate	23	3	26
Doctoral	4	16	20
Masters	12	42	54
Research	7	42	49
Total	47	116	163

Table 3

Mean Occupational Salaries in 1997-98 for Employees Covered by Collective Bargaining Agreements and Not Covered By Collective Bargaining Agreements in the APPA Sample

Occupation	Mean Salary Without Union	Mean Salary With Union (Ratio)
Administrative Secretary	21,953	26,978 (1.23)
Custodian	16,993	22,850 (1.34)
Grounds Keeper	18,838	26,138 (1.39)
Carpenter	26,206	35,962 (1.37)
Electrician	27,701	38,629 (1.39)
Locksmith	27,243	33,463 (1.23)
Heating and Cooling	26,576	37,600 (1.41)
Painter	24,468	34,645 (1.42)
Plumber	26,852	37,575 (1.40)

Source: Authors' computations from the APPA data. Only institutions that reported union coverage for an occupation and a salary figure for an occupation are include

Table 4

Logarithm of 1997-98 Occupational Salary Equations: Coefficients of Union Variables
 Sensitivity Analyses
 (Absolute value of t-statistics in parentheses)

Administrative Secretary	Custodian	Grounds Keeper	Carpenter	Electrician	Locksmith	Heating and Cooling	Painter	Plumber
(A) .024 (0.6)	.101 (2.7)	.007 (0.2)	.107 (2.3)	.122 (2.6)	.071 (1.5)	.167 (3.1)	.138 (3.0)	.135 (2.7)
(B) .044 (0.9)	.131 (2.8)	.081 (1.1)	.155 (2.0)	.171 (2.2)	.129 (1.9)	.187 (2.5)	.189 (2.5)	.208 (2.7)
(C) .020 (0.5)	.072 (2.2)	.020 (0.3)	.099(1.6)	.130 (2.0)	.069 (1.3)	.139 (2.3)	.135 (2.3)	.158 (2.5)
(D) -.013 (0.3)	.030 (0.7)	-.067 (1.3)	.084 (1.6)	.116 (2.2)	.032 (0.6)	.128 (2.3)	.125 (2.4)	.113 (2.2)

Where:

- (A) OLS coefficients of the union variable from the basic model
- (B) OLS coefficients of the union variable from model that excludes the logarithm of average faculty salary
- (C) Seemingly unrelated regression estimates of the union coefficients from the basic model for the sample of institutions that report data for all 9 occupations
- (D) Selectivity bias corrected estimates of the basic model

Table 5
Universities That Have Recognized Teaching Assistant Unions

Public Universities (pre1999)	Public Universities (1999 and after)	Private Universities
CUNY	Michigan State	New York University (2001)
Florida A&M	Oregon State	
Rutgers (New Brunswick)	UC Berkeley	
SUNY Albany	UC Davis	
SUNY Binghamton	UC Irvine	
SUNY Buffalo	UCLA	
SUNY Stony Brook	UC Riverside	
Florida	UC San Diego	
Iowa	UC Santa Barbara	
Kansas	UC Santa Cruz	
Massachusetts (Amherst)	Massachusetts (Boston)	
Massachusetts (Lowell)	Temple University	
Michigan	Washington (Seattle)	
Oregon		
South Florida		
Wisconsin (Madison)		
Wisconsin (Milwaukee)		
Wayne State		

Source: "Unionization Activity of Teaching Assistants", *Chronicle of Higher Education: Almanac* – 2001 Issue

Table 6
Median Total Years Enrolled Between
Baccalaureate and Doctorate Degrees

Academic Discipline	1970	2000
Total	6.0	7.5
Engineering	5.2	6.8
Physical Sciences	5.3	6.5
Geological Sciences	5.8	7.8
Math and Comp. Sci.	5.2	7.1
Life Sciences	5.3	7.0
Psychology	5.3	7.2
Social Sciences	5.8	8.1
Humanities	6.0	8.8
Education	6.3	8.3

Authors' calculations from data found in WebCaspar (<http://caspar.nsf.gov>)

Table 7**Comparison of TA Salaries, Costs and Compensation at Public Research Universities With and Without TA Unions^a**

Outcome/ Group (number in group)	1996- 1997	1997- 1998	1998- 1999	1999- 2000	2000- 2001
Average TA Academic Year Salary					
A (16)	10,370	10,617	10,990	11,378	11,817
B (4)	10,401	10,670	10,537	10,724	11,223
B+C (6)	10,561	10,891	10,950	11,352	11,686
D (7)	12,347	12,616	12,833	13,161	13,630
Average TA Academic Year Compensation					
A	9,739	9,931	10,250	10,688	11,150
B	8,953	9,107	10,009	10,141	10,649
B+C	8,999	9,269	9,892	10,271	10,653
D	10,679	10,964	11,429	11,483	12,751
Average TA Academic Year Cost					
A	14,009	14,492	15,079	15,612	17,350
B	14,415	14,855	16,019	17,756	17,318
B+C	13,354	14,020	14,925	16,001	16,132
D	15,345	15,676	18,375	16,256	18,627
Average TA Summer Salary					
A	2904	2970	4,012	4347	3625
B	2608	2695	4,608	5059	4865
B+C	2683	2767	4,319	4624	4576
D	4182	4752	4,607	4788	4785
Average TA Salary/ Average Asst. Prof. Sal.					
A	0.19	0.23	0.22	0.22	0.22
B	0.20	0.22	0.21	0.21	0.20
B+C	0.20	0.23	0.23	0.22	0.22
D	0.21	0.26	0.24	0.24	0.24

^aAuthors' calculations from confidential data provided to the authors from a set of major research universities that participate in a data exchange program

Where

A – Public institutions without TA unions

B – Public institutions with TA unions prior to 1995

B+C- Group B plus public institutions with TA unions starting in 1995 or 1996

D – Public institutions with TA unions starting during the 1999 to 2001 period

Compensation –Salary less the portion of tuition and fees that TAs must pay

Cost – Salary plus tuition and fees that university foregoes

The value of health insurance benefits provided to TAs is excluded from TA salaries. The share of health insurance costs that is paid for by a fee charged to students that is waived for TAs is included in TA costs

