

## **REPORT FROM THE DEAN OF THE UNIVERSITY FACULTY - 2013-2014**

### **Introduction**

During this, my second, year as Dean of the University Faculty, Cornell University has continued its recovery from its serious financial challenges, while simultaneously introducing a new budget model that intends to clarify expenses and revenues. The University is also starting to address the revolution in higher education that distance-learning experiences might bring, and the faculty is considering new titles. The accomplishments and dedication of my faculty colleagues, the quality and openness of the central administration, the dedication and loyalty of the hard-working staff, and the helpful involvement and wisdom of the Board of Trustees have continued to impress me.

The sections below address faculty consultation and governance, faculty accomplishments and honors, faculty renewal, and actions taken by the Faculty Senate.

### **Faculty Consultation and Governance**

Communication and consultation between various Cornell constituencies seems to have improved recently. Nonetheless some professors still consider the administration to be insufficiently consultative on major campus issues, including Cornell NYC Tech, distance learning and budget plans. University governance is an area where, for the welfare of the entire enterprise, further effort is needed on all sides: the professorate have vast knowledge of the university and are closer to day-to-day academic issues than are administrators; meanwhile the central leadership is generally aware of more aspects of many issues, and further has responsibility for deciding final policies. I believe that the faculty, to be effective, must become more pro-active on topics rather than reactive. But to be pro-active requires advance knowledge about forthcoming issues, which will necessitate advance disclosure on the part of the central administration, and that requires faith. Progress along these lines seems to have been made on some financial issues, by the Provost's appointment of faculty representatives to several budget planning groups and he has allowed faculty more access to relative salary levels.

The Provost met the University Faculty Committee (UFC), the executive arm of the University's Faculty Senate, monthly during AY2013-14; the President joined these meetings several times, including once alone when the Provost was unavailable. During the year Provost Fuchs addressed the Senate once (on the new budget model) and President Skorton twice (discussing challenges that higher education faces and divestment from fossil fuels). David Skorton and I also meet privately at least monthly; we further share lunch once each month with a quartet of professors. I also attended all of the Senior Staff meetings as well as most meetings of the college Deans. These interactions between faculty and administration, arising in part out of faculty legislation on campus governance and the President's urging, have enhanced the communication that is crucial to implementing change successfully across the campus. As a result, the faculty has further expanded its involvement with other constituencies. Moreover the WCMC faculty dean and I have begun to connect on matters of mutual interest.

Senior administrators (academic affairs, budget planning, and research) discussed their specialties with the Faculty Senate in order to broaden the latter's background about how Cornell functions. These same individuals plus the Chief Investment Officer, Chief of Information Technologies, the A&S Dean, and the Vice Provost for Undergraduate Education addressed issues with faculty standing committees, particularly the Financial Policies Committee, the Faculty Committee on Tenure Appointments, the Faculty Advisory Board on Information Technology, the Committee on Academic Freedom and Professional Status, and the Committee on Academic Freedom and Professional Status. The Distance Learning Committee which was chartered at the May 2013 meeting and which contained faculty, staff and administrators (Counsel's office, research, undergraduate education and information technologies), met biweekly between May and January when the report was released.

The Executive Committee of the Board of Trustees continued their practice of meeting with the UFC. The October gathering principally considered University governance issues. Owing to time pressures from the Presidential search, the March meeting tried a casual format, which some felt was less successful than formal meetings with pre-determined topics. I thank the leadership of the Board of Trustees for soliciting faculty opinions in a respectful, meaningful way. Four professors (two faculty trustees, the faculty dean and Jonathan Culler) have joined fifteen other members, essentially all trustees, of the Presidential Search Committee.

An area where consultation continues to be crucial regards the further elaboration of Cornell NYC Tech. More than two years after Cornell's selection, perhaps the buzz has subsided a bit, but the faculty members continue to have considerable interest along with some apprehension. Without knowing very much, some faculty worry about the nature of the academic endeavor on Roosevelt Island and the links between the NYC campus and Ithaca in the matter of faculty appointments. There remains a very significant concern on the part of some faculty that effort directed to the New York City campus will divert needed attention away from Ithaca. Although this should be a marvelous opportunity for Cornell to redefine its land-grant mission and indeed the nature of technical universities worldwide in the next decades, it must be properly done.

Even while railing against the arbitrariness of academic rankings by the popular press, most American universities seek to improve their current numbers. Cornell is no exception: our strategic plan includes the aspiration to be widely recognized as among the top-ten research universities in the world. That said, many faculty at Cornell and elsewhere –especially at the most highly ranked universities– are skeptical about highlighting specific rankings because they believe that questionable metrics are too heavily weighted and those doing the ranking often have unknown qualifications. Nonetheless, I will now report Cornell's current reputation as a research university, according to various lists. This year, for example, *US News* ranked us 16<sup>th</sup> overall among American research universities. We do particularly well in engineering (six programs in the top ten) and natural sciences. And Cornell is rated as a "best value" university. Our global ranking, according to international publications, was as good or better. For example, we are 13<sup>th</sup> in the Shanghai University's *ARWU* (Academic Ranking of World

Universities), 15<sup>th</sup> according to *QS*, and 19<sup>th</sup> by the standards of the English *Times Higher Education*, where we score well in citations and research, but not as good in industrial support and international contacts. Probably most impressive of all is that more of our graduate fields (49, or greater than half of them), than those of any other US research university place in the top ten nationwide for that discipline, according to Academic Analytics LLC, a commercial benchmarking firm funded by most elite universities. In this third compilation, Cornell is best in the US in this category, regaining a position that we held in the first year of this survey. This underscores Cornell's astonishing combination of research breadth with excellence. The distribution of programs that are either first or second touches all of the major colleges in Ithaca. The University has been particularly successful in fostering interdisciplinary research programs and centers. Because these organizations are often unique nationwide, they must be nurtured locally.

The new business model encourages the use of various metrics to attempt to measure not only the quality of the whole university, but also that of departments and indeed individuals. Some professors are uncomfortable with this, believing that one's success as a teacher cannot be reliably measured and that Cornell should not adopt the traditional metrics of other universities because we are unique with our land-grant/Ivy combination.

#### **Faculty Achievements and Honors**

The Cornell faculty, now 1627 strong, is a collection of outstanding individuals who are sometimes "otherwise thinking", often innovative and vigorous in their teaching and scholarship. The Web of Knowledge lists 9992 articles contributed to the scholarly literature by Cornell authors in 2013 through early May 2014. This number is undoubtedly incomplete because it misses some online and conference proceedings, which are increasingly common, especially in technical fields such as computer sciences, and because its coverage of many fields in the humanities and the international literature is imperfect. Finally Cornell scholarly achievements in the fine arts are rarely found in surveys such as these, just as they overlook accomplishments that happen on the farms across New York State. In 2013-4 we taught 5847 courses carrying nearly 450,000 student credit hours; the courses were about two-thirds undergraduate and one-third graduate. Following May's ceremonies, nearly 3700 bachelors, 1780 masters, 660+ MBA/LLM, 554 PhD, nearly 200 JD and 85 DVM degrees will have been earned.

Funded research support amounted to \$766M (-4.5%) during FY2013, of which \$572M was received through competitive grants; this is about one-third of the Ithaca budget. Last year alone, more than 2100 new proposals were submitted in an intensely competitive external funding environment that is only expected to worsen as federal research support declines and already-low success rates on proposals fall further. 3323 research awards and 810 sub-awards are active, being led by nearly 1100 principal investigators. All of the preceding numbers, but for PIs, are drops of a few percent from 2012. In FY2013, the Ithaca faculty had 395 disclosures of intellectual property, 162 new licenses and 170 patents granted based on previous disclosures, leading to ~\$11M in gross revenue. Eight start-up companies opened.

Members of the Cornell academic family continue to receive many accolades. For example, W. Kent Fuchs (Provost, and electrical and computer engineering), Harry Greene (ecology and evolutionary biology) and Chuck Feeney'56 entered the American Academy of Arts and Sciences. Edward Buckler (USDA, and plant breeding and genetics) was elected to the National Academy of Sciences, while Jerry Stedinger (civil and environmental engineering) was admitted to the National Academy of Engineering. Craig Fennie (applied and engineering physics) and Sheila Nirenberg (physiology and biophysics, Weill Cornell) were identified as MacArthur geniuses. Six Cornell scholars received NSF Early Career Development awards, two got other early career grants, two more received Guggenheim fellowships, and three were awarded Sloan fellowships. At least five professors were honored with lifetime achievement prizes from their professional societies.

Three Stephen H. Weiss Presidential Fellows, Cornell's highest recognition for teaching, were announced in early 2014. Ashim Datta, biological and environmental engineering, is lauded for his engaging teaching style, real-world examples, "unlimited" office hours and dedication to learning by the entire class, including those near the bottom. Melissa Hines, chemistry and chemical biology, is praised for her assistance in solving personal and academic issues, for introducing new teaching methods that incorporate completely reinvented laboratories, realistic problems sets and group problem-solving. David Sherwyn, a professor of hospitality, human resources and law in the School of Hotel Administration, is a demanding and engaging teacher who uses interactive theatre and other creative educational schemes; he also helps his colleagues to strengthen their teaching and courses.

### **Faculty Renewal**

Faculty renewal is, very appropriately, a major preoccupation of the university today. The central administration is striving to finance the rebirth of the faculty; meanwhile colleges are selecting the new research thrusts that should be instituted and those areas of earlier expertise that should be correspondingly diminished. Many departments are consumed by this activity: the sequential processes of choosing departmental priorities and then selecting and interviewing candidates have absorbed major fractions of faculty time, especially each of the last two springs.

If a typical academic career lasted thirty-five years, forty-seven replacements would be required in an average year to replenish a faculty corps of 1645. But this underestimates today's needed hiring rate because our current faculty demographics are skewed toward older full professors. The present age distribution became emplaced during the 1960s and 1970s when Cornell (and most of higher education) grew enormously, in faculty and researchers; these individuals are now in their seventies and sixties, respectively. Being part of this group myself, I know them well. Many of these individuals are retiring and, sadly, others are passing on. The advent of the global budget crisis in 2007, exacerbated by the simultaneous realization of our own structural budget deficit, has put the University under enormous financial stress, leading six years ago to staff layoffs and stagnation in faculty hiring, just as it should have been expanding. In AY2010 only 27 new faculty were hired, 41 in the following year and 70 in AY2012. Hiring this year is

equally fast-paced and stressful, with competition fierce for the very best academics among peer institutions that face the same ageing pressures; to date, 57 new faculty have been hired in AY2013-14.

The Provost introduced a new budget model during the past year, with the goal of making revenue sources and expenses more explicit and transparent. This has created anxiety for some faculty, who worry that previous but now-exposed subsidies may become vulnerable and that, with a clearer statement of what is valued, the model can be “gamed” and bad behavior will ensue. Various safeguards have been emplaced but only time will tell as to the effectiveness of this oversight.

The faculty renewal program, which the Trustees initiated and which is funded partly by alumni donations, has allowed departments to pre-fill some faculty positions to take advantage of the availability of exceptional candidates. This smart planning has already helped substantially. Most colleges have had considerable success in attracting both neophytes and more accomplished academics. Ideally we will be able to employ current hiring opportunities to improve campus-wide diversity. Dual-career couples continue to be challenging to hire in a small upstate NY community.

### **Actions by the Faculty Senate**

The Senate approved two dual-degree programs that bridge policy analysis in CHE with management, and a MMH/MBA dual degree with the China-Europe International Business School in Shanghai.

In the early fall the Senate agreed to institute the title of Clinical Professor in the Hotel School. At the April meeting, Senators endorsed a new academic title, Professor of the Practice, that parallels a Clinical Professorship. This is pointed towards disciplinary experts who will primarily teach courses in the practice of a profession rather than fundamentals or advanced scholarly materials. The Committee on Academic Freedom and Professional Status is considering whether Cornell should introduce the title of Research Professor that most of our peer universities have.

A faculty-staff committee on policies and strategies for distance learning met biweekly last summer and fall; the University Faculty Committee prepared its charge in May 2013, and the Provost and I chose its membership. Its report describes the attributes of MOOCs (massive, open, online courses) and their potential educational impact. Longer-term policies, concerning how MOOCs operate, intellectual property ownership, and the educational goals for Cornell’s participation were also considered. This group recommended the University should pursue a diverse portfolio of distance-learning avenues but continue offering MOOCs as an educational experiment. It emphasizes the need for not over-stretching our resources and for a careful assessment of the costs and benefits of particular strategies.

Cornell’s first round of MOOCs were presented in spring 2014; topics included relativity and cosmology, networks, data in an era of privacy, and American capitalism.

Representatives of each of these MOOCs described their (generally quite positive) experiences with MOOCs at a roundtable in April. Interesting observations included: the enthusiasm and rigor of the students, the enormous amount of work required to produce a course, a quick leveling off in the enrollment after a steep initial decline, and the unexpected effectiveness of the format for the humanities. All described how their experiences would strengthen their future classroom teaching and how they might use materials that they prepared. While uniformly instructors thought that the production quality was very good, several encouraged better promotion of the material. Four courses have been chosen in a recent competition with additional monies being made available for innovations in other distance learning formats.

A resolution that proposed Cornell's response to the global climate change crisis was vigorously debated at the December meeting and in more than forty on-line comments. The original resolution was modified significantly following meetings and correspondence between proposers, our Financial Policy Committee and Cornell's chief investment officer. The final resolution requested that Cornell become carbon neutral by 2035 rather than 2050, and that the University divest its stake in companies with large holdings of fossil fuel reserves. President Skorton accepted the first recommendation but demurred on the second. The Vice President of Facilities and I chose members of a committee that is now seeking ways to accelerate Cornell's march to carbon neutrality.

The University Assembly followed up on several actions that came through the Faculty Senate. Making use of a Faculty Senate report on the Ho Plaza incident, and following further deliberations of the UA's Codes and Judicial Committee, portions of the Campus Code of Conduct have been rewritten. At its last meeting, the UA encouraged Cornell Libraries to develop an open access policy whereby all Cornell research publications are available for free to the public; our Library Board reviewed earlier versions of this. The UA was informed by the extensive Faculty Senate discussion of the fossil fuel divestment issue (see above) before their passage of a resolution that accepted our first recommendation but modified the second to no longer call on divestment.

### **Concluding Remarks**

To a great extent, Cornell's professors provide the basis of the university's sterling reputation worldwide. I am extremely fortunate to represent these outstanding individuals. We faculty are paid to create new knowledge and to describe topics that we love. We are given the opportunity to investigate questions that we find intellectually challenging. We are privileged to interact with very bright, enthusiastic, inquisitive and questioning young minds -- in and out of the classroom. Our members are unanimous in desiring that Cornell remain a unique, top-level institution, and accordingly we strive to contribute to that excellence. We recognize and deeply appreciate the Board of Trustee efforts to guide, support and strengthen our beloved institution.

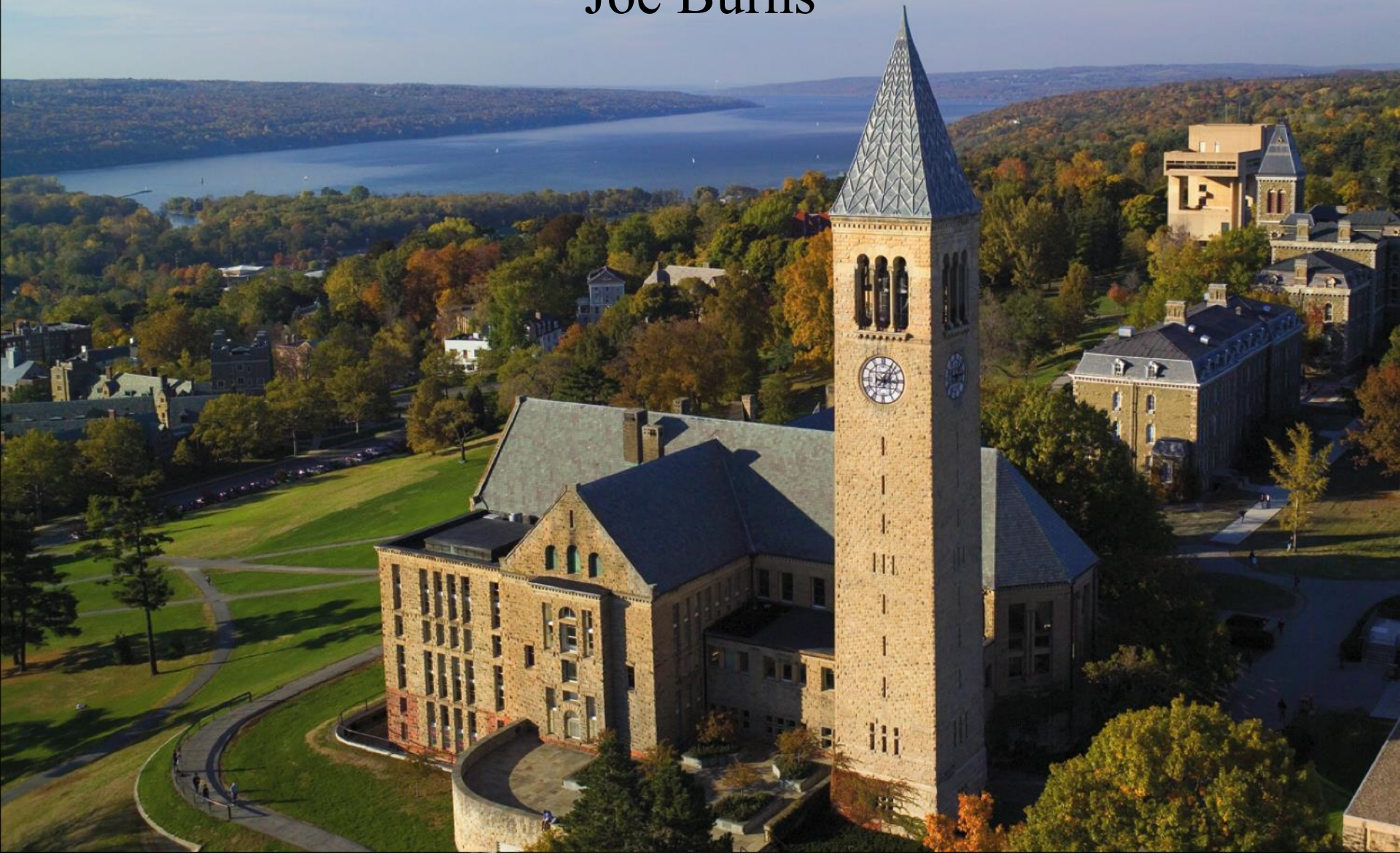
Joseph A. Burns  
Dean of the University Faculty  
May 9, 2014





# Report from the Dean of the University Faculty

Joe Burns







# OUTLINE

1. Accomplishments
2. Honors
3. Topics



# Accomplishments

- **Teaching:** 5847 courses, ~450,000 student credit hours
- **Degrees:** 3700 Bachelors, 1780 Masters, 554 PhDs,  
660 MBAs + LLMS, 285 DVMs + LLDs
- **Scholarly Publications:** 9992 papers + many other contributions
- **Research Funding:** \$572M, 2100 proposals submitted
- **Intellectual Property:** 395 disclosures, 162 patents, 8 start-ups

# Honors

- **American Academy of Arts and Sciences**

W. Kent Fuchs (Provost, Electrical & Computer Engineering)

Harry Greene (Ecology & Evolutionary Biology)

Chuck Feeney '56

- **National Academies of Science and of Engineering**

Edward Buckler (USDA, Plant Breeding & Genetics)

Jery Stedinger (Civil & Environmental Engineering)

- **MacArthur Fellows**

Craig Fennie (Applied & Engineering Physics)

Sheila Nirenberg (WCMC, physiology & biophysics)

- **6 NSF Early Career Fellows, 3 Sloans, 2 Guggenheims**

# Congratulations to our Weiss Fellows

**Ashim Datta**

**Biological & Environ Engineering**



**Melissa Hines**

**Chemistry & Chemical Biology**

**David Sherwyn**

**School of Hotel Administration**





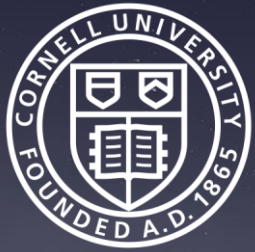
# TOPICS

- Faculty Renewal
- New Professorial Title(s)
- Fossil Fuel Divestment
- Revenue Enhancement



Saturn in eclipse, 2006

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Thank you!  
Questions? Comments?

