



**THE ORGANISATION OF
DOCTORAL RESEARCH
Interim Report**

**AESOP/SOCRATES
WG-PhD**

Faculteit der Beleidswetenschappen
University Nijmegen
The Netherlands

prof. dr. D.B. Needham
drs. A.M. van Putten

juli 2000



Katholieke *Universiteit* Nijmegen

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WG-PhD**

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Preface.

Two years ago in 1998 a questionnaire about doctoral researchers (i.e. those working for a doctors – PhD - degree) spending some time at a university in another country was sent to all European countries where there are members of AESOP.

This was sent as part of a project called 'Improving planning education in Europe' by which the European Commission (SOCRATES) gave money to AESOP (the Association of European School of Planning). The working group for which we are responsible has the task of investigating how the education and training of doctoral researchers can be improved. The information provided by that questionnaire concerned visits by doctoral researchers from your university or country to a university in another country, and visits to your university or country by doctoral researchers from another country. We processed in a report (October 1998) that information from all the 59 universities in 15 countries that replied.

When we discussed this subject at the AESOP congress last year in Bergen (Norway), it became clear that we knew very little about the way in which doctoral research and studies are organised in each other's countries. And without this knowledge, we cannot investigate sensibly the possibilities of exchanging doctoral students (part A). One of the other points made during this meeting was that in some other disciplines, there is already experience of exchanging doctoral students and that there are various schemes for furthering this. It was decided that it is important to draw upon this experience so that it can be used for doctoral students in planning and therefore it should be investigated (part B). So it was decided to collect that additional information.

To collect the necessary information for part A, we issued a supplementary questionnaire this Spring, for each country where there are members of AESOP, and not for each separate planning school (member of AESOP). This was based on the assumption that the way in which doctoral research is organised is more or less the same within one country. Out of the 19 countries represented in AESOP 14 have filled in our questionnaire. Parallel to this we collected information about initiatives taken in other disciplines to further the exchange of doctoral students, for Part B.

What lies before you is our interpretation of the collected information. The report is divided in two parts. The first part, part A, focuses on the way doctoral research and doctoral studies are organised in AESOP-countries. The raw data is collected in an Excel-sheet that is attached to this report. This part of the report will focus on the internationalisation possibilities for doctoral students in Planning during their research.

The second part, part B, describes the results of the collection of the data on a small scale about internationalisation efforts in PhD-trajects of other disciplines.

AESOP/SOCRATES

Socrates workgroup on PhD education, the 3rd year

1. History of the project

The activities of the workgroup PhD (WG-PhD) built up on the findings of the report 'Survey of doctoral studies in planning in AESOP member schools in Europe' (Ingrid Lundahl, 1996). In a summary of the conclusions, this report said:

Knowledge is developed in a dialectic process. It grows in a dialogue between different researchers, research programmes and projects... The doctoral work is a learning process which is moving forward through an interaction between ideas, theories, traditions and approaches... The possibility of interaction is limited due to the small scale of the doctoral research... Information about doctoral research in the European planning is a necessary condition - a sine qua non - for the desired communication and interaction. The problem has since long discussed. It is time for action.

The stimulus and financing given by the SOCRATES project (grant for 3 years from 1998) offered the opportunity for taking this action. That part of the SOCRATES project carried out by the WG PhD concentrates on one particular aspect of the desired communication and interaction, namely: **the exchange of doctoral researchers between different countries of the EU for a period during their research.**

Since then the subject has expanded to doctoral research and doctoral training. The first year the work concentrated on the gathering of specific local information from AESOP members. This resulted in a report with the title; "Cross-section report on thesis and doctoral studies research programmes". This was presented at the AESOP congress in Aveiro (1998).

The next year the emphasis lay on (Bergen) a supplementary analysis of the data.

The third year the objectives and task are;

- A) to collect more information about the way doctoral research is organised in the AESOP-countries and,
- B) to gather information about the internationalisation efforts on other academic fields for the benefit of doctoral researchers.

The first part of this interim report will focus on the collection of additional data about the way doctoral research is organised in the AESOP-countries. Aim of this survey.

How do the AESOP-membercountries organise their doctoral research and how does that influence the exchange of doctoral researchers for a period during their research?

The second part of this interim report will focus on the efforts made by other doctoral disciplines in the Netherlands for their doctoral researchers. Aim of this survey.

To learn from the experience of other disciplines in order to construct a solid basis for internationalisation efforts of formal training and PhD-research of doctoral students.

Part A.

How do the AESOP-member countries organise their doctoral research and how does that influence the exchange of doctoral researchers for a period of during their research?

2. Method of work

Information has been collected about doctoral courses associated with planning schools in countries that contain AESOP-members.

The information has been collected by means of a questionnaire (a copy of this questionnaire is included as appendix I). It has been completed by the country co-ordinator. Country co-ordinators had been established in the first year of the project. Each co-ordinator completed the questionnaire for all the possible Planning PhD-trajects in his or her country and sent it to group leader (Barrie Needham).

The group leader, assisted by the research assistant (Anne-Margreet van Putten), has processed the results and written this (interim) report.

Coverage

The aim is to provide information about the organisation of doctoral research and how this organisation influences the possibilities for the exchange of doctoral researchers for a period during their research. Therefore it was desired to get the questionnaire completed by all the country co-ordinators (100% response). Of all 19 questionnaires sent to country co-ordinators we got 14 returned completed and some with additional information. Enough, for us, to analyse the information/data and to draw the first conclusions.

3. Results

Of the 19 countries represented in AESOP 14 returned the completed questionnaire. The conclusions drawn are based on the information given by the country co-ordinators of Denmark, Finland, France, Germany, Hungary, Ireland, Italy, Netherlands, Norway, Poland, Slovakia, Sweden, Turkey and United Kingdom. The information provided by each country is represented in detail in appendix I.

Summary of the findings

Most countries have more than one single course/way to acquire a doctoral degree. These courses differ mainly on who provides the money. The more public money is used, the more demands there are made on the doctoral researcher regarding formal training and other tasks. When the money comes from private funds, the demands on the quality of the research stay high but formal training is not obliged.

The four most mentioned trajects are;

- a traject whereby someone is appointed by the university primarily to carry out doctoral research for a limited number of years and paid by the university for this.
- a traject whereby someone is appointed by the university primarily to carry out doctoral research which is commissioned by and paid by the future user of the research.
- a traject whereby someone who is not an employee or student of the university carries out doctoral research in his/her spare time.
- a traject whereby an employer of the university, and with a permanent appointment (lecturer) carries out doctoral research among his/her other duties.

General information

In all countries and in all different trajectes there is a staff member or tutor of the institute supervising the doctoral researcher. An administrative level above the institute (like the faculty, university or a national institution) obliges this.

When the doctoral researcher is financed by the future user of the research, a delegate of that organisation is also involved in the supervision.

The language the thesis should be written in is in most cases the national language but English is also accepted. The other major languages France and Germany can be used and even the language of smaller countries after approval.

Formal obstacles to foreign exchanges

In most of the countries there are no formal obstacles that influence the exchange of doctoral researchers for a period during their research directly. Only one country co-ordinator mentions restrictions like, the need for a positive evaluation by a supervisor (to be supplied every year) and the fact that most universities need recognition by higher education council which makes it difficult to for a doctoral researcher to spend a period abroad.

Time spend abroad.

Doing part of the **doctoral research** in another country is possible in every traject. It is encouraged by all institutes for the doctoral researcher in traject 1 and 2 especially when the research requires cross national comparison or would benefit from studying another country. In almost 2/3 of the countries there are structural funds to finance a temporary stay at a foreign sister institute. In most of the countries without structural funds there are ad hoc funds available that doctoral students can draw on.

Spending part of the **formal training** in another country is possible in every institute in the trajectes which require formal training. All institutes encourage it also. Although there are no formal obstacles training at another institute (except for the annual AESOP summer school) is rare. In almost half of the countries concerned there are structural funds available. In most of the countries without structural funds there are ad hoc funds available that doctoral students can draw on and the Socrates EU-grants.

Timeframe

The official timeframe within which a doctoral thesis should be completed differs from traject to traject and from country to country. There are however a few similarities. In most countries the university and/or the national government set the timeframe for those doctoral researchers whom they finance. The full-time doctoral research following trajectes 1 and 2 takes 3 or 4 years (50-50). Part-time doctoral research in trajectes 1 and 2 is rare, but for traject 3 and 4 more common.

Formal training

In 11 of the 14 countries training in traject 1 and in most cases also in traject 2 is obliged. Only in France, Ireland and Germany is it not compulsory at this moment. However the European harmonisation of doctoral research will probably change this situation within the next decade.

In most cases the faculty and/or the regional/national graduate school or the national government set the rules and regulations about the training.

The content of the training is mostly set at a more local level like the institute, faculty and the university. The same goes for the screening (quality) of the proposed training program.

Within the set timeframe of 3 to 4 years, about 10%-25% is reserved for formal training. This training usually takes place in the first 1-2 years of doctoral period.

When the training is evaluated the most frequently used evaluation method is passing a course/training/exam and receiving credit points, certificates or a mark on the grade record.

Other tasks

In 2/3 of the countries it is common that doctoral researchers in traject 1 spend part of their time on other tasks like teaching undergraduate students. The workload is between 10 and 25% of the total time. This can take place during the whole period but is normally concentrated in the last years. Doctoral students in traject 4, employed by the university, have to perform their other/normal duties during the whole timeframe, the same goes for doctoral students in traject 3. Doctoral students in traject 2 are sometimes expected to perform duties for the future user of the research.

It is remarkable that in countries where doctoral students that are not required to follow formal training they are not obliged to perform other tasks either. And that the formal timeframe in those countries is 3 year full-time.

4. Conclusions

How does the organisation of doctoral research influence the possibilities which doctoral researchers have to spend a part of their research abroad.

Difference in timeframe: when you have only three years to complete the thesis it is harder to spend a lot of time organising a stay at a sister institute in another country.

In most countries doctoral students are obliged to follow formal training in the first half of their appointment. Even if this period is concentrated, this makes it hard for doctoral students to spend a couple of months abroad during the first two years.

In most of the countries where formal training is obliged, performing other tasks is also common. This means that doctoral students spend a lot of time on specific tasks which are programmed in a time schedule and often spread over the whole period: this makes it difficult to leave the home institute for a couple of months.

For doctoral researches that have other duties, like the ones in traject 3 and 4, it is also difficult to leave for a longer period.

Money, structural funds

In most of the countries there are structural funds to finance a temporary stay at a foreign sister institute. In most of the countries without structural funds there are ad hoc funds available that doctoral students can draw on. But it normally takes more time to organise the funding from those other funds due to regulations etc. and time is one thing that is already under pressure by the other demands made on the doctoral researcher.

Thanks

Thanks are due to all the county co-ordinators and to all that provided the information.

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Barrie Needham, Netherlands

Part B.

To learn from the experience of other disciplines in order to construct a solid basis for internationalisation efforts of formal training and PhD-research of doctoral students.

Overview of the internationalisation efforts of (the) other doctoral disciplines in the Netherlands.

1. Introduction

During a meeting of the workgroup at the AESOP Annual Congress 1999 (Bergen, Norway 1999) a start was made in exchanging information in a structured way about the regulation and organisation of PhD research in the planning schools belonging to AESOP. This was done in order to increase the mobility of the doctoral students during their training and research. AESOP already organises successful annual Summer Schools but there are opportunities not taken (yet) which can give internationalisation a new dimension. One of the points made during a meeting of the WG-PhD was that in some other disciplines, there is already experience of exchanging doctoral students and that there are various schemes for furthering this. It was decided that it is important to draw upon this experience so that it can be used for doctoral students in planning and therefore it should be investigated. The aim is to learn from this experience in order to construct a solid basis for internationalisation efforts in the area of formal training and PhD-research of doctoral students.

This part of the interim report describes the results of the collection of the data on a small scale about internationalisation efforts in PhD-trajects of other disciplines/academic fields.

2. Approach.

We have to focus on known initiatives, supplemented with initiatives known by national (Dutch) institutions, like KNAW (Royal Netherlands Academy of Arts and Sciences), NWO (Netherlands Organisation for Scientific Research), Nuffic (Netherlands Organization for International Co-operation in Higher Education) and our home university. Their perspectives can give us a broader view of the internationalisation efforts.

The focus will be on internationalisation initiatives within other disciplines for their doctoral researchers.

What is their history, what are their goals, which problems/barriers did they face, how did they tackle them and on which points are they active.

Sub-questions:

- Which academic fields are occupied with internationalisation efforts for PhD-students?
- How do they formalise these efforts? (like research schools)
- Which stage of collaboration?
- Which countries are involved?
- What is their goal/mission, perspective in the long run?

3. Collection of data.

3.1 Method of collecting.

Our starting point is the Dutch situation. Information obtained through the Bureau of Foreign Affairs of our university and Nuffic (Netherlands Organization for International Cooperation in Higher Education) gave us a good idea of the local situation. The information at a higher level was obtained through the KNAW (Royal Netherlands Academy of Arts and Sciences) and the NWO (Netherlands Organisation for Scientific Research).

Two of the functions of the KNAW are judging the quality of scientific research (peer review, academy fellowship program, accreditation committee for research schools in the Netherlands) and providing a forum for the scientific community and promoting international scientific co-operation (international contacts, congresses, funds and endowments). From this point, the KNAW has a good overview of the internationalisation efforts within research schools.

The Netherlands Organisation for Scientific Research (NWO) is the central Dutch organisation in the field of fundamental and strategic scientific research. NWO encompasses all fields of scholarship. Consequently, NWO plays a key role in the development of science, technology and culture in The Netherlands. NWO acts also as the national research council in the Netherlands. The NWO is a good source of information when it comes to internationalisation efforts within academic fields.

With the information provided by the organisations mentioned above we decided to focus on research schools because there are numerous bilateral contacts between universities on an ad hoc basis and we are mainly interested in stable contacts between disciplines in multiple countries. We used the information about research schools given to us by the KNAW and NWO and we compared it with our own information.

To get more specific information about specific research schools which the KNAW and NWO described to us, we contacted them, visited web-site and asked them by telephone for specific information.

3.2 Results.

Although internalisation is a hot topic within research schools, it is popular but not (yet) widespread. Almost every school is thinking about ways of internationalisation and has taken the first steps toward a closer connection to sister disciplines abroad but few have already combined forces with foreign research schools or foreign universities.

Every academic field from Law to Physics, Philosophy to Medicine and so on is represented. We decided to focus on four disciplines, each one working at a different level and with different perspectives: these are Philosophy, Law, Discrete Mathematics and Nuclear Physics.

Philosophy

Within the Nijmegen philosophy department there are steps taken to 'team up' with 5 other national universities because of the small numbers of doctoral students. The mission of the research school is to enhance the co-ordination of research in philosophy in an international perspective, to educate doctoral researchers and to give them an international perspective. The formal training takes for the most part place in the research school and at the university level. The research mainly takes place at their home university. The international component in this discipline is the co-operation with the university of Leuven (Belgium). Their doctoral students take part in the training sessions/(summer)schools/workshops.

The school is not very active in presenting itself to the outside world. It has no active website and contact person.

Law

The Law faculties of Maastricht, Utrecht and Leuven (Belgium) started a research school in 1995, named IUS COMMUNE.

The school focuses on the training of doctoral students. The number of doctoral students participating is around 55.

Of the 1000hr reserved for formal training, about 40% takes place within the research school program. This program contains workshops, summer schools and training sessions.

Doctoral researchers participating in the research school can spend part of their research at a sister institute abroad.

The school is active in presenting itself to the outside world. It has a web-site that contains information about, the school, its mission, organisational structure, training activities, newsletter and more.

<http://www2.unimaas.nl/~ozic>

Discrete Mathematics

The Mathematics faculties of the Dutch universities of Eindhoven, Twente and Delft 'teamed up' in 1994 in a research school, named EIDMA. The aim of the research school is among other things to promote and organise research programs on a large scale, to support and stimulate young research fellows. The educational activities include graduate courses for PhD students and courses on special topics, mini courses of one week.

Later that year Gent en Brussels (Belgium) and Essen (Germany) joined the research school. Groningen recently started to participate in the Research school.

The number of doctoral students participating is around 70.

Doctoral students take part in the training sessions and get a certificate for the completed courses. They can also take part in training at "sister institutes". Doctoral researchers spend a set percentage on parts of the joint educational program of the research school.

The percentage is less than 40% of the total time reserved for training. (no exact figures yet)

The co-operation has recently been evaluated by the KNAG and by the participating institutes. The evaluation was positive which means they will continue for at least another 5 years.

The school is active in presenting itself to the outside world. It has a web-site that contains information about, the school, its mission, organisational structure, training activities, newsletter and more.

<http://win.tue.nl/~eidma>

Nuclear Physics.

FANTOM is an international research school for fundamental and applied nuclear and atomic physics. The participating institutes are from the Netherlands (Groningen, Amsterdam), Belgium (Gent, Leuven), Germany (Münster), France (Orsay) and Sweden (Uppsala). The aim of FANTOM is to educate scientific trainee researchers (research assistants)/doctoral researchers and to enhance the co-ordination of research in an international perspective.

The educational program of the FANTOM research assistants (Ph.D. students) is fixed at 24 credit points, where 1 credit point corresponds to one week of full-time study, or approximately 40 hours. A small fraction (4 credit points) of the program is obligatory: (at least) 4 general FANTOM study weeks have to be attended in the first three years of

research of the research assistant. The remaining part of the program can be filled in individually, in consultation with the supervisor(s). When a research assistant has taken his or her Ph.D. examination and has met the requirements of the FANTOM educational program, he or she is entitled to receive the Fantom certificate.

The research assistants may compose (the free part of) their educational programmes from the following activities: General FANTOM study weeks, specialised FANTOM study weeks, courses for (advanced) undergraduate students, workshops, international schools, conferences and work placement

Within FANTOM it is considered important that its research assistants gain international experience during their period of research and that they can look beyond the frontiers of their own Ph.D. project. Therefore it is encouraged that the research assistants to do a foreign work placement, in a field that is outside the direct topic of the Ph.D. research. The maximum duration of the work placement is 8 weeks; for each week one credit point is earned.

Obstacles they encountered:

All participating institutes give in practice a different definition to obligations which the doctoral students have with respect to components of formal training.

At the start of the co-operation arrangements were made regarding financing the joint educational program. In practice the costs are mainly covered by the institutions providing the location and the program of the educational activity.

Not every member of the research school is active in providing information to the central administration, for example regarding the subject of the thesis and the progression made.

Co-operation means a lot of co-ordination. You must give an institute or a small bureau the opportunity to do so and must be willing to co-operate otherwise the co-operation peters out in good intentions.

FANTOM has never had the opportunity to draw from funds that support internationalisation efforts because of their advanced international co-operation.

Tip from the co-ordinator of FANTOM when she heard of the size of AESOP; "Don't set your aims to high. First aim at the goals you can achieve if the organisation and co-ordination works as expected, then aim higher."

The school is active in presenting itself to the outside world. It has a web-site that contains information about, the school, its mission, organisational structure, training activities, newsletter and more.

<http://www.kvi.nl/~fantom>

4. Answer to the questions.

What can we (AESOP) learn from initiatives taken by other disciplines regarding internationalisation efforts during the doctoral research phase? It seems clear that we can learn most from the last two examples.

It might be a coincidence but these two examples are placed in the beta-field. Historic ties and habits within this field probably influenced the internationalisation efforts.

Together with the law research school, they make good use of the possibilities of the Internet.

All the internationalisation efforts looked at in this overview are formalised in a research school. There are some varieties in the rules and regulations but on the whole doctoral researchers are obliged to participate in a set percentage of the school's training modules/workshop or conferences.

The rest of the training takes place at the home university.

In all research schools, spending part of the research abroad is seen as desirable.

Most of the research schools in which Dutch universities participate include neighbouring countries like Belgium and Germany. When there are other countries participating they originate from N-W Europe and are neighbours of the other countries. The research school

that contains the most countries is FANTOM that contains the Netherlands, Germany, Belgium, and France and has an associate partner in Sweden.

The mission (in the long run) of the research schools is to educate doctoral researchers, to give them an international perspective and to enhance the co-ordination of research in an international perspective.

5. Conclusion

There is no evidence of structural co-operation between disciplines on an international level on a wide/big scale. This is in contrast to internationalisation efforts in the Bachelor and Master phase.

There are however a lot of incidental contacts which on a large scale are subsidised by the faculty/university/government etc. and the internationalisation is a hot topic so it would not be surprising to see more international research schools set up in the years to come. However they probably will not include as many countries as AESOP does. The initiatives we looked at work on a much smaller scale, max. 5 countries and 9 universities.

But what can we learn?

One thing that is very obvious is the use of Internet, especially having a good web-site. Some kind of harmonisation of the doctoral research, especially the formal training, seems a condition when you want to co-operate in a research school. That does not mean all doctoral researchers follow the same program, but there could be set percentages/hours, even when this is a small number) of the formal training that a doctoral researcher participates in activities of the AESOP-research school like, 2 Summer schools and 2 workshops. For this participation, doctoral students could get a certificate.

The programmes of the workshops and Summer schools should be placed on the web-site, so doctoral students can inform themselves and choose a workshop that has special value for them.

To give each participant a good idea of the research topics within AESOP, the research programmes of every participating university/institute should be placed on the site also. This makes it easier for doctoral students to choose a possible university to spend a part of the research. Moreover it gives sister institutes and employers of these institutes an opportunity to get to know each other better.

It is very important that the web-site is kept up-to-date, the information should be accurate and recent. A small bureau could co-ordinate this and could co-ordinate the gathering of information. This should be the central point within the organisation.

The site also should have links to all participating institutes.

Possible resources for internationalisation in the doctoral stage.

Doctoral students are allowed to use EU-grants like Socrates when they want to spend part of their formal training at a sister institution abroad. This is possible for students who are in their first doctoral year.

Thanks

Thanks are due to all that provided the information.

Ms. Schoemaker. Bureau of International Relations, University Nijmegen.

Mr. van Dijk. NUFFIC. International Relations.

Mr. Smeenk. KNAW Dept. International Relations and Quality Assessment.

Ms. Houben EIDMA

Ms. Koopmans FANTOM

Mr. Schenk NWO International Relations.

Appendix 1

THE ORGANISATION OF DOCTORAL (PhD) RESEARCH

Working group PhD: (WG PhD)

QUESTIONNAIRE

(version: 13 July 2000; 10 pages, 30 questions)

Name Country:

Name Respondent:

Address Respondent:

Date:

- A. Does your university have a regulation whereby someone can register to carry out research under supervision from a member of staff and for a limited number of years, which will lead to the award by the university of a PhD degree?

YES
NO

(In what follows, we call this a regulation for a **doctoral course** and the person undertaking it a **doctoral researcher**.)

If your university does have this regulation and if your department / school makes use of it, please continue.

If not, the questionnaire does not need to be filled in further.

- B. Are there more than one different registered trajects/ways someone can carry out research under supervision from a member of staff and for a limited number of years, which will lead to the award by the university of a PhD degree?

- a traject whereby someone is appointed by the university primarily to carry out doctoral research for a limited number of years and paid by the university for this.

- a traject whereby someone is appointed by the university primarily to carry out doctoral research which is commissioned by and paid by the future user of the research.

- a traject whereby someone is not an employee or student of the university carries out doctoral research in his/her spare time.

- a traject whereby an employer of the university, and with a permanent appointment (lecturer) carries out doctoral research among his/her other duties.

If so will you please answer the following questions for each of the trajects separately!!!

General Questions						
		Traject 1				
		At which level(s) are these rules set?		Answer		Answer
1	How is the subject for a proposed dissertation chosen?	The institute The faculty The university Regional/national graduate school National government Other,.....			The institute The faculty The university Regional/national graduate school National government Other,.....	
2	Who chooses the subject?	The institute The faculty The university Regional/national graduate school National government Other,.....			The institute The faculty The university Regional/national graduate school National government Other,.....	
3	Must there be an outline of the research project before the doctoral student can register?	The institute The faculty The university Regional/national graduate school National government Other,.....			The institute The faculty The university Regional/national graduate school National government Other,.....	

4	Who writes this outline?	<p>The institute The faculty The university Regional/national graduate school National government Other,.....</p>		<p>The institute The faculty The university Regional/national graduate school National government Other,.....</p>		
5	Who finances the research?	<p>The institute The faculty The university Regional/national graduate school National government Other,.....</p>		<p>The institute The faculty The university Regional/national graduate school National government Other,.....</p>		
6	Who selects the research propositions?	<p>The institute The faculty The university Regional/national graduate school National government Other,.....</p>		<p>The institute The faculty The university Regional/national graduate school National government Other,.....</p>		
7	What is the appointed timeframe within which a dissertation should be completed?	<p>The institute The faculty The university Regional/national graduate school National government Other,.....</p>		<p>The institute The faculty The university Regional/national graduate school National government Other,.....</p>		

8	Do the terms of employment include specifications about a full-time/part-time commitment of the doctoral researcher working on the dissertation? If so what does it say? Or what can it say?	The institute The faculty The university Regional/national graduate school National government Other,.....			The institute The faculty The university Regional/national graduate school National government Other,.....		
9	Is there from the start of the doctoral research supervision from a member of staff? Tutor/promoter	The institute The faculty The university Regional/national graduate school National government Other,.....			The institute The faculty The university Regional/national graduate school National government Other,.....		
10	Are there regulations about the language the thesis should be written in?	The institute The faculty The university Regional/national graduate school National government Other,.....			The institute The faculty The university Regional/national graduate school National government Other,.....		
11	Are there agreements between universities about co-ordinating the subjects for doctoral research? If so how are these agreements laid down?	The institute The faculty The university Regional/national graduate school National government Other,.....			The institute The faculty The university Regional/national graduate school National government Other,.....		

Formal training							
12	Does the doctoral researcher have to follow formal training (lectures, taught courses, seminars, practicals, etc.) as well as carrying out his/her research (i.e. following the courses is obligatory if the researcher wants to receive a doctor's degree)?	The institute The faculty The university Regional/national graduate school National government Other,.....				The institute The faculty The university Regional/national graduate school National government Other,.....	
13	About how much time in total does the doctoral researcher spend on this formal training?	The institute The faculty The university Regional/national graduate school National government Other,.....				The institute The faculty The university Regional/national graduate school National government Other,.....	
14	Is this training concentrated into one part of the doctoral course or is it/ can it be spread over the whole course?	The institute The faculty The university Regional/national graduate school National government Other,.....				The institute The faculty The university Regional/national graduate school National government Other,.....	
15	If concentrated, in what period?						

16	Who determines the content of the formal training?	The institute The faculty The university Regional/national graduate school National government Other,.....			The institute The faculty The university Regional/national graduate school National government Other,.....		
17	Who decides if the proposed content of the formal training is acceptable?	The institute The faculty The university Regional/national graduate school National government Other,.....			The institute The faculty The university Regional/national graduate school National government Other,.....		
18	How is the performance of the doctoral researcher in the various training courses evaluated? For example with certificates,	The institute The faculty The university Regional/national graduate school National government Other,.....			The institute The faculty The university Regional/national graduate school National government Other,.....		
Other tasks							
19	Are there other obligatory components a doctoral researcher must comply to, other than writing a thesis, if the researcher wants to receive a doctor's degree? Like teaching bachelor and master students.	The institute The faculty The university Regional/national graduate school National government Other,.....			The institute The faculty The university Regional/national graduate school National government Other,.....		

20	If so about how much time in total does the doctoral researcher spend on these components/tasks?	The institute The faculty The university Regional/national graduate school National government Other,.....			The institute The faculty The university Regional/national graduate school National government Other,.....	
21	Are these tasks concentrated into one part of the doctoral course or are they/ can they be spread over the whole course?	The institute The faculty The university Regional/national graduate school National government Other,.....			The institute The faculty The university Regional/national graduate school National government Other,.....	
22	If concentrated, in what period?					
23	Who determines the content of these tasks?	The institute The faculty The university Regional/national graduate school National government Other,.....			The institute The faculty The university Regional/national graduate school National government Other,.....	
24	Is the performance of these tasks evaluated? If so who evaluates the performance?	The institute The faculty The university Regional/national graduate school National government Other,.....			The institute The faculty The university Regional/national graduate school National government Other,.....	

Time spend abroad

25	Is it possible for a doctoral researcher registered at your university to carry out part of his/her formal training at another university in another country?	<p>The institute The faculty The university Regional/national graduate school National government Other,.....</p>		<p>The institute The faculty The university Regional/national graduate school National government Other,.....</p>		
26	Do you encourage doctoral researchers in your department / school to attend formal training in another country?	<p>The institute The faculty The university Regional/national graduate school National government Other,.....</p>		<p>The institute The faculty The university Regional/national graduate school National government Other,.....</p>		
27	Are there structural finances available to stimulate/commodate doctoral students to spend during their formal training at an other university in another country?	<p>The institute The faculty The university Regional/national graduate school National government Other,.....</p>		<p>The institute The faculty The university Regional/national graduate school National government Other,.....</p>		
28	Is it possible for a doctoral researcher registered at your university to carry out part of his/her research at another university in another country?	<p>The institute The faculty The university Regional/national graduate school National government Other,.....</p>		<p>The institute The faculty The university Regional/national graduate school National government Other,.....</p>		

29	Do you encourage doctoral researchers in your department / school to carry out part of his/her research at another university in another country?	The institute The faculty The university Regional/national graduate school National government Other,.....		The institute The faculty The university Regional/national graduate school National government Other,.....	
30	Are there structural finances available to stimulate/commodate doctoral students to spend during their research at an other university in another country?	The institute The faculty The university Regional/national graduate school National government Other,.....		The institute The faculty The university Regional/national graduate school National government Other,.....	

Appendix II **The raw data, part A.**

Country	Q.A doctoral- courses yes/no	Q.B different kinds of trajects	Q.B variation between trajects	Q.C variation between diciplines	Q.D formal rules obstruction	Q.E additional information	Q.1 1.How subject chosen 2. level	Q.2 1.Who chooses subject 2. level
Denmark t1	yes	no	-	no			fund.agency, dept or stud.appl. 2. A,e	stud.obo pri.topic 2.a,b,e, a,b,dn, phdstudent
Finland, t1	yes	yes 1,3?,4	no	no			a	adm and scient.b. 2. A,b,c,e, res.cent a,financer
France, t1	yes	yes 1#,2,3#	yes	yes, a/b/g	no 1#	1#	adm.and scient.bodies (v.v.) 2. a,b,c,e and researchcentr. a,c, financer	adm and scient.b. 2. A,b,c,e, res.cent a,financer
France, t2							2. A,c, possible financer student, staff member(v.v.) 2.a,b	2. A,c.poss.financ. stud., staffmbr. (v.v.) 2.a,b
France, t3							-	-
Germany	yes	?	no	yes,a/b/g	no	#8	-	-
Hungary, t1	yes	yes 1,2/3	yes	yes,a/b/g	yes, 2#	#2	a	a, phd-student
Hungary,t2/3							2.a	a, phd-student
Ireland, t1	yes	yes 1,3,4	yes	yes,a/b/g	no		doct.researcher/phd.student c	doct.res/phd.stud 2.c
Ireland, t3/4							doct.researcher/phd.student 2.c	doct.res/phd.stud 2.c
Italy, t1	yes	no	-	no	no	#3	Interest of cand. + f4 2.f5	#1 2.f5
Netherlands, t1	yes	yes, 1,2,3,4	yes	no	no	no	b must approve 2.b	a puts fwr a proposal 2.a
Netherlands, t2							a	a and phd.student 2.a
Netherlands, t3							a 2.a	a and phd.student 2.a

		General Questions						
Country	Q.A doctoral- courses yes/no	Q.B different kinds of trajects	Q.B variation between trajects	Q.C variation between diciplines	Q.D formal rules obstruction	Q.E additional information	Q.1 1.How subject chosen 2. level	Q.2 1. Who chooses subject 2. level
Netherlands, t4							a a and phd.student	
Norway, t1	yes	yes 1,2,3	yes	no,#1	no	#4	2.a candidate, #1	2.a candidate, #2
Norway, t2/3							2.f4 candidate, #1	2.f8 candidate
Poland, t1/3/4	yes	1,3,4	no	no, 1 trj.	no		2.f4 #2	2.f8 PhD-student, #1
Slovakia, t1	yes	1,2,4,5	yes	no	no	#5	2.b b in coop with a and practice	2.b phd-student, #3
Slovakia, t3	yes						2.e b in coop with a and practice	2.e phd-student,#3
Slovakia, t4							2.e b in coop with a and practice	2.e phd-student,#3
Slovakia, t5							2.e b in coop with a and practice	2.e phd-student,#3
Sweden	yes	1, (3)	no	yes	yes, #4	no	candidate	PhD-student
Turkey	yes	2,for every	no	no	yes, #3	#6	2.e a=f4	2.e a
UK, t1	yes	1,2,4,6,7	yes	yes	no	#7	2. a=f4 supervisor proposes, d approves supervisor + student	a a
UK, t2							2.d by departement	2.d by departement
UK, t4							2.d #4	2.d #4
UK, t6							- By member of the staff	- member of staff
UK, t7							2.d By applicant	2.d by applicant
							2.f m.of staff + futere user	- m.of staff + futere user
							2.f	2.f

General Questions

Q.3	Q.4	Q.5	Q.6	Q.7	Q.8	Q.9	Q.10	Q.11
Outline before registration	Who writes outline	finances	selection propositions	timeframe	employment specifications	supervision staff	language	agreement coordinating subjects
2. level	2. level	2. level	2. level	2. level	2. level	2. level	2. level	2. level
yes	-	-	-	-	yes, pt teaching	yes	yes	no
2.b	-	-	-	-	2.a,b	2.e	2.a,e	-
yes	b, dn	c,b,dn,min.of educ	b,a,dn	4 years	yes, d ft,others pt/ft	yes	yes, E or nl	yes, subjects
b, dn	-	-	-	-	-	-	-	-
yes	1#	publ.fund.	#1, c, finc	3 years	no	yes	yes	no
2. A,b,c,e	2.a,b	2.e,1#	2.c,e	2.c,e	-	2.a,c in f1	2.e	-
yes	1#	2#	#1,c,finc	3 years	no	yes	yes	no
2. A,c,poss.finan.	2.a,b	2#	2.c,e	2.c,e	-	2.a,c in f1	2.e	-
no	-	none/std.	st.mbr, c	3 years	-	yes	yes	no
-	-	-	2. A,b,c	-	-	-	2.e	-
-	-	-	-	-	-	-	yes,nl, E	-
-	-	-	-	-	-	-	-	-
yes	a	e	a->b	3 years	yes, incl pt teaching	yes	yes,#1	no
2.a	2.a	-	-	-	-	-	2.b	-
yes	a	e + 2#	a->b	3 years	-	yes	yes,#1	no
2.a	2.a	-	-	-	-	-	2.b	-
yes	doct.res/phd.stud	3#	doct.res	3 years	no	yes	yes, E.	no
2.c	2.c	2.c	2.c	2.c	-	2.c	2.c	-
yes	doct.res/phd.stud	3#	doct.res	3 years	only if employer	yes	yes, E.	no
2.c	2.c	2.c	2.c	2.c	-	2.c	2.c	-
yes, #1	doct.res/phd.stud	c, (+ f6)	f5	3 years	no	yes	yes, nl	yes, #1
2.c	2.c	2.e, (f6)	2.c,e	2.c, e	2.e	2.e	2.e	2.c,e
yes	a	b	b	4 years	4 ft, 5 pt (0,8)	yes, app b	yes, nl, #3	no
2.b	2.a	2.b	2.b,d	2.c	2.c	2.b	yes, nl, #3	-
yes	a	external	a	#2	y, length of time	yes	yes, nl, #3	no
2.c	2.a	-	-	-	-	2.b	-	-
yes	a	researcher self	doct.res	no timeframe	no	yes	yes, nl, #3	no

Formal training				Other tasks			
Q.12	Q.13	Q.14	Q.15	Q.16	Q.17	Q.18	Q.20
formal training	time	conc/spread	period	who determines content	who decides acceptable	how preformance evaluated	time
2. level	2. level	2. level	2. level	2. level	2. level	2. level	2. level
no	-	-	-	-	-	-	work/teach
yes	2 semesters	concentrated	first 2 years	f1, f11	f1	#1	-
2.e	2.f9	2.f9	-	2.f9	2.f9	2.f9	25%
yes	2 semesters	concentrated	first 2 years	f1.f11	f1	#1	2.e
2.e	2.f9	2.f9	-	2.f9	2.f9	2.f9	-
yes, #3	825hrs	spread	-	Fac.Council	Fac.Council	#2	if needed theaching
2.b	2.b	2.b	-	2.b	2.b	2.b	2.a,c
yes	18 months	concentrated	first 18months	#1	#1	certificates	#1
-	-	-	-	2.e	2.e	2.e	-
yes	24 months	concentrated	first 24months	#1	#1	certificates	#1
-	-	-	-	2.e	2.e	2.e	-
no	24 months	concentrated	first 24months	#1	#1	certificates	#1
-	-	-	-	2.e	2.e	2.e	-
irrelevant	irrelevant	irrelevant	irrelevant	irrelevant	#1 only exams	certificates	#1
-	-	-	-	-	-	-	-
yes	20% spread	-	-	staff of a.	#4	#6	20%
2.e	2.a	2.a	-	2.a	2.a	2.a	2.a
yes	both	both	#1	#2	#2	#3	#2
2.d	2.d	2.d	2.d	2.d	2.d	2.d	2.d
yes	1d/w >1yr	concentrated	first year	fac.committee	#3	#4	-
2.b	2.b	2.b	-	2.b	2.b,c	2.b	-
yes	1d/w >1yr	concentrated	first year	fac.committee	#3	#4	-
2.b	2.b	2.b	-	2.b	2.b,c	2.b	-
-	-	-	-	-	-	-	not relevant
-	-	-	-	-	-	-	-
yes	#1	concentrated	first year	b	b	#5	-
2.b	-	-	-	2.b	2.b	2.b	-
yes	#1	concentrated	first year	b	b	#5	-
2.b	-	-	-	2.b	2.b	2.b	-

AESOP General Questions

Country	Q.1 1. How subject chosen 2. level	Q.2 1. Who chooses subject 2. level	Q.3 Outline before registration 2. level	Q.4 Who writes outline 2. level	Q.5 finances 2. level	Q.6 selection propositions 2. level	Q.10 language 2. level
Denmark t1	fund.agency, dept or stud.appl. 2. A,e	stud.obo pri.topic 2.a,b,e,	yes 2.b	-	-	-	yes 2.a,e
Finland, t1	a	a,b,dn, phdstudent	yes b, dn	b, dn	c,b,dn,min.of educ.	b,a,dn	yes, E or nl
France, t1	adm.and scient.bodies (v.v.)	adm and scient.b.	yes	1#	publ.fund.	#1, c, finc	yes
France, t2	2. a,b,c,e and researchcentr. a,c, financer	2. A,b,c,e, res.cent a,financer	2. A,b,c,e yes	2.a,b 1#	2.e,1# 2#	2.c,e #1,c,finc	2.e yes
France, t3	2. A,c, possible financer student, staff member(v.v.)	2. A,c.poss.finan. stud., staffmbr. (v.v.)	2. A,c.poss.finan. no	2.a,b	2# none/std.	2.c,e st.mbr, c	2.e yes
Germany	2.a,b	2.a,b	no	-	-	2. A,b,c	2.e
Hungary, t1	-	-	-	-	-	-	yes,nl, E
Hungary,t2/3	a	a, phd-student	yes 2.a	a	e	a ->b	yes,#1 2.b
Ireland, t1	2.a	a, phd-student	yes 2.a	a	e + 2#	a->b	yes,#1 2.b
Ireland, t3/4	doct.researcher/phd.student C	doct.res/phd.stud 2.C	yes 2.C	doct.res/phd.student 2.C	3# 2.C	doct.res 2.C	yes, E. 2.C
Italy, t1	doct.researcher/phd.student Interest of cand. + t4 2.f5	doct.res/phd.stud #1 2.f5	yes yes, #1 2.C	doct.res/phd.student 2.C	2.C c, (+ f6) 2.e, (f6)	doct.res 2.C	yes, E. 2.C
Netherlands, t1	b must approve 2.b	a puts fwr a proposal 2.a	yes 2.b	a	b	f5 2.c,e	yes, nl 2.e
Netherlands, t2	a	a and phd.student 2.a	yes 2.C	2.a	2.b external	b a	yes, nl, #3 yes, nl, #3
Netherlands, t3	a	a and phd.student 2.a	yes 2.C	2.a	researcher self	doct.res	yes, nl, #3
Netherlands, t4	a	a and phd.student 2.a	yes 2.C	a	a (staff time)	doct.res	yes, nl, #3
Norway, t1	candidate, #1	candidate, #2	yes	applicant	c ->17	#2	yes, #2

Netherlands, t1	b must approve	a puts fwd a proposal	yes	a	b	yes, nl, #3
Netherlands, t2	2.b	2.a	2.b	2.a	2.b	2.b,d
Netherlands, t3	a	a and phd.student	yes	a	a	yes, nl, #3
Netherlands, t4	2.a	2.a	2.c	2.a	-	-
	a	a and phd.student	yes	a	researcher self	yes, nl, #3
	2.a	2.a	2.c	2.a	-	-
	a	a and phd.student	yes	a	a (staff time)	yes, nl, #3
	2.a	2.a	2.c	2.a	-	-
Norway, t1	candidate, #1	candidate, #2	yes	applicant	c->f7	yes, #2
	2.f4	2.f8	2.f8	2.f8	2.e	2.f8
Norway, t2/3	candidate, #1	candidate	yes	applicant	#4	yes, #2
	2.f4	2.f8	2.f8	2.f8	2.e	2.f8
Poland, t1/3/4	#2	PhD-student, #1	#2	PhD-student	#5	yes, nl
	2.b	2.b	2.b	2.f	2.a	2.c
Slovakia, t1	b in coop with a and practice	phd-student, #3	yes	applicant	#6	partially
	2.e	2.e	2.b,c	2.b,c	2.e	2.e
Slovakia, t3	b in coop with a and practice	phd-student,#3	yes	applicant	#7	partially
	2.e	2.e	2.b,c	2.b,c	2.e	2.e
Slovakia, t4	b in coop with a and practice	phd-student,#3	yes	applicant	#7	partially
	2.e	2.e	2.b,c	2.b,c	2.e	2.e
Slovakia, t5	candidate	PhD-student	yes	PhD-student	#7	no
	2.e	2.e	-	-	2.e	-
Sweden	a=f4	a	yes	a+candidate	c, f13	yes
	2. a=f4	a	a	a	-	2.e
Turkey	supervisor proposes, d approves supervisor + student	supervisor + student	no	-	#8	yes, E
	2.d	2.d	2.d	2.d	2.d	2. c,d
UK, t1	by department	by department	yes, #3	m.of staff	comb. b,f4,c	E (nl)
	2.d	2.d	2.d	2.d	2.b,d	2.a
UK, t2	#4	#4	yes, #4	2#	#9	E (nl)
	-	-	-	-	-	-
UK, t4	By member of the staff	member of staff	yes	m.of staff	#10	E (nl)
	2.d	2.d	2.d	2.d	-	-
UK, t6	By applicant	by applicant	yes	appl+supervisor	e,student,#11	E (nl)
	2.f	-	-	-	2.e,f	-
UK, t7	m.of staff + futere user	m.of staff + futere user	yes	user+m.o.staff	user + #12	E (nl)
	2.f	-	-	-	-	-

AESOP

Formal Training

Country	Q.B different kinds of trajectories	Q.7 timeframe	Q.9 supervisor staff	Q.12 formal training	Q.13 time	Q.14 conc/spread	Q.15 period	Q.16 who determines content	Q.17 who decides acceptable	Q.18 how performance evaluated
		2. level	2. level	2. level	2. level	2. level	2. level	2. level	2. level	2. level
Denmark t1	no	-	yes	yes	6-12mth total ti can be spread	-	-	student+advisor	eval.comm.	certificates
Finland, t1	yes 1,3,4	4 years	yes	yes, d,b	45 weeks of tot spread	-	-	-	2.a	-
France, t1	yes 1#,2,3#	3 years	yes	no, facult.	-	-	-	-	b, prof	c
France, t2		2.c,e	2.a,c in f1	-	-	-	-	-	-	-
France, t3		3 years	yes	no, facult.	-	-	-	-	-	-
Germany	?	-	-	no	-	-	-	-	-	-
Hungary, t1	yes 1,2/3	3 years	yes	yes	4hr/week	can be spread	-	a + prof	a	creditpoints
Hungary,t2/3		3 years	yes	yes	4hr/week	can be spread	-	a + prof	a	creditpoints
Ireland, t1	yes 1,3,4	3 years	yes	no, #1	-	-	-	-	-	-
Ireland, t3/4		2.c	2.c	f4	-	-	-	-	-	-
Italy, t1	no	3 years	yes	yes, #2	20-30%	concentrated	1th year	f5	f5	by f5,interviews
Netherlands, t1	yes, 1,2,3,4	4 years	yes, app b	yes	6 months	25% yr1&yr2	first 2 years	a,b,d, #3	b	n2,c,e cert, #7
Netherlands, t2		2.c	2.b	2.b,d	2.b,d	2.b,d	-	2.b	2.b	-
Netherlands, t3		#2	yes	no	-	-	-	-	-	-
Netherlands, t4		no timeframe	yes	no	-	-	-	-	-	-
Norway, t1	yes 1,2,3	4 years, #1	yes	yes	2 semesters	concentrated	first 2 years	f1, f11	f1	#1
		2.e	2.f8	2.e	2.f9	2.f9	-	2.f9	2.f9	2.f9

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Other tasks

Country	Q.19 other obligatory components 2. level	Q.20 time 2. level	Q.21 conc/spread 2. level	Q.22 period 2. level	Q.23 who determines content 2. level	Q.24 how performance evaluated 2. level
Denmark t1	various	6 months	spread	-	a	a
Finland, t1	yes, exams	45 weeks	spread	-	b	prof+b
France, t1	no	-	-	-	-	-
France, t2	no	-	-	-	-	-
France, t3	no	-	-	-	-	-
Germany	no	-	-	-	-	-
Hungary, t1	yes,teaching	4hr/week	yes, mostly	-	a	no
Hungary,t2/3	no	-	-	-	-	-
Ireland, t1	no	-	-	-	-	-
Ireland, t3/4	empl/teach	a lot	-	-	-	-
Italy, t1	no	-	-	-	f4	-
Netherlands, t1	2,e teach#4	1/2 year	-	years 3&4	a	#4
Netherlands, t2	no	-	-	-	2.a	-
Netherlands, t3	no	-	-	-	-	-
Netherlands, t4,	yes	work/teach	variable	variable	-	a,b

Netherlands, t1	yes, 1,2,3,4	yes	-	no	yes	no	no
Netherlands, t2		-	-	no	yes	-	no
Netherlands, t3		-	-	no	-	-	no
Netherlands, t4		-	-	no	yes	-	no
Norway, t1	yes 1,2,3	yes	yes,partly#1	no	yes	no	no
Norway, t2/3		2.e	2.e	2.f9	2.e	2.e	2.e
Poland, t1/3/4	1,3,4	yes	yes,partly#1	no	yes	no	no
Slovakia, t1	1,2,4,5	2.e	2.e	2.f9	2.e	2.e	2.e
Slovakia, t3		yes	yes	#2	yes	yes	yes
Slovakia, t4		2.a,b	2.a,b	2.e,f	2.a,b	2.a,b	2.e,f
Slovakia, t5		yes	yes	no	yes	yes	yes
Sweden	1, (3)	2.b,c	2.b,c	-	-	-	no
Turkey	2,for everyone	yes	yes	no	yes	-	no
UK, t1	1,2,4,6,7	2.b,c	2.b,c	no	yes	-	no
UK, t2		irrelevant	irrelevant	no	irrelevant	irrelevant	irrelevant
UK, t4		yes	yes	yes,some	yes	yes	yes
UK, t6		2.a	2.a	2.a	2.a	2.a	2.a
UK, t7		yes	yes,strongly	yes	-	yes	yes
		2.d	2.d	2.d	2.c,e	2.c	2.c
		yes	#2	no	yes	no, but #2	no
		2.b	2.b	2.b	2.b	2.b	2.b
		yes	#2	#3	yes	no, but #2	#3
		-	-	-	-	-	-
		-	-	-	-	-	-
		-	-	-	-	-	-
		could be,#1	y, aesop ws	no	yes	yes,if relevant	yes,if relevant
		-	-	-	-	-	-
		could be,#1	y, aesop ws	no	yes	yes,if relevant	yes,if relevant
		-	-	-	-	-	-

Appendix IV

CODEBOOK

-) no answer B part of the question or not applicable A part of the question.

The following asbrenations are used in the table.

- a) The institute
- b) The faculty
- c) The university
- d) **Regional/national graduate school**
- e) National government
- f) Other,.....
 - 1- Research centre
 - 2- International research agreements
 - 3- International organisations
 - 4- Department
 - 5- Teachers panel of Doctoral Course
 - 6- European Union
 - 7- Ministry of Research and Education
 - 8- National Doctoral Code, means that the desisions have been taken at the level of f7
 - 9- OSA, Oslo School of Architecture
 - 10- National University Council
 - 11- Director of doctoral programme
 - 12- Higher education Council
 - 13- State Research board

Q.B

Are there more than one different registered trajects/ways someone can carry out research under supervision from a member of staff and for a limited number of years, which will lead to the award by the university of a PhD degree? For example;

- 1) a traject whereby someone is appointed by the university primarily to carry out doctoral research for a limited number of years and paid by the university for this.
- 2) a traject whereby someone is appointed by the university primarily to carry out doctoral research which is commissioned by and paid by the future user of the research.
- 3) a traject whereby someone who is not an employee or student of the university carries out doctoral research in his/her spare time.
- 4) a traject whereby an employer of the university, and with a permanent appoinment (lecturer) carries out research among his/her duties.
- 5) a traject whereby an excellent researcher can get a PhD degree without a spatial doctoral research-stage passing the exams and preparing his/her thesis without any tutor.
- 6) Someone comes with a research grant from a UK research council or a government agency (offer international) for a limited number of years.
- 7) Someone has a research bursary, part-funded by a "CASE", CESRC CASE studentship.
- 1#) 1 but paid by the Ministry of Education and Research.
- 3#) registered as student of the university, but formally no member of the University reseach centre.

Q.C

Do the answers to the above questions vary significantly according to the discipline in which the doctoral researcher works?

a/b/g/) alpha/beta/gamma no variation in the field of planning but between the different areas of sciences.

#1) because the doctoral code encompasses all 4 universities and 6 university colleges in the country, and only these institutions have the right to confer doctoral degrees.

Q.D.

Is there anything in the formal rules which makes it difficult for the doctoral researcher to spend some time abroad? If so would you please describe these rules?

#1) More a cultural obstacle.

#2) some students have to teach continuously over the period. This makes it difficult to leave the country.

#3) The restrictions;

a) transcripts and/or supervisor's positive evaluation(to be supplied every year),

b) most universities need recognition by higher education council.

#4) One point is that our doctoral researchers have to be financed (mainly from the state in some way). They get a salary otherwise they are not allowed to attend doctoral courses to take a PhD degree. Other doctoral researchers are maybe older compared with other countries.(Around 30 years old with families, house and so on).

Q.E. Is there any additional information which is important for understanding how doctoral (PhD) research is organised in your country?

If so would you please describe or attach this information?

#1) Before the students start a PhD, they have to follow a degree of one year (DEA) this includes both formal training and a small piece of research.

This explains the lack of training in the doctoral course.

But in the coming years, it is possible that the facultive training within the doctoral courses becomes compulsory. In the meantime the international exchanges regard only research, untapped possibilities in the future for planning education.

#2. The PhD system is new, introduced in 1993 and is a system with quite a lot of ambiguity.

#3) Starting from 2000 a new system has been implemented which gives universities more autonomy in the regulation of the courses and in the definition of structure and programmes and Doctoral Courses.

#4) See study plan.

#5) See written tekst in Query

#6) see www.metu.edu.tr

#7) see written text Healey.

#8) In all universities there is a discussion about the organisation of regulated doctoral courses like in Britain or the Netherlands, but there are until now no results.

The direction is of course to install a system which is asked for by the EU (two or three year courses, credit-point-systems, parts of doctoral studies abroad).

Q.1 How is the subject for a proposed dissertation chosen?

#1) Candidate chooses a subject, a research committee evaluates & selects among the applicants.

#2) Available areas are defined within the rules of PhD-study.

#3) By the faculty in the co-operation with responsible institute and practice.

#4) By the organisation commissioning the research.

Q.2 Who chooses the subject?

#1) according to suggestions from f4 and f5.

#2) on a few occasions the school might choose a subject.

#3) PhD-student proposes subject, promoter accepts and Faculty Council agrees upon it at Council meeting.

#4) By the organisation commissioning the research.

Q.3 Must there be an outline of the research project before the doctoral student can register?

#1) none unto 1999. Starting 2000 in some doctoral courses doc. candidates have to submit a preliminary research project (proposal).

#2) to be registered student has to prepare an outline/content of dissertation together with other documents and present it to faculty council.

#3) outline to be approved by staff in the departement/faculty.

#4) #3 + research commissioner.

Q.4 Who writes this outline?

#1 PhD-student in co-ordination with his practice research director (staff member)

Q.5 Who finances the research?

- #1) regional authorities/public agencies.
- #2) public and/or private funding even co-funding.
- #3) The researcher pays yearly fees(may apply for scholarship or bursary). Sometimes external employees may be funded by their employer.
- #4) traject 2: employer or personal, traject 3: the OSA.
- #5) a of promotor can apply for grant for research done by a and can include PhD student in this research team.
- #6) state represented by university.
- #7) No extra expenditure and financial support for PhD-student, nor for the university.
- #8) Parent university.
- #9) commissioner, private or public agency.
- #10) Generally no fees are payable.
- #11) research funding bodies.
- #12) National Research Council.

Q.6 Who selects the research propositions?

- #1) research centre.
- #2) special evaluation committee appointed by the OSA research committee.
- #3) a + b represented by dean and a common commission for PhD-study in certain fields of study for whole state.
- #4) thesis follow up commission.

Q. 7 What is the appointed timeframe within which a dissertation should be completed?

- #1) including 1 year "duty work" at OSA.
- #2) in agreement with external financier.

Q. 8 Do the terms of employment include specifications about a full-time/part-time commitment of the doctoral researcher working on the dissertation?

If so what does it say? Or what can it say?

- #1) In the employment, there could be about 10% lecturing at the undergraduate level.

Q. 10 Are there regulations about the language the thesis should be written in?

E english

nl national language

- #1) major European languages
- #2) Norwegian, Swedish, Danish, English, German or French (other languages require application to the school).
- #3) major European languages, other languages possible with permission.

Q.11 Are there agreements between universities about co-ordinating the subjects for doctoral research? If so how are these agreements laid down?

- #1) Some courses involve different universities/departments. In fact some courses are the result of official and stable partnerships amongst universities/departments.
- #2) The university has direct contracts for co-operation with other universities in Poland and abroad and can include PhD students within this agreement.

Q.12 Does the doctoral researcher have to follow formal training (lectures, taught courses, seminars, practicals, etc.) as well as carrying out his/her the course (i.e. following the courses is obligatory if the re-searcher wants to receive a doctor's degree)?

- #1) This depends on the university department
- #2) But structure varies from one doctoral course to another
- #3) besides the situation that the student is employed as an assistant at university.

- Q.13** About how much time in total does the doctoral re-searcher spend on this formal training?
#1) 4 modules in first year,(25% in year 1) seminars thereafter (5%?).
- Q.15** If concentrated, in what period?
#1)no period stated
- Q.16** Who determines the content of the formal training?
#1) the offer is approved by responsible common commission for PhD-study for each field.
#2) supervisor and thesis follow committee
#3)a proposes, b determines, sometimes with approval of d.
- Q.17** Who decides if the proposed content of the formal training is acceptable?
#1) After the PhD-student has choosen from the offer, the dean of the faculty decides.
#2) departmental co-ordinator.
#3) approves by b and than c Senate.
#4) Tutor together with head of the doctoral courses.
- Q.18** How is the performance of the doctoral researcher in the various training courses evaluated? For example with certificates,
- #1) Written evaluation, colloquium, diploma for completed research education.
 - #2) pass exams or/and other forms of evaluation
 - #3) grade record.
 - #4) Projects to be passed and certificates awarded.
 - #5) submitted work is ass.... and a formal statement of performance provided.
 - #6) Small thesis, exercises, mutual examinations etc..
 - #7) Certificates issued by the organisation that gives the course.
- Q.19** Are there other obligatory components a doctoral researcher must comply to, other than writing a thesis, if the re-searcher wants to receive a doctor's degree? Like teaching bachelor and master students.
#1) if needed, teaching
#2) Exams in 5 subjects.
#3) doctoral proficiency exam.
#4) Not obligatory but doctoral researchers may spend total of 1/2 year in years 3&4 on teaching.
- Q.20** If so about how much time in total does the doctoral re-searcher spend on these components/tasks?
#1)It is not possible to define.
#2)at the end of 2 years, enters the proficiency exam.
- Q.22** If concentrated, in what period?
#1) After completed research education.
- Q.23** Who determines the content of these tasks?
#1) head of a and promotor.
#2) the offer is approved by responsible common commision for PhD-study for each field. After the PhD-student has chosen from the offer, the dean of the faculty decides.
#3) supervisor and thesis follow up commission.
#4) Head of doctoral commission.
- Q.24** Is the performance of these tasks evaluated? If so who evaluates the performance?
#1) head of a and promotor

- #2) yes, exam commission for certain subjects.
- #3) thesis follow up commission + appointed jury members.
- #4) Not evaluated, but the doctoral researcher can be required to first follow a course in teaching method.

- Q.25** Is it possible for a doctoral researcher registered at your university to carry out part of his/her formal training at another university in another country?
#1) It may be. Our *resulbility*? Would allow this. But no-one has tried it, untill now. But the Aesop PhD-workshop attendance is encouraged.
- Q.26** Do you encourage doctoral resear-chers in your department / school to attend formal training in another country?
#1) yes but only partly, the core research education must be taken at the OSA.
#2) Do not encourage but would facilitate.
- Q.27** Are there structural finances available to stimulate/commodate doctoral students to spend during their formal training at an other university in another country?
1)The Academy of Finland finance foundations (TAOF)
#2) Usually grant from (abroad) host university or EU. Sometimes grant from KBN-Committee for scientific Research (e).
#3) Would expect costs to be covered by the research commissioner.
- Q.28** Is it possible for a doctoral researcher registered at your university to carry out part of his/her research at another university in another country?
#1 Yes, but difficult due to the absence of grants, "money goes to the rich" or to doctoral researchers who are backed by a research center.
- Q.29** Do you encourage doctoral re-sear-chers in your department / school to carry out part of his/her research at another university in another country?
#1) If the research requires cross national comparison or would benefit from studing an other country.
- Q.30** Are there structural finances available to stimulate/commodate doctoral students to spend during their research at an other university in another country?
#1) Targeted grants (similar to other PhD-grants), but which are targeted to research in specific countries, short term grants covering the trip expenses.
#2) They are finances but they are also open to trajects 1&2. In this context, traject 3 students have few opportunities.
#3) Would expect costs to be covered by the research commissioner.

Draft on a List of Keywords

Jeroen Verbart, Barrie Needham

How to describe a PhD -thesis in five (key-)words?

University of Nijmegen, The Netherlands

Nijmegen, July 2000

Background and purpose

In the Aesop Working group on planning research, the spread of information between researchers is seen to be very important. To enable this spread of information, a classification system is useful. Prof. Barrie Needham presented a project with the title 'structuring planning knowledge at the Aesop congress in Nijmegen in 1997. Following this attempt to develop a 'Body of Knowledge of Spatial Planning, Barrie Needham, Fransesco Lo Piccolo and Julia Lorenzo worked on proposals to develop a list of keywords to classify PhD Thesis.

Gradually, the outline of the approach became clear. These are:

the classification system is based on a *Limitative* list of keywords. By using a limitative list, PhD researchers will be pressed to use the same keywords to describe the comparable phenomenon they study. Otherwise, every researcher will use its own jargon to classify their theses, and it will difficult for other researchers to look for studies in their field of interest. Secondly, the list is categorised on a *reasoned system*. Some notes on the background of the list makes it easier for researcher to understand the use of the keywords. With this system in mind, the way PhD researchers choose the concepts to describe their thesis will be more comparable. Thirdly, with the categorisation being used, a distinction between *Spatial Development Issues, Process, Content and Context of Interaction* and *Intervention Methodology and instruments for Intervention(spatial) analysis, and evaluation*, the reader will get a glimpse of the conceptual model in the thesis to analyse, explain and/or prescribe issues in spatial planning.

Proposal

When a researcher is looking for relevant PhD Thesis, and (s)he can only use five words from a Limitative list of keywords, what should be the basis of this list?

Searching will be easier when the keywords are organised according to a system stressing different possible *aspects* of a PhD Thesis. We propose three categories to distinguish the different aspects:

1. SPATIAL DEVELOPMENT ISSUES.

2. PROCESS, CONTENT AND CONTEXT OF INTERACTION.

3. INTERVENTION METHODOLOGY AND INSTRUMENTS FOR INTERVENTION, SPATIAL ANALYSIS AND EVALUATION.

These categories are described below. But first a few notes about the background of the chosen categories.

The German political scientist Scharpf makes an interesting distinction between the contributions of different disciplines in policy research. He distinguishes "*Problem-oriented Policy Research*" and "*Interaction-oriented Policy Research*". *Problem oriented Policy Research* is a kind of substantive policy analysis concerned with the causes of policy problems, with the potential policy solutions, and with their likely effects on the initial problems and on their wider policy environment. Scharpf gives the examples of contributions from the discipline of

criminology in the case of crime prevention, epidemiology and immunology when the issue is the reappearance of contagious diseases, or from the chemistry of stratospheric reactions when the destruction of the ozone layer is the problem under scrutiny. Once the problem has been analysed the specific contribution of *Interaction-oriented Policy Research* comes into its own. According to Scharpf, many of the well-designed policy proposals will never get a chance to become effective. Public policy is not usually produced by a unitary actor with adequate control over all required action resources and a single-minded concern for the public interest. Rather it is likely to result from the strategic interaction among several or many policy actors, each with its own understanding of the nature of the problem and the feasibility of particular solutions, each with its own individual and institutional self-interest and its own normative preferences, and with its own capabilities or action resources that may be employed to affect the outcome. Analysing the interaction among these purposeful actors is the focus of interaction oriented research. Scharpf identifies the interaction oriented approach with the disciplines of political science and political sociology. Typical of the discipline of planning, though, is that it combines the problem oriented research and interaction oriented research. Both substantive (spatial) issues as well as the interaction processes and institutions connected to spatial developments are studied in planning. And the distinction seems to be a first useful heuristic to distinguish the different possible aspects of PhD theses. The object of problem oriented research could here be called: (1) **SPATIAL DEVELOPMENT ISSUES**. These are spatial developments which pose threats or opportunities for society and policy. To describe the Spatial Development Issues at hand, a researcher could for example study problems on a particular scale, on a specific field of interest, or on the other hand one could study broad 'megatrends', like globalisation.

According to Scharpf, analysing the interaction among purposeful actors is the focus of *interaction oriented research*. Here the object is called the (2) **PROCESS, CONTENT AND CONTEXT OF INTERACTION**.

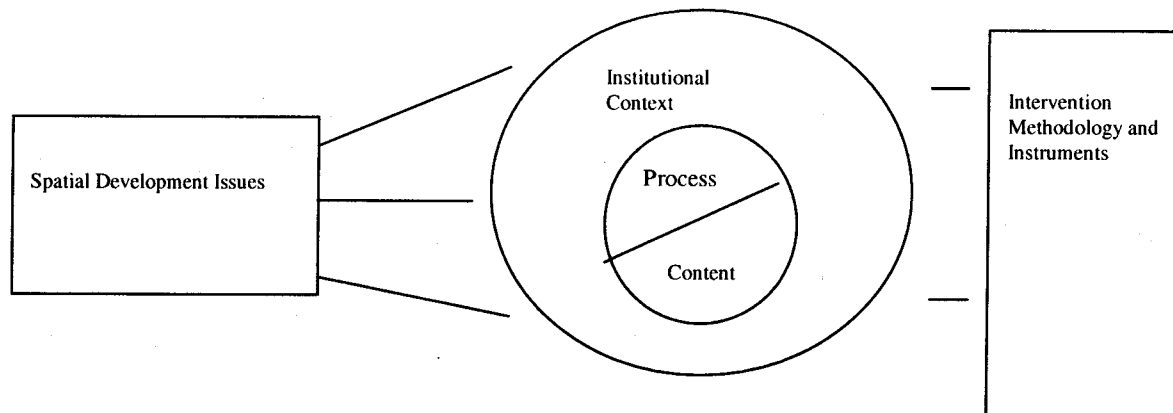
Recent research in strategic spatial planning offers three relevant angles:

- The interaction process itself
- The communicative content
- The institutional context of the interaction process

The institutional approach to spatial planning focuses on the different positions of the various actors concerned and the pre-existing normative patterns in which spatial planning must come into fruition. Key words considering the institutional approach are for example 'the (formal or informal) rules of the game' or the 'planning system'. In the interactive approach to spatial planning, the focus is on the interaction process itself, the actors, their strategies and the resources they are able to mobilise. The emphasis is on the organisation and management of policy-making in a context of plurality. The communicative approach to spatial planning focuses on the communicative role of policy. The emphasis here is on the structuring role of collectively held views in processes of planning and policy making. There is much attention for the importance of 'discourses', '*leitbilder*', the various 'levels of argumentation', 'metaphors' or 'tropes' in planning and policy making. So keywords are for example discourses and planning concepts.

Planning research is not only about analysing spatial problems and the process, content and context of interaction, but may also aim to make a contribution to planning practice. Thus (3) **INTERVENTION METHODOLOGY AND INSTRUMENTS FOR INTERVENTION, SPATIAL ANALYSIS AND**

EVALUATION is the third category being used. This contribution of the discipline of planning can take different forms. For example developing planning instruments, developing spatial concepts, or organisation and management concepts. Corresponding keywords are thus: organisation, management, planning instruments, simulations, Decision Support Systems.



So, the system to describe the different possible aspects of a PhD Thesis consists of the three categories with some subcategories. Keywords can be organised according to these categories, which can then be used to describe PhD Theses. A PhD researcher should choose up to five keywords. Probably, the PhD researchers will choose keywords from the three different categories, but some research will be focused on one category, e.g. analysing spatial development issues, or intervention methodology. To help the researchers to classify their theses in a similar way, there are alternative concepts placed between brackets. These are seen to be similar with, or part of, the first keyword, which is not placed between brackets. So the researcher should choose the first keywords. Of course the alternative concepts between brackets don't mean exactly the same, but it is important to put concepts which are roughly comparable under the same heading.

1. A description of the **SPATIAL DEVELOPMENT ISSUES** of the PhD Thesis. Planning is one way or the other about deliberate interventions in spatial developments. There are seen to be problems with spatial developments. Planners are interested in spatial developments which present threats or opportunities for society and policy. The analysis of these spatial developments and their implications resembles Scharpf '*Problem-oriented*' policy research: a kind of substantive policy analysis concerned with the causes of policy problems, with the potential policy solutions, and with their likely effects on the initial problems and on their wider policy environment (p.11). So the key words in this category are used to describe the kind of spatial developments issues that are central in the PhD Thesis.

Spatial scale:

local, region, national, transnational

Environment, energy and natural resources:

Sustainable development,

Biodiversity,

Energy, Natural resources

Regional Economics

Employment,

Learning Regions,

Regional Economics

Rural development:

Agriculture

Recreation (tourism)

Nature protection and development

Town-countryside relation

Urban development:

Social Exclusion/ (Equality issues)

Urban renewal/regeneration

Housing

Urban structure (urban networks, urban transformation)

Property Development

Transport and traffic:

Infrastructure,

transport systems

Megatrend:

Globalisation / Regionalisation / Glocalisation

Political modernisation

Mobility

Informatisation

Demography

Time period of processes being studied:

Historical/ long term analysis

Contemporary analysis

2. A description of the ***PROCESS, CONTENT AND CONTEXT OF INTERACTION***

Since the sixties, the complex process of spatial decision making is no longer perceived to be of one of merely translating the results of substantive analysis into action. Instead, the organisational and procedural aspects became objects of attention in their own rights. To analyse interaction process, we can distinguish between the institutional context, the interaction process itself, and the content of interaction.

So the keywords to describe this category are

Institutional context:

Planning system (planning agency, juridical system, governmental system, land use planning, planning law)

'Rules of the game'

Networks

Process

Games (actors, resources, strategies)

Arena (arrangement, system of action)

Stakeholder involvement (public participation)

Exercise of power (relational power)

Governance

Content of interaction

Spatial concepts (Images)

Frames of reference (Discourses, problem definitions, definition of the decision situation, perceptions, planning doctrine, belief systems)

Spatial identity

3. INTERVENTION METHODOLOGY AND INSTRUMENTS FOR INTERVENTION, (SPATIAL) ANALYSIS AND EVALUATION

Planning research is not only about analysing spatial problems and the process, content and context of interaction, but may also aim to make a contribution to planning practice. This contribution of the discipline of planning can take different forms, it could consist of the development of an intervention methodology or the development of instruments for intervention, (spatial) analysis and evaluation.

Methodology

Process management

Network management

Collaborative planning (interactive policy making, open planning)

Arbitration/Alternative Dispute Resolution

Reframing

Urban design

Landscape planning

Instruments for intervention, (spatial) analysis and evaluation:

Juridical instruments

Simulation

Decision Support Systems

GIS

Multi Criteria Analysis

Scenario

Syntax Analysis

Environmental Impact Assessment

Performance research (implementation research)

Application and comments.

An earlier draft of the list has been tested by several PhD students at Nijmegen University. In general, they agreed with the classification system, but were critical on some of the keywords. The list has been slightly changed accordingly. Furthermore we tried to classify the papers for the AESOP PhD workshop in 1999. This worked well, although it proved to be more difficult because of the greater range of subjects and the more diverse background of the papers. In general, the list may represent too much a policy oriented approach, and may not be suited well to engineers and architects. Therefore it should be tested by PhD students with an engineering/architect background as well. On the basis of comments by Julia Lorenzo and Franseco Lo Piccolo, the list has been enlarged, adding (again) some keywords from an earlier draft drawn up by Fransesco Lo Piccolo. The most important comments are listed below, with our response to it. We can only give our thoughts on the issue here, a conclusion must be reached in interaction.

-Studies by architects and engineers aimed at territorial spatial analysis are not easily codified (e.g. 'industrial location', 'quality of life' or 'syntax analysis'). On the basis of this comment, several keywords for describing spatial analysis have been added under the category of 'Intervention and Instruments'. Furthermore, the exact classification depends on the specific angle in the thesis. A thesis on the 'quality of life' can be described with different keywords, depending on the angle in the thesis. A thesis on how to *enhance* the quality of life for example can be by using one or more keywords on intervention methodology. Whereas an *empirical study* on the changing quality of life could be described by one of the keywords under Spatial Development Issues. And a study which focuses on different *perceptions* of the quality of life in planning processes could use the 'frame of references' keyword.

-Theoretical issues like planning theory, planning history or history of cities are missing. As far as we can see the history of cities can be described with the list of keywords (for example 'historical / long term' and 'urban transformation') and seems to be more an empirical subject than a theoretical issue. Furthermore every PhD -

research contains theoretical issues and these are present in the keywords being used. A PhD-researcher describing his or her thesis in five keywords from the three categories gives an indication about the theoretical issues which are most important according to the researcher. Using keywords like ' networks' and ' collaborative planning' refers at the theoretical framework being used in the research. According to us a distinct set of keywords describing theoretical issues doesn't seem to be very useful. We think that distinct 'schools of thought' in planning like rational, communicative or interactive planning can be grasped by the keywords already being listed above. because In the second place there don't seem to be very distinct general theories in the discipline of planning itself. The more general (meta -) theoretical foundation is not specific to the discipline of spatial planning, but stems from other disciplines like sociology or economics (e.g. neo-marxism, methodological individualism, system theory, symbolic interactionism et cetera).

- Finally there are two themes missing which Francesco Lo Piccolo pointed at: there is no category to describe the methodology being used *in* PhD research . But the methodology being used *in* PhD research can partly be described by the keywords 'Instruments for Intervention, (Spatial) Analysis and Evaluation.)' which refer more to planning practice . These methods which are or could be used in planning *practice* are partly the same as the methods which are or could be used for *research*. The second theme which is missing as a distinct category is discipline-oriented knowledge (social analysis, urban economics, demography et cetera). We think the most important discipline oriented subjects can be described with the keywords under Spatial Development Issues. Apart from that, we don't consider it necessary to make a distinct category on discipline oriented knowledge.

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