

Excellence: to pick or to foster?*

Abstract

In this note, I shall annotate a number of observations — or theses — regarding the state of affairs of European higher education and Humboldtian universities. These theses were presented at a Forum in Vienna which ran under the title “Exzellenz auswählen” (December 15, 2006). The theses cover a very broad spectrum of concerns, and a full elaboration would require the space of a book. The annotations presented here are very short, but they might induce the reader to reassess higher education and higher education policies¹.

Excellence has become one of the key foci of higher education, at least in Europe. The concern with excellence is tied to the observation that excellence is rare but needed; it may also be tied to the perception that excellence is to be found elsewhere now — and that it was once an exclusive attribute of European universities.

There is no doubt that most European universities have lost their once dominant position in the world of learning [5]. It is unclear why this has happened, and it is generally thought that the catastrophic events in conjunction with the Nazi Regime and World War II are at least partially responsible for the decline of European science [21, 25, 28] and its slow recovery since. The question remains to be answered, however, why Europe was in a position to recover economically and as an industrial base of strength, even in today’s globalized world, while it failed to regain its once noble position in higher education and research. The answer to this riddle may have to be found within higher education itself.

Thesis 1: European universities failed to adapt properly to Mass Higher Education

It was Joseph Ben-David who suggested that the European — and in particular the German, Humboldtian — university was unable to adapt

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properly to a changing environment [3, Chapter 6]. The very forces which propelled the German university in the 19th century to prominence [27] acted in the 20th century as a veritable “strangling noose” for the development of science. Unfortunately, Ben-David’s thesis did not fall onto fertile grounds. Researchers do and did see shortcomings of the European — or German — higher education system [10, 14], but Ben-David’s challenge — that particular systemic aspects rooted in our higher education cultures ought to be held responsible for the state of affairs now — has generally not been taken up. The failure to embrace Ben-David’s analysis may be responsible for many of the ill-fated searches for solutions now.

Thesis 2: US universities adapted far better

The situation in the US can almost be sketched as a complement of the European picture. The US research university came into being in the latter half of the 19th century, and it emulated the German university where many US scientists and professors had received their doctoral training [12, 24]. But the US university retained the college next to the newly formed graduate schools, and it retained the collegiate culture borrowed from Oxford and Cambridge. The US university could not rely on well educated *Gymnasiasten* (high-school students), and it chose to retain a strong focus on teaching. As a consequence, student-faculty ratios remained fairly stable over the past 100 years, and they did not deteriorate significantly in the face of mass higher education after World War II. The implication of this is that US research-oriented institutions have more faculty than corresponding European institutions, perhaps by a factor of three or more. At US research universities, staff-faculty ratios remained moderate even in engineering or the sciences [19], nurturing a collegiate, less hierarchical setup conducive to cross-disciplinary research. The irony of this is that a system created to foster teaching and learning has now shown to be superior as a research setting [17].

Thesis 3: US research universities are Humboldtian

Wilhelm von Humboldt’s dictum of the unity of teaching and research has long been a topos of our higher education debate. While the German university model had a definite impact on other systems [33, 31], the concept of the Humboldtian university gained credence long after the time of Humboldt, and perhaps most prominently at the time when mass higher education became slowly a reality [32]. The longing for the Humboldtian university was accompanied by a gradual deterioration of the unity of

teaching and research within the German university. But this unity did not fail everywhere: Gerhard Caspar, a past president of Stanford University and himself a native German, speculated that the US research university had perhaps better preserved Humboldt's ideals.

A number of aspects differentiate US from European universities, and one ought to study these differences in order to find cues for the apparent differences in quality and productivity. First, US higher education is highly diversified [35, 20]: only 96 institutions, roughly 2% of a total of closed to 4,400, are counted (by the Carnegie Foundation) as research universities. Second, US institutions are autonomous to a large degree [6], and many of them embrace what US chief justice Felix Frankfurter called the "fourth academic freedom", namely the freedom to select (within strictly defined rules and regulations) their own student body. Third, power is distributed in different ways: whereas in European universities power is concentrated on the government and the individual faculty member, US universities place power on the executive board and the collegiate culture: US and European institutions differ in their morphological setup [4]. And finally, US universities try to have a broader resource base [7], and teaching and research are funded separately [18]. All these factors together appear to be responsible why US universities were more successful in adapting to mass higher education and are more productive than their European counterparts.

Thesis 4: Excellence is not only a matter of money

It is clear that higher education requires resources, and it is clear that at least the top institutions have to be funded properly. But resources alone, in absolute numbers or as a percentage of GNP, cannot guarantee excellence. Other factors will have strong effects on the quality of institutions, and these factors will have to be studied in conjunction with the levels of resources provided.

I have indicated above that very few US institutions qualify as true research universities. This stands in contrast to European sentiments where almost every university aspires to be a research university. Instead of calling for more funding, or substantially more funding, without a good base of analysis, it might be more fruitful first to look at the distribution of funds provided. Funds that are distributed too thinly are likely not invested effectively. We need discussions on the demand for higher education services, on the mission of the various institutions, on diversity in higher education, and funding ought to reflect the outcome of these discussions. The result

might be that fewer universities should assume the (expensive) role of research universities and more institutions should focus on (less expensive) quality teaching.

To institute changes within European higher education, top-down approaches are *en vogue*. In this mode, changes are decreed: they do not take place because of some adaptation to changing conditions [16]. Because of this predilection, Centers of Excellence are declared instead of discovered, and proponents of a new public management resort to planning techniques which are in opposition to their own political stance and which were thought to be abandoned long ago [18]. Centers of Excellence need not be decreed. The framework within which higher education operates will have to be changed. If we separate the funding for teaching and research, and if the funding of research is meritocratic, centers of excellence will naturally develop as part of an adaptation process.

Separate funding streams for teaching and research are a necessary — but by no means a sufficient — condition for a successful transformation of European higher education. At least three other elements will have to be provided in order to secure a viable development. First, in the case of research universities, the “fourth academic freedom” will have to be implemented. Only thus will the institutions be in a position to properly program their own resource allocations and to gradually improve quality and standing. Second, European institutions will have to focus on a collegiate culture and to completely abandon the concept of a chair system (*Lehrstuhl*) on which most institutions are still based [19]. Student-faculty ratios will have to be improved significantly, particularly within research universities, with the prospects for more faculty, smaller research teams, less hierarchy, more independent research, and much better career prospects for younger scholars and women. And finally, third, many independent research institutes (such as those of the Max Planck Society) ought to be reintegrated into universities, to stop the bleeding-out process of universities and to invigorate research institutes.

Thesis 5: Excellence is possible on all levels, in all institutions

There is a tendency to associate excellence with research alone, or with output. Excellence is clearly not restricted to research, and it has as much to do with performance or performance improvement as it has with output.

Excellence is not confined to elite institutions. We can find it in various endeavors and environments. A range of scholars have pointed out this fact, among them Alexander W. Astin [1, 2]. Astin drew attention to the

fact that excellence in education refers foremost to a process, not a static (test) result, where student and school interact. To foster weak learners may be as challenging — and rewarding — as the stimulation of the talented. Societies need educational excellence at all levels of schooling, not only in universities, and not only in so-called ‘elite’ institutions. Furthermore, modern societies require a balance among their educational strata in order to reap the fruits made available by scientific insights and progress. Otherwise, inventions can be made but not brought to market, and agglomeration economies, so necessary for the well-being of our respective societies, cannot be exploited [26, 30, 29, 13].

Thesis 6: Excellence develops slowly

If we look at the cream of research universities today, we notice that they are generally quite old: they definitely did not set out to become world-class universities, and they developed slowly. There are practically no prominent universities which are less than 100 years old. Newly founded universities — like Stony Brook University (1957) in New York which was to take on the role of the Berkeley of the East, or the University of Waterloo in Canada (1957) — have become good universities, but they are not yet part of the well established set of elite institutions. Israeli institutions — like the Hebrew University (1925), the Weizmann Institute (1934), the Technion (1924) — do astonishingly well, but they are not that young either, and they were founded to serve a vital function. In the foreseeable future some Chinese universities might surprise us, but they are not yet there.

Universities can be destroyed quickly, as we are bound to notice, but it takes decades of continuous and dedicated improvement activities to serve their cause and to bring them to fruition. One cannot count on quick and easy payoffs: concerted and enduring efforts are necessary if one intends to advance the standing and the impact of an institution, or if one intends to found new institutions [9].

Thesis 7: Excellence ought to be fostered, not proclaimed

The current public debate on — or better even: public obsession with — excellence and elite universities is new. Ten years ago, these themes (according to LexisNexis) were barely visible in the (German) press. In the context of today’s Initiative for Excellence in Germany, for instance, special research oriented schools (so called *Graduiertenkollegs*), excellence-clusters or university-wide projects are earmarked to receive special funding [11]. “Visible research beacons” are sought — and proclaimed — that

are to shine over the sea of science. For the first two tasks combined € 7.5 million per annum are to be distributed on average for each institution which was selected to be funded, and for the third task (benefiting the Universität Karlsruhe, the Ludwig-Maximilians-Universität München and the Technische Universität München) € 21 million per annum are to be distributed.

As I have said above (under Thesis 4), “excellence is not only a matter of money”. Will these funds make a lasting difference? Will they help to promote lighthouses which shine over the ocean of science, as the text of the initiative alludes to metaphorically? This is unlikely the case. If the “internationally visible research beacons” are already there, the funding might help them to survive; if they are not yet there, they will not emerge because of the funding. Modern research universities of distinction run on a yearly budget of € 0.5 to 1.5 billion or more (without capital outlays). Funding in the amount envisaged today in Germany will not make a difference.

What is required, instead, is a new delineation of the framework within which higher education can operate, a “re-engineering” of the system’s boundaries [15], and a reallocation of funds [18]. This can be done gradually, gaining experience and insight along the way. Research universities should not be imposed: they should emerge. They require neighbors and peers; they thrive on competition; they need to be allowed to be entrepreneurial [7, 8]. It will be impossible to find the moneys required to elevate — top-down, so to speak — the many European higher education institutions to the level of research universities, but if we start a sustainable reform along the lines already sketched, true research universities might gradually emerge.

Thesis 8: Excellence might best be promoted bottom-up

As I have observed above, the current national and European Initiatives for Excellence operate mainly in a top-down fashion. Institutions will benefit, not researchers. In this fashion, Initiatives for Excellence will complement institutional base funding as well as competitive — meritocratic — research funding. It is not clear why such an approach, which also forms the foundation of the Research Assessment Exercise in the UK and which has been criticized — among others — by Martin Trow [34], ought to be preferred.

There exists a successful culture of a separation of funding streams: base funding of institutions to sustain teaching, and meritocratic funding of research activities of individual scholars or research teams. Quality assessment exercises — self-assessment and peer review — have long been used

to improve teaching and research activities, but these are only effective if they serve the needs — and find the trust — of those assessed [22, 23]. There is enough evidence that professors are generally conservative and reluctant to change: hence the urge to push and shove the faculty. But it appears unwise to forgo good institutional management — or the prospect thereof — and replace that by funding and decision modes which are far removed from the institutions which are to benefit.

Institutions should not be steered from afar, and governance should better recognize its fiduciary role and should not engage in management (and particularly micro-management). Institutions require a proper framework within which they can operate and prosper, and if governors, trustees or elected officials are convinced of deficiencies or shortcomings of institutional managers, they should replace these executives, not interfere with their management. At the same time, institutions — and the science enterprise in general — will have to learn to be more introspective and to exploit the insights of institutional research or the sociology and economics of science.

Thesis 9: The reforms themselves require evaluation, and they are possible

A range of features of today's higher education systems are the results of previous reforms, and not all of these reforms appear well advised. Reform measures have to be tested and evaluated locally, and on an individual basis, before they are to be implemented on a grander — national or international — scale. Furthermore, a broad range of reform projects ought to be evaluated.

Among the wide spectrum of possible measures to reform higher education, only relative few measures are contemplated and fewer still are tested or implemented. Reforms pertain to two levels: (i) the macro — or inter-institutional — level, and (ii) the micro — or intra-institutional — level. With regard to the macro-level, the following reform measures appear to require closer scrutiny:

- separation of funding streams for teaching and research;
- reintegration of dedicated research institutions — such as the Max Planck or Fraunhofer Institutes in Germany or the institutes of the 'Centre nationale de la recherche scientifique' in France — into research universities;
- installation of the "fourth academic freedom", i.e. the right to select their student bodies, for research universities.

Regarding the micro-level, the following reform measures ought to be contemplated:

- abolishment of (most) academic staff positions past the post-doctorate that do not enjoy full academic freedom and the eventual abolishment of corresponding academic degrees (e.g., in the German context, no *Privatdozentur* and no *Habilitation*);
- improvements in the faculty-student ratio — and implicitly also the faculty-staff ratio (more faculty, i.e. professorial positions; more and smaller research groups);
- the promotion of active learning measures and attempts to reduce drop-out rates among students.

Thesis 10: Successful change requires communality, and only common positions are stable positions

All reforms require a perception — and an acknowledgement — of the interests of the various actors or stakeholders of higher education systems. These interests are naturally diverse, not only because individuals have different views and notions, but because views are normally tied to various roles people fulfill in our respective societies. Politicians, regents or higher education executives view higher education and university from other angles than faculty, and they in turn assume other viewpoints than staff or students; parents, industry leaders, employers, citizens and tax payers have yet their own views regarding the role and mission of higher education or technology transfer. In order to move higher education, and in order to change institutions, common positions will have to be sought. A common position, a consensus, cannot be reached without a discourse, an ongoing discussion, and it will also require scholarly immersion as well as experimentation with the unknown — or the unfamiliar.

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