

# La Cuestión Universitaria

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## The Context for Opportunity in the United States for Young International Scholars



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Across Europe and the United States (U.S.), educators and policymakers are in agreement that a strong national system of graduate education is essential to a country's ability to innovate, to compete in the global economy, and to contribute to solving some of the most pressing challenges in areas ranging from energy, the environment, world health, and security. The strength of the U.S. graduate enterprise depends upon its critical infrastructure and leadership, on quality curricula and facilities, on partnerships with government and industry, and on a strong pool of domestic and international talent. Over the past three decades, international students have come to play an increasingly important role in this enterprise. Indeed, as global competition accelerates for the best students in every field, many universities in the United States are striving harder to ensure the continued attraction of study opportunities for young international scholars. They are doing this through increased sensitivity to the needs of international scholars and the challenges they face, through innovative "best practice" initiatives to improve the quality of the graduate experience, and through collaborative agreements with institutions from other countries.

The May 8, 2008 Cátedra UNESCO de Gestión y Política Universitaria seminar on the mobility of researchers asked an important question, one that every country and university with a stake in graduate education should be asking, and one that has particular importance for those countries whose export of research talent exceeds their current import capacity: Is the asymmetry in the direction of talent flow acceptable? There are a number of ways to answer this question and several potentially contradictory metrics by which we could define acceptable or nationally beneficial. There is also some uncertainty about the long term effects to "sender" countries -and the sustainability- of current global patterns of student mobility. These patterns reflect global perceptions of the quality and reputation of educational institutions as well as a complex interplay of social, economic, and geopolitical forces typically outside the control of university policymakers.

There was a second question, though, that implicitly guided many of the contributions to the seminar and in response to which much of the international discussion among senior university leaders and government policymakers is now taking place: What roles do university and government policies and practices play in influencing the patterns of talent flow? This second question has been at the center of discussions of international student mobility in the United States, and the Council of Graduate Schools (CGS) has been an active facilitator of that dialogue.<sup>(1)</sup> Whether a university perceives its contribution to the national interest primarily in terms of helping to produce and retain the best domestic talent or helping to import and prepare the best talent from around the world, the most effective university talent strategies - those elements within the purview of faculty and university policymakers- are likely to exhibit some common characteristics: the willingness to innovate, even while building on established traditions of excellence; the ability to seek out, establish, and sustain mutually beneficial partnerships; and the desire to position educational and research activities in a broader global context.

One impetus for recent CGS international activities came from the recognition of the increased dependence of U.S. universities on international students in science and engineering doctoral education, especially since 1980. To better understand the international flow of students to US graduate programs and the possible impact of university and government policies, CGS began a multi-year study of talent flow through a variety of mechanisms, including surveys of member institutions on international student admissions patterns and international activities, and focused discussions on policies and practices that may impact the quantity and quality of international students applying to U.S. graduate programs. International students currently comprise an important part of the U.S. research enterprise, making up 48% of students in engineering graduate programs and 40% in the physical sciences (CGS, 2007). The troubling news for policymakers and university leaders in the United States is that behind this positive sign of attractiveness to international researchers is one of diminished interest among domestic students in pursuing doctoral degrees in science and engineering. The percentage of domestic students earning science and engineering Ph.D.s is down from approximately 70% in 1985 to less than 55% in 2006, even as the country's overall production of Ph.D.s in these fields has grown during that period. (NSB, 2008)

Another motivation for CGS research on international student admissions trends was the evidence, at first anecdotal, that U.S. universities were feeling repercussions from the attacks of September 11, 2001 in decreased numbers of international students applying for graduate study in the U.S. Since 2004, CGS has conducted an annual survey of U.S. universities on international student admissions trends in three phases: applications, admissions (students who formally receive offers of acceptance), and enrollment (students who accept and begin study). Initially, CGS reported a steep average decline of 28% in international student applications for the 2003-04 academic year, and in 2005 reported a 5% decline for the following year. The next two years, CGS reported an 11% and an 8% increase in international student applications, respectively. Although the most recent applications survey reports total growth of 3%, most of this growth was accounted for by the top 50 with respect to numbers of international students. But 65% of those universities that have continuously responded to the university reported decreases, averaging 31% lower than 2003 levels (CGS, 2008). Although the ultimate impact on international student enrollment was not nearly as severe, the conspicuous drop in applications served as a wake up call for many institutions to the fact that the seamless flow of international talent could no longer be taken for granted, and that the potential influence of factors beyond their immediate control (such as student visa processing and the broader geopolitical environment) should encourage them to focus, proactively and to the best of their ability, on those factors that are within their control. In order to better understand what kinds of activities universities were undertaking, and as a supplement to the

admissions surveys, CGS also included a questionnaire on topics such as: graduate admissions policies and practices on three-year bachelor's degrees in response to the Bologna Process reforms (recognizing that not all signatories have three-year bachelor's degrees), international collaborations, and international student recruitment activities.

Many of the findings from these policy and practice surveys suggest greater opportunities for international researchers. Trends in graduate admissions, for example, suggest that the Bologna Process is gaining wider recognition and the resulting degree structures -in part because of improved credit transfer processes and credential evaluation instruments, as well as diploma supplements and other clarifying mechanisms- are all gaining wider recognition and acceptance in the U.S.

There is also evidence of significant collaboration between universities partnering on joint- and dual-degree programs. In dual (or double) degree programs, students "study at two or more institutions and upon completion of the program receive a separate diploma from each of the participating institutions." In joint degree programs, "students study at two or more institutions and upon completion of the program receive a single diploma representing work completed at two or more institutions (2)." Among those institutions with the largest numbers of international students, dual and double degrees are more common (with 44% of respondents in the top 10 with respect to international enrollments reporting dual degree programs, and none reporting joint degree programs (3)). Overall, however, the relative prevalence of the two types of program structures is fairly even: 11% of all respondents reported having dual and double degrees, while 7% reported having joint degree programs. The most common fields for such collaborative degree programs are business and engineering, and they are more common at the master's than at the doctoral level, with the exception of the life sciences (CGS, 2007). This promises to be a growing area of institutional activity.

As the number of formal international collaborations between U.S. and European universities continues to grow, opportunities for international faculty at U.S. higher education institutions may increase. At the same time, global projects requiring international research collaboration across government, business, and non-profit sectors are creating new non-academic career pathways for advanced degree holders that may involve opportunities for employment in the United States. And as we come to see the increasing globalization of scholarship and research in both academic and non-academic contexts, universities are focusing to a greater degree than before on global citizenship, and on the specific sets of skills needed to thrive in an international context. U.S. policymakers are aware of complaints about delays in visa processing times that have affected students, postdoctorates, and researchers and have been responsive to the graduate community. But there is no doubt lingering concern that excessive restrictions on H and J visa programs could compromise some of the attractive opportunities for international scholars that help to make the U.S. graduate and research enterprises so successful.

Most of those in the U.S. higher education community support the global trajectory that governments and universities have mapped out for greater international collaboration and enhanced student and researcher mobility. There are other voices in the public sphere, however, calling for tighter controls on immigration, generally, which could potentially impact the policies conducive to the flow of high-end talent. At the same time, other countries are quickly developing capacity in graduate education with the hope of retaining their own top students and attracting those from other countries. U.S. Immigration policies and emigration policies of other countries are variables that make the specific shape of future opportunities somewhat uncertain.

In this broader context with all of its uncertainty, there are a number of positive trends for students aspiring to paths to and through the United States. The importance of international scholars to American research is often exemplified by the fact that between 1990 and 2004, "over one third of Nobel Prizes in the United States were awarded to foreign-born scientists" (Wulf, 2005). Most employment indicators point toward a more mobile future and more hospitable climate for international scholars seeking opportunities in the U.S.

#### **a. Faculty and academic opportunities**

Between 1992 and 2003, the percentage of citizens U.S.-born in full-time faculty positions declined from 83% to 76%, while that of citizens, foreign-born and non-citizens in those positions grew from 9 to 13 and from 8 to 11%, respectively (SNB, 2008). There is more good news for international scholars seeking academic careers in the U.S. on the faculty salary front. Overall, the average annual salary ranges (in U.S. dollars) at doctoral institutions are: for full professors, \$93,000 to \$159,000; for associate professor, \$69,000 to \$103,000; and for assistant professor, \$60,000 to \$87,000 (4). Salary ranges typically vary by discipline, and there are differences by institutional type, with master's focused institutions typically paying lower and private universities generally paying higher salaries than doctoral and public universities, respectively. A recent comparative study on faculty salaries also found that "US academics enjoy higher salaries than those in any of the main English-speaking countries" including Australia, Canada, New Zealand, and the UK (Commissioned by The New Zealand Vice Chancellors Committee on behalf of the Tripartite Forum Working Group, 2008).

While future prospects for international scholars in the U.S. look promising, there are some countervailing trends to be aware of. Although the U.S. Bureau of Labor Statistics predicts faster growth in postsecondary teaching jobs, much of this increase will be in part-time positions (Bureau of Labor Statistics, 2008). There is some evidence, moreover, that as part-time positions increase, undergraduate degree completion rates decline, suggesting that accountability pressures may place competing demands upon universities (i.e. on the one hand, to save costs and on the other, to ensure outcomes) (New York Times, 2007). As greater emphasis on institutional accountability becomes the norm, how trends in the increase in part-time faculty will be perceived is uncertain. In some fields where part-time faculty are becoming especially prevalent, new postdoctoral scholar or fellow positions are serving as halfway points between the interests of the individual scholar (in the security of a faculty appointment) and those of the institution (in securing competitive talent while minimizing financial commitments).

Although research universities tend to exhibit fairly uniform processes for tenure and promotion of faculty, and standards in the disciplines are relatively common across institutions, there can be enigmatic aspects such as the relative weight of quality over quantity in publications, the quality of teaching, and the research portfolio. While faculty appointments are not "political" in the strict sense, the phrase "departmental politics" connotes a set of interpersonal and scholarly issues that are not typically covered in the explicit requirements for tenure and promotion. Denial of tenure on these bases is the exception rather than the norm. But awareness of institutional decision-making, recent history in the department, and the need to understand the sometimes unspoken expectations as well as the formal requirements is a good idea for international scholars on the academic path in the U.S.

Of course, one additional element in the tenure and promotion process for international scholars that domestic scholars do not have to face is the immigration process. While the process may appear daunting from the outside, universities typically have resources in place to

assist scholars who otherwise meet the university's criteria for professional advancement. The typical visa type for faculty, and some postdocs, is the H-1B visa. With a time limit of up to six years, the purpose of the H-1B is temporary employment in "specialty occupations" and/or with intent to apply for permanent residency. The typical visa type for postdoctoral scholars is the J-1 visa. The purpose of the J-1 program is to provide exchange opportunities for a cultural/educational purpose. The time limit of the J-1 is up to 3 years, with the possibility of a 6-month extension, and (unlike the H-1B visa) spouses may apply for employment authorization [\(5\)](#).

#### **b. Non-academic opportunities**

International workers comprise an even larger portion of the non-academic workforce than they do the U.S. faculty, and the internationalization and multi-nationalization of employers is resulting in a greater number of opportunities for international researchers. According to the National Science Foundation, "25% of all college educated workers [and 40% of doctoral holders in science and engineering occupations in 2003] were foreign-born; at least 41% of foreign-born university-educated employees in the U.S. science and engineering workforce in 2003 had their highest degree from a non-U.S. educational institution; and about half of science and engineering doctorate holders in U.S. postdoc positions may have earned doctorates outside the United States (NSB, 2008). Global diffusion of research and development (R&D) employment is further reshaping non-academic career paths: From 1994 to 2004, R&D employment outside the U.S. by U.S. firms increased by 76%, compared with a 31% increase in R&D employment by the same firms in the United States, and an 18% increase in U.S. R&D employment at the U.S. subsidiaries of foreign-firms." [\(6\)](#) One way of looking at this trend is as the third wave of so-called "globalization," following that of the manufacturing and service sectors. But another key development driving this trend is the recognition that global solutions and success in global markets in the twenty-first century knowledge economy require international teams of investigators and talent.

#### **c. The role of the university**

Universities that will secure a competitive advantage in attracting in and preparing talent for this global knowledge economy will be those that are "networked" or successful in developing and maintaining meaningful international collaborations. In 2006 and 2007, CGS, in partnership with the European University Association (EUA), held two major meetings of strategic leaders to explore mutual concerns and possible collaborative opportunities in graduate education. The first meeting, which took place in Salzburg, Austria, included over 40 graduate education leaders from across Europe, and address "Doctoral Education in a Global Context." The second meeting, which took place in Banff, Canada, brought together those same participants with an expanded group of leaders representing graduate education in North America, Europe, and the Pacific Rim. Proceedings from the latter meeting, *Global Perspectives in Graduate Education* (CGS, 2008) contain the "Banff Principles," which outline a set of nine consensus points for a future platform for international collaborations on graduate education (CGS, 2008).

#### **d. The Collaborative Advantage of the Global University"**

The question of the acceptability of the current asymmetry in the international flow of talent has, perhaps understandably, not been center stage in discussions in the United States, which has largely benefited from this asymmetry. But the question may well become an increasingly important part of the international dialogue as universities devote more effort to formal

educational partnerships such as dual and joint degree programs, exchange programs, and international research projects. Talent retention also depends upon cooperation and tighter integration between government, the employment sector, and academe. The 2008 Cátedra UNESCO de Gestión y Política Universitaria seminar provides an important model for such intersector dialogue. The combined forces of researchers, university leaders, and national policymakers in both national and international settings can no doubt, in this environment, turn current asymmetries to collaborative and competitive advantage for all.

The Times Higher Education Supplement's world ranking of universities recently added "global university" to its set of ranking criteria (Topuniversities, 2007). However such a measure is defined, its inclusion sends an important message that while universities may propose international activities for a variety of reasons, in today's global research environment, there is an emerging link between a university's cosmopolitanism and its reputation for quality. A few of the characteristics that we might say make for a "global university" include:

- international research collaborations;
- international educational programs and collaborations (such as joint degrees, dual degrees, or certificates);
- international students;
- international experiences for domestic students;
- and international postdoctoral fellows and faculty.

There are two obvious motivations for universities to invest additional effort in international collaboration. The first is expressed in the dictum "know the competition." The second is the recognition that the public and financial beneficiaries of a graduate degree often extend beyond the region or country in which that degree is earned, and that the opportunities for international mobility of researchers continue beyond their choice of graduate program or first employment. It is easy to envision, though difficult to study, that the benefits of international mobility redound to both sending and receiving countries in ways that cannot easily be explained with a closed border or fixed period approach to return on education investment. As more U.S. universities explicitly position themselves as global actors, this will likely create additional opportunities for international scholars, but it may also exacerbate current asymmetries affecting those universities in so-called "sender countries" that are finding it more difficult to create global partnerships and capitalize on international opportunities. While these two considerations (revenue aside) may be some of the prime motivations for seeking international collaboration, one of the underlying conditions for the attractiveness of the "global university" may be that we are all becoming a bit more comfortable with the uncertainty that global identity entails. As universities move in the direction of positioning themselves globally, conventional administrative priorities of predictability and control over the flow of talent across borders may be giving way to new priorities of pursuing the boundless opportunities that collaboration among "global universities" makes possible.

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## Notas al Pié

1. (1) The Council of Graduate Schools is an organization of 500 institutions of higher education in the United States and Canada engaged in graduate education, research, and the preparation of candidates for advanced degrees. CGS members award 94% of the doctoral degrees and 80% of the master's degrees in the United States. The organization's mission is to improve and advance graduate education, which it accomplishes through advocacy in the federal policy arena, research, and the development and dissemination of best practices ([www.cgsnet.org](http://www.cgsnet.org)). All website links cited in this article retrieved on June 12, 2008.
2. (2) CGS definitions, 2008.

3. (3) Respondents included 9 of the top 10 with respect to international student enrollment.
4. (4) American Association of University Professors.
5. (5) These requirements may change, so those interested should check with the (US Citizen and Immigration Services, <http://www.uscis.gov/portal/site/uscis>). See also the National Postdoctoral Association website (<http://www.nationalpostdoc.org/site/c.eoJMIWOBirH/b.1388059/>) for important updates pertaining to postdoctoral fellows.
6. (6) Ibid
7. (7) Daniel D. Denecke (Ph.D.) is co-author of the publication *Ph.D. Completion and Attrition* (2004), which reviews empirical studies on the topic, discusses the institutional factors that contribute to graduate-degree completion, and outlines salutary interventions and next steps for improving completion rates in graduate education. Dr. Denecke has directed the Council of Graduate Schools (CGS) Ph.D. Completion Project, a major national initiative to address the underlying factors of students' departure from graduate study. He currently directs the Project for Scholarly Integrity to develop institutional models for embedding research ethics and the responsible conduct of research into the graduate research experience. Prior to working on these projects, he managed the Preparing Future Faculty (PFF) program at CGS, to promote and institutionalize professional development programs for doctoral students aspiring to faculty positions. Through his work at CGS, he works extensively with graduate deans, faculty, and program directors to improve graduate education. He has also worked with universities and organizations in the U.S. and Europe to assess the potential impact of the Bologna Process beyond Europe (e.g. on U.S. graduate admissions processes) and has presented to international audiences on career opportunities for international scholars and researchers. Dr. Denecke's personal research focuses on pedagogy, literature, and the rise of social science in nineteenth-century Britain.

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