



Administration's grand victory over academia

Many professors, especially at U.S. Universities, have noticed an unprecedented growth of the University administration. Excellent insight into causes and effects of this development has been provided in the book “The fall of the faculty: The rise of the all-administrative university and why it matters.”⁽¹⁾ This reading surpasses a horror novel by the fact that it is not fictional, but fact-based. If you are a member of the academia outside the U.S. and have not noticed the trend, do not worry: it will catch up with you within a couple of years.

In short—a significant part of the innovative power of a nation, which has been the fruit of the academic freedom of faculty members at Universities, is gradually being strangled by University administration that is ever growing in size and power.

In my opinion, the root of this development is twofold. The public usually confuses the *role of Universities* with that of vocational training schools (with a nationally visible football team as an essential benefit). If so, the public and the elected politicians rightfully conclude, why not replace teaching faculty members by efficient interactive online resources that will train upcoming generations in the same skills at much lower cost. Already now, this trend is becoming quite evident in the number of online courses taught with minimum faculty involvement. Currently, the University administrators and support personnel outnumber faculty members at U.S. Universities, and the fraction of full-time faculty members has been decreasing over time.⁽¹⁾ To run Universities more efficiently, many believe, involves implementing approaches that work well in the world of business: Treat the students as customers and the University as the provider that has to please them in a competitive world. As in the business world, this—as many believe—necessitates efficient management by professionals. This notion is ill-conceived, since it implies that cutting-edge research and innovative ideas, the key to not becoming obsolete, can be planned and implemented by skilled managers in the same way as production in the business world. Reducing academic success, education and wisdom to mere compliance with specified metrics misses the desired objective. A managerial approach to education, however efficient it may appear, ignores the key role of Universities in creating and teaching new, innovative concepts and ideas that are vital to the country's future.

The second, more important problem is the *source of financial support of Universities*. In most countries around the globe, Universities are considered to be institutions that benefit the country as a whole. Consequently, much of the running cost—including faculty salaries—is covered by tax revenue. The U.S. approach is different. Opposite to common perception, only maybe 20% of the budget at public or state Universities is supported by tax revenue, and a larger fraction is covered by student tuition. The rest is being covered by private or industrial endowments (at fortunate institutions) and by overhead charges, a tax imposed on research grants. The overhead tax rate varies between around 50% at state Universities and nearly 100% at private institutions in the U.S., and this percentage increases over time.



Strategic plans and slogans sell better than quality education and research.

The vital necessity to receive sufficient overhead revenue has changed the attitude of the University administration towards its faculty members. Gone are the days, when faculty members were valued for their innovative thinking, expressed as fruits of their academic freedom in scholarly publications, or for their ability to teach an upcoming generation by making tough concepts digestible to students on a one-on-one basis. The faculty members, which the University depends on for its survival, have little to do with

the wise professors of the past. They are *revenue generating faculty members*. The revenue they generate comes from research grants provided by the government and the industry. In a climate, where money is in short supply and funding success rates of sound proposals often fall below 10%, funded research is typically very applied or promises a mere update of known facts that leads to viable applications within few years. Unaware of the fact that most progress has originated from innovative individuals, funding agencies and University administrators give strong preference to teams of researchers and research centers with fancy names that can be better presented in public relations campaigns. Among the key criteria used to judge the value of proposed research are the likely short-term impact on the economy, outreach activities beyond the University, gender equality and minority participation, and more recently also a precise adherence to formatting issues including the width of page margins. Originality of contents is much harder to judge and thus secondary. Uncommon or novel ideas are rarely funded, since it is nearly impossible to avoid any skeptical perception within a large review panel that decides on funding.

To support its growth by overhead revenue from research grants, University administration understandably favors research, which meets the above criteria and is most likely to be funded. Since the success rates are low, there is significant pressure to generate a larger number of proposals. The increased administrative effort, in turn, requires increased administrative support to meticulously check the formal aspects, including the width of page margins. Starting as a subset of faculty members, who volunteered a part of their time for a necessary cause, the University administration has by now evolved into an independent entity that has effectively detached itself from its initial purpose. University administrations commonly believe to represent the essence of the University and consider faculty members merely as useful employees. While most University administrators and staff members have successfully absolved their University training, many have not experienced first-hand the essence of academic freedom as innovative power the same way as faculty members have. The uncontrollable growth of administration as a money-consuming entity is described adequately by Parkinson's Law,⁽²⁾ which mathematically formulates the rate, at which bureaucracies expand over time. A common symptom of such uncontrolled growth is the reluctance to take personal responsibility, but rather to delegate it to others, including hiring more administrators. This may lead to the occasional absurd situation in times of financial hardship, when the size of administration has grown to control the reduction of academic programs.⁽¹⁾ University administrations are particularly skilful in organizing funding campaigns that ultimately finance the growing administrative apparatus and, to a much lesser degree, the quality of instruction or scholarly activity of faculty members.⁽¹⁾

To increase revenue generation, University administrations have expanded their power into a territory previously reserved to faculty members, such as decisions on granting tenure to current and hiring of new faculty members. The key question is not, whether a faculty member will play a pioneering role in an intriguing field of research or be an engaged instructor, but rather whether he or she is likely to attract massive research funding in the near future. The University administration plays an increasing role in the approval of tenure requests by requiring a sufficient amount of overhead-generating external funds as a proof of academic excellence. The net amount depends on the University and the field and is likely to be lower in Philosophy than in Engineering. Amounts near 5 million US\$ are currently common as a threshold to receive tenure in Engineering. Among new faculty hires, the so-called "moneyball" hires of faculty members with a proven record of strong external funding receive strongest support of the University administration. Revenue generation takes precedence over scholarly excellence and teaching capability.

All this makes me think: Is it really only the money that a University is about? Are we, as faculty members, not expected to teach the young generation to be innovative, to step where no-one has stepped before with new ideas? If independent, high-quality research, which is intimately linked to high-level education, technological innovation and eventual economic growth, is not possible in the U.S.—where will it happen? Will other nations take over? (And... has this already happened?)

I believe strongly that the level of education and innovation is an invaluable and maybe the most important strategic asset of a country. In the past century, this strategic asset of the U.S. has pioneered the aircraft and automobile industry, brought us a personal computer, a smart phone, a CD player and the Man on the Moon. Much of this innovation has been inspired and directly benefited from fundamental research by faculty members at U.S. Universities in the past. U.S. leadership has been gradually transferred to Europe and more recently to Asia. In some fields of technology, this trend can no longer be reversed. It is a sad fact that University administrators, who in many cases have little academic experience besides their managerial training, have played a key role in this deplorable process.

References and Notes

1. B. Ginsberg; *The Fall of the Faculty: The Rise of the All-Administrative University and Why It Matters*, Oxford University Press, New York (2011).
2. C. N. Parkinson; Parkinson's law; *The Economist* 177, 635 (1955).



David Tománek
Michigan State University



David Tománek studied Physics in Switzerland and received his Ph.D. from the Free University in Berlin. While holding a position as Assistant Professor of Physics in Berlin, he got engaged in theoretical research in Nanostructures at the AT&T Bell Laboratories and the University of California at Berkeley. He established the field of Computational Nanotechnology at Michigan State University, where he holds a position as Full Professor of Physics. His scientific expertise lies in the development and application of numerical techniques for structural, electronic and optical properties of surfaces, low-dimensional systems and nanostructures. Since he was working on his Ph.D. Thesis, he promoted the use of computer simulations to understand atomic-level processes at surfaces and in atomic clusters. Witnessed in several hundred publications and invited talks are his results on the electronic structure, mechanical, thermal, and optical properties, as well as quantum conductance of nanostructures. His contributions to Computational Nanotechnology, in particular in the field of fullerenes and nanotubes, have been rewarded by a Fellowship of the American Physical Society, the Alexander-von-Humboldt Foundation Distinguished Senior Scientist Award and the Japan Carbon Award for Life-Time Achievement.