

Quo Vadis Doctoral Education? New European Approaches in the Context of Global Changes

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Changing Policy Contexts in Europe and North America

Doctoral education and training have become the object of scrutiny and policy formulation in recent years. A number of reform initiatives are currently being undertaken in order to change and improve this phase of qualification.

In Europe, the Bologna Declaration of 1999 to create a European Higher Education Area and the Lisbon Strategy, formulated in 2000 to create a European Research and Innovation Area, have certainly had an impact on the perspective and conceptualisation of doctoral education and training. While this phase of qualification has been integrated as the third cycle of higher education in the framework of the Bologna Process (an intergovernmental initiative signed by 46 European countries so far), the presidential conclusions of the EU Lisbon Summit stated that more and better trained researchers were needed in order to make Europe the most competitive and dynamic knowledge-based economy in the world (cf. Lisbon Summit, 2000). Doctoral education and training are the major link between the two goals to create a European Higher Education Area and a European Research and Innovation Area in order to make European higher education more attractive and more competitive in a globalising world. However, with the trends towards greater harmonisation (Bologna) we can observe a growing variety of models of doctoral education and training in Europe and with the trends towards more public and private investment in the training of researchers (Lisbon) we can observe that the level of expected investment will not be achieved in most European countries.

But it is not only Europe which is thinking about strategies to become more competitive. In North America, similar changes of the policy contexts can be identified. Both national and international forces and developments have triggered extensive criticism and a major re-thinking of doctoral education over the last 15 years (Nerad & Heggelund, 2005). In his analysis of doctoral education in Canada Garth Williams (2005) stated that 'globalization has altered both the context and substance of university education, advanced research and doctoral training' and he characterised 'globalisation' by a number of factors, such as the new economy, the growth of multinational corporations, greater international movement, a revolution in communication technology, increased production and more intense economic competition worldwide (ibid., p.15). In addition, the US have a serious problem to generate a sufficient number of highly trained engineers and natural scientists from their own national student body because too few of them choose these subjects. This is why the US — but also Canada — actively recruit international students into Master's and Doctoral Programmes in these subjects.

It becomes clear with these roughly sketched developments that doctoral education and training are no longer regarded exclusively as the disinterested pursuit of knowledge but that the generation of new knowledge has become an important strategic resource. Another factor has contributed to the changing policy context which can be observed in both Europe and North America. In the last 10 to 15 years there has been a considerable increase in the number of doctoral students — or ‘early career researchers’ as they prefer to be called in Europe — and doctoral degrees awarded. This means that a growing number of doctoral degree holders will not remain in academia but seek employment on the labour market outside universities and research institutes. For these jobs, a research education within disciplinary boundaries and skills geared towards academic teaching and research are deemed to be insufficient.

As the European reforms are closely observed in those countries that Europe sees as competitors for best talent (and which see Europe as their competitor) reforms of doctoral education and training have become an almost global phenomenon. Let me summarise what is generally thought to be wrong with traditional forms of doctoral education and training. Doctoral students are believed to be:

- Too narrowly educated and trained,
- lacking key professional, organisational and managerial skills,
- ill-prepared to teach,
- taking too long to complete their doctoral studies or not completing them at all,
- ill-informed about employment opportunities outside academia, and
- having too long a transition period between Ph.D completion and stable employment (Nerad & Heggelund, 2005).

New Directions for Doctoral Education

One of the main emphases of the *Trends V Report* which was prepared for the Bologna Follow-up Meeting of the Ministers in May 2007 in London was doctoral education and training, or ‘third cycle’ as it is called in the framework of the Bologna Process. As a result of a survey amongst European universities, the Report pointed out that, at present, 29% of the respondents had established doctoral schools, 22% continued with individual supervision only, and 49% offered taught courses in addition to individual supervision. In many of the Bologna signatory countries a mix of two or even all three of these modes of research education and training was found (TRENDS V, 2007, 28ff.). Furthermore, it pointed to the growing diversity in the distinction of profiles or purposes of the doctoral qualification phase: there are research degrees, professional degrees, doctorates in which the research work is carried out in cooperation with an enterprise, creative or arts doctorates, fast track doctorates allowing access to a doctoral programme after completion of a Bachelor degree, the British ‘New Route Ph.D’ which has been specifically though not exclusively designed to attract international students, and finally the joint or European doctorates. Shared supervision or ‘*co-tutelle*’ arrangements are also becoming more frequent. The TRENDS V Report also listed a number of open questions with regard to reforms of doctoral education which should be addressed in the next few years (ibid, p. 28):

- What is the purpose of the third cycle?
- Do we need better or clearer structures?
- What should be the conditions for access?
- Which forms of funding are needed and how can they be used more efficiently?
- How can mobility be developed or improved?
- What is the relevance of the third cycle for the labour market?
- Is there a changing labour market for doctoral degree holders?
- Should research continue to be the primary focus?
- Are credits necessary and helpful?
- Are the ongoing changes coherent?
- What about critical mass?

It is interesting to note that these questions are very similar to those which were discussed in the framework of a transatlantic dialogue in doctoral education organised by the Salzburg Seminar in September 2006 with representatives of the US Council of Graduate Schools. Although completion and attrition are certainly more strongly in the foreground of concerns in the US, the participants agreed that answers were needed to the following three common concerns:

- the articulation of master's and doctoral education;
- the definition, purpose and structure of both Ph.Ds and professional doctorates;
- the broadening of international dialogue on graduate education to the global arena (Council of Graduate Schools, 2006, p. 5).

These open questions are worth exploring in more detail. Certainly, the definition and purpose of the doctoral degree are changing. It is no longer exclusively a research degree but increasingly aims to also qualify for non-academic labour markets. Whether this is done by separating the qualification phase into various tracks or by including additional key competences and skills in the regular research training programmes very often depends on national traditions.

The more structured phase of qualification for a doctoral degree is meant to reduce drop-out rates and provide more efficiency, i.e. get a higher number of doctoral students or candidates more rapidly through this period. Interestingly, it is Germany with one of the highest degrees of 'laissez-faire' in this period which has been producing the largest number of doctoral degree holders as a proportion of its graduates (more than 10%; expressed in absolute figures, more than 25,000 doctoral degrees were awarded in Germany in 2005). An explanation of this is certainly an issue which merits further research.

The conditions for access to doctoral schools and programmes will be an important topic for regulation and policy in the near future. In most of the Anglo-American countries the Master degree has lost its importance and most doctoral students need only a Bachelor's degree to enter doctoral programmes. The Master degree is only awarded to those who, after one or two years, decide not to study for a doctorate. There are first examples of this in continental Europe as well 'fast track Ph.Ds'. But the access question is again a different one in programmes for professional doctorates. People with some years of professional experience are often entering such programmes, looking less for an academic research

qualification or an original contribution to the knowledge base of a given discipline than for a greater problem-solving capacity and a career boost in their professional field. It remains an open question whether national or even European frameworks of qualifications are the right solution for these diverse purposes. A further issue in this context is the fact that, in many European and non-European countries, non-academic labour markets for Ph.D holders are still rather limited or non-existent.

The forms of funding that are currently available for doctoral candidates differ greatly across Europe and are a topic of considerable debate. Should doctoral candidates be regarded as students and pay tuition fees or should they be regarded as early career researchers and receive a salary and appropriate social benefits? Or, if we focus on the degree itself: is it the first step in a research career or is it the highest academic degree? Depending on these perspectives, doctoral candidates are regarded either as employees or as trainees (Scott in Council of Graduate Schools, 2006, p. 2). In this context, it is interesting to note that doctoral candidates in the social sciences and humanities constitute the highest percentage of doctoral students without scholarships or salaries.

The issue of critical mass is an outcome and effect of the British Research Assessment Exercise. Concentrating the best talent in larger research programmes or schools exclusively established in elite universities or top level research departments would provide more opportunities for individual doctoral students because they can communicate and exchange experiences with other people in the same situation and also meet a larger variety of teachers. This would improve the education and training phase as such. On the one hand, this is certainly a convincing argument. On the other, concentration also leads to (depending on the level of perspective) universities, regions and — on a global scale — even whole countries no longer having any doctoral education. This development is strongly promoted by the League of European Research Universities (LERU, 2007).

Closely related to the issue of concentration is, of course, the issue of competition. Peter Scott summarised the tension very well by making a distinction between 'the 'external' view of doctoral education in the international war for global talent and the 'internal' view of doctoral education as a strategy for cultivating domestic talent on the heels of rapid 'massification' across Europe at the undergraduate level' (Council of Graduate Schools, 2006, p. 2). This tension could also be one of the reasons why international mobility within doctoral education is not as widespread as hoped for and promoted. Do universities tend to keep their doctoral students at home in order to profit from the new knowledge they are generating and for fear of losing them permanently to another institution abroad (brain drain)?

All these issues are currently being debated in the context of a European higher education and research area, the development of which is closely monitored by experts and policy-makers from abroad, in particular North America and Australia, in order to propose appropriate action. There is some reason to fear that these developments may turn out to be yet another 'academic arms race' (Dill & Soo, 2005, p. 523).

Global, European, and Regional Networks and Initiatives

At this point it could be appropriate to provide some information about global, European and regional networks, projects and initiatives which have been established in order to discuss the issues that have been elaborated so far.

In 2005, Prof. Maresi Nerad, Director of the Centre for Innovation and Research in Graduate Education (CIRGE) at Washington University in Seattle, invited a group of 34 experts from 17 countries and all continents for a week-long workshop to discuss forces and forms of change in doctoral education internationally and form a network to continue working on the issues that were identified during the first meeting. Although the emphasis during this first meeting was on country reports and first attempts at comparisons, five forces and forms of change in doctoral education were identified which are at work in practically all countries represented in the network:

- nation building and internationalisation,
- definition of what is a Ph.D,
- existing research, available data, lack of data,
- evaluation and quality,
- meta-forces.

The expert network met again shortly before Easter 2007 in Australia at the invitation of the University of Melbourne. Altogether, there were 27 participants from 15 countries and all five continents. The task forces which had been cooperating between the first and the second meeting presented their first results. This second meeting concentrated on recent reform developments in various world regions and the outcomes of the work of the task forces. As was the case after the first network meeting, the second will also result in a book. The third meeting is planned to take place in Germany in September 2008 and will concentrate on policy issues and recommendations. Further information can be found at <http://depts.washington.edu/coe/cirge/html/conferences.html>.

EUREDOCS is a network of European doctoral students working on issues related to the Europeanisation of higher education and research. It aims to facilitate communication between doctoral students and new doctoral degree holders (thesis defence no longer than one year before) working on issues related to the Europeanisation of higher education and research. The network also aims to promote the publication and dissemination of research results and to facilitate exchange and mobility amongst young scholars in this field. EUREDOCS is an interdisciplinary network and accepts doctoral students and recent doctoral degree holders in sociology, political science, economics, history, and educational studies as members. Its activities mainly consist of:

- a website which is designed to be a resource for doctoral students and recent doctoral degree holders,
- a directory collecting detailed information about doctoral students and recent doctoral degree holders and about their Ph.D topics in progress or recently defended in the field of Europeanisation of higher education and research,
- an (annual or bi-annual) international conference.

The network is currently co-organised by four European research centres, representatives of which form the scientific committee:

- The Centre de Sociologie des Organisations at Sciences Po and CNRS in Paris, France (Christine Musselin),

- The International Centre for Higher Education Research (INCHER-Kassel), University of Kassel in Germany (Barbara M. Kehm),
- The Institute of Education, University of London in Great Britain (Penny Jane Burke),
- The Rokkan Centre for Social Studies, University of Bergen in Norway (Ivar Bleiklie).

Representatives of several research centres in the field of higher education from other countries have been invited to join the scientific committee. While the Centre de Sociologie des Organisations and Sciences Po are responsible for the website and the directory, the conferences are organised in turn by the members of the Scientific Committee who also review the papers that are submitted.

One of the objectives of the EUREDOCS network is to organise annual or bi-annual international conferences for doctoral students and new doctoral degree holders on its thematic priorities and interests. These conferences aim to:

- promote exchange and foster discussion and reflection amongst doctoral students and recent doctoral degree holders,
- encourage them to write and present papers at academic meetings and conferences,
- provide practical experience as discussants and commentators,
- foster scientific exchange and debates.

The conferences are also intended to represent opportunities for doctoral students and new doctoral degree holders to meet senior researchers who will act as moderators or be part of the audience. They also serve as an opportunity for further cooperation and exchange. The papers presented at the conference are made available on the EUREDOCS website and will thus be widely disseminated. In addition, the members of the Scientific Committee support revision of some of the papers for publication in scholarly journals. Each conference provides an opportunity for a limited number of contributors (between 12 and 16) to present a paper on a focused issue (which is part of a Ph.D thesis) in order to allow debates and develop relationships amongst participants who share common interests and knowledge on a common theme. For each conference, a new topic will be explored, a call for proposals will be disseminated and the Scientific Committee will select the best from the submitted proposals.

The first EUREDOCS Conference was held at Sciences Po in Paris in June 2004, the second at the Rokkan Centre in Bergen in 2005, the third in Kassel in June 2006 and the fourth in London in May 2007. Further information can be found at euredocs@sciences-po.fr.

Finally, there is a more general network of doctoral students in Europe, founded in 2002, the EURODOC Network, which stands for the European Council of Doctoral Candidates and Young Researchers. It is a federation of national associations of Ph.D candidates and young researchers and acts as a lobby organisation for the interests of doctoral students/candidates within the European policy framework (<http://www.eurodoc.net/>).

In addition to the networks mentioned here, there are a number of initiatives and larger scale projects which focus on changes in doctoral education and related policy issues. The first which should be mentioned here is the 'Doctoral

Programmes Project' carried out by the European University Association (EUA, 2005). EUA was given the task of carrying out a survey amongst its member institutions after the ministerial meeting of 2003 in Berlin in the framework of the Bologna Process in order to identify the most important challenges and problems with which universities are currently faced concerning the organisation of their doctoral education. The Bologna follow-up meeting of Ministers in Bergen in 2005 asked EUA to continue with the work after the results of the first phase of the project had been presented. The follow-up project is called 'DOC-CAREERS Project' and investigates various models of doctoral training in Europe and the employability of doctoral degree holders in different sectors of the economy. It will focus in particular on doctoral programmes in collaboration with non-academic partners and a collection of data for tracking careers of doctoral degree holders to provide the basis for an analysis of doctoral degree holders' career paths.

In February 2007, LERU, the League of European Research Universities which was founded in 2002 and is an association of 20 leading European research universities, issued a 'Statement on Doctoral Training and the Bologna Process' (LERU, 2007). In this Statement, LERU advocates the view that there is a need to concentrate high level research and research training for Europe to remain competitive internationally as a knowledge-based economy. The Statement implies that, in Europe, a differentiation should be promoted between globally competitive, leading-edge, research-intensive universities in which doctoral education is concentrated and smaller and medium-sized 'academic centres' to satisfy local demands for graduate skills. It seems that only LERU member institutions are worth being called universities. Consequently, research is not listed among the tasks of the remaining local and regional 'academic centres', as they are called in the Statement. LERU thus acts as a strong stakeholder organisation for the interests of its own members. What is more, however, is the fact that the Statement does not take into account that every kind of 'leading-edge' research needs 'normal' and mainstream research, since it is impossible to arrive at a distinctive top level — and differentiation here is of course vertical rather than horizontal — without the existence of lower strata as well.

The final initiative to be mentioned here is the 'Manifesto of European Doctoral Students in Literature and the Humanities' (Manifesto, 2006) which represents the outcome of a European meeting of 19 doctoral schools from five European countries which took place in Clermont-Ferrand (France) in November 2006. It states that Literature and the Humanities represent the rich cultural diversity of countries and research in these fields and should not be marginalised. It emphasises the need for more cooperation and mobility of doctoral students and researchers in these fields; it proposes to increase joint supervision of research work and to introduce interdisciplinary elements into the subjects. Most importantly, however, the Manifesto supports the creation of synergies between the academic world and the professional, i.e. non-academic, world in these subjects and calls for the establishment of European doctoral cooperation networks and associations of current and former doctoral students to improve the integration of young researchers into both the academic and non-academic labour markets.

This overview of initiatives, projects, and networks does not claim to be exhaustive. The examples serve to demonstrate the variety and range of debates and

activities with regard to changes in doctoral education and training in Europe and beyond.

Conclusion

Concerning the forces and forms of change at work in doctoral education we find notable differences due to national traditions but also a number of commonalities due to general policy developments. In Europe, we can observe a general shift in policy-making for doctoral training and advanced research from the national to the supra-national level. Both the Bologna Process and the Lisbon Strategy have reinforced this trend. More often than not, innovative models and new ideas are generated in European-level working groups or associations. Despite continuous differences in terms of the forces and forms of change in doctoral education in the European countries, there is one similar factor of change, namely the more or less advanced shift from the individual and/or departmental responsibility in reforming doctoral education to the institutional level. Well-reputed doctoral education and programmes contribute more and more to the overall reputation and profile of an institution, attract best talent and funding and thus begin to play a more important and extended role than serving the extension of the knowledge base in any given discipline. We can note this as an example of a general paradigmatic change in higher education policy which implies two shifts. First, the shift from the institutional to the systems logic, moving the 'idea of the university' (in a Humboldtian sense) into the background and focusing on the structure and configuration of a higher education system at the macro level. Second, the shift from the chair holder logic to the institutional logic in which academic work is more closely controlled and monitored and embedded in the new corporate identity of the institution.

But there are more shifts involved in the ongoing changes. The European initiatives to create a European higher education and research area are increasingly influencing or even shaping the national agendas with regard to doctoral education and research training. There is a basic agreement in Europe that high quality research training and a greater supply of qualified researchers are important in achieving the vision of a globally competitive Europe of knowledge. To achieve this goal, doctoral education and research training are supposed to be more structured and to improve their quality and relevance. In identifying the goals of the reform and analysing the instruments and models used to implement it, we can observe two underlying trends which have already been briefly mentioned in the first part of this article. The first is that doctoral education and research training are no longer regarded as exclusively curiosity-driven and as the disinterested pursuit of knowledge. Instead, the generation of new knowledge has become an important strategic resource and economic factor. It thus becomes a commodity and its shape acquires a more utilitarian approach. Policy-makers have begun to be interested in the state of research training and universities have been requested to develop institutional strategies for it. In addition, it is deemed so important a resource that it is no longer left in the hands of professors and departments but has become an object of policy-making and has moved to the institutional and national, even supra-national level.

The second trend is the considerable increase in the number of doctoral students and doctoral degrees awarded over the last 10 to 15 years in the most

highly developed countries across the globe. And a further considerable increase is expected as a result of the implementation of the Lisbon Strategy. This means that a growing number of doctoral degree holders will be seeking employment on the labour market outside universities and research institutes or academies of science. This development is expected to trigger economic growth and innovation. However, for these jobs, research training within disciplinary boundaries and the acquisition of skills geared towards academic teaching and research are deemed to be insufficient. Thus, reforms of doctoral education and research training are a must, even if we do not support the trend towards the commodification of knowledge production.

The impact of globalisation with its greater emphasis on competition on the one hand and strategic alliances on the other has been identified as one of the main factors that triggered change in doctoral education and research training. Globalisation is linked to the more rapid dissemination of information and knowledge through new information and communication technologies. This has not only led to the fact that information and new knowledge become outdated much more quickly than before, but also to a greater emphasis on the production of new knowledge. In the emerging knowledge societies or knowledge-based economies, knowledge production becomes commodified and a strategic national resource. These developments have started to have an impact on the ways in which knowledge is generated in universities and on how the education and training of the future knowledge producers are organised. They are no longer almost exclusively geared towards self-recruitment of the academic profession but towards a much broader range of careers in society and the economy.

Emerging models for the organisation of research and research training for the knowledge society differ from traditional models in several respects. Not only do we find greater number and variety of education and training models which are similar, however, in their trend towards a higher degree of formalisation. We also find an increasing differentiation of profiles in the degree itself, indicating different purposes of qualification and different career aspirations.

The continental European model of doctoral education and training is still very much shaped by the traditional 'master-apprentice-model' and will certainly continue to be dominant in the near future. However, the idea of doctoral programmes is spreading and will become more important. Approaching doctoral education in a more systematic way and making it more structured, while at the same time working towards more transparency in admission, selection and quality assessment will probably leave enough room for national traditions and ambitions to remain. What does this mean for the Master-Ph.D link? It can be assumed that the explicit distinction between professional and research degrees, as well as the idea of a 'fast track' will become more widespread. However, for the time being, the latter will remain the exception rather than the rule.

One last thought is offered here in conclusion. There is a common issue in many countries around the world: doctoral degree holders are regarded as too valuable a resource to leave their education and training in the hands of academics alone. Thus, this phase of qualification has become an object of institutional management and of national and even supra-national policy. Despite the fact that doctoral candidates are still mostly trained in the research paradigms and methodologies of a given discipline by academics of that discipline, structures, quality,

output and level of performance are closely monitored by agents outside the discipline who have motives, purposes and goals that are not purely academic. Whether this will eventually reflect on the research training itself still remains to be seen. If a utilitarian concept of relevance becomes so strong that it determines academic notions of quality or excellence and the idea of curiosity-driven research, then we could all end up poorer than we were before.

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