

## Reflections on the geopolitics of doctoral studies\*

In many countries today we are witnessing massive changes in doctoral studies. The consequences of those changes will be anything but neutral in the medium to long term.

Emerging nations are trying to close the gap with the industrialized world by building the systems of higher education they will need to survive in the global knowledge race. Their governments, when they possess the resources, are creating ambitious doctoral programs, either in-country or, more often, by sending students abroad for a doctorate. Examples of countries with large doctoral scholarship programs include China, where today hardly 40% of university faculty hold a doctorate, Brazil, Mexico, Chile, Vietnam, Indonesia, and Syria. Morocco recently adopted an emergency plan for doctoral studies within the context of a wider emergency plan.

Meanwhile, industrialized countries continue to promote doctoral mobility by competing mightily to recruit doctoral candidates to programs at their higher education institutions. Some do so because they want to train the elites of certain emerging countries. Others are suffering from a knowledge gap and feel they must recruit international talent. The latter form of premeditated brain drain is supported by grant programs that are at least as attractive as those offered by the sending countries. A third motivation behind the recruitment of doctoral students is to increase university revenues by tapping a particularly lucrative segment of the postsecondary education market.

As doctoral study becomes increasingly professionalized and increasingly integrated into economic activity, several countries have begun to try to reclaim "their" foreign-trained doctoral students, offering significant financial incentives and heightened professional and social status to entice them back to assume temporary postdocs or permanent career positions. Other countries try to attract the most talented international research

scholars using all sorts of methods, private and public. Some countries are proceeding on both fronts, reclaiming their own nationals while recruiting talented graduate students of other nationalities.

At the same time, the depopulation of Europe (including Russia), Japan, and several other large countries—coupled with the relative disinterest of western youth in doing basic research or earning a degree that is often poorly rewarded in today's labor market—threatens to alter radically the distribution of the doctoral population<sup>1</sup>. The case of France is described in a report from the DEPP, which predicts a 32% drop in doctoral enrollments by 2017<sup>2</sup>.

Taken together, these developments, which in one way or another all reflect an overall shortage of brainpower, are likely to result in a growing number of doctoral candidates around the world and a very sharp increase in the number of internationally mobile candidates, even if, for certain countries, the internationally mobile component remains very small (0.4% of American doctoral students, for example)<sup>3</sup>. Contrary to what one might think, the current global crisis only reinforces this movement, as human capital remains essential for countries, and as individuals continue to view their investment in higher education as a guarantee of a better future<sup>4</sup>.

But do the degrees that those individuals earn meet the needs of their countries for future senior university staff, researchers, or managers and engineers for industry? What, in the end, does the doctoral degree guarantee? And is that guarantee the same everywhere?

To attempt a modest reply to such a broad question, we will start with a provocatively titled work edited by Maresi Nerad and Mimi Heggelund, *Toward a Global PhD? Forces and Forms in Doctoral Education Worldwide*, which emerged from

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\* By André Siganos, Professor of General and Comparative Literature, Director General of CampusFrance.

1 - According to the United Nations mean estimates of the population aged 15–24 thirty years from now, Algeria will have as many young people as Germany. Germany will have fewer young people than Britain, and Britain fewer than France. The youth of Turkey and Iran, numbering 14 and 13 million, respectively, will exceed Japan's (10 million) and approach Russia's (15 million). The 10 top countries will be: India (245 million), China (170), the United States (48), Nigeria (47), Pakistan (42), Indonesia (41), Brazil (35), Ethiopia (28), the Philippines (22), and Mexico (18).

2 - Note DEPP, Nov.08/32.

3 - Cf. Institute of International Education (IIE), <http://opendoors.iienetwork.org/?p=131562>.

4 - According to a recent British report (Neil Kemp, *The UK's Competitive Advantage: The Market for International Research Students*, UK Higher Education International Unit, Research Series 2, London, July 2008, [www.international.ac.uk](http://www.international.ac.uk)), the growth of the world's doctoral population over the next 10 years should produce an increase of just 3.5% in the total student population.

an international colloquium held at the University of Washington in Seattle in 2005. The work is valuable for having assembled in one place the thinking of 20 specialists from 12 different countries on the status of the doctorate around the world. The editors are to be commended for their interest in the Bologna Process, to which they give a very liberal interpretation<sup>5</sup>. Other recent reports may enable us to place the ongoing Bologna effort in perspective.

The editors begin by observing that economic globalization cannot fail to affect the pattern and pace of doctoral studies, posing the question of whether we will soon see the birth of a global system of doctoral education within the larger global knowledge economy.

Whether the goal is to respond to universities' need for faculty or to the needs of business, the editors stress the transformations that will be needed to enable "the emergence of a worldwide hierarchy of institutions, degrees, and doctorate holders" (page 4). They take for granted that the "global actors" sitting atop this hierarchy will of necessity belong to a very selective network of world-class universities. The phenomenon of the Shanghai classification appears to be fully operational here. The book's argument seems to hang on the distinction between the *international* and the *global*, with the second encapsulating the first. This distinction allows us to revisit a nontrivial semantic difference: that between "internationalization" and "globalization." The first term refers to international exchanges conducted in accordance with rules that lie outside the market, particularly the rule that values cultural and linguistic diversity. Globalization, by contrast, refers purely and simply to the globalized economy and higher education as a part of that economy. From this point of view it is immediately apparent that the values that underpin the European position expressed in the Bologna Process need to be clarified.

Assuming for the moment that one accepts the book's premise that some sort of global hierarchy is emerging—and that such a hierarchy is a good thing—the process of moving toward a global doctorate, one that signified universal recognition of excellence in research training and preparation to meet the needs of the market, would not be without its difficulties. To begin with, one would have to embrace the idea of adhering solely or predominantly to the rules of the traditional concept of the market in higher education and research, putting aside UNESCO's 2005 declaration that higher education was an "international public good." And one would have to stop caring whether doctoral programs around the world retained their cultural idiosyncrasies as well as their disciplinary specificity. Still other obstacles would have to be overcome, as well.

The first relates to the meaning of this level of education. Everywhere in the world the requirements are high and relatively clear with respect to doctoral training in preparation for academic research, although even here the requirements for the writing of the dissertation and for its defense are quite varied. In this respect, the Bologna Process, which has been billed more as a process of harmonization than of standardization, probably strikes a good balance between scientific requirements and the way in which each country grapples with them.

But as soon as doctoral education is viewed as a way of certifying that the holder of the doctorate is qualified for a job in a firm, or even for applied research, the meaning of the credential is much more questionable and the content open to much more criticism. Around the world critics lament the length of doctoral programs and their failure to thoroughly prepare young people for the world of work. They criticize their lack of structure, the excessive variability in what programs are supposed to be measuring, the excessive dependence of candidates on their dissertation advisers, and the inadequacy of the coursework offered in programs that purport to train people to do research. In short, critics tend to emphasize the lack of *professionalism* of doctoral training. But it is a short step from there to conclude that the criticisms reflect badly on doctoral education at large.

It is for that very reason that countries as developed as Japan make a clear distinction between the doctorate, which prepares students to do research, and the Master's degree, the natural stepping stone to business. The relatively low ratio of doctoral candidates in the Japanese student population (1.8%) no doubt reflects that distinction<sup>6</sup>. Indeed, outside the academic sphere, the doctorate is hardly recognized as a significant diploma in Japan<sup>7</sup>. In India (and other emerging countries) the situation is even worse. There, one often hears complaints about the general quality of doctoral candidates and the low quality of their research, which rarely merits publication. In the United Kingdom, where doctoral training is unabashedly viewed in the context of the world market for higher education, doctoral programs have undergone substantial diversification. The appearance of a professional doctorate may be a response to market demand, but the diversification of which it is an expression is producing confusion, largely because it is proceeding in a marginal fashion, without significant restructuring of programs—and without much discussion of the meaning of "professional doctoral training" and the degree to which it leads<sup>8</sup>.

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5 - Maresi Nerad and Mimi Heggelund, eds., *Toward a Global PhD? Forces and Forms in Doctoral Education Worldwide*, University of Washington Press, Seattle, 2008, 344 pages. The book is an expanded report of a colloquium held in 2005 at the University of Washington in Seattle, with representatives from the following countries: Australia, Brazil, Canada, Denmark, Germany, India, Iceland, Japan, Mexico, Netherlands, Norway, South Africa, the United States, and the United Kingdom. China, France, and the OECD were invited but were not able to attend.

6 - In 2006 this ratio was 2.2% for the United States, 3.2% for France, and 4% for the United Kingdom. But one must be extremely careful in interpreting these figures, which may cover very different circumstances. Some countries include the last year of the Master's degree, while others do not. (sources: UNESCO, CITE6, 2006).

7 - "Doctoral programs are understood to focus on training researchers and academics, while Master's degrees focus on professionals and highly talented people" (Shinichi Yamamoto in *Toward a Global PhD?*, *op. cit.*, p. 204).

8 - "The broad categories of doctoral study in the UK can be summarized as follows: PhD; Taught Doctorate; Doctor of Medicine; High Doctorates; PhD Published Work; Professional Doctorate; and Practise-Based Doctorate." (Howard Green, in *Toward a Global PhD?*, *op. cit.*, p. 42).

The foregoing remarks about Britain, from contributor Howard Green, are all the more telling because they were made by an expert who observes that his country enjoys a triple advantage in the market of knowledge: the short time it takes to earn the degree, the language used, and the concern for quality that envelopes doctoral programs. And yet he adds that the universities' interpretation of the quality framework proposed by the U.K. national agency is vague<sup>9</sup>, and that we are witnessing a sort of crushing of the model by the exact sciences to the detriment of the creativity and change that the humanities and social sciences can bring. He goes so far as to say that assessments of the quality of doctoral education, and of the degree granted, remain largely empirical.

The conclusions adduced by Maresi Nerad and Thomas Trzyna<sup>10</sup> testify to the difficulty of their subject. They do not dismiss the recent history of colonialism or the possibility that western imperialism might be perpetuated in a global (as distinct from international) scientific vision. They are very clear about the inevitable commercialization of doctoral exchanges that would result from the transformation of the degree into a standardized product churned out for consumption in the knowledge market. But, they remind us that the private sector will find a solution where the public sector refuses to act<sup>11</sup>.

The new standard product already has a language (English) and an ongoing global reform campaign, known as Mode 2. "Mode 2 doctoral education is characterized by a team of students and senior researchers working together on a project that has marketable value as defined either by government or by private interests<sup>12</sup>." The standardization process is fueled by demands for quality assurance, the setting of goals and indicators, and the increasingly managerial flavor of university administrations. (In this context, the Bologna Process is held up as a model, which merits debate.)

Taken together, the foregoing considerations demonstrate the extent to which doctoral education:

- demands a great deal of attention, which does not appear to have been the case for the Bologna Process, at least not until relatively recently<sup>13</sup>;
- reveals such striking gaps in scientific standards that it is sometimes difficult to believe that one is discussing the same step on the academic ladder;

- has crept from the purely academic sphere, where it is expected to impart the skills required to perform original, individual research, to the professional sphere, where it is likely to be valued as a sign that the holder has acquired capacities needed to address ever more complex problems<sup>14</sup>;
- must be pondered and debated in the global South as well as the North, in the East as well as the West. The thought structures implicit in languages, like the social needs and requirements linked to doctoral-level training, differ widely from culture to culture, economy to economy. Rules that purport to improve doctoral education cannot ignore those differences. The phenomenon of brain drain must be combatted. The ethical responsibility of the world's great universities in this regard must be clarified<sup>15</sup>;
- deserves therefore to be underpinned by values that are not purely commercial;
- must make separate provision for disciplines that cannot be divorced from their cultural matrix: languages, literature, the humanities, and the social sciences.

For all these reasons, it is difficult not to endorse the principles on which the experts who convened in Seattle in 2005 agreed. Those principles demand, as necessary parts of doctoral education, an understanding of the ethical dimensions of research and the practice of interdisciplinarity; a willingness to become citizens of a multicultural world, the diversity of which must be accepted; the need to learn at least one foreign language; and a commitment to preserve and protect native cultures.

Yet one cannot help but suspect that these principles may be serving partly as window-dressing for a more technical vision of doctoral education, a vision that may or may not be reinforced by the current global crisis, which, of course, was unforeseen in 2005. Much in *Toward a Global PhD?* hints at an unacknowledged (and perhaps unconscious) strategy, by which the world's great universities set rules that allow them to ensure their own reproduction and to continue to supply the market of knowledge.

9 - "The UK national qualifications framework describes doctoral level work as that which makes a significant contribution to knowledge and which is original" (Howard Green, *ibid.*, p. 60, citing Quality Assurance Agency, 2001). Others cite a contribution and its application, while still others emphasize the publishability of the dissertation.

10 - Maresi Nerad and Thomas Trzyna, *ibid.*, p. 300–12.

11 - "Where there is strong national resistance to changing the model of doctoral education, private universities can adjust more rapidly to the new global expectations" (*ibid.*, p. 305).

12 - *Ibid.*, p. 306.

13 - "It was really only in 2005 when the first declaration, at the instigation of the European University Association, stated how the doctoral components of the Bologna Declaration should be interpreted. Very little has been done in most countries, and the structures in most European countries still stick to the original models as they existed before the Bologna declaration." (Andreas C. Frijdal, *ibid.*, p. 89).

14 - "Doctoral education is seen as playing a crucial role in the production of knowledge, and doctorate holders are viewed as a primary source of innovation, research, and development capacity and as workers able to perform well in complex, knowledge-intensive situations" (*ibid.*, p. 5).

15 - Brendan O'Malley (*ibid.*, p. 68–69) recently emphasized the extent to which this responsibility is becoming a national debate but leaves out the "marble universities" ("New Strategy to Lure Postgraduates," *universityworldnews.com*, March 15, 2009).

# Conclusion

**T**his review, to which we have added our own views, as well as those of other recent authors on the subject, exposes some important omissions that have not prevented a clear position being taken on a complex topic, a position based on a logic that seems irrefutable, the logic at work in globalization. In fact, what interests the authors was indeed the doctorate of the future, a degree destined to become a standardized product integrated into the global economy.

But that shiny new product does not fully address the disaffection of students for basic research. Nor does it settle the question of national control of science policy. One thinks of Brazil, but also of France, which championed the motion adopted by UNESCO in 2005 on cultural diversity. Both countries have shown that another vision of international exchanges is possible within the economy of knowledge.

The Bologna Process, while liberal in its inspiration, incorporates important programs of research training and scientific mobility, as well as a thorough review of the status of the doctoral student in Europe. It deserves closer attention. Over the past decade, the United States has taken several initiatives, public and private, that show that the market alone is not likely to fix all problems. Two of those initiatives are supported by the National Science Foundation: the Integrative Graduate Education Research and Traineeship Program (which involves the creation of thematic, interdisciplinary doctoral programs in which the academic and professional worlds overlap and for which doctoral candidates receive public support<sup>16</sup>) and the Alliances

for Graduate Education and the Professoriate, which promote the training of professors and researchers in the hard sciences, with an emphasis on minority students. The NSF expects these programs to help change the academic culture by encouraging more collaborative and interdisciplinary research, as well as more contact with professional circles and greater innovation in programs<sup>17</sup>.

Clearly, we stand at the very beginning of an international dialogue that must include the countries of the South and the disciplines of the humanities and social sciences<sup>18</sup>. We would do well to pursue that dialogue wherever it may lead us, querying the business world for its views, asking postdocs for their appraisal of the dissertation they wrote and the training they received, examining with as much data as possible the role of PhDs in the world of work, inviting all postsecondary institutions (and not just a global elite) to describe the changes they are making and why. In so doing, we should ask ourselves about the reasons behind the diaspora of the world's doctoral population and the implications of that diaspora in the context of the demographic explosion in the major emerging countries and the needs of the industrialized world, where populations are falling. The extreme difficulty of assembling reliable and comparable statistics to analyze the global phenomena raised here is yet another indication that the path to a truly international community of higher education will be a long one.

16 - 125 programs at 65 universities received five-year financing to the amount of \$2.9 million.

17 - Cf. Nerad, in *Toward a Global PhD?*, *op.cit.*, p. 290 et seq.

18 - A colloquium will be held in Casablanca in June 2009 on the topic of "academic communities confronted by the logic of the market." The meeting is being organized by the Ecole des Hautes Etudes en Sciences Sociales, the CNRS, and the University Hassan II in Rabat (Morocco).

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**Editorial director:** André Siganos

**Translation:** Steven B. Kennedy (and coordination by Louise Watts)

**Editing:** Solange Pisarz, Claude Torrecilla ([claudetorrecilla@campusfrance.org](mailto:claudetorrecilla@campusfrance.org))

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79, avenue Denfert-Rochereau

75014 Paris

Tél. : 01 53 63 35 00

[www.campusfrance.org](http://www.campusfrance.org)

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