

THE ROLE OF RESEARCH IN US HIGHER EDUCATION

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If you were a university professor in the United States who was interested in the former Soviet Union, or a university student who wanted to learn Russian, the 1960's were a good time for you. The National Defense Education Act was passed by the federal government in 1958 (Cohen, 224). Its purpose was to provide funding for people who wanted to study places in the world against which the United States government thought it might have to defend itself. The Soviet Union was one of those places, and thus someone who, in the 1960's, wanted to study, for example, the steel industry in Magnitogorsk probably would have received funding from the US government, whereas someone who wanted to study the steel industry in Pennsylvania or Ohio probably would not have received funding.

Benjamin Barber, in his 1992 book An Aristocracy for Everyone: The Politics of Education and the Future of America, criticized US universities for their partnerships with business and industry: decrying the "corporate takeover" of universities, he wrote that "...higher education has come to mean education for hire" (Barber, 197, as quoted by Lucas, 278-9). He and others worry that if research in universities is funded by corporations, the researchers will study only those topics which the corporations want to fund and will publicize only the results which the corporations want to hear.

Joseph Biden is a US Senator from Rhode Island. He wanted to be President of the United States, and a number of years ago, he ran in the Democratic primaries. Eventually, however, he withdrew from the race. One significant reason for his withdrawal — significant enough to be front page news in The New York Times when it was uncovered — was the revelation that he had plagiarized material for a research paper when he was an undergraduate at Harvard. In the United States, people own their research and writing and ideas in the same way that they own their cars

and their clothes and their money. Using someone else's idea without specifically saying "This is Ann Smith's idea, taken from page 104 of her book, My Thoughts" — in the US, that's considered theft.

Most teachers of freshman composition in the US spend a lot of time on something called "prewriting" — techniques to help students figure out what exactly they want to say in their essays, what their specific, original point is going to be. Repeating what others have said is okay, but only as evidence for the student's own new idea. "What's your thesis?" writing teachers ask, ad infinitum. "What idea about this topic are you trying to prove?"

As these examples suggest, research in American colleges and universities takes place within a specific context. It reflects the culture, history, economy, and aspirations of the United States. The focus on the new; the idea that the world is filled with problems to be solved rather than givens to be accepted; the entrepreneurial spirit and admiration for the person who follows his or her individual dream — all of these have contributed to putting research in a pre-eminent place in many US colleges and universities. Its emphases and funding sources change as US society changes, but the focus on the future and, particularly in the humanities and social sciences, on individual creativity, remain constants. On the other hand, the system which developed in the Soviet Union and which has been developing in Kyrgyzstan comes from somewhat different traditions. Cerych, for example, suggests (154) that the fact that research and teaching were separated in Soviet times — research in the Academies of Sciences and teaching in the universities — grew out of the Soviet government's desire to keep tight control over teaching and learning, while realizing that research, especially in the sciences, required that people have the flexibility to think in unconventional ways. Whether or not you

agree with Cerych, it is important to understand that American colleges and universities have developed an *infrastructure* which supports research and its infusion throughout the university, a different kind of infrastructure from what exists now in Kyrgyzstan. If the universities of Kyrgyzstan decide that they want the role of research here to be what it is in the US, some profound institutional and attitudinal changes will need to take place. The cost may be more than some Kyrgyzstani universities want to pay.

One way in which the academic infrastructure in the US supports the idea of research is that doing independent work is not something that professors are suddenly expected to do when they become professors. All along the way, in higher education, original thought and independent work are supported, and those who, like Joseph Biden, use others' work without acknowledgment (plagiarism) face severe sanctions, ranging from failing an assignment to failing the course to expulsion from the university. Another example of the emphasis on independent work is that students in the US are expected to do much more work outside of class than are students in Kyrgyzstan. Full-time undergraduate students in the US spend, on the average, only about 15 hours per week in class — more if they have lots of science labs or beginning language classes. However, first and second year students (whom we call freshmen and sophomores) are expected to work independently outside of class about two hours for every hour spent in class, and third and fourth course students (juniors and seniors) are expected to work independently three to four hours for every hour they spend in class. By the time students enter graduate school, they are expected to work independently eight to ten hours outside of class for every hour in class. Princeton University, for example, expects that doctoral students in its English literature program will read 1000 pages a week. Obviously, this amount of independent work is not expected at most universities in Kyrgyzstan — a fourth course student who is spending 25 or thirty hours a week in class, for example, could not spend four times that — 100–120 hours a week — studying outside of class. However, this amount of independent work also presupposes a high degree of material wealth — that each student has his or her own books for every course, and,

in an increasing number of colleges and universities, that each student has his or her own laptop computer, Internet access, and an array of software. (Professors, of course, are expected to have access to even more resources, so that classes go beyond the materials to which students have access.) Such independent work by students lays the groundwork for the kind of independent research which is expected of professors in the US.

Compensation and funding systems in US universities also support research. At many universities in Kyrgyzstan, professors are paid on the basis of contact hours — the actual number of hours they are present in the classroom. A professor here may be very excited about a particular research topic, but if there are children at home to be fed or elderly parents to be supported, then the research may be set aside so that more teaching may be done and more money may be earned. In many US colleges and universities (community colleges often are exceptions), professors are paid an annual salary and are expected to perform three functions: teaching, research, and service to the academic, professional, or outside community. A professor may teach two courses one semester and three the next, but his or her salary will not change. Advising students, serving on committees, submitting conference papers, taking part in national associations with others in one's discipline — all of this generally is considered part of a professor's work. People are not paid for each activity individually, any more than a doctor is paid just for doing operations, with an extra salary for writing prescriptions or talking to patients; people are paid to be professors, to be professional teachers and scholars, doing all which that entails. Hours in the classroom are seen as only one way of promoting learning. Thus any university in Kyrgyzstan which is interested in adopting the US focus on research within the university itself will have to consider overhauling its entire compensation plan, and will need more professors to teach the same number of courses it currently offers.

Not simply compensation but other sources of college and university funding generally will support research at US colleges and universities. Each department usually will have its own library budget, to buy books and journals which are important for professors as well as for students.

In addition, departments often have subscriptions budgets, to purchase academic journals which are published by various disciplinary associations — the American Sociological Association, the Association of American Historians, the American Association for the Advancement of Slavic Studies, etc., most founded in the late nineteenth and early twentieth centuries, as faculty in the US became more professionalized and specialized (Cohen, 130) — so that professors can stay current with what others in their field are doing. Each department probably also will have a travel budget, to support faculty travel to conferences in their disciplinary areas, both for presenting papers and for obtaining new knowledge from others. (Many professors in US universities feel a stronger loyalty to their discipline — history or economics or music — than to a particular university, which often encourages collaboration, rather than competition, between professors in the same field at different universities.) In addition, frequently colleges and universities in the US have a system of sabbaticals, an idea which started at Harvard in the 1880's (Cohen, 126). This means that after six years of full-time work, a professor may apply for a year at half pay or a semester at full pay to work on a specific research project, or to in some other way increase his or her knowledge. Many of the Fulbright professors who come to Kyrgyzstan from the US, for example, are on sabbatical.

Faculty evaluation systems in the US also rarely are based on teaching alone, but rather on teaching, research, and service. The emphasis given to each varies from one type of higher education institution to another, with community colleges and liberal arts colleges likely to emphasize teaching more than research universities, and regional universities likely to emphasize service to their regional communities than liberal arts colleges which draw from a national base for their students. Some universities are beginning to add in success in getting grants as a criterion for evaluation — grants which, almost invariably, support research work, particularly large projects in which graduate students may participate, so that they, too, may be on “the cutting edge” of research.

The infrastructure and the funding sources which support research at colleges and universities in

the US are not static. Lucas (172 ff. and 175) notes the important influence of the German university model, with its concepts of *Lernfreiheit* (freedom to learn) and *Lehrfreiheit* (freedom to teach) on the early development of the research university in the US, particularly on the founding of Johns Hopkins, and the creation of electives, the expansion of academic freedom for professors, the deepening of disciplinary specialization, and the formalization of academic disciplines which developed from that model. Cohen (4 and passim) divides the development of US higher education into five eras — Colonial (1636-1789), Emergent Nation (1790-1869), University Transformation (1870-1944), Mass Higher Education (1945-1975), and Contemporary (1976-1998) — and examines the role of research, as well as other topics, in each one. Geiger focuses almost entirely on the contemporary era, examining the shift from governmental funding to industry-sponsored research and the “shift to the periphery” (away from the liberal arts in subject matter, and away from academic departments in location, toward separate research units) which that shift engenders (74). Conrad et al also look at the shift in graduate education away from the traditional liberal arts disciplines, noting that “Of all the people earning master's degrees [in the US] since the early 1980s, about 90 percent earned degrees in professional fields outside the traditional liberal arts and sciences” (xiii). The Cold War, economic development, technology transfer, Reagan's desire for “Star Wars” technology, the National Science Foundation's decision to emphasize support for engineering — all these and other specific events in the US have influenced the direction of university research funding (see Cohen, 260, 396-397, and 415, and Geiger, 70-72).

The shifts in funding priorities of government and industry, and the corresponding shifts in the foci of researchers, can be seen as one negative characteristic of the US model of research — continuous, dependable funding for basic research is rare indeed, and researchers in the sciences and in technical fields who need large laboratories and up-to-date computers are disproportionately affected by these funding shifts. Other criticisms of the role of research in US higher education abound. One such criticism is the “publish or perish” syndrome found at many

US colleges and universities (community colleges generally are an exception to this rule). This means that research, and publication of that research, is the *sine qua non* for not only advancement but simply for maintaining one's job at most college and universities in the US. Therefore, in many institutions, particularly research universities, good teaching is less valued than research productivity. Benjamin Barber (196, quoted by Lucas, 286) writes:

The dirty little open secret of American higher education, known to every faculty member who manages to gain tenure, is this: No one was ever tenured at a major college or university on the basis of great teaching alone; and no one with a great record of research and publication was ever denied tenure because of a poor teaching record. Teaching is the gravy, but research is the meat and potatoes.

In many research universities, in fact, much of the undergraduate teaching is done not by professors but by graduate students. Professors may lecture to large groups — during my freshman year at the University of Michigan, for example, my smallest lecture had 200 students — but it is graduate students, generally with no training in teaching, who lead the small group discussions. In fact, the July 9, 1999 issue of the weekly higher education newspaper, The Chronicle of Higher Education, contained an article which, for anyone interested in quality in undergraduate teaching, could be described as horrifying. The article is written by Elaine Showalter, the widely-published and widely-known professor of English at Princeton University (one of the top universities in the US) who recently ended a controversial term as chair of the Modern Language Association, one of the largest and most prestigious of the disciplinary associations in the US. (Her term was controversial because she suggested that doctoral students who have trouble finding teaching positions should look for work outside of academe; her critics think that the solution is for universities to stop hiring so many part-time professors.) In her article, Dr. Showalter describes a seminar she offered to help the doctoral students who were leading the 28 discussion sections for her 350-student lecture course on contemporary fiction learn how to teach. Showalter describes her own revelations: “I discovered outstanding texts that I had never known existed, books that offer guidance for new teachers,

experienced teachers, and those trying to teach teaching at the college level.” What is amazing is that someone who is at the pinnacle of her field, someone who has been teaching for probably thirty years, could just be “discovering” classics such as the work of Kenneth Eble or the latest edition of the work of William McKeachie. Her “discoveries,” however, probably say less about her as an individual and more about the US higher education system as a whole — that it is possible to be the head of a major professional organization and to be a well-known professor at an elite research university, and still to be an utter neophyte in the realm of teaching effectiveness.

Other criticisms of the US system include, as mentioned, the commercialization of research when industry is paying the bill (see Geiger, 71 ff. and Lucas, 278 ff.). Government funding also is criticized when some legislators make sure that appropriations bills are worded so that only one particular university in their own district can receive funding (Geiger, 74); this was a major issue in the funding of FIPSE (the Fund for the Improvement of Post-Secondary Education) last year. The excessive narrowness of research topics — part of the search for something new and individual to say — which removes intellectuals from public discourse and from the concerns of the wider society is another issue (see Robert Bellah, quoted in Lucas, 283). The research paradigm in US universities also is criticized for what some see as an excessive reliance on the scientific method. Bellah (quoted by Lucas, 282) questions the predominance of the natural sciences as the best research tool for other disciplines, as well as the unquestioned pursuit of “progress” in US culture. Cohen (129) wonders if it is really appropriate to have rationality be the one and only criterion for research, suggesting that method has, to some extent, become more important than content.

The role of research in US colleges and universities, then, grows out of a specific historical and economic context, and is in no way a system without problems. The system creates successes — for example, the majority of the Nobel prizes in science this year were given to researchers at US universities. The focus on individual initiative also can have economic results; for example, in a

1997 article in The Economist, P. David describes a study which notes that “if the 4,000 or so companies founded by MIT graduates and faculty were turned into an independent nation, the income they produced would make it the 24th richest in the world” (quoted by Cohen, 419).

Overall, the system has both plusses and minuses, and certainly has costs. Kyrgyzstani educators would do well to think through carefully all of the implications of the US experience, and to adopt only those elements which best meet their own needs.

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