AESOP-papers

DOCTORAL STUDIES BETWEEN ACADEMY and PROFESSION

A Survey of Doctoral Studies in Planning: In AESOP Member Schools in Europe

report prepared by

Ingrid Lundahl, Senior Research Officer
Department of Infrastructure and Planning
Royal Institute of Technology
Stockholm, Sweden
1996

The preparation of this report has been supported by AESOP, the Swedish Council for Planning and Coordination of Research and the Swedish Council for Building Research

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what we look for are answers to our problems.
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PREFACE

This survey of doctoral studies in AESOP member schools is a part of AESOP´s programme with the aim "to promote the development of teaching and research in the field of planning".

Spatial planning is undergoing great changes in order to develop a capacity to correspond to the regional and urban restructuring in Europe. Planning has become an important tool in the transformation process. The development demands both increased competence by means of advanced education and access to deeper and broader knowledge generated by research. In both cases doctoral studies and doctorates have a crucial role. The main trends of this development and the new context it creates for spatial planning have been described in the AESOP STATEMENT 1995 "The State of Spatial Planning in Europe", written by two presidents of AESOP Patsy Healey and Giorgio Piccinato.

The survey has been initiated by AESOP´s Working Group on Planning Research. The Group has on its programme:

"to stimulate an exchange of information
on doctoral programmes and students"

At one of the meetings of the Group the problems of doctoral studies were discussed. The discussion focused on the question: What is a doctoral programme for? Shall the doctor´s degree qualify for the profession or for academic teaching and research? Is a compromise needed or shall a differentiation of programmes be supported?

As a base for a further debate about this and other problems, more information about the performance of doctoral studies in the member schools was needed. The Group therefore suggested that the AESOP Council initiate a pilot study in order to investigate the possibility of getting relevant information by means of a questionnaire. After a positive outcome of such a test, the AESOP Council decided to make a survey in all member schools offering doctoral studies and entrusted me as secretary of the Working Group to do it. My work has been carried out within the Department of Infrastructure and Planning at the Royal Institute of Technology, Stockholm.

The most important motives for AESOP´s decision to engage in an inquiry were formulated by Patsy Healey in the following way:

1. The frequent isolation of doctoral students, both within their own departments, and, in some cases, in countries with very few doctoral students in planning;

2. The increasing value of international contact in developing understanding of advances in planning theory and methods in the planning field, and, in the European context, developing the ability to transcend national institutional cultures for planning theory and practice, and understanding national planning questions in a European context;

3. The desirability of building up a cadre of high quality planning researchers with a good understanding of the varied planning academic research traditions within contemporary Europe.

ACKNOWLEDGEMENTS

A condition of information about doctoral studies in the great number of AESOP member schools located in almost all European countries is that the members contribute their knowledge. This Survey is an example of such cooperation.

The origin of the Survery rests with AESOP´s Working Group on Planning Research which gave priority to an investigation of doctoral studies as the most important activity of the Group. In particular I wish to express my gratitude to the two chairs of the Group: professor Alain Motte who formulated the programme for the Group and the need of initiatives to stimulate the development of doctoral studies in planning and the present chair, professor Alessandro Balducci, who has actively contributed and supported the implementation of the Survey. The Working Group has discussed the first part of the Survey at the AESOP Congress in Glasgow 1995 and the final version at the Congress in Toronto 1996 and has given very valuable recommendations for amendments.

I also wish to thank professor Patsy Healey. While being president she developed the ideas and motives for the study. Her commitment to improved education and research has given an impetus to me and to all others who have contributed to the work.

In this gratitude I include the Advisory Group of the Survey in which, besides the three above mentioned, the professors Klaus Kunzmann, Germany, Tadeusz Marszal, Poland and Folke Snickars, Sweden, have participated with very valuable proposals about the design and implementation of the Survey. Thanks to the amendments of Folke Snickars the quality of the questionnaire was considerably increased. To this group belongs also professor Göran Cars, who has not only contributed to the survey but also, sitting in the room next to mine, taken time to give me advice and encouragement when problems have turned up.

In the concerted work the AESOP members - many of them members of AESOP´s Council of Representatives - are acknowledged in particular. They have put their work aside to be able to prepare material for the Short overviews and respond to the fairly long questionnaire. With their detailed comments they have given inspiration to my work. One of the AESOP members finished the questionnaire with a sigh: "This questionnaire takes quite a long time to complete".

It had not been possible to prepare the Survey without economic support. In addition to the contribution from AESOP Council, I am most in debt to the Swedish Council for Building Research - my former place of work - which is financing research on Planning and Building, and to the Swedish Council for Planning and Coordination of Research with the task to support problem- oriented interdisciplinary research. The Building Research Council has moreover financed necessary journeys to AESOP congresses and meetings. I wish to express my gratitude to all three which have together funded the project.

Ingrid Lundahl
Secretary of AESOP´s Working Group on Planning Research

1. The need of a stronger relationship between education and research in planning

Education and research are dependent on each other. The relationship between them is decisive for the quality of education. Through co-operation the education shares in the ongoing development of knowledge and gains the possibility to become deeper. Without research undergraduate education becomes stagnant. Without a good undergraduate and graduate education recruitment to postgraduate studies and research is decreased or comes to an end.

"The teaching and research at the universities shall not be separated if the education shall be able to correspond to changing needs, the demands of society and scientific progress."
Magna Charta of the European Universities

A carefully developed relationship between education and research gives the students access to contact with an active research environment. A condition for this is that education and research are carried out within the same organisation. Furthermore the researchers need to contribute to education and the teachers should be able to participate in research in areas outside their teaching.

This relationship has been given low priority in the planning area. The education in planning has at first hand been a professional education. Parallel to the university education special professional schools have also educated planners for the public sector in some countries - France, Germany, and the Netherlands. The research has principally been applied with a concentration on the development of instrumental knowledge, that is knowledge which can contribute to the solution of planning problems and to the improvement of professional activities.

The dominance of applied work and practical experience involves limitations upon planning as an academic discipline and research field. The basic research of planning theory, critically examining and evaluating the results of planning work and developing new approaches, models and methods, has a modest scope in comparison to applied research. There are few international comparative studies which describe, analyse and understand the professional planning and planning education in different countries. Research co-operation between European university departments is still rare (1). No international research organisation follows and accounts for the scientific development such as those which are found for instance in the social science disciplines. Altogether there is risk that knowledge and competence development will stagnate.

The poor relations between education and research can be illustrated by the situation in the Nordic countries. In Denmark, Norway and Sweden early efforts were made to build up competence in independent research institutes for planning and building research while the education was located in the universities. Planning education was a part of other disciplines, foremost architecture and geography. Planning research was mainly carried out by researchers within established disciplines. The consequence has been weak relations between education and research.

2. Planning a discipline in the university system? Initiatives of the 1980s preparing the 1990s

The planning crisis and the reorientation of planning activities during the 1980s meant that the professional character of education began to be questioned. This occurred in England where planning education and the planning profession have been closely related.
In the discussion about the need to change the education it was emphasised that the professional orientation had "tended to isolate the knowledge base for planning from those built environment and social science disciplines which should feed it". It had encouraged standardisation in education rather than innovation and the homogenisation of planning expertise rather than variety. The professionalisation had tended to retard the development of a research tradition. Few students decided to continue with research. It was often overseas students who choose to study for research degrees.

given motives for organising an "Association of the Italian Town Planners" which has among its aims "to encourage the formal acknowledgement of the profession of territorial and town planning".

In the Netherlands planning is recognised as a distinct academic discipline. The Dutch planning education is since long based on a theory of planning which forms a social-science discipline called planologie (planology in English). The first professor of planologie was appointed in 1962 at the Amsterdam University and a second soon after in Nijmegen.

The concept of planologie contains two components: ruimtelijke planning - spatial planning - and ruimtelijke ordening - spatial order (the direct influencing by public authorities of the spatial order). Spatial planning is the systematic preparation for spatial ordering(7). However during several years hardly anything was done with these two concepts. Since the university tradition is emphasising the difference between academic education and professional training it was recognised that education in spatial planning within the university sector had to be based on a sound theory of both spatial planning and spatial ordering and on the relation between them. The 1980s saw a research and debate going on to form one unified theory of spatial planning. A factor which was a driving force in this discipline development was the divergence of approach and theory between urban design and planologie. The outcome has been a broadening of the domain of planning and the planning discipline (8). Since 1983 self-contained full-time degree courses in planologie are offered at the universities of Amsterdam and Nijmegen.

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PART I

WHAT ARE DOCTORAL STUDIES FOR?

1. The European network of planning schools

Planning in the sense of spatial planning is a world-wide activity with growing importance not only in the Western world - in Europe and USA - but also in Asia. The dynamic economic growth in Asia with accompanying industrialisation and urbanisation has created a strong need of planning for a better living environment. The urban population of the world is now exceeding the rural for the first time in history. 21 of the largest world cities are expanding with a population exceeding twenty million by the year 2000. In Europe with 79% of the total population already living in urban areas (1992) the urbanisation process is still going on with a trend towards an increasing population in the large city regions. At the same time the development of new production systems in combination with the rapid development of transport and communications are creating new urban patterns through a differentiation within regions, cities and towns. There is a need in all parts of Europe to manage the process of urban development and to achieve a more balanced urban system (1).

Spatial planning is engaging a great number of specialists - the planners. How many is difficult to know since we lack a clear definition of a planner. If we consider Europe two figures can give some idea about the scope. In United Kingdom which is the only country where planner is an accredited title there was by the beginning of the 1990s a core stock of physical town planners of about 15,000 (2). Most of them were members of the Royal Town Planning Institute, the main professional body for planners in UK. An estimation made for Poland in 1990 in the connection with a discussion about the need of a new generation of planners showed that over 800 towns and 2100 communes need a highly qualified staff of planners with a new planning education (3).

Having the extension of planning activity in mind, we may expect that most European countries should have schools for a qualified education of planners.[1] What we know is that planning schools which are full and associate members of AESOP are established in 27 of the 44 European countries. In these countries 121 AESOP member departments or institutes are offering graduate education in planning. (Figure 1a) and b). (The number of planning schools is taken from AESOP Directory of Planning Schools, Second Edition 1993). AESOP goes East - AESOP paper 7, 1992 - reports 20 more schools in Czechoslovakia, Hungary and Poland, not being AESOP members. AESOP has also surveyed the planning schools in the former Soviet Union; AESOP paper 8 1992: New Horizons for Planning Education in the former Soviet Republics. In the European part - Russia, Belorussia, Moldavia and Ukraine - graduate education in planning is available in 27 schools - not AESOP members. Of the 121 university departments 77 departments in 21 countries are also offering doctoral studies in planning or oriented to planning (Figure 2a) and b). It means that, according to AESOP knowledge, all countries except a few in the Balkans and the very small ones (population less than half a million) have one or more planning schools.

As a comparison the number of planning schools offering bachelors degrees in planning in North America was 100 by 1991. The numbers of PhD programmes in planning were 30. Even if we know that there are more planning schools in Europe than those which are AESOP members and known by AESOP it seems that planning schools are more frequent in North America than in Europe in relation to the population, even if the former Soviet Republics are excluded (Figure 3).

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[1] According to the AESOP CHARTER 1992 "School" refers to any school, department, centre of teaching and research or other teaching entity which grants university degrees or other equivalent awards. "Planning" includes strategic planning (both urban and rural), planning on both local and regional scales, and environmental management. "Europe" and "European" refers to those countries outside North America which compose the Economic Commission for Europe of the United Nations Social and Economic Council.

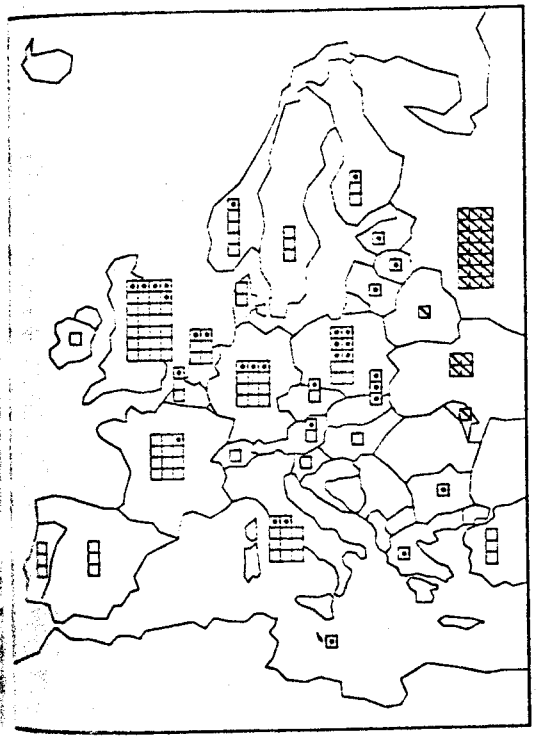
- North America population: 285 millions [1] —100 schools
- Europe population: 568 " [1] —141 (121+20) schools
- Former Soviet Republics population: 183 " [1] —27 schools

[1] Population statistics 1992

However, the planning schools for both graduate and doctoral training in almost all European countries represent a great potential for development of a more qualified training and research to meet the needs of the new communication era.

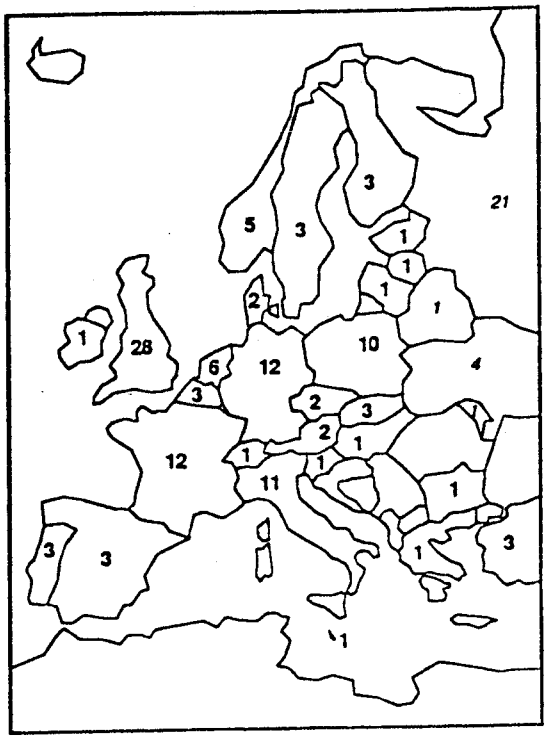
FIGURE 1a

Number of planning schools



Planning schools – full (□) or associate (▣) members of AESOP – offering graduate education in 27 European countries.
Planning schools – not AESOP members (▨) – in Russia, Belorussia, Moldavia and Ukraine.

Number of planning schools

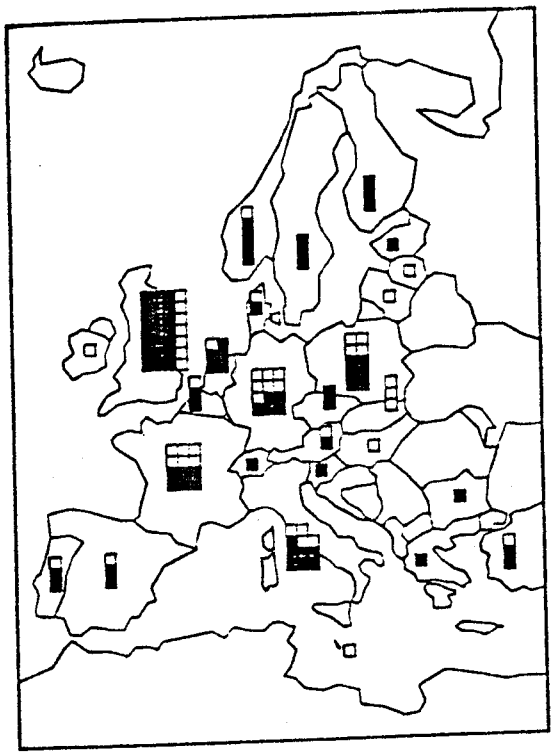


121 planning schools – full or associate members of AESOP – offering graduate education in 27 European countries.
27 planning schools – not AESOP members – in Russia, Belorussia, Moldavia and Ukraine (*Italic figures*).

FIGURE 1b

Number of AESOP member schools with doctoral studies

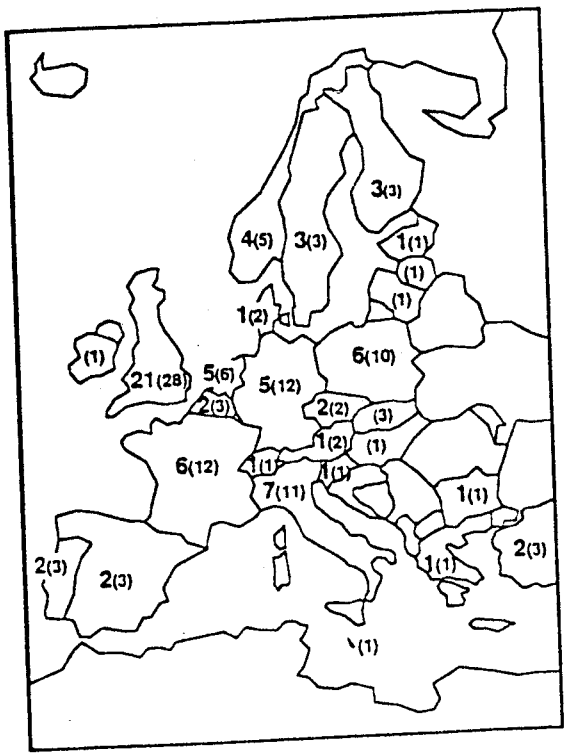
FIGURE 2a



AESOP member schools – full and associate membership – with doctoral studies (■) or without (□).

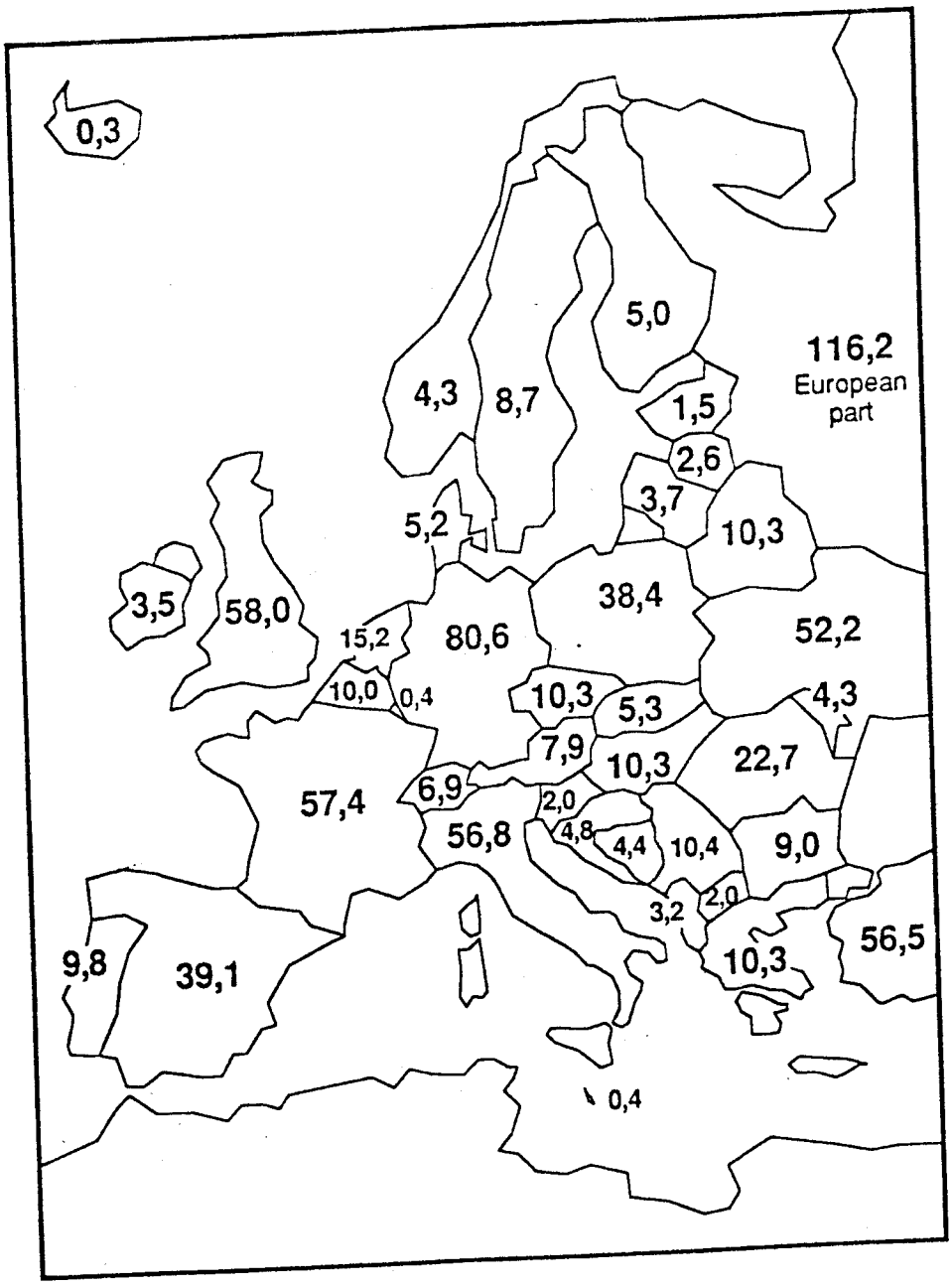
Number of AESOP member schools with doctoral studies

FIGURE 2b



AESOP member schools – full and associate membership – with doctoral studies (member schools with graduate studies)

Population



Population in the European countries 1992 (millions)

2. Planning education in a new era

The transition from the industrial society to the information and service society is involving a deep economic, social and political transformation process in the European countries. To this process belong the European economic integration, initiated by the European Union.

The key tendencies of this development with relevance to spatial (urban and regional) planning and the need of new approaches and methods are described in the AESOP statement 1995 (The State of Spatial Planning in Europe).

It is emphasised that "AESOP member schools have an important role to play in undertaking research on the critical issues which need attention for an effective, facilitative form of planning. AESOP also has a responsibility to promote the education of the coming generation of planners". Some comments will be added to this part of the statement about the need for a more qualified education and research programme and for doctoral training as an indispensable part of it.

In order to manage - and keep pace with - the dynamics of the changing society planning has to be based on knowledge about the changes and their driving forces to a much higher degree than before. A deeper knowledge about the processes of change and the relationship between them and space and environment will give a deeper understanding of the possibilities - and barriers - to achieve - or not achieve - the desirable development. A more knowledge-based planning with a broad perspective on its context should have a better ability to analyse conflicts and incompatibilities between different aims and interests and their respective consequences in order to give a substantial base for political priorities. Those analyses should also enable the planner to pay more attention to the evaluation of risks - and costs - of unsuccessful investments and of inadequate planning not conforming to real needs.

An orientation of planning in this direction means a shift of paradigm from an ideological and normative planning to a more analytical and flexible; from *formal* rationality and *formal* planning towards *real* rationality and *real* planning (4).

The shift in planning has to be accompanied by a shift in planning education and research. The present professional and practice oriented planning education at graduate level is not sufficient to meet the complex problems of the new era. It has to be supported by a broader research providing both deeper knowledge about the relation between the process of change, environment and planning and about new approaches and methods to deal with the problems. Such a research development demands in turn an increase of doctorates in planning with qualifications both in planning research and in the transferring of the results to teaching.

Graduate education in planning is an education for professional planning- not for research. If it is desirable to raise the quality of planning education what part have doctoral studies and doctoral degrees to play? Are the students prepared to go straight on to a doctoral programme or to individual doctoral research? In some countries an intermediate level is inserted both as a professional qualification and as a bridge between the graduate and doctoral level: the masters degree in United Kingdom and the US, the D.E.A. (Diplôme d'Études Approfondies) degree in France, the licentiate degree in the Nordic countries. Is that a means to make studies more feasible and more attractive to the students? If we look at the relationship from the doctoral level the principle of the academic society seems to be that a certain relation between graduate education and doctoral research training is necessary. Is such a relation desirable and possible to achieve in the planning field?

The questions asked are characteristic not only of the planning field. They are relevant to the ongoing discussion in Europe about how to adapt the preparation of a doctoral degree to new needs

of competence. One of the core problems is how to manage the change from "elite" to "mass" postgraduate education and research. What is needed in order to achieve both higher quality and greater effectiveness?

It would seem as if the problem of scale and numbers of students is not relevant to planning education, the problem of which is not too many but often too few doctoral students. But the problem of quality and effectiveness caused by an increase of students generally in the university has relevance even to small departments. The small ones are more vulnerable when resources have to be reduced. Is perhaps planning as a small academic sector threatened?

The current debate deals with the aim of doctoral studies and the need for new approaches to the preparation for a degree. An overview of some ideas and proposals seems relevant as a frame of reference for the key question - what are doctoral studies in planning for - and for the following overviews of the present state in the individual countries.

3. The aim of a doctor's degree: Scientific knowledge or training in research?
According to the traditional European model - originating in the German Humboldt university of the early 19th century - it is independent scientific work which should lead to a doctor's degree. The degree is awarded for the development of new scientific knowledge and is considered as a stage in an academic career. Traditionally the student learned how to do research by being an assistant to a professor - "he was sitting at the feet of a master". The model has therefore been called the apprenticeship model.

As the scale of university education and the number of doctoral students is growing this model is not sufficient. The number of students is increasing more rapidly than the teaching staff, proportionally. (The Swedish Government presented a plan in 1993 to double the number of doctorates awarded by the year 2000. Some years earlier the French Government made a commitment to double the doctorates within five years.) The scale is one of the factors which makes a rethinking necessary. An alternative model has developed - the professional model - which shall prepare the student for a wider range of careers than the traditional academic one. According to this approach doctoral studies shall not only include individual research but also training in research by means of courses giving both deeper knowledge in relevant subject areas and skills in the application of research methods. The thesis shall show the ability of the doctoral candidate to master scientific methods.

The two models, discussed in the European universities, show basic differences in the attitudes to the aim of a doctoral degree (5, 6). The traditional model is focused on the scientific development of the discipline. The research work for the doctor's degree is not conceived as a training in research but as a contribution to scientific knowledge. According to the professional model the doctor's degree is not only intended for science and for a scientific career but also for the knowledge development of relevance to careers outside the university. The development of society is depending on research for solving its more and more complex problems.

To the arguments for the professional model may belong the rapid expansion not only of scientific basic research but also of a wide applied research and development work oriented to the solution of problems of practice. The doctoral training should have relevance to such problems, not only to those which are raised in the scientific disciplines.

Among the objections to the professional model are that the emphasising of research skills rather than original scientific work will cause a dramatic fall of the quality of university research. The response has been that there seems now to be an agreement that it is important for the quality of the doctoral work that the doctoral student is well prepared in the research process and research

methods. It does not mean that the dissertation shall be judged in any other way than before as to its scientific quality and originality.

4. Is a compromise desirable?

The debate about doctoral training with polarisation between two different models does not seem to give much guidance for the planning education. Scientific progress is needed in a discipline such as planning, which according to one of the survey responses is "a wide, complex and scientifically not yet very much developed field" (professor Dieter Frick, Berlin). It means a need of doctoral studies which are developing new original knowledge and strengthening its theoretical base. In the traditional German model of doctoral studies emphasis is laid on knowledge and the research training is integrated in the development of new knowledge. Priority is given to the quality of the thesis - the scientific value of the work - while the research education to a great extent is mediated through co-operation in groups and joint research and through close supervision. This model is still the dominant one in a majority of European countries with AESOP member schools (see PART II:7).

However, there is also a need of skills in the application of research methods to professional problems. Does it mean a different doctoral training and programme? Harvey S. Perloff suggested in the mid 1970s to establish a professional doctorate parallel to the Ph.D (7). If so, it does not seem to solve the problems of planning as a scientific field. Or is it possible to integrate both approaches in the same model? That is, is there a need of a compromise?

A compromise was presented by the Committee of Vice-Chancellors and Principals of the universities in UK in 1988. The PhD should be — said the Committee — "both a product, an original contribution to knowledge and a process, the training of a researcher. The only way to accomplish such goals within a four year time period is to define the thesis topic carefully and to accept the notion of a PhD programme with formal training elements complementing the original research work".

However, this approach has been criticised. It has been considered difficult to combine formal courses and training with the research work in a coherent way. So the traditional model with an independent research work aiming at a contribution of "new scientific knowledge" is still the dominant one. It seems to be valid also for most of the British doctoral training programmes in planning. According to the overview of doctoral studies in UK: "Few universities have substantial established PhD programmes consistently producing graduates". The report also gives information that the eight largest doctoral programmes will only produce 2-5 PhD's a year and a large percentage of the students will be overseas and non-European. And in addition: "PhD's are no longer necessarily the academic elite and the best students do not find it necessary for their career".

What does it mean to the academic part of the planning field, to teaching and research (and indirectly to professional planning)? Planning research is well developed in several universities and centres in UK. To which extent are the researchers doctors in planning? Is perhaps planning research carried out by researchers educated in other disciplines? The responses to the questionnaire (see PART III:3.4) give information about the number of teachers having a doctor's degree in all participating schools. The answers for UK show that teachers with a doctoral degree amounted to 75% only in three schools out of thirteen. In four schools 50% of the teachers had a doctor's degree and in the remaining six the figure was mostly 25%. However, it seems at present that the pressure to have doctorates is very strong.

5. Rethinking the role of doctoral research training

As the information and knowledge society needs more research and researchers at the same time as an internationalisation and competition in education and research is going on, the quality and

effectiveness of the research training has been given more attention. How shall high quality combined with efficiency be provided? In several countries doctoral training is an object of new thinking and reforms which deal with the structure and quality of the doctoral research training. The changes are of international interest. The need of an overview of new approaches motivated the Dutch Minister of Education and Science to set up an international advisory committee in collaboration with his Belgian, French and German colleagues - Temporary International Consultative Committee on New Organisational Forms of Graduate Research Training. The Committee, chaired by professor David de Wied, ex-president of the Royal Netherlands Academy of Sciences, and called the de Wied Committee, had the task to compare the new forms of graduate research in training on the doctoral level and "to provide indications and recommendations that allow for more co-operation at the level of graduate training". A report was presented in 1991 (6).

According to the report the reforms of the doctoral training in different countries had two aims:

- to make it useful also for the labour market outside the university
- to prevent an expected scarcity of teachers for graduate education

As to the second aim the de Wied Committee emphasised particularly the urgent need to train a new generation of university teachers in Central and Eastern Europe (former communist states). The need is given priority by the countries themselves. "Institutions of higher education" (in the Czech Republic) "will therefore have to recognise more clearly the close connection between the doctoral studies they provide and the renewal of their teaching staff" (8). The problem as to planning is indicated in answers to the AESOP questionnaire (See PART III:5). The AESOP report 7 - AESOP Goes East - refers to the need of assistance from Western universities and of exchanging staff in the work of building up qualified faculties. A developed international co-operation between East and West in the planning field with a need for assistance with doctoral training of expertise from the West may imply a greater demand for doctorates in planning in the West; an issue to be kept under observation by AESOP.

The de Wied Committee observed similar trends in the reforms of the doctoral training in the investigated countries. The trend was a more structured programme inspired by the graduate school model in USA but in a different European design. One of the fundamental problems is how to make research training both efficient in terms of resources and of a high, internationally comparable quality. What was borrowed from the graduate school model was its taught courses and close supervision and also its setting standards for admission and requirements for the degrees.

Among the causes of the reforms, which form a complex pattern, was a need to give the research and researchers a broader working arena than the academic one. Research was seen as important to raise the knowledge infrastructure in the society and as a means in the competition between countries, regions and cities. The Committee considered it important that the student is prepared for the doctoral research and proposed a more formalised and structured first year of doctoral training.

6. New approaches to research training in planning - three examples

The European discussion about the role of doctoral studies as to scientific and professional development is of special relevance to the planning field which is considered as well developed professionally but not very much scientifically.

The reforms which have been introduced in some universities in order to broaden and improve the research training by means of a more organised and structured training have also been applied in some planning schools. In the following three examples of new approaches to doctoral research training in planning are presented which have great similarities.

- The French research training ending in a diploma - DEA - as a necessary prerequisite for admission to doctoral dissertation work
- The Netherlands research school involving collaboration between universities and providing a first year of structured research training.
- A proposed Graduiertenkolleg - Graduate School - in planning at the University of Dortmund in Germany; the idea being a preparation of the dissertation work by participating in interdisciplinary study programmes.

The French D.E.A.
The doctoral training in France is an example of a structured programme for training in research methods as preparation for the main doctoral work which is the dissertation. The doctoral training is divided in two parts. The first one is D.E.A. Diplôme d'Etudes Approfondies. Access to doctoral studies is available only to those who have attained a D.E.A. diploma. For the university the right to award D.E.A. is a prerequisite of the right to offer the doctorate. That means a double system for control of the quality. First at the institutional level to be sure that the institute has a qualified staff and resources for the D.E.A. training. Second a selection is made on the individual level of students who are qualified and motivated for doctoral work. The one year D.E.A. training is followed by an unstructured period of normally three years which is altogether devoted to the dissertation.

The D.E.A. training in planning follows special aims and guidelines prepared by the university institutes of planning - Instituts d'Urbanisme - and approved by the government. The programme comprises compulsory courses and professional research training. An evaluation of the D.E.A. training in planning was made in 1994 by the common organisation of the planning institutes - APERAU, Association pour la Promotion de l'Enseignement et de la Recherche en Aménagement et Urbanisme (9). Such an "auto-evaluation" is recurrent with the purpose to contribute to the improvement of the planning education. It is an activity without precedent in the French university system. In 1996 three universities with independent Institut d'Urbanisme offered a D.E.A. and a doctorate specialised in planning.

The French model is an example of doctoral training as a "compromise". It combines a process - the D.E.A. training in research methods - with the product - the thesis contributing to scientific knowledge and being the main part of the doctoral work. However, some problems have developed in recent years. Too few students carry on after D.E.A. to work for a doctor's degree. The completion rate has been low especially in social sciences and humanities and also in planning. Proposals have therefore been made to establish special doctoral schools - *écoles doctorales* - with more structured research training. The idea is that efficiency and quality can be raised by co-ordinating research and training in different departments/universities but in the same discipline. In 1993 45 doctoral schools had been established, though none in planning.

A prospective German Graduate School in Planning
Even in Germany, where the traditional individual model of doctoral studies has a strong position, reforms for more organised studies have been made with consequences also for planning.

At the German universities the upper second school certificate forms the general entry requirements. Certain studies have additional requirements (numerus clausus). The growing number of students causing longer times and higher public funds for education has as a consequence that major political pressure is put on the universities to reduce the study times by reducing the respective curricula and examination requirements.

A prospective way to do so could be to reduce certain university curricula, among them e.g. planning curricula, to a lower standard of scientific qualification but to a higher practical work skill

comparable with curricula already applied by the Fachhochschulen in Germany. Additionally a second level of Graduate School Education can be organised for those who wish and are able to gain a higher standard of education, not necessarily as high as a doctor's degree.

Another approach - presently discussed at the Department of Spatial Planning at the University of Dortmund - is to institutionalise a so-called "Graduiertenkolleg" to be oriented to the theme *"Planning in the public domain"*. The idea behind is to reconcile the German doctorate system (see the Short overview of Germany in PART II), focusing in particular the promotion of graduates of the proper department, well known to the supervising professors, with requirements to accept as well graduates from other universities with different curricula and education as eligible for a doctorate at the faculty.

Several departments can participate in a Kolleg which shall have a base in outstanding research groups and favour interdisciplinary study programmes. The aim is to counter the development of specialisation and joint programming of research proposals is encouraged.

The Netherlands: The first research school in planning

The Netherlands has been the first country to establish a research school with a specialisation in planning. NETHUR - Netherlands Graduate School of Housing and Urban Research - which started to work in 1994, has an educational programme in geography, planning and urban design and doctoral training in planning. It is a co-operation project between the four Universities of Amsterdam, Delft, Eindhoven and Utrecht.[1]

The Netherlands has during the 1980s left the traditional apprenticeship-model of the doctoral training. A first initiative was to limit the study time to four years. A new system of study grants was introduced which made it necessary for the student to follow an organised programme. The students are appointed after application as research assistants or "assistants in training" during four years. As such they are employed by the university with a certain salary. During the first year they are obliged to follow courses and participate in teaching. According to the guidelines they shall spend the rest of the time - three years - on their thesis work. The main structure 1+3 years is similar to the French education even if the Dutch system seems to contain more training on the job. The assistants-in-training system still have some similarities with the former apprenticeship system. However, the system is expensive since the university has a responsibility for employment even after the four-year period. A discussion has started to leave it and turn the assistants to students with possibility of grants. If so, what will happen with the present training by teaching? How will this part of the programme be changed?

One of the fundamental principles in the Dutch doctoral research training is co-operation and networks as a means for increasing quality. In the middle of the 1980s the government proposed that the universities should build up inter-university training networks. Of special interest for a small discipline such as planning with few students is the network between research assistants that the students and supervisors have organised - the Doctoral Planning Network (Promovendi Netwerk Planologie). The network is organising shorter courses and seminars. An example to follow.

The last phase in the process of developing a new research training system has been the introduction of graduate research schools (Onderzoekschole). The aim of these schools is "to be a

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[1] The Dutch government decided in 1991 to introduce a system of research schools, seen as research institutes of international standing which provide structured postgraduate courses for researchers. A research school shall have a number of young trainee researchers and in addition a number of postdoctoral researchers.

centre for high-quality research, forming an independent organisational unit. It is to have a sufficient number of young trainee researchers (about 40-50) and in addition a number of postdoctoral researchers". A majority of schools involve collaboration between universities.

According to the Short overviews of the Netherlands (see PART II) other universities as Groningen and Nijmegen are exploring possibilities of joining NETHUR. This school "might well turn out to be the most important national school offering doctoral education in planning". A prospect to be related to the above mentioned aim to be a centre for high-quality research.

7. International co-operation on research study programmes
The above mentioned de Wied Committee underlined the importance of an international collaboration on research training in particular for doctoral students and young researchers. The interest in studying abroad should probably increase if the countries aimed at a greater conformity between the first year training programmes.

In accordance with this recommendation the participating countries of the Committee - Belgium, France, Germany and the Netherlands, together with Denmark, decided to work for an enlarged collaboration and an internationalisation of the research study programmes. Denmark has followed this agreement by establishing a *European Doctoral School of Technology and Science* with seven PhD research programmes, one of them being *Planning and Development*. The aim is to secure a high international level for the research study programmes. See PART II about Denmark

8. The role of doctoral research needs a continuous discussion
The doctoral training in planning is - as all doctoral training - a training in research. The role of research is to contribute to new knowledge. According to a majority of responses to the questionnaire - 35 out of 50 - the doctoral theses play an important role in the building up of planning knowledge. It is "one of the main sources to new knowledge". Another response: "Doctoral assistants make up for about 75% of the department's research capacity". Among the remaining responses - 10 is of the opinion that the contribution is small. Some point at a strategic issue for the knowledge development - the dispersion of themes. "Each thesis builds up planning knowledge around its particular topic. The topics are very diverse."

All scientific development depends on an accumulation of knowledge. Is the lack of accumulation the cause or one of the causes for planning being "a wide, complex and scientifically not yet very much developed field"? Is perhaps the lack of accumulation in its turn depending on a great demand for applied research within a vast subject field?

The above mentioned debate about science and/or profession as aim of the doctoral studies has shown some of the problems. A straightforward answer to the question "What are doctoral studies for" is given by the planning schools participating in the survey. According to a substantial majority - 43 out of 54 answers - the doctoral training is designed both for academic and professional careers (see PART III).

An interpretation of this answer could be that a doctoral programme with such an aim should have as a task to develop the knowledge area of planning by means of academic research. It should work for the transfer of academic research into application and for an action oriented research through a close co-operation between the doctoral students, teachers and professionals. The distance between research-practice should be bridged over and planning developed as both a scientific and professional discipline (10). A realistic or utopian idea? Is it really possible to manage a structured doctoral programme limited to 4 years which shall give both a qualified training in research and a dissertation containing new scientific knowledge and also knowledge about the professional field and methods suited to its problems?

If there is a need felt for a development of planning as a discipline with an independent position in the university system the prospects of the future may be the same as in the United States. The PhD degree is there not seen as the end of the research training. Postdoctoral training is developing for a traditional academic career in university teaching and research. A complement to a combined academic and professional training for a doctor's degree? Compare the Netherlands' research school above, which shall include a number of postdoctoral researchers, and also the two forms of a doctoral degree which are used in East-European countries as well as the German second level of a doctor's degree - Habilitation (see the Short overviews, PART II).

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PART II

SHORT OVERVIEWS OF DOCTORAL STUDIES IN 17 EUROPEAN COUNTRIES WITH AESOP MEMBER SCHOOLS

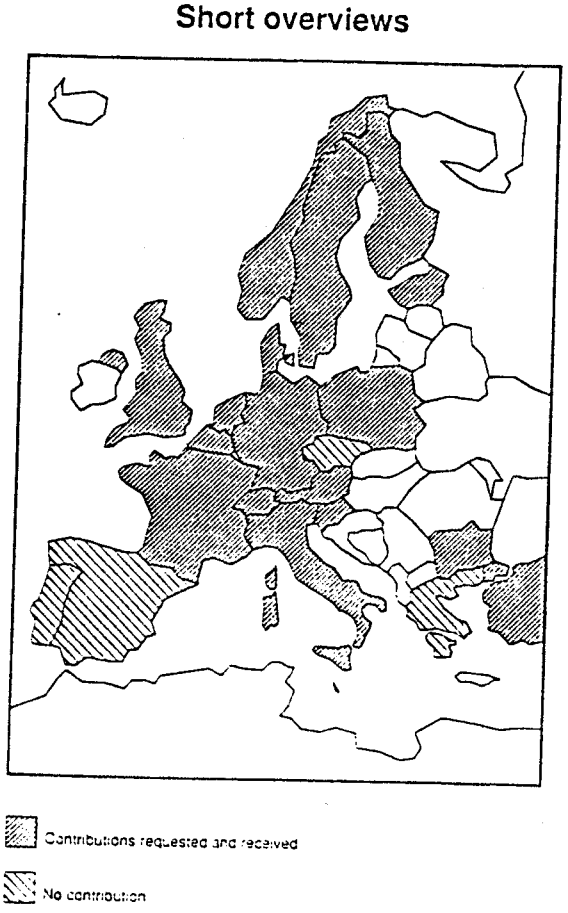
1. Introduction

When it is a matter of graduate and post-graduate education in planning with the purpose to provide the professional world with planners there is a need for both national and international information. Professional oriented planning education is organised all over the world and information about it has a broad market. Doctoral studies in planning make up a very small training and research area compared with graduate/postgraduate education. Accordingly even the demand of information is small.

However, a few countries show an expansion. One of them is Italy. Without any programme in planning at the doctoral level before 1985, much effort has been made in order to establish doctoral studies at the universities. Information in the form of newsletters and annual conferences is developed to stimulate co-operation and exchange of experiences. The idea to include Short overviews of doctoral studies in this survey emanates from Italy. At the yearly National Conference of Ph D Programmes in Planning 1994 in Venice the participants, invited from other countries, were asked to give an overview of the doctoral programmes in their own country. As a representative of Sweden I could only state the fact that no overview with relevant information was available. No school or organisation has had a need to prepare any. Every school supplied itself with information necessary for its own work. So a national overview intended for an international forum had to be prepared.

Probably the situation is similar in other countries. It was therefore decided that it would be of interest to include Short overviews in the AESOP Survey as background on national experiences to supplement the collective information compiled by the questionnaire. The overviews have called for work by AESOP members and it is therefore very positive that 17 countries are represented, thanks to contributions from as many AESOP members. Only four are missing (Figure 4 and PART II:8).

FIGURE 4



The overviews are brought together into five groups, representing different parts of the European territory - north, east, central, west, south. The motive for the grouping is that the countries of most groups are showing some similarities in their planning and educational systems - when looked upon at an overall level.

The overviews are made at a national level, not that of the individual school and programme. They are too short to give substantial knowledge about the performance of the doctoral studies and they do not reflect the differences between approaches found within a country. But by looking at the collective experience of schools and countries, it is possible to see some similarities and dissimilarities between the approach in different countries, which may form a rough frame of reference for the individual country and school.

A special target group of the Short overviews is the doctoral candidates and young academics. The small scale of doctoral studies in each country makes it very important for them to get information about doctoral training and research in other countries. It may be of help to find schools - and countries - for studies abroad as well as contacts and possibilities of co-operation.

2. Doctoral Studies in the Nordic Countries

- The Nordic Countries - some trends
- Denmark
- Finland
- Norway
- Sweden

The Nordic countries - some trends

The concept of planning formulated by Harvey Perloff in 1957[1] corresponded well with the approach and experience of the Nordic countries. Planning is a highly complex activity that needs specialisation. Therefore it has to be a teamwork of specialists educated in a planning core programme. The specialists have in first hand been architects or have had a technical degree. In recent years planners with a social science background has increased in Finland and Sweden. In a corresponding way there has not been any independent doctoral degree in planning. The doctoral education has been a sector within other academic disciplines and the degree has been awarded in the chosen discipline. This concept decided the design of the planning education both at graduate and doctoral level during the following three decades.

However, during the period 1981-1995 it has been possible for students in the Nordic countries to choose a doctoral education specialised in planning at the Nordic Institute for Studies in Urban and Regional Planning - NORDPLAN. During this period 20 doctor's degrees have been conferred at the Institute. This possibility of an independent structured doctoral education in planning has disappeared from 1 January 1996, since the Ministers of Nordic Co-operation have decided to withdraw the doctoral planning education from the Institute. NORDPLAN is going to be reorganised during 1997.

Doctoral studies in a new era

At the beginning of the 1990s the planning problems of a new era are starting to influence the doctoral education: EU's planning activities, the regional unbalances, the problems of the city

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[1] Harvey S. Perloff: Education for Planning

regions, infrastructure and environmental problems. A need is emerging to raise the level of competence by introducing doctoral studies specialised in planning at independent departments. Two new programmes are offered in Denmark and Sweden.

- In Denmark an European Doctoral School of Technology and Science was established in 1994 at Aalborg University with one of the doctoral programmes being *Planning and Development*. The programme is based on a new more comprehensive orientation of the planning concept in the direction from a physical technical approach to an interdisciplinary one.

- In Sweden a new department of Infrastructure and Planning was founded at the Royal Institute of Technology in 1994. The Department is responsible for an independent interdisciplinary and structured doctoral programme in *Infrastructure and planning* based on an extensive research.

A specialised doctoral programme is now also available at the Stockholm University School of Planning, belonging to the department of Human Geography. The studies are individual but supported by taught courses in planning subjects. The School is so far the only university institution which can offer both a full-time undergraduate education and a doctor's degree specialised in planning.

In Finland and Norway, doctoral training is still part of established disciplines at the technical universities. Taught courses in planning are available - but not formal programmes.

A doctoral degree with a thesis theme oriented to a subject area of planning is also possible to pursue in the form of individual studies at the social science faculties of the universities in all Nordic countries.

In Norway the Oslo School of Architecture is still in the process of building up for the first time a doctoral training, oriented to planning. As part of this process a key problem of doctoral research training in planning has been brought up and analysed: the relationship between the profession and the discipline. The background is the new perspective on architecture and planning regarded as both professions *and* (professional) disciplines that has emerged during the last few years. Professional disciplines are in a different situation than sciences: they are "between the devil and the deep blue sea " of knowledge *and* action, theory *and* practice. "A profession can only survive if it is supported by its theoretically expanding discipline. Research will be decisive for the survival of planning as profession i.e. it should be promoted in order to strengthen the theoretical base of planning as discipline".

It is the attempt to find a relation between the professional graduate education and the academic doctoral training which deserves a further discussion.

Denmark

A reform of doctoral programmes at Danish universities and other academic institutions was accomplished in 1993 with the intention to increase the internationalisation of the programmes and formalise research studies. The Faculty of Technology and Science at Aalborg University has chosen to follow this policy by establishing a European Doctoral School of Technology and Science at the University. In 1994 seven doctoral research study programmes were introduced among them one in *Planning and Development*. The aims are:

- to secure a high international level for the research study programmes which will normally be documented by the acquisition of the European Doctorate

- the integration of the individual Ph D student and the individual doctoral research programme in the active research environment

The European Doctorate is a doctoral degree which can be granted by higher educational institutions in the Member states of the European Union. There are certain requirements to be fulfilled as to foreign study residence, the language of the theses, criticism and assessment of these. (See AESOP NEWS Spring 1993, page 15.)

As to the research study programme called Planning and Development, Denmark is among the Member States which have broadened the planning concept to a more comprehensive and complex form as is mentioned in the EU's report EUROPE 2000+. Planning and Development has an interdisciplinary character dealing with planning and management of production, technology, infrastructural systems and the physical environment.
Two departments co-operate on the programme: the Department of Development and Planning and the Department of Production. In the planning department research is focused on the following 10 areas:

- Land management
- Co-ordinated Physical Planning
- Traffic and Transport Planning
- Environmental Planning
- Energy planning
- Technology Planning
- Geographical information systems
- Quality Control
- Production Control and Technology Management
- Industrial Economics

The doctoral research study programme consists of compulsory and optional courses and the thesis. The compulsory courses deal with the following 6 themes:

- Technology Assessment
- Planning and Development Theory
- Implementation and Assessment
- Public control and Regulation
- Internationalisation
- Organisation and Management

The doctoral students get their education and training in research methods mainly through participation in the research programme and by close co-operation with the supervisor.

In order to broaden its capacity and the research environment of the doctoral students the School has established a network for doctoral programmes within the fields of technology and society, including departments at the Technical University of Denmark, the Graduate School of Business Studies in Copenhagen and Roskilde University. Between 1990 and 1994, 20 doctor's degrees were granted in the planning field. In 1995 17 doctoral students were working full-time.

Doctoral studies in planning are also offered at the Technical University of Denmark. The planning education is based on courses, not on a structured programme. Infrastructure, Environment and Planning is the main education and research field, with Urban Ecology as a growing area of interest.

The Geographical Institute of the University of Copenhagen offers a doctoral education in geography with the possibility of choosing an orientation to Urban Geography and Physical Planning. The studies are altogether individual. At the Research School of the Institute some courses are of interest to doctoral students which have chosen an orientation to planning: Urban System Change and Metropolitan Competition in Europe, Development Geography, Landscape Ecology and the Use of GIS in Land Evaluation.

The formal study time for a doctoral degree in Denmark is three years. A master's degree or an education of equal quality is demanded.

Finland

In Finland (physical) planning is not (yet) recognised as an academic discipline which means that there is no undergraduate education to reach a "planner's degree". The undergraduate education in planning is mostly given in departments of architecture which have institutes for planning. These departments are found in Helsinki University of Technology, Tampere University of Technology and Oulu University.

Consequently there is no independent doctoral training in planning. It is possible to choose a doctoral training with orientation to planning but it has to be implemented in an academic discipline. This means that there are no Doctors in Planning but e.g. Doctors in Technology etc. Doctoral dissertations related to planning issues are completed in departments/faculties of architecture, civil engineering, surveying, geography, social sciences, etc. This makes the whole doctoral training in planning very dispersed.

Two types of post-graduate degrees are available: licentiate and doctor. The licentiate's degree is an intermediate level between a master's degree and a doctor's degree. Normally a licentiate degree is taken as an intermediate degree but it is also possible to proceed directly to the doctor's degree. Many students do not continue after the licentiate's degree; possibly due to the length of postgraduate studies. It is however proposed that the licentiate thesis shall be approved as a part of the doctor's degree.

The right to study for a licentiate's or doctor's degree e.g. at the Helsinki University of Technology is granted to students who have a master's degree in technology, architecture, landscape architecture or a degree of corresponding level in Finland or abroad. The "normal" time for a doctor's degree is four years and for a licentiate's degree two years. In practice only those who can study full-time can manage this schedule. Most students need much more time.

In evaluations of the doctoral studies in Finland the length of the doctoral studies have been criticised. A consequence is that the average age of new doctors is high. One of the causes may be that Finland has no uniform system for the financing of doctoral studies and there are few opportunities for concentrating fully on doctoral work. Doctoral students are usually engaged in teaching and research thus financing or contributing to the financing of their studies. According to the responses to the questionnaire on doctoral studies (see PART III of this report) a main problem of the doctoral studies in Finland is lack of financing which gives the students possibility of full-time studies.

The main subjects of the doctoral studies belong to two categories: the first contains knowledge divided between research theory and methods. The second gives the students knowledge about planning-related issues, such as planning theories, environmental issues, land use economics and land policy, etc.

The doctoral training in planning has not been specialised into such sub-groups as urban design, urban and regional planning, etc. The training has been more generally oriented. Each student chooses his/her own special research theme for dissertation and for this work individual training is given by the personal supervisor which is appointed to each doctoral student. Usually this supervisor is the professor of the relevant subject area.

The aim of the doctoral studies is more to qualify for research and teaching than for the profession. Very often the real personal motive for this kind of studies is just to develop your abilities without any directly practical goals. There is no real demand of doctoral degrees in planning practice.

The total number of students studying for a doctor's degree in planning-related subjects is unknown. Without any survey there are in Finland probably less than a hundred such students in technical and social science faculties and annually ca 2-4 doctorates and 4-6 licentiates finish their studies. The number of doctoral students has increased during the last five-year period.

Norway

As in Finland there is no specific doctoral training in planning in Norway. Doctoral studies are carried out as individual programmes which include some common courses and a scientific thesis. Courses oriented to physical planning are available at the Oslo School of Architecture, the Norwegian Institute of Technology, Trondheim: the Faculty of Architecture and the Norwegian College of Agriculture, Aas: the Institute of Landscape planning. It is also possible to choose a doctoral training with a dissertation theme oriented to planning within the social science faculties of the universities in Oslo, Bergen, Trondheim and Tromsø. Of them the department of Geography at the University of Bergen is a member of AESOP.

A formal regulated doctoral training has a rather short history in Norway, introduced first in the 1970s to 1980s. In 1991 nationally co-ordinated rules - a Doctoral Code were adopted. According to them "the programme of studies leading to the doctoral degree is intended to qualify students for research and for other kinds of work which demand a high level of scientific or scholarly insight. The specific goal of the studies is the production of a thesis of high academic standard, based on independent research in a particular area of specialisation". The doctoral programme shall consist of three phases: the training phase, the in-depth study phase and the preparation of the doctoral dissertation. The stipulated time is three years.

In 1992 the Oslo School of Architecture launched a doctoral programme of Architecture. Doctoral studies in a professional discipline such as Architecture were considered to contain special problems as regards research . The traditional professional undergraduate training gives few opportunities to learn about theoretical research. The curriculum has therefore been developed with reference to the two worlds: the academic one and the professional. The doctoral studies contain some compulsory common courses and some specific to the discipline. Among the common ones are courses in research theory and practice and courses introducing general theoretical issues. Two approaches in the building up of the course curriculum have been chosen: one is the historical development of the planning profession, the other is a "cultural-relativist perspective", based on the study of different national planning traditions ("schools").

A new situation appeared in 1994 when the Oslo School of Architecture was requested to extend the subject of the research training to cover the whole subject- field *"From the spoon to the city"*. Planning should be included. In such way the doctoral programme at the School should be accessible to several universities and even colleges. In Norway, a small country with limited academic resources a strategy has developed called the Norway Network which means that the education responsibility is shared within the higher education system. The main objective is that the university education thus shall get a higher quality.

The Oslo School of Architecture is co-operating with the Faculty of Architecture in the Norwegian Institute of Technology and the Institute of Landscape Planning in the Norwegian College of Agriculture to formulate a specific planning track within the whole doctoral programme *From the spoon to the city*. Work is going on to prepare the planning course curriculum, particularly an Introduction to planning theory. The main objective of this course is to discuss theories in and about physical planning, thus giving the doctoral students possibility of building up their theoretical identity. The common course *Introduction to planning theory* focuses on the following three perspectives:

1. it emphasises the building up of the students' theoretical identity;
2. it recognises planning as a professional discipline, i.e. practice decides on the discipline's *raison d'être;*
3. spatial planning belongs to the family of the so-called *making disciplines*.

The disciplinary specific courses are adapted to the disciplinary profile of each institution and to the available teaching competence. All courses have reference to the ongoing research work of each student. The main part of advanced research takes place in the in-depth phase of doctoral studies which follow the introductory training phase (about two semesters).

The admission rules for doctoral studies are stipulated in the above mentioned Doctoral Code and valid for all doctoral training. The applicants must have passed the examination for a higher degree in the subject for which they are seeking admission or they must have other education approved by the Faculty as a basis for admission.

Sweden

The Swedish planning education has traditionally been focused on the graduate level. Doctoral training has belonged to the established academic disciplines and a doctoral specialisation in planning has been lacking. Yet a specialised doctoral training has been available to Nordic students at NORDPLAN (Nordic Institute for Studies in Urban and Regional Planning) until the end of 1995, when it was withdrawn.

In Sweden the municipalities have the main responsibility for urban and regional planning. In an inquiry in 1990 to the municipalities - the opinion was that the need of a co-ordinated and comprehensive planning is increasing. A higher competence in strategic planning with a more holistic perspective was demanded. EU has expressed the same view in EUROPE 2000+: "Spatial planning is one component in a much wider array of issues... A more comprehensive and complex form of spatial planning is evolving."

In accordance with these trends a doctoral programme in *Infrastructure and Planning* was introduced in 1994 at the Royal Institute of Technology in Stockholm. The interdisciplinary and structured "study plan" is divided into four specialisations: Regional Planning, Transport and Traffic planning, Highway Engineering, and Municipal Planning and Management. The concept of infrastructure is broad, comprising the built environment considered as a basic structure, system and network for the socio-economic and environmental activities of society. After a reorganisation of the institute in 1993 the department of Infrastructure and Planning was established and given responsibility for the programme. According to the study plan 1996 doctoral students in all four subject areas have to complete the following three courses, which are compulsory:

- Research Methods and Seminars in Infrastructure and Planning
- Systems Analysis
- Scientific Theories

3. Doctoral studies in East-Central Europe

- The East-Central European countries - some trends
- Bulgaria
- Estonia
- Poland
- Slovenia

The East-Central European countries - some trends

The East - Central European Countries are working with the reform of their planning system in order to change it from a highly centralised to a decentralised one involving local government. The whole system of local planning has to be organised anew. Priority is given to the education of a new generation of professional planners who can contribute to the development of new planning processes and planning methodology. It calls also for an increased education of university teachers qualified in planning. That means a growing need for more doctoral students.

Planning is not an independent discipline and education is not specialised in planning neither at undergraduate, graduate nor doctoral level. Planning education is developed via different disciplines and professional areas. This multidisciplinary approach has similarities to the above mentioned concept of planning and planning education in the Nordic countries.

The approach is subject of debate. In Poland for instance a discussion is going on about the integration or separation of planning education. The SARP - the Architects Society has been in favour of a uniform education of architects which should make them competent to deal with planning. Whereas TUP - the Town Planning Society - is in favour of a separate education of planners (AESOP GOES EAST, AESOP papers 7 page 20).

As to the doctoral training it is principally linked to architecture and technical disciplines but in some Polish universities also to social sciences, mainly economics. All doctoral studies are individually organised and the main part is individual research. Courses offered deal with such subjects as: Planning theory, Urban and regional development and economics, Spatial planning, Economic - ecological systems, Agriculture land structure transformations.

Post-graduate studies for a doctoral degree can take two forms: studies leading to a doctoral degree (Dr) and studies leading to a doctor of sciences degree (Dr Sc). The Dr degree is comparable to the PhD degree in Western European universities. The field in which the degree is awarded is indicated on the diploma. A prerequisite of a doctor of sciences degree is a more extensive research work and of a dissertation which contributes to the scientific development of the subject area involved (compare PART I: The aim of a doctor's degree: Scientific knowledge or training in research?).

In half of the universities of the survey in these four countries the training is intended for an academic career as teacher or researcher. The usefulness of cross-national comparative studies about different approaches to the doctoral training is emphasised.

AESOP is working for an increased co-operation between universities with planning education in East and West. In order to provide member schools with more information a Survey and Directory of Planning. Education in Czechoslovakia, Hungary and Poland was made by AESOP in 1992 (AESOP GOES EAST, AESOP-papers 7).

Bulgaria

Planning education in Bulgaria is offered as a specialisation within the education in architecture. It is available at the Faculty of Architecture, Department of Urban Design and Planning, University of Architecture Civil Engineering and Geodesy in Sofia, which is the only school of architecture and

planning in the country. It is a specialised programme for pre-diploma students after their 4th year. The graduate programme covers lectures in Regional planning, Urban design and planning, Landscape design and planning, Ecology, Technical infrastructure, Urban sociology, Management and Law for planners. There are also tutorials and projects in the first three areas (regional, urban and landscape planning), a prediploma project and a 130 days' diploma project in the 6th year.

Shorter one term lecture courses in Urban and regional planning are available in several universities: Sofia University (Department of Geography), University of National and World Economy, Higher Institute of Forestry. A social science planning education oriented to Economics is offered as a full-time four year programme in Regional planning at the Higher Institute of Economics in Varna.

A *doctoral degree* in Architecture and planning can only be awarded in the Faculty of Architecture of the Sofia University. The admission requirements do not include a first degree in planning, since there is no complete full-time graduate education in planning. The selection of doctoral students is made through an open competition with three entry examinations - written exam in the History and Theory of Planning, a project (8 hours) and an exam in a foreign language.

The doctoral studies are conducted through individual research. Research is an extensive part of the doctoral training, given by courses, participation in projects and individual readings. The main subject field of the training is urban planning. The training does not include compulsory courses but the students have to pass three compulsory examinations: in philosophy (or sociology), in theory of planning and in foreign or Bulgarian language (for foreign students) Pedagogical practice is compulsory - one term tutorials. The normal total time for a doctor's degree is 3-4 years, with possibility to study full-time or part-time. The studies are completed by a public defence of the thesis. A scientific council of 25 members in the Faculty of Architecture awards the degree and the official accreditation is made by a State Certifying Commission.

As mentioned above (Some trends) two doctoral degrees are available: Dr and Dr of Sciences.

On average 3-5 students have been studying for a doctoral degree during the period 1991-1994. 2 students have taken a degree. In the autumn 1995, 4 doctoral students began doctoral studies in the Department of Urban Design and Planning.

However, it is not possible to draw any profound conclusions about the scope of doctoral training for several reasons. The characteristics of the educational situation are:

- thorough economic and political transformation
- unstable educational legislation
- social polarisation and disappointment with the position of intellectuals in society
- restructuring of the research institutions
- lack of sufficient financial support for doctoral students in the universities etc.

Estonia

Estonia has not had a tradition in professional planning and planning education. During the Soviet period with planning being an integral part of the centralised state administration, there was no professional training for planners. Graduate and postgraduate degrees in Engineering and Land surveying were available. As to surveying most of the teaching was carried out in agricultural institutions - in Estonia at the University of Agriculture. That means special emphasis on the problems of agricultural land. The degree in Architecture at the Tallinn Technical University was in a very small part concerned with physical planning.

The tradition of land surveying continued in the 1990s. The dominating planning problem is land reform. Its objective is the re-establishing of private ownership of land. The main task is the formation of real estate and re-allotment of sites both in urban and rural areas. A first reform has been to create a legal foundation of planning. *A law of land management* (planning outside densely populated areas) was adopted in January 1995 and later the same year also *a law of planning and civil engineering* (planning in densely populated areas).

The progress of the land reform will depend on the results of land use planning as a tool for solving land use problems. The methods of planning have to undergo considerable alterations. A new system for land use planning has to be created and appropriate methods developed, which is the major task of planning research.

This is the background to the initiative to introduce a doctoral programme oriented to Land use planning and Surveying. The programme was accredited in 1994 to the Institute of Land Use Surveying of the Estonian University of Agriculture (former Department of Land Management and Department of Geodesy). The aim of the programme is to increase the number of qualified researchers and lecturers in order to meet specific professional demands.

The programme will involve taught courses about for instance the theoretical base of planning, regional planning and the management of real property - its valuation and taxation. The curriculum is planned to contain 50 weeks of taught courses including 10 weeks of general studies and 40 weeks of specialised studies, followed by 100 weeks to compile the doctoral thesis. The total time for a doctorate is planned to comprise four years.

Poland

During the communist period town planning was the same as physical planning and design. University education for planners was not the rule. Less than 50% of people engaged in town planning had an university education. Those with higher education were either architects or civil engineers, trained at technical universities. Collaboration with universities and scientific institutions were rare. "Only single individuals could boast of a doctor's degree".

In the beginning of the post-communist era planning profession and planning education was in deep crisis. Local self-government was introduced in 1990 and the new organisation created quite new tasks for the planner. The education system was not adapted to these conditions and new educational programmes for planners at local level were needed. This is a background to be kept in mind when looking at the post-graduate-doctoral education five years later.

Planning education is characterised by multidisciplinarity. Planning is not an independent discipline and there are no schools of planning in Poland. Education in planning at graduate level is offered as a specialisation within different established disciplines, foremost in architecture, to some extent in the social sciences. However there are also tendencies to give planning a stronger position in the university education. A full time five years Master of Science education specialised only in planning has been offered at the Wroclaw University since 1991. It can be followed by a Dr of Sciences degree attained through an individual programme. Three other Master of Science programmes - in Geography and Local Economy contain a specialisation in Spatial planning

In accordance with the multidisciplinary policy there is no standardised programme of doctoral education specialised in planning and containing compulsory courses. The doctoral studies are individual. The student interested in planning has to collaborate with a supervisor interested in planning research in order to decide the theme of the thesis and to plan courses relevant to the thesis theme. With the thesis completed the doctoral student has to pass three compulsory examinations - one in a social science subject area, one in a foreign language and one in a subject

The eight institutes are:

- The Institute for Urban Design and Regional Planning
- The Institute for Landscape Planning and Garden Design
- The Institute for Law
- The Regional Science Institute
- The Institute for Public Finance and Infrastructure Policy
- The Institute for Local Area Planning
- The Institute for Transporting System Planning
- The Institute for Spatial Planning

The Institutes' scientific work is documented by regular publications. The doctoral studies are altogether individual without any organised programme of courses, seminars etc. It is up to the doctoral candidate to show his or her scientific competence. According to the "University Act" the aim is the elaboration of a doctoral thesis, which has to prove the graduate student's ability to carry out independent scientific work. The dissertation is defended in public.
During the four year period 1991-1994 11 degrees in planning were awarded. In 1995/96 about 15 doctoral students are working with a planning theme.

Federal Republic of Germany
In Germany spatial planning (Raumplanung) has been recognised as a distinct academic discipline since 1971. Six schools within universities are specialised in planning independent of traditional disciplines, such as architecture, engineering and geography and offering graduate programmes in planning. (The Universities of Berlin, Dortmund, Hamburg-Harburg, Kaiserslautern, Kassel and Oldenburg). Some other universities are also organising graduate and post-graduate courses in planning. A doctoral degree can be obtained from all planning schools at universities, that is from all AESOP member schools in the country. The degree corresponds to the German tradition of Technical Universities and is in engineering - Dr Ing. and in Dortmund also Dr rer.pol respective to the theses submitted.

The doctoral studies are not formalised in organised doctoral programmes and courses. They are undertaken by research only. In principle there is a great freedom to select the themes of the theses. Some universities occasionally organise doctoral colloquia.

In practice all planning related themes, from urban design to law, from regional economics to environmental planning - can be subject of individual research for obtaining a doctoral degree. The theme usually depends on the "Doktorvater" - the supervisor - accepting a candidate and his/her research theme. In theory applicants eligible for a doctorate could submit a thesis for acceptance as a doctor's thesis to the faculty without any contact with a faculty member. In practice this would be extremely risky for the applicant. Therefore the usual procedure is, that a professor of the Faculty accepts the candidate from the start of the doctoral work as supervisor ("Doktorvater"). To take on this "Doktorvater" - function is voluntary and cannot be enforced by the applicants. Due to the required quality of a doctoral thesis for a doctorate the implementation is time-consuming. It is rare that a doctorate is achieved besides regular professional activities outside the university.

The freedom of selecting a research theme may be seen as an aspect of the difficulty of defining the subject area of planning. Another is the difficulty to reach consensus about the theoretical and empirical bases and minimum requirements of doctoral dissertations, which is characteristic not only of Germany. The themes are varying, ranging from very descriptive themes to very normative ones, and from rather holistic to extremely sectoral, (e.g. transportation, law, land management) themes. Mere theoretical dissertations are rather the exception. International literature is read and used by a small number of candidates.

The precondition for admission to doctoral studies in planning is a degree from a planning school (Dipl. Ing.). In singular cases candidates with long experience in planning (research or practice) can be accepted.

There are three ways of doing and financing research for a doctor's degree:

1. The German university system offers staff positions which allow more or less to prepare the doctoral thesis besides the general duties, though this is not formally part of the usual 3-5 year contracts[1].
2. Interested candidates can apply for doctoral scholarships.
3. The interested candidate has a job in planning practice and sacrifices his/her free time to work on the dissertation.

In all cases the candidate depends heavily on a "Doktorvater" although this is not required formally.

Nearly 150 doctoral degrees have been awarded at the School of Planning in Dortmund since its beginning. That is around 10 per year. A quarter of the successful candidates are foreign students coming from developing countries and doing research about their own country.

A guess is that another 10 degrees per year are obtained from all other planning schools in the country.

As a rule (exception urban design) a doctoral degree is a prerequisite both for a (tenured) academic and a senior professional position in Germany. For being promoted to the position of university professor at a German university (as a rule), a second kind of doctoral degree called "Habilitation" is demanded (usually not for Urban Design). However, an iron rule requires mobility of the candidate. There are no *internal* academic career strands within a German university. Positions are advertised in newspapers and candidates may apply.

A proposal has been made to establish a more formalised doctoral programme in Dortmuntd - a "Graduiertenkolleg" - with an orientation to *Planning in the public domain*. An intake of about 10 doctoral students will be accepted and they will receive a two/three years scholarship from the German Research Society. (About Graduiertenkolleg see also PART I:6.)

Switzerland

Planning in Switzerland is not considered a distinct academic discipline. The concept of planning and planning education is multidisciplinarity. Planning demands a contribution of knowledge, drawn from different disciplines. The academic education in planning has its base in a graduate degree given in different disciplines. No first degree in planning is organised but lectures on planning are given in several Faculties of the universities.

The only academic education in planning is the one year postgraduate course given at the ORL-Institute (Institut fur Orts-, Regional-und Landesplanung) of the Swiss Federal Institute of Technology in Zürich. Participants shall have an academic degree in a discipline which relates to planning and to the built, social and natural environment. The education is interdisciplinary which will have an influence on the future planning activity of the participants. The main emphasis is on the project work and interdisciplinary collaboration.[1]

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[1]It has to be observed that scientific assistance has as target to qualify for Habilitation (see below). In Germany scientific assistant (Wissenschaftlicher Assistent) and scientific collaborator (Wissenschaftlicher Mitarbeiter) have to be differentiated.

The postgraduate course in spatial planning is a prerequisite for doctoral studies but on this level no training programme is organised. The studies are altogether individual and informal. The candidates are employed as part-time scientific collaborators or as assistants if they take part in the postgraduate course.

Research training in projects is given priority and is valued as very important. Theoretical subjects are important, apart from planning theory which is considered of less importance.

The doctor's degree does not play any important role for the Swiss interdisciplinary action oriented planning. Planning practice usually values practical experience at first hand. The possibilities for an academic career are few due to the small scale of planning studies. During the five-year period 1991-1994 3 doctoral degrees were awarded.

5. Doctoral Studies in Western Europe

- Belgium
- France
- The Netherlands
- United Kingdom

Belgium

Planning education has a long history in Belgium. It was recognised as a discipline already in 1936. So far planning education has been postgraduate. In the universities it has been linked to the engineering faculties (architecture) or to geography departments and has had a strong social science base.

In the first part of this report it is mentioned that a discussion is going in the universities of Europe about how to change doctoral training in order to adapt it to new demands. The ideas of new approaches have influenced or are in a stage of influencing the doctoral training in some countries in a way that seems to be positive to the planning field. In Belgium the development seems to go in the opposite direction and be to the disadvantage to the doctoral training.

It has been possible to go on from a post-graduate education - licentiate in urban and regional planning - (in the Faculty of Engineering) to doctoral studies and a doctoral degree in planning. Now the university reform has dismantled the straight track to doctoral training and a doctoral degree for post-graduate studies. The doctoral training is linked to traditional disciplines on the graduate level and located in the Faculty of Engineering. The social science base is diminished.

That means there is very little interest within the faculty to give a grant to a planner with a basic degree in geography or/and sociology for doctoral studies in engineering. Especially as planning in the faculties of geography and sociology is very marginal or non existent (in contrast to many other countries).

It seems strange that a country - situated in the heart of EU, which has a growing interest in spatial planning - should not be able to offer a proper doctoral training specialised in planning.
Positive in the university reform is the creation of special PhD programmes though not yet for planning. It may stimulate an interest in co-operation between departments and universities in order to compensate for the small scale of doctoral training and few candidates in each university. Compare the Short overview about Italy.

France
(Compare The French D.E.A. in PART I:6)

Planning education in France is independent, multidisciplinary organised, and separated from architecture and other disciplines: but it is not acknowledged as an autonomous academic discipline. Such proposals have met a series of obstacles within the university world. However France has a distinct formal system for postgraduate education ending in doctoral studies - a system which is applied to planning. Borderlines are drawn between the professional oriented part of education - D.E.S.S. (Diplôme d'Etudes Supérieures Specialisées) and the research oriented part D.E.A. (Diplôme d'Etudes Approfondies) which also is a prerequisite of the proper doctoral studies.

Planning education is also strengthened by the co-operation between planning institutes within the universities - Instituts d'Urbanisme - and by the common association A.P.E.R.A.U. (Association pour la Promotion de l'Enseignement et de la Recherche en Aménagement et Urbanism). The institutes agreed in 1984 to co-operate and have a common multidisciplinary orientation concerning their post-graduate studies - the D.E.S.S. and the D.E.A.

For the universities the right to award a D.E.A. diploma is a prerequisite for the right to offer doctoral studies and doctorates. Universities wanting to organise a D.E.A. education have to apply for it at the Ministry of Universities and to give detailed information about the content of the education. The proposal is examined by a panel of referees. Accreditation of doctoral courses together with the number of students are made for all disciplines each 4-5 years approximately. The planning courses are reviewed by A.P.E.R.A.U.

The following four universities having a planning education which was recognised in 1994-1995 by A.P.E.R.A.U. offer an accredited D.E.A. and the possibility to proceed to a doctor's degree:

- Université Aix Marseilles III - Institut d'Aménagement Régional (IAR)
- Université des Sciences Sociales de Grenoble -Institut d'Urbanisme de Grenoble (IUG)
- Université de Paris VIII - Institut Français d'Urbanisme (IFU)
- Université de Paris XII - Institut d'Urbanisme de Paris (IUP)

The universities of Lyon, Reims and Tours are other universities - being members of AESOP - which offer a research education through D.E.A. and a continuation to doctorate.

The doctoral programme starts with a one year full-time education ending in a D.E.A. diploma. Students have to have the diploma before they can start doctoral studies. D.E.A. is a theoretical multidisciplinary education intended to give both a deeper contact with the professional activities and training in research. For students with a planning degree, the D.E.A. lasts one year. Without a "necessary base in urbanism" the time is two years.

The D.E.A. programme is focused on research. It contains taught courses in theory and methodology of planning - five compulsory courses and three optional - and also seminars, participating in research projects and a short dissertation (80-120 pages). As examples of the subject areas of compulsory courses, can be mentioned the courses in:

University of Aix Marseilles:
- Public Policies in Planning
- Innovation and Research Development
- Landscape Identities and Territories
- Urban Rules and Law

- Social Housing and Land Uses

University Paris VIII:
- Theories and Research Methods in Planning
- Patrimony and Urban Transformations
- Urban Engineering
- Public Spatial Policies
  Plus introductory courses (300 hours) for those without education in planning

University Paris XII:
- The Doctrine History of Interventions in the City
- Transformations of Urban Space
- Institutions and Professions
- Comparative Approaches - Competition and Co-operation in European Cities, Analysis methods for the Great Metropolis
- Methodological and Critical approaches - Analysis methods for Local Economies

Besides the D.E.A. in Urbanisme, a D.E.A. Transport is also offered by the University of Paris XII in co-operation with the École Nationale des Ponts et Chaussées (National School of Bridges and Roads). The multidisciplinary education is open for students with a first degree in different disciplines of relevance to transport, such as engineering and economics, but also planning, law, geography and others. Transport is a subject field in great demand for research.

After the D.E.A. diploma individual interviews are made with the doctoral candidates and discussions about their research proposals for the thesis.

The recommended time for a doctor's degree is three years which are entirely devoted to research. That means four years postgraduate studies as a minimum for a doctorate.

The Netherlands
(Compare PART I:6 : The Netherlands: The first research school in planning)

In the Netherlands planning is recognised as a distinct academic discipline called "Planologie" (Planology) [1] separated from urban design and with self-contained degree programmes. Since 1982 a full-time four year course leading to a graduate degree in planning is available at two universities - in Amsterdam at the Faculty of Spatial Sciences - Department of Spatial Planning and Demography and in Nijmegen at the Faculty of Policy Sciences - Department of Spatial Planning..

When it comes to the next step in the academic career - the doctoral studies and degree - specialisation in planning is still given priority, though not in an equally distinct way as on the graduate level. Doctoral education is offered, in addition to the above mentioned two universities, at five other universities: University of Utrecht, Faculty of Geographical Sciences - Department of Geography and Planning, Delft University of Technology, Faculty of Architecture and Urban Design - Research Institute for Technical Policy Studies (OTB), Eindhoven University of Technology, Faculty of Building and Architecture - Urban Planning Group and Urban Renewal and Management Section, Wageningen Agricultural University - Department of Agrarian Law and

[1] "Planologie" is the scientific and methodological reflection on spatial ordering and planning, forming - on the basis of empirical research - descriptive, explanatory and normative theories.

Department of Physical Planning and Rural Development, University of Groningen, Faculty of Spatial Sciences - Department of Planning and Demography[1].

All institutes offer doctoral programmes based on the normal format of a four year project. Formal educational programmes however do not always exist. As every department organises (or used to organise) its own doctoral education there is much variation[2]. Research assistants[3] follow courses, but more often than not these are attuned to their specific research topic. Courses on research methodology, philosophy of science, recent developments in theory, basic educational and academic skills however are most of the time part of the research assistants' programme. Over and above that, each department or faculty is working on the development of special doctoral training programmes. Courses on academic and educational skills, (research) methodology and philosophy of science are often compulsory.

Since the beginning 1994, the Universities of Amsterdam, Delft, Eindhoven and Utrecht have participated in the NETHUR - Netherlands Graduate School of Housing and Urban Research. NETHUR is a research school and the only research school in geography, planning and urban design on the national level, offering a well established training programme (albeit with optional courses so each student can select his/her own programme). Part of it is especially designed for research assistants in planning, most of it is attuned to geography. Apart from departments with a PhD training programme, post-doc research fellows from various departments - e.g. in the field of housing and urban design - participate in NETHUR.

As other universities such as Nijmegen and Groningen are exploring the possibility of joining NETHUR, this research school might well become the most important national school offering doctoral training in planning. Already the Promovendi Netwerk Planologie (Doctoral Planning Network - see below) is co-operating with NETHUR in organising national planning courses.

Admission rules for doctoral students are the same in all universities. A master's degree (doctorandus - drs) in planning, geography, policy sciences, social sciences, engineering (ingenieur - ir) law (meester - mr) or any other relevant graduate education is required. In general no special planning degree is required, albeit, that - depending on the subject of the projects - students with a degree in planning are in more advantageous position when applying for the post.

Main fields of doctoral training and research

In general most universities use a personal educational plan for each research assistant employed. The personal "educational plan" is best seen as a contract between the research assistant, his/her supervisor and the faculty, listing the courses to be followed, and thus the obligations of the research assistant and the faculty (and supervisor). Every department and university has its own rules about the hours which have to be dedicated to education and about the courses a research assistant has to attend. Research assistants which work for the departments and faculties which participate in NETHUR have to attend a part of the NETHUR courses. The research assistants from the other universities have their own rules. This means that the educational plans will have some common elements but can vary substantially.

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1 The universities of Groningen and Utrecht have courses combined with geography; Wageningen with agricultural sciences and Delft and Eindhoven with civil and urban design.

2 The possibility exists for individual students to aim for a doctor's degree without attending special courses.

3 Doctoral Education is based on a system of research grants (assistants are employed by the National Foundation for Scientific Research - NFSR) and a system of junior research assistants, employed by the university. (Compare Part I:6 about the Netherlands)

As far as the "supply" is concerned one could differentiate between the university departments, NETHUR and the Doctoral Planning Network. The university departments offer the better part of the courses. Next to all kinds of substantive topics, the courses deal with basic practical and academic skills (e.g. presentation of research findings, research management and publishing of scientific texts), and scientific issues like methodology and philosophy.

NETHUR offers courses to all the research assistants who work at the universities which participate in NETHUR. Research assistants of the other universities can also participate in the courses. The courses NETHUR offers concern five major topics:

- courses on theoretical topics
- courses in urban research
- courses in research methods and techniques
- courses in practical skills
- specialisation courses

The Doctoral Planning Network (Promovendi Netwerk Planologie) organises courses in co-operation with NETHUR. (Compare the doctoral network in Denmark (the Short overview). Until now they are:

- A planning week. A one week fully supervised interdisciplinary policy development and design exercise for about 10-15 research assistants on a real life planning problems (e.g. strategic development planning for a medium sized town; sub-regional development planning; strategic spatial scenario writing for the Rotterdam area 1995). These weeks are especially organised to confront social science trained planners with urban and landscape design trained planners in "pressure cooker" circumstances; special attention is given to interdisciplinary methodological issues.
- A course on New developments/innovations in strategic planning. Emphasis is on theoretical issues.
- Various one-day seminars on specific topics to be organised by the departments participating in the network. In these seminars research topics of the research assistants are discussed within a group. Methodological and theoretical questions predominate.

Doctoral research covers all kinds of subjects, differing from urban design, planning methodology, innovative plan-making, environmental issues, European matters and traditional areas such as planning for housing, infrastructure, nature development and developments in the agricultural sector (mainly Wageningen). Most subjects are selected as parts of the research programming of the departments. NETHUR however may in due time develop a more national programme. Recently topics like policy evaluation, implementation studies, Europe, infrastructure and environmental issues have been in vogue.

The research assistant has four years to complete the doctoral thesis. Of those a total of the equivalent of one year at the maximum is devoted to education. Assistants employed by universities almost invariably are also engaged in lecturing and tutoring undergraduate students (to the maximum of 50%, i.e. one half year of that same year). Assistants employed by the NFSR (National Foundation for Scientific Research) are in a different position and quite often allowed to use their one years equivalent for their own personal education.

Research makes up at least 75% - the equivalent of three years - of the total project of four years. The doctoral projects are nearly always developed by senior researchers and are more often than not a part of the research programme they are working on. Education in research is given in basic courses. However training on the job - i.e. actually conducting supervised research - is the most important part of the project.

During the last five year period, an estimate indicates that some 25 research assistants have taken their doctor's degree (e.g. Nijmegen alone stands for 5 degrees in 1990-1994).

United Kingdom

The powerful position which professional planning education still has in UK does not seem to include close co-operation between teaching and research and between graduate/postgraduate training in planning and doctoral studies. This does not mean - of course - that planning oriented research is lacking. But research for and into planning seems to be a small part of the work carried out in planning schools. Whereas an important and extensive social scientific research connected with the planning field is located in the university disciplines. Such a structure prevents a close co-operation and communication between research and teaching and is an obstacle to an easy transfer and use of research knowledge.

The separation of teaching and research does not seem to be a consequence of the reorientation and weakening of planning during the last decade but to depend more on the tradition of planning education as a vocational training for the profession.

These comments are prompted by the information given in the short overview of doctoral studies in UK which also comments on the problems of doctoral studies a little more than other overviews. Doctoral students in planning are few. A large proportion of them are non European overseas students. Few universities have substantial PhD programmes in planning. Even the eight largest programmes in Bartlett School, Liverpool, London School of Economics, Newcastle, Nottingham, Sheffield, Strathclyde and Westminster - will only achieve 2-5 doctorates a year.

However, after the conversion of Polytechnics into universities two thirds of the planning schools have started to emphasise research more and are also offering doctoral training.

If the quantity is small even the quality of the doctorates has shortcomings. "The standards of intake have fallen. PhDs in planning are no longer necessarily the academic elite". The upper second class of the graduate degree which is normally necessary to be admitted to doctoral studies are much easier to obtain than a decade ago. Funding is erratic and the best students do not see it as a good career more (i.e. does not help getting a job in practice).

As to the number of doctoral degrees the above mentioned figure is in accordance with the answers of 13 schools to the questionnaire on doctoral studies (see PART III:3 and 4). They show that the number of degrees each year during the period 1990 - 1994 was 26 or in average 2 per school. The figure is the same as for the total number of schools. However many of the Ph D students trained in UK are overseas (approximately one half of them) and return to their countries which means fewer trained to doctoral level for the British universities and the planning profession.

The sceptical attitude of the Short overview towards the role of doctoral studies is also shown in the answers to the question about the role of doctoral theses in the building up of planning knowledge. The total responses to the question show that the role is judged to be "considerable" by 70%. In the British part only 38% hold this view. The British schools are also less optimistic about the career prospects of doctoral graduates in planning. 46% of the 13 respondent schools think that they are good or improving while the total responses to the question is 67%. Whereas the answers to the question, if the numbers of doctoral students is increasing or decreasing are similar. According to 50% of the responding schools the number is increasing. In the British schools the figure is 46%.

In 1995 209 students were studying for a doctoral degree at the 13 planning schools in UK responding to the questionnaire; that is 16 students in each school. The average figure for the total respondent schools was 16. Of the total number in UK 66 were female students or 5 in average per

school; a figure very close to 6 per school in the total material. The same correspondence between UK and other AESOP member schools is valid also for the above mentioned number of doctoral degrees. So in spite of experienced problems there is no difference between UK and the other planning schools participating in the survey neither where the number of doctoral students is concerned - male or female - nor the number of doctoral degrees.

Doctoral studies are primarily based upon research and are expected to make an original contribution to scientific knowledge. The studies are individual and informal and have, according to tradition, not contained any taught courses. There is however a growing emphasis on formal instruction and students are encouraged to complete a master's degree with taught courses before registering for a doctoral degree. This is an interest of the Economic and Social Research Council (ESRC) which is funding doctoral studies in planning. A few graduate schools after the American model have been established in universities but not in planning[1].

A first degree in any discipline with relation to the planning field is accepted for admittance but normally has to be the upper second class. The student has to be in the top 30-40% of the undergraduates to qualify. Among UK students many are graduates in geography, practically all are social scientists, while planning degrees are rare. Some doctoral students are able to get financial support for 3 years full-time studies. However, only 8 awards were available for planning in 1995-96 from the Economic and Social Science Research Council. It is, however, rare to finish the studies in this time. Four years are common. Many students are studying part-time with a study time of 5-7 years.

The subject fields of the theses vary widely across the entire field of planning. Some schools and supervisors make efforts to develop particular fields but this is not common. There are also attempts to link students to specific research groups but the ad hoc nature of demands and funding especially from the British students makes such co-operation difficult to achieve and maintain.

The large schools usually organise courses in Research Methods and also Research Seminar Series to provide a forum for students to present their work and discuss it with other researchers. Students can take and even are required to take taught post-graduate planning courses that are relevant to their research topic. As mentioned students are also encouraged to complete a "taught" master's degree.

As to the research part of the training, most students attend a course in research methods - perhaps 30-40 hours of tuition. Some get research training by participating in a wider research project or get experience from paid employment. The above mentioned ESRC providing scholarships expects the student to take around 3 courses.

6. Doctoral Studies in Southern Europe

- Italy
- Turkey

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[1] In UK there are two types of masters' degrees, viz. 'taught' usually MA or MSc and 'research' usually MPhil, and two types of doctorate viz. PhD (three years full-time or more part-time on the basis of a thesis) and higher doctorate (e.g. MD, DSc and DLitt. on the basis of outstanding published work). It is customary for PhD students to register initially for MPhil (two years full-time) and either retrospectively transfer to PhD or merely complete MPhil. Both constitute reputable research output by thesis. Higher doctorates are rare in most subjects: probably none have been awarded in the planning field yet.

Italy

In Italy, planning since early 1920s belongs to the discipline of architecture. City planning was established within the Schools of Architecture between the two World Wars. In the 1970s a five-year independent programme in urban planning was founded in the University of Venice leading to a graduate degree - a Laurea in Pianificazione Territoriale e Urbanistica - though still within the School of Architecture. It was followed some years later by a second programme in Reggio Calabria. In 1995-96 a third four-year programme has been established at the Politecnico di Milano.

Doctoral programmes in planning were introduced only recently in 1985. A few years earlier - 1980 - a reform act sanctioned the first organised programmes in Italy, leading to a doctoral degree - the dottore di ricerca. The previous preparation for an academic career was "libera docenza" which had to be an original contribution to scientific knowledge - the evaluation being made by a central commission. This objective is valid also for the present doctoral studies and degrees; something that is made clear in the answers to the questionnaire on doctoral studies.

It is the faculties of Architecture and also Engineering which are working with the development of the theory and application of the discipline of planning. Within the planning departments - which were introduced by the same reform act 1980 - doctoral schools are developed which are devoted to the training of researchers with emphasis on the methodology of research and development of planning theory and the methods of analysis. The subject area is mainly territorial planning but includes also urban planning and public policies, planning and environment and planning and the real estate market.

The formal approval to organise a doctoral programme is given by the Ministry of Universities and Research on the proposal of the Vice-Chancellors of the Universities. The approval includes both the programme of courses and the professors, facilities etc. to run the organisation. The proposals are examined by the National University Council composed of university professors and researchers and on the basis of its advice the Minister decides about the number of programmes and allocates them among the universities.

In 1996 the following doctoral programmes were in progress; some of them being consortiums between more than one university:

- Venice DAEST: Territorial Planning and Public Territorial Policies
- Venice DU-Turin DIT-Milan DST: Territorial Planning
- Turin DIT: Territorial Planning and Real Estate Market
- Milan DST: Territorial and Environmental Planning
- Rome DPTU: Urban and Territorial Planning
- Pescara DAU-Rome DPTU: Urbanistica
- Palermo DCT-Catania DAU-Reggio Calabria DSAT: Urban and Territorial Planning
- Reggio Calabria DSAT (in co-operation with North-Eastern University, Boston, USA): Territorial Planning
- Florence DUPT: Urban and Territorial Planning
- Bari: Urban and Regional Planning
- Rome DATETU: Territorial Planning

Each local programme is reserved for no less than three Italian students and two foreign ones and no more than ten. The selection of students is made in a national competition in order to test their aptitude for research. No graduate degree in planning is demanded.

The decisions about admittance are made by a Commission nominated by the Minister of Research and University and its members are two supervisors from each school responsible for the

programme and a professor from a different faculty. The admitted students get a scholarship for three years, which is the stipulated time for a degree. About 30-35 students are beginning their doctoral studies in planning each year. In 1995 about 120 students were studying at the above mentioned programmes in planning.

The studies are composed of courses and individual studies. They are following general guidelines for the organisation of the studies involving also examinations and control stations for the thesis work. The universities have generally no core curriculum of planning subjects. Courses are very different as to subjects and the valuation of different subject areas are varying.

As to research training students are usually participating in research projects. Many of the doctoral candidates have previously been engaged in active research and have been informally connected with educational activities within the school or department where they are studying.

The first year is dedicated to courses, seminars and the definition and decision about the theme of the thesis. The second year is spent on research work in Italy and abroad and the third year on the preparation of the thesis. The thesis, defended in public, will be judged by a national commission, nominated by the National University Council. It is then possible to receive the title "dottore di ricerca". During the period 1990-1994, 60 degrees were awarded at eight planning programmes. A reform of the doctoral studies is under discussion with the intention to decentralise some of the present decisions at government level to the individual universities.

Some universities are co-operating with other universities on a joint doctoral programme e.g. Venice/Turin/Milan or the programme Dottorato di Urbanistica between Pescara and Rome. (Compare the co-operation between universities in the Netherlands and also the network between doctoral programmes in Denmark). A permanent network has also been created with a yearly national conference as forum of discussions between co-ordinators and teachers of the doctoral programmes in planning. A common secretariat is charged with the task to prepare a newsletter and to provide a systematic circulation of abstracts and information about the dissertations.

Turkey

Planning is well established as a discipline and educational field in the Turkish university system. Urban planning education at graduate and undergraduate level has been available at the University in Ankara since the 1960s and in several other universities since the 1970s. Graduate education in urban planning is in demand.

In the same way as in many other European countries, Turkey has decided in a special act to decentralise urban planning to the municipalities. This change has created a lack of planners (Turkey has 1702 municipalities) and a demand of graduates of urban planning. It might be expected that this development should have been transmitted to the doctoral level, causing a demand for more doctors in planning both in the academic and the professional field.

Such a development may seem to be facilitated by the relationship between the undergraduate, graduate, post-graduate and doctoral level in the faculties. A doctoral programme in urban planning may not be offered by a university unless there is already a four-year undergraduate programme in urban planning. The undergraduate degree is not a condition of admission to doctoral studies but a master's degree is; and an undergraduate degree is in its turn a prerequisite of a master's degree.

So there is a ladder to mount for higher competence in planning. However doctoral competence is not in demand in the professional field. According to available information doctoral studies are

intended for an academic career. (Almost 90% of the teachers of the doctoral planning programme at Ankara university have a doctor's degree).
Six universities, which offer undergraduate programmes in urban planning and/or regional planning, also offer doctoral programmes in planning. The universities are:

- Yildiz Technical University (YTU, Istanbul)
- The Mimar Sinan University (MSU, Istanbul)
- The Istanbul Technical University (ITU, Istanbul)
- The Middle East Technical University (METU, Ankara)
- The Gazi University (GU, Ankara) and
- The Dokuz Eylul University (DEU, Izmir)

Every school announces the number of students which are able to enrol for that year or semester. Some universities, e.g. the Mimar Sinan University, open up doctoral programmes every semester while others start these programmes only in fall semesters.

The candidates must pass a set of examinations, testing their proficiency in a foreign language and their scientific qualifications. The type of examination depends on the decisions of the relevant boards. It is however a general tendency to have a written examination and an interview. The schools emphasising physical planning usually give an additional examination in design.

An undergraduate degree in urban or regional planning may or may not be a necessary condition of a candidacy. All schools accept applicants with an undergraduate degree in architecture or urban and regional planning. Some schools accept also candidates with undergraduate degrees in cartographic sciences, economics and sociology.

A master's degree, regardless of the discipline is required for any doctoral programme at any university.

Graduate programmes (offering a master's degree) vary as follows: urban planning (in every university), urban planning programme specially structured for those with undergraduate degrees in architecture, urban design, urban conservation and regional planning. Some courses in these programmes are compulsory while others are optional.

Doctoral programmes are not specified in the same way as the programmes of a master's degree. Every university announces a list of doctoral courses to be given in various fields like urban planning, public administration, regional sciences etc. The doctoral student is advised to choose the courses, which are relevant to his area of interest; among those of the university at which he is enrolled or among those of any other university. This choice is subject to the approval of the advisor. Hence a doctoral student wishing to make a doctorate in urban planning at the YTU and to specialise in urban ecology, for example, may enrol in a course offered by the department of geography, and another one at the department of environmental engineering, in addition to some courses offered by the department of urban and regional planning in the YTU.

The post-graduate programmes are administered and co-ordinated by the institutes for graduate and post-graduate studies in every university. However all of the academic work is done by the associated departments.

Doctoral studies in Turkey consist of three parts: The doctoral courses, the qualification examination and the dissertation. In the first part the students must attend the doctoral courses, at least for a full year and complete the required amount of credit points. Then they have to take a qualifying examination. The students who are successful in this examination may start with their

dissertations. The thesis is guided by a full-time professor. When it is completed the thesis is presented to a jury of professors who are the specialists of the field.

The average time for a doctor's degree is about 5 years with a stipulated maximum time of seven years

7. Some visible trends of the Short overviews

Doctoral studies in progress

In the report written by researchers to the first AESOP Congress in Amsterdam 1987 professor Klaus Kunzmann contributed a chapter about *"AESOP and the changing context for planning education and research"*. He said about the Ph D degree: "Special Ph D programmes hardly exist" and "there is hardly any research training at our schools". Nine years later the Short overviews show that the situation is improving. Doctoral studies in planning are offered by 77 AESOP member schools in 21 European countries. 54 member schools in 18 countries are participating in the AESOP Survey. The majority of the departments - 45 or 83% - are specialised in planning.

In nine countries[1] the traditional model for doctoral studies is prevailing. It means mainly individual informal studies without an organised programme of courses, seminars etc and with emphasis on an original contribution to the scientific knowledge development.

In seven countries a shift can be seen in the majority of schools from the traditional model to doctoral programmes containing taught courses in research methods and other subjects as well as training in projects. The quality of research training is emphasised as preparation for the dissertation work (Figure 5).

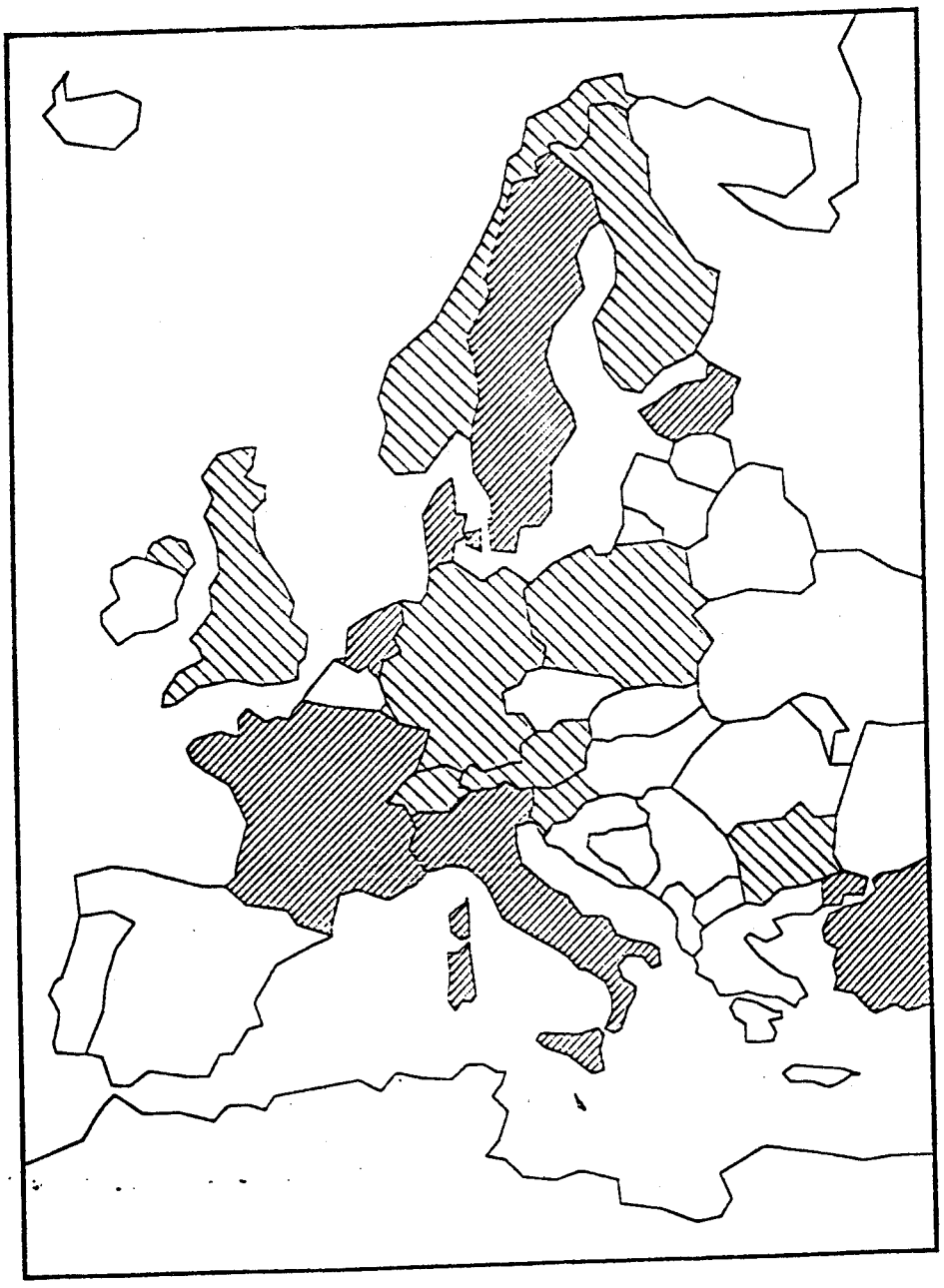
This development corresponds with the present discussion and evolution in the European universities concerning the role and design of doctoral research training presented in PART I of this report. The aim of doctoral research is not only scientific development and an academic career. Doctoral competence is also needed in the professional field outside the university. This approach is accompanied by an interest in more formalised research training with the North American Graduate School as inspiration. Though it has met objections and is not generally accepted.

However the double perspective - to academy and to profession - is of interest to the doctoral studies in planning. Can this approach help to bridge the distance between scientific academic research and professional knowledge development and initiate a greater focus on planning as discipline? The Short overviews give examples of new approaches. Doctoral studies are offered in some countries and schools in more organised forms with a greater supply of courses and emphasis on research training and research skills. So has for instance the Netherlands got the first research school in this field - NETHUR Netherlands Graduate Schools of Housing and Urban Research. It offers courses in research methods as well as training in real life planning problems. In the same year - 1994 - a European Doctoral School with formalised interdisciplinary research studies was established in Denmark in accordance with the recommendations of the European Union. One of the doctoral research study programmes is oriented to Planning and Development. A graduate school - Graduiertenkolleg - oriented to Planning in the Public Domain - is proposed in Germany at the university of Dortmund. In France a post-graduate research training - D.E.A. (Diplômes d'Etudes Approfondies) is the base and requirement for doctoral studies. Even in UK with individual informal doctoral studies, more emphasis is given to formal research training (taught courses) during the first year. This development seems to correspond with the view of a majority of planning

[1] Austria, Bulgaria, Finland, Germany, Norway, Poland, Slovenia, Switzerland, United Kingdom

FIGURE 5

Informal or formal doctoral studies



Formal studies

Informal studies

AESOP member schools with mainly informal or mainly formal doctoral studies (with a taught element)

schools of the survey (80%) which consider the doctor's degree in planning to be suitable both for academic and professional careers.

Furthermore the development seems to go in the direction of greater independency. As mentioned above 83% of departments participating in the Survey have answered that the department is specialised in planning. Only 9 form a part of another discipline. The above mentioned more organised doctoral programmes in 7 countries are pursued in departments which are specialised in planning. Since long ago the difference between independent planning education in the West-European countries and planning education as a part of other disciplines (architecture, engineering and others) has been the rule in the North- and East-European countries. This pattern is in a stage of change in the Nordic countries. As is shown in the overviews independent interdisciplinary studies specialised in planning are established at doctoral level both in Denmark and Sweden. The concept of planning has broadened.

A conclusion which also can be drawn from the Short overviews is that the dependence of planning education on technical universities and faculties seems now to dominate mainly in East-Europe (compare the responses to the Questionnaire in PART III: 3.1). In the four East-European countries included in the survey (Bulgaria, Estonia, Poland, Slovenia) doctoral studies dealing with planning problems belong to Technical Universities and within them to Faculty of Architecture or Engineering. However the survey also shows that it is possible in Poland to choose doctoral studies with a social-science orientation to spatial planning, management and economics. They are offered by the department of City and Regional Management at the University of Lodz and the Poznan Academy of Economics.

> *"The traditional technically oriented focus of planning will be challenged by the need for a politically oriented advocacy perspective of planning."*
> Karel Maier, Czech Republic in Journal of Planning Education and Research, 1994

The problems of the ongoing transformation process and its influence on the doctoral studies are shortly mentioned in one of the overviews - Bulgaria.

Promoting doctoral studies through co-operation

The demand for specialised courses as part of more organised doctoral programmes is an incentive for co-operation between departments e.g. about common courses. Co-operation is also a way to break the isolation of the often very few doctoral students. "It is a lonely project to complete a dissertation", (doctoral candidate in his thesis, Trondheim University). In four countries networks for co-operation between university departments with doctoral studies and between doctoral students have been established. The four mentioned in the Short overviews are: Denmark, France, Italy, and the Netherlands.

In Denmark the European Doctoral School is co-operating with three other universities of the country in order to broaden its capacity and the research environment of the doctoral students. A wide network of formal co-operation between national and international university departments is also developed.

France gives also an example of co-operation between planning departments which is going on within the common association A.P.E.R.A.U.. A.P.E.R.A.U. evaluates regularly the post-graduate education in planning D.E.A. (which is an compulsory part of the doctoral studies) within the institutes of "Urbanisme" in the universities. The objective is to develop the competence of the institutes and a common multidisciplinary orientation of the studies.

In Italy small groups of universities co-operate about joint doctoral programmes in planning and a permanent network for co-operation between all doctoral programmes as well as between doctoral students is established. The opinion is also expressed that the Italian network could become a useful tool and a sort of "branch-point" for a wider European network that is emerging by AESOP initiatives on doctoral training.

In the Netherlands four universities co-operate on a common doctoral programme in planning at the research school NETHUR. A special network has been formed by the doctoral students and their supervisors - the Doctoral Planning Network (Promovendi Netwerk Planologie). It is arranging courses, seminars, presentation of research projects etc.

These are examples of co-operation in order to improve the capacity of teaching and research on doctoral level and compensate for a small scale university field. They are taken from four countries where the schools are interested in and have initiated more organised doctoral studies. Similar initiatives do not seem to exist in countries with free individual studies as Germany and UK. (Compare PART III, 4:V, the responses to question 29: The low interest in circulation of information about doctoral dissertations.)

The situation seems to be the same in the East-European countries. It goes without saying that co-operation between departments involved in doctoral training within the own country or within the family of East-European countries facing similar problems, should fulfil an important task in the ongoing reorganisation of planning education. Such initiatives need not be dependent on co-operation with schools in West-Europe.

Another form of co-operation which is of importance both to the research environment of the planning department and the quality of the doctoral training is the participation in national or international research projects. According to the responses to the questionnaire 40 schools or 78% of those responding to the question are engaged in such collaboration.

"Among the most important tasks facing AESOP are: stimulating research co-operation between different departments, especially those which until quite recently have not been involved in AESOP activities. Such co-operation could be based on undertaking clearly defined research projects and take the form of regional networks."
Tadeusz Marszal, University of Lodz in AESOP News No 14 1994

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Missing countries

- Czech Republic
- Greece
- Portugal
- Spain

PART III

DOCTORAL STUDIES AND TRAINING IN AESOP MEMBER SCHOOLS
RESPONSES TO A QUESTIONNAIRE

1. Introduction

The implementation of the questionnaire

The basic aim of the whole survey about doctoral studies in planning has been that it shall give a possibility

> *"to exchange information about the aims and organisation of the different approaches to doctoral training in Europe."*

Which issues shall an information comprise in order to provoke into discussing differences in aims and approaches between a great number of schools in different European countries? Which differences are of interest? How general or how specific shall a selection of qualities be in order to illustrate differences in approaches?

It depends on the target group that the information is addressing. A professor of a school or department with a comprehensive responsibility for teaching and research has other information interests than the teachers concerned with teaching methods, new knowledge etc. The interest of the teachers are on their part different from the ones of the doctoral candidates etc.

The survey is initiated and decided by AESOP. As an interest organisation of planning schools AESOP has a continuous need of information in order to develop its programme and activities. The target group of the survey is in first hand the organisation AESOP.

One of the objectives formulated for AESOP is "to promote the development of teaching and research in the field of planning". AESOP's interest is so far to a great extent centred to the graduate teaching in planning. A good overview and thorough knowledge is available about the planning schools and the organisation and content of the graduate education they offer. Knowledge about the East-European countries has been given special attention. The problems of the graduate education and related research which are of interest to the schools are since long brought up by the AESOP members and analysed and discussed at the yearly congresses. Similar discussions about the state and prospects of doctoral studies are lacking. More information may make a change and is of particular interest to young academics and doctoral candidates.

The second part of the information about doctoral studies given by the Survey is responses to a questionnaire (see Appendix). They have the purpose to contribute to the further development by presenting some basic facts about the doctoral studies in the member schools. The facts include:

I. The institutional organisation - that is the position of the programme in the university organisation as to faculty, department, discipline; the size and organisation of the programme: number of students, teachers, doctor's degrees; the quality requirements in terms of admission policy; financing

II. The orientation, aims, structure, and supervision of doctoral studies

III. Training in research, subject areas, selection of thesis theme

IV. The labour market for doctors in planning

V. National and international co-operation.

Finally a few "open questions" about problems and prospects of doctoral studies and the contribution to knowledge development are included (see Appendix).

As mentioned in the Preface of the report the second aim of the Survey is:

"to develop debate on effective ways to develop understanding of research strategies and methodologies appropriate to the planning field".

The objective of the questionnaire is therefore not only to present information in cold figures but to combine it with information which can contribute to such a debate. In addition to factual questions attempts have been made to include questions which touch on the key issues of doctoral training and which have been discussed in AESOP, particularly in the Working Group on Planning Research.

The key issues are a consequence of planning being both a profession and a university discipline with unclear borderlines. The discipline has its base in the profession and its theories have been developed in relation to professional practice. The approach to and management of the key issues will have a decisive influence on the further development of planning as discipline [1].

The following five issues are examples of *Key issues* which relate to planning being both a profession and a profession-oriented university discipline.

1. Which is the aim of doctoral studies in planning:
   - to contribute to the development of planning as an academic discipline and prepare for an academic career in research and teaching
     or
   - to contribute to the development of professional knowledge in planning and form experts in public policies planning

2. Is the study model of doctoral studies:
   - an academic model with individual informal studies
     or
   - a formal "training in research" model with taught courses?

3. Is knowledge in planning in the form of a graduate or postgraduate degree in planning a condition of doctoral studies?

4. Experience shows that doctoral students have difficulty in identifying researchable problems in the planning field. What are the reasons?

5. Which is the role of doctoral theses in the building up of planning knowledge? Shall the doctoral students have a free choice of thesis theme or should they relate it to particular problem areas?

There are no "right" and definite solutions of the key problems. The solutions depend on the context of the doctoral programmes. But they will have an influence on the relationship between the professional and the academic knowledge development. Key issues have therefore a role to play in connection with decisions about the doctoral programmes. The responses to the questionnaire will give some information about the present approach of the schools.

[1] International research is showing that a new mode of knowledge production is emerging which is not located within a university discipline. The knowledge is "transdisciplinary" - not mono- or multidisciplinary. The problem solving is not related to a particular discipline. The knowledge is produced in the context of application and characterised by a constant flow between theory and practice. The new approach seems to have relevance to the planning field (see Michael Gibbons et al. New Production of Knowledge. Sage Publications 1994).

The questionnaire was sent in June 1995 to AESOP "contact points" in 77 schools where according t the AESOP Directory of Planning Schools 1993 doctoral studies in planning are offered. 54 addressees have carefully responded to the questionnaire. In addition one of the "contact points" have sent a personal letter commenting some of the questions of the questionnaire. This information is not included in the following presentation. The responses thus amount to 70%, which is a satisfying and encouraging result, showing an interest in the survey. The Short overviews presented in PART II and the responses to the questionnaire give together information about all countries with AESOP member schools offering doctoral studies in planning, except Greece and Portugal.

2. The aim of doctoral studies in planning. Responses to the questionnaire (Questions 10, 17, 34b)

In PART I the aim of doctoral studies have been discussed at the background of the ongoing debate in the European university world about new approaches to doctoral studies. The debate deals with a change of perspective from science to society or rather to science and society. Interaction between science and society are intensified. The problem is similar to the core problem of the planning field - the interaction between science-research and the profession. But while the problem of the established academic disciplines is if and how the doctoral training shall be organised to be of relevance to practice and profession the problem of planning is rather the reverse. Which role shall the doctoral training have in the planning field which is well developed as profession but "a scientifically not very much developed field"? Is the aim to work for a long-term development of planning as a scientific discipline or to advance planning as a professional knowledge field? Is the most important task to develop a knowledge for and into planning or to train qualified researchers? Which position has been taken by the planning schools?

The questionnaire includes an open question to the schools about their aim of the doctoral studies (question 10 of the questionnaire). The often rather extensive responses contain a valuable information about the approach of the schools. They are also showing clear differences between them.

50 schools of total 54 have responded. 47 have described their aim. The responses relate to the two mentioned main problems:

1. Doctoral studies for academy or profession
   and
2. Doctoral studies for scientific knowledge or training in research.

An attempt to group the main aim of the 50 responses by means of keywords gives as result a series of responses on a sliding scale; starting in scientific knowledge, turning to the professional side and ending in professional substantive knowledge as aim (see the following table). If related groups are brought together a rough overview is received which shows a division in three groups of similar size:

- Schools which value a scientific-academic development (15)
- Schools which give priority to education of researchers or education for research, both for academic and professional work (18)
- Schools which consider development of professional knowledge as most important (12)

AIM OF DOCTORAL STUDIES IN PLANNING AT THE MEMBER SCHOOLS
(Question 10)

Respondent schools	Academic aim	Both academic and professional aim	Professional aim	No aim	To help students to a degree
50	15	18	12	3	2

The second main problem about scientific knowledge or training in research is also recurring in the responses but does not characterise them in the same way as problem 1. Though training in research, expressed by the schools with almost the same words - Education of researchers or Education for research - is the single aim which has got most answers (12). In combination with the group aiming at research training both for academy and profession the number of schools giving priority to research training amounts to 18 (36%). The main aim of the majority of schools is still not research training but is focused on increase of knowledge - scientific or professional.

The most important answers are therefore presented and commented in the following. Attempt has been made to combine questions and their responses which have a relation to each other and to a common issue. The answers to a question of the questionnaire (number 10) about the aim of the schools for doctoral studies in planning have been described and discussed in the previous chapter 2.

The questionnaire is added to the report as Appendix.

3.1 Doctoral studies in departments specialised in planning (Question 1)

According to the responses to question 1 - Is your department/school specialised in planning - a majority of departments - 45 out of 54 - have responded that they are specialised in planning. 9 have declared that they are not specialised.

Of the 9 departments
4 belong to a Faculty of Architecture
3 to a Social Science Faculty
1 to a School of Engineering and
1 to a Department of Land-Use and Landscape Planning

As to the 45 specialised departments they can roughly be divided in two groups of similar size. One contains 22 departments which belong to Faculties of Architecture (16) or Faculties-Universities of Technology, Engineering or Agriculture (6). They are mainly located in the Nordic and East-European Countries and in Italy. The other group of departments (23) belong to institutes, faculties, schools and centres for planning or a few of them to Faculties of social sciences (policy science, geography, economics). They are in first hand located in Western Europe - in France, the Netherlands and United Kingdom.

Comparatively few departments related to the total number - 16 - are parts of technical or polytechnic universities. It seems possible to assume that a shift in orientation has been made in some schools and is slowly going on - looking over the whole field - from planning being a part of architecture and technical disciplines to planning with an independent position in the university organisation. (Compare A. Rodriguez-Bachiller about The Evolution of Planning Education in Europe in AESOP Papers 1988 "Unity is Strength in Planning Education". Editor M. McEldowney)

3.2 Representation of women in doctoral studies and supervising (Questions 2, 15)

The number of doctoral students is of special interest in terms of relationship between male and female students. Female students are 37% of the total number of students. It is a lower share compared with North America. According to a report of ACSP - Association of Collegiate Schools of Planning - about the doctorate in planning 1993 the female doctoral students amounted to 42%. The variations between the AESOP schools is great, ranging from 0% to 50%.

Swedish statistics shows that the higher up in the academic career the fewer are the women. The share of female professors are for instance only 7 % and has increased very slowly from 3% in the year 1975. The experience seems relevant also to the AESOP schools. According to the responses to question 15 about share of supervisors that are women, a majority of respondent schools - 34 out of 45 - has a share less than 20 %. More than half of the schools or 24 of 45 has a share less than 10 %.

The span between the schools is the same as for doctoral students, ranging from 0-50 %; in one case even 60 %! In the ACSP study it is recommended to increase the share of women and support them to pursue the doctoral studies. Financial support should be given to students with child

responsibilities. The present situation in the AESOP schools is worth investigating further, perhaps by one of the female participants of the *AESOP Doctoral Workshop*.

3.3 Doctor's degrees 1990 - 1994 and their prospects (Questions 5, 34, 3)

During the five year period 1990 - 1994 505 doctor's degrees were awarded in 51 member schools or 2 in average per school and year (question 5). That is less - though not very much - than in North America where 78 students in 30 programmes graduated annually during the five year period 1987 - 1992; that is 2.6 doctorates per programme and year.

If the figure shall be considered as satisfying or not depends on the demand of doctors in planning. The responses to question 34a) about the career prospects show that these seem to be rather good. Only 7 schools consider them to be bad or worsening. 35 schools mean that they are improving (15) or good (20).

This opinion corresponds rather well to the information given about the increasing or decreasing number of doctoral students (question 3). In 27 schools of 53, which answered the question, the number is increasing, in 21 schools the number stays the same. Only 5 schools say that the number is decreasing.

3.4 Number of teachers and supervisors with a doctor's degree (Questions 6c, 16, 27, 28)

The share of teachers with a doctor's degree is low. Only in 11 schools of 52 (21 %) all full-time teachers have a doctor's degree. As a comparison can be mentioned the share in North American planning schools according to the study of doctorates in planning by ACSP in 1993. 40 % of academic positions in doctoral programmes were filled with doctors in planning.

However, where the supervisors are concerned the demands for a higher competence are raised. In 22 schools (44%) all supervisors have a doctor's degree and in 10 more the share is 75%.A few schools - 8 - have no supervisor with a doctor's degree.

A successive increase of teachers with a doctor's degree can be expected. The Survey shows that so far most doctors in planning in AESOP member schools have chosen an academic career. According to the responses to question 27 42% of doctorates with the degree awarded 1990-1994 went to academic positions and 27% to professional. The major part - 62% - went however not to planning positions. These engaged only 38% of the doctorates conferred 1990-1994.

3.5 Admittance requirements for doctoral studies (Questions 7, 8, 25, 33)

The question (7) asked in the questionnaire about admittance demands deals both with the level of graduated degrees required to enter doctoral studies and education and experience in planning as base for doctoral studies. The schools have been asked to give information if they require a first degree or a master's degree and if it has to be a degree in planning or not.

As to the level of degrees a majority of schools - 29 (53 %) - demand a master's degree. 20 schools (37%) require a first degree. The European admission policy with preference of a master's degree is similar to the one in North America. 15 of 16 doctoral programmes surveyed in 1991 required there a master's degree.

There is a clear difference in admission policies between countries. A master's degree required is the main rule in schools in the Nordic and East-European countries, France, Germany and the

If such combined responses which are 7 are added to the responses to the alternative with only individual studies (=13) 20 schools have mainly informal studies. These schools are situated in countries which consider their doctoral studies to be mainly informal.

The 20 schools can be compared with the number of schools which have chosen only programmed alternatives (taught courses, guide-lines and examinations) and altogether excluded the individual alternative. They are also 20.

Taken together the responses to question 11 seem to show that certain predetermined elements are found in most of the schools participating in the survey: a sort of built-in control. In some schools the intervention is dealing with the research training as a more formal part of the studies, while the thesis work is the individual, independent and informal part. An example is the D.E.A. programme as a first more formal part of the doctoral studies in France.

An extension of the formal part of the studies are made in some schools which have a general study plan or programme with a common structure and orientation of the studies. In these schools the doctoral studies are seen as a part of the research programme of the department. The student's individual study plan is integrated as part of this research programme implemented by collaboration between doctoral students and post-doctoral researchers. Examples can be drawn from the Netherlands research school and from Denmark and Sweden.

There are thus different forms of both informal and formalised studies which need a further description and analysis in order to stimulate an exchange of experiences and make relevant comparisons possible. The polarisation between informal and formal may not be the best way to proceed with the basic question: in which way can the doctoral studies contribute to a scientific development of knowledge in planning?

This is a key problem which cannot be solved by an either-or perspective: informal or formal, theory or practice, academic or professional. The development of planning as a problem-oriented interdisciplinary discipline needs both the development of a theoretical core - a systematic body of theory and principles as foundation of planning - as well as research on real world problems.

3.7 A core curriculum of doctoral studies? (Question 19)

A core Curriculum is an established concept valid for the graduate professional planning education. Which knowledge have the future planners to be master of? The transfer of the capital of knowledge accumulated in the planning field is a central part of the graduate education.

As to doctoral studies they have the aim to contribute to the development of new knowledge. The knowledge needed in the studies is specialised and has to support the main task which is a qualified dissertation based on research. It seems therefore not adequate to use the term "curriculum" for studies on the doctoral level. Curriculum have in first hand the meaning of a coherent "running"[1] system of courses dealing with the subject field.

However, apart from the terminology which does not seem to have created problems, the schools have responded to the intention of the question: Are the schools giving priority to any subjects which are considered to have a special, central importance to the doctoral studies?

[1] Curriculum from the latin word currere = to run

The number of schools which have responded "yes" to the question about a core curriculum is 20 or 39% of the responding schools. 17 of them have also named the subjects. The main part of the responses refer to some of the compulsory courses which are presented in responses to question 12. The subjects of the "core" are fewer than the ones of the compulsory courses. The "core" contains a relatively smaller part of research subjects than the compulsory courses in question 12 and a greater part of subjects re planning methods.

The responses are divided in two halves of the same size: one with responses from countries with formalised studies and one from countries with mainly informal studies. (Compare 3.6 about the Organisation of doctoral studies. Informal or formal).

3.8 The role of doctoral theses in the building up of planning knowledge (Questions 35, 29, 24a+b))

The 50 responses to the open question about the role of doctoral theses for planning knowledge give much information about the views of the schools. Most schools - 35 or 70% value the theses very positively (question 35).

Among positive comments are for instance:

-"They are one of the main sources to new empirical knowledge"
-"They contribute to establishing of planning as a professional discipline"
-"They form a basis for developing planning theory"
-"They develop the knowledge in depth"
-"Doctoral theses are an essential part of the academic research which is nearly 100% of the research in planning"
-"The doctoral candidates make up for about 75% of our departments research capacity"
-"They are the most important sources because we programme the work of the candidates in such a way that they fill the gaps which we have identified"

In spite of the positive valuation only three schools are mentioning the importance of publishing them in order to disseminate the knowledge. According to question 29 - Information about doctoral dissertations - the number of schools (27 or 53% of responding schools) which regularly circulate information about theses to other schools, libraries, journals etc is lower than the number of schools which value the theses as very important/important (35 or 70%).

The more critical responses deal with the key issues of the discipline as the dispersion of topics, the tendency of the discipline to be practice-led or that the theses are case study oriented more than pure research. Besides the reservations on principle is one economic: "They do not cover the problem field systematically because the lack of money prevents the development of larger research programmes".

As to the dispersion of topics it has to be mentioned that a couple of schools consider the importance of the thesis depending on a strong relation between the thesis and the research programme of the department.

How is the dispersion of thesis themes related to the choice of themes? Are the candidates free to choose the theme in any planning field or have they to relate it to the subject field of the department? The responses to the questionnaire (24a+b) are contradictory. The majority of respondent schools (64%) confirm a free choice (24a) but 78% are also responding that the candidates have to relate them to the subject field of the department (24b). The reason may be a too short and not enough concise question.

4. Responses to the questionnaire in tables
(The questions of the questionnaire, see Appendix)

I THE POSITION, SIZE AND ORGANISATION OF DOCTORAL STUDIES

1. Department/school specialised in planning?

Respondent schools	Specialised in Planning	
	Yes	No
54	45	9

2. Number of doctoral students

Respondent schools	Total number of students	Male students	Female students	Average number of students per school	
				total	women
54	881	554	327 (37%)	16	6

3. Changing number of doctoral students

Respondent schools	Number of schools with		
	increasing number	decreasing number	no change
53	27	5	21

4. Average time of a doctor's degree

Average time	Number of schools
3 years	17
4 years	19
5 years	11
5.5-9 years	5
3.9 years in average for	52 schools

No response: 2

5. Doctor's degrees 1990-1994

Respondent schools	Total number of degrees	Degrees per year	Degrees in average per school and year
51	505	101	2

0 degrees = 8 schools

6a. Number of teachers

Respondent schools	Total number of teachers	Average number per school
53	1168	22

6b. Full - time teachers

Respondent schools	Total number of full-time teachers	Average number per school
53	695	13

6c. Full-time teachers with a doctor's degree

Percentage of number of full-time teachers with a doctor's degree						
	100	99-75	74-50	49-25	0	Respondent schools
Number of schools	11	12	13	11	5	52

7. Admittance requirements

Requirements	Number of schools
a) First degree in any academic discipline	18
b) First degree in planning	0
c) Masters degree	16
d) Masters degree in planning	4
Some schools admit more than one degree	
• First degree in planning or in any discipline	2
• Masters degree or Masters degree in planning	9
• First degree in planning or Masters degree	1
• First degree or Masters degree in any discipline	2
• All alternatives accepted	2
Total responses	54

9 schools have responded that also work experience in planning is required besides a degree.

8. Introductory courses required?

Respondent schools	Introductory courses	
	Yes	No
51	21	30

9:2. Most common way or combination of ways of financing the studies

Financing		Number of schools
a+b)	Scholarships or studentships or both	9
c)	Research grants	5
d)	Employment as assistants	2
e)	Self-financing	7
•	Most used combination: Employment as assistant in combination with scholarships, studentships or research grants	7
•	Several other combinations	14
•	No responses	10
Total		54

II THE ORIENTATION OF DOCTORAL STUDIES

10. Aim of doctoral studies in planning

Respondent schools	Academic aim	Both academic and professional aim	Professional aim	No aim	To help students to a degree
50	15	18	12	3	2

About the aim of doctoral studies, see also PART III:2.

11. Organisation of doctoral studies

Organisation		Number of schools
I	Only one alternative of the question	
	a) Individual informal studies	13
	b) Programmed education involving guidelines to work	4
	c) Programmed education involving taught courses	12
	d) Programmed education involving examinations and control stations	3
II	Combinations of alternatives in I above	
	a) Individual/informal studies combined with alternative b) or c) or b)+c)	7
	b) Taught courses combined with alternative b)	4
	c) Taught courses combined with alternative d)	4
	d) All alternatives relevant	5
	e) Guidelines + examinations/control stations	2
	Total responses	54

12. Subject areas of compulsory courses

Responses from 33 schools with 108 subject areas listed

Subject area	Allocation among schools
• Research methods	23 (10 schools in UK)
• Planning theory	15
• Urban and regional planning	16
• Economics	11
• Science theory	7
• Law	6
• Urban engineering	4
• Landscape planning	4
• Ecology-Environment	3
• Planning policy (France)	2
• Planning methods	2
• Housing (France)	2
• Research ethics (Norway)	1
• Various subjects	12
Total subject areas	108

13. Individual study plan?

Respondent schools	Individual study plan	
	Yes	No
51	38	13

14. Supervisor appointed for each candidate?

Respondent schools	Supervisor	
	Yes	No
53	49	4

15. Female supervisors

Share of supervisors in per cent	Number of schools
0%	13
1-10%	11
11-20%	10
21-30%	4
31-50%	6
60%	1
Number of schools	45

No response: 9

16. Supervisors with a doctoral degree

Share of supervisors	Number of schools
All	22
75%	10
50-60%	7
25%	3
0%	8
Total	50

No response: 4

17. Academic or both academic and professional career

Respondent schools	Mainly academic career	Both academic and professional career
54	11	43

18. Valuation of subject areas

Subject areas	Number of schools				
	Very important	Important	Less important	No response	Total
- Substantive knowledge of the planning field	33	18	2	1	54
- Planning systems	11	30	8	5	54
- Planning theory	25	23	4	2	54
- Research methodology	42	12	0	-	54
- Research training in projects	22	19	10	3	54
- Learning to teach	5	13	36	-	54
- Writing skills	21	25	7	1	54

19a. Core Curriculum in planning

Respondent schools	Core Curriculum	
	Yes	No
51	20	31

19b. Topics represented in the Core Curriculum in planning

	Substantive knowledge	Planning systems	Planning methods	Planning theory Research theory/ methods	Project work	Total
Number of topics[1]	17	9	18	24	2	70

[1] Respondent schools = 17

20. Teaching in interdisciplinary research

Respondent schools	Interdisciplinary research	
	Yes	No
52	36	16

21. Teaching in pedagogical subjects

Respondent schools	Pedagogical subjects	
	Yes	No
51	6	45

22. Participation in teaching and research

Respondent schools	Participation in			
	teaching	research	both	No participation
52	4	8	36	4

23. Selection of theses theme

a) Doctoral student	b)Doctoral stud/super-visor jointly	Super-visor	It varies	Total responses
10	29	4	11	54

24a. Thesis theme in any planning field

Respondent schools	Thesis theme in any planning field	
	Yes	No
50	32	18

24b. Relation of thesis theme to subject field of department

Respondent schools	Relation required	
	Yes	No
50	39	11

25. Doctoral students' difficulty in identifying researchable problems

Respondent schools	School's experience of this problem		
	Yes	No	Both yes and no 1)
52	30	20	2

1) = sometimes

Reasons of the difficulty

Reasons	Number of schools
1. Scope of planning field	3
2. Lack of knowledge/experience in research	12
3. Gap academic objectives social/professional demand Missing link	6
4. Lack of experience of research problems at undergraduate and graduate levels Need of guidance	5
5. No answer	6
Total	32

IV THE MARKET FOR DOCTORS IN PLANNING

27+28. Careers of doctorates in planning:
27a+b Academic or professional careers

Number of doctorates 1990-1994 (Cp question 5)	Number of doctorates in	
	academic positions	professional positions
505 [1]	212 [2]	135 [3]
Per cent of total number doctorates 1990-1994	42%	27%

[1] Respondent schools = 51, no response = 3, 0 degrees = 8 schools
[2] Respondent schools = 49, no response = 5, schools with no doctorates in academic positions = 15
[3] Respondent schools = 50, no response = 4, schools with no doctorates in professional positions = 15

28. Doctorates in planning oriented positions

Number of doctorates 1990-1994 (Cp question 5)	Number of doctorates in planning oriented positions
505[1)]	191[2)]
Percent of total number	38%

[1)] Respondent schools = 51, no response = 3. 0 degrees in 8 schools
[2)] Respondent schools = 42, no response = 12
Schools with no doctorates in planning positions = 15

V NATIONAL AND INTERNATIONAL CO-OPERATION

29. Information about doctoral dissertations

Respondent schools	Information circulated		
	Yes regularly	Yes sometimes	No special initiatives
51	27	14	10

30. Participation in national / international research projects

Respondent schools	Participation	
	Yes	No
51	40	11

Titles of research projects in co-operation

A rough grouping of titles in subject areas	Number of titles belonging to the group
• European planning and EU projects	7
• Environmental planning Environmental assessment	7
• Innovation in planning	5
• Urban planning and development	5
• Third World planning	4
• Spatial planning in East-Europe	3
• Infrastructure	3
• Various titles	9
Total number of titles	43
Respondent schools	29
No response	11

31. Encouragement to doctoral studies abroad

Respondent schools	Doctoral studies abroad encouraged	
	Yes	No
54	40	14

Italy Venice:	it is compulsory 4-6 months
Denmark Aalborg:	at least one trisemester for each student
Czech Praha:	no resources for that available

Scholarships (grants) available

Respondent schools	Yes	No
44	32 [1]	12

[1] 7 schools have very limited resources

32. Doctoral students studying abroad

Respondent schools	Schools with doctoral students abroad	Number of doctoral students abroad	Schools with no doctoral students abroad	Question not applicable or number unknown
49	29	75	15	5

VI OPEN QUESTIONS

33) Main problems in organising doctoral studies in planning

Respondent schools [1]	Insufficient resources: financing	teachers, supervisors	too few students	Insufficient development of the subject field	Diversity of background of students	No specific problems
50	16	11	12	10	4	4

[1] A few schools have responses in more than one group

34 a) Career prospects of doctors in planning

Respondent schools	Career prospects: Bad or worse	Stable	Some chances	Good	Improving-
52	7	6	4	20	15

34 b) Job market in the academic area or in the professional

Respondent schools	Job market in: Academic area	Professional area	Both areas	None of them
45	14	13	14	4

35) Role of doctoral theses for planning - knowledge

Respondent schools	Role: Very import-ant/ important	Limited/ partial	Some/ sometimes	Dispersion of topics
50	35	7	5	3

Concluding comments:
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The main message of the Survey

The 1990s has become a decade on the threshold of the twenty-first century when the development of new thinking and new forms of planning has been initiated. The aim of EU to introduce both an overall spatial perspective and a future-oriented in the report Europe 2000 has been followed on the national level. Several countries have prepared studies about their future development in the form of national overviews - for instance the Baltic Sea Area 2010, Denmark 2018, Finland 2017, France 2015, Germany without time frame, the Netherlands 2015, Sweden 2009.

They can be seen as attempts to study long-term trends and problems and suggest strategies to tackle them. The studies encompass usually the development of infrastructure, land-use and environment and the influence on them of the continuous internationalisation and integration. Attempts are also made to form a common view of the future trends as base for political decisions but have been criticised for top-down tendencies.

Of interest in this connection is that these studies represent a development of new forms of planning which involves to work with a holistic perspective instead of a sectoral and to study the interplay between sectors and geographical areas. The geographical area of planning is widened as well as the time perspective. Planning has both as knowledge - and action area got a very large span. It is no longer only plan-making but is developed as a learning and knowledge process to identify problems and find possible strategies to approach them. Such a process calls for both high professional competence and contribution of research. The Baltic Sea study is emphasising that continued work requires improved knowledge through development of research programmes and co-operation with research institutes.

Planning has to be provided with knowledge through research about the relationship between planning and its effects on social functions and spatial design. The increasing complexity of spatial and environment problems, the rapid transformation of society, the shrinking economic resources demand new methods and instruments for a systematic analysis and evaluation of different alternatives and strategies. Research is also needed to follow up the changes of institutional systems - administrative organisation, decision processes, legislation etc.

The need to anchor the professional planning in scientific research has been expressed in the Short overviews (Nordic Countries - some trends) in the following way: "Research will be decisive for the survival of planning as profession. It should be promoted in order to strengthen the theoretical base of planning as discipline". Planning as an independent discipline should have the possibility of developing a problem-orientated research bridging over the gap between theory and practice - the problem of academic disciplines. Are the doctoral studies containing possibilities of such a development? Which information is given in the Survey?

Positive Trends

Most important is to state: Doctoral studies are now established in most European countries and have a firm basis. They are offered by 77 university departments in 21 countries. 54 departments in 18 countries are participating in the survey and have responded to the questionnaire. The studies are pursued in schools/departments of which a majority (45 out of 54) are specialised in planning. In the Federal Republic of Germany and in the Netherlands spatial planning is recognised as a distinct academic discipline.

New organisations of doctoral studies are developed in some countries as Denmark's European Doctoral School, the Netherlands Research School, a proposed Graduate School in Germany.

Promising for the further development is that the number of doctoral students is increasing in half of the responding 54 schools or stays the same in 21, while it is decreasing in 5 schools.

This positive tendency is reinforced by favourable career prospects. They are assessed as good or improving by a majority of schools (35 or 67 %). Only 7 schools (13 %) think that they are bad or worsening.

These tendencies mean possibilities of an increased competence in teaching and research at the planning schools. During the period 1990-1994 the total number of doctoral degrees was 505 in 51 schools or 2 per school and year. 42% of them went to academic and 27 to professional positions. Only 38% of the total number of doctorates went to planning oriented positions. It can in any case be expected that the number of teachers with a doctor's degree will successively increase in the planning schools.

A positive trend is also that according to most schools (70%) the doctoral theses has a very important or important role to play in the building up of planning knowledge. "They are an essential part of the academic research". "They form a basis for developing planning theory". That is: they provide an essential resource for the academic education and research.

The problem is that the knowledge produced is dispersed and not accumulated, which is emphasised in some answers. Is this problem related to planning being "a wide, complex and scientifically not yet very much developed discipline"? (Professor Dieter Frick, Berlin) Which role has a free choice of thesis theme or a choice related to the subject area of the department? Are the doctoral students free to choose the thesis theme in any planning field or not? The inquiry does not given any clear answer.

Main Problems

The credit side of a balance account for doctoral studies has also a debit side. There are problems which form barriers to the further development. The schools have formulated very distinct responses to an open question about their main problems. The problems are of two types. One deals with insufficient human and financial resources and the other with the insufficient fundament of planning as discipline: research methodology, interdisciplinarity, lack of a core curriculum.

The responses show that the insufficiency problems are interrelated. The lack of financial resources creates a vicious circle. Lack of scholarships for the doctoral students makes the studies less attractive. There is an anxiety that the best students do not choose doctoral studies in planning. The doctoral students have difficulty in financing full time studies. Lack of money prevents them from developing larger research programmes. The low number of students is preserved. Reduced funding is also influencing the number of teachers and supervisors. It makes it difficult to have a staff with different specialities. The workload of the staff prevents enough time for supervision. In such way the development of planning as discipline and knowledge area is delayed or obstructed.

The financial problems are dominating the responses. Almost all come from West-Europe; not least from United Kingdom. The East-European countries are more concerned with the teaching situation: lack of teaching resources - teachers and supervisors - but also teaching material as books in the own language. Their problems include low esteem of research and little motivation for doctoral studies among students.

Financial problems are also a problem of the doctoral studies in North America. In the previously mentioned ACSP[1] study it was therefore proposed to seek funding to establish fellowships -

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[1] ACSP = Association of Collegiate Schools of Planning

awarded nation-wide on a competitive basis - for doctoral studies in planning. It seems that a similar initiative could be considered by AESOP and addressed to EU which within its education and research programme may have an interest in supporting doctoral studies about the development of spatial planning.

The schools are trying to compensate for the small scale and small resources of doctoral programmes by means of collaboration. Examples from Denmark, France, Italy and the Netherlands are mentioned in chapter 7 of PART II. In the responses is suggested to consider a collaboration about parts of doctoral programmes even between schools in different countries.

The need of strategies for the further development

Is the schools´ description of their problems related to doctoral studies corresponding to the problems which have been considered as particularly crucial by AESOP's Working Group on Planning Research; the key issues presented in the introductory chapter to PART III.

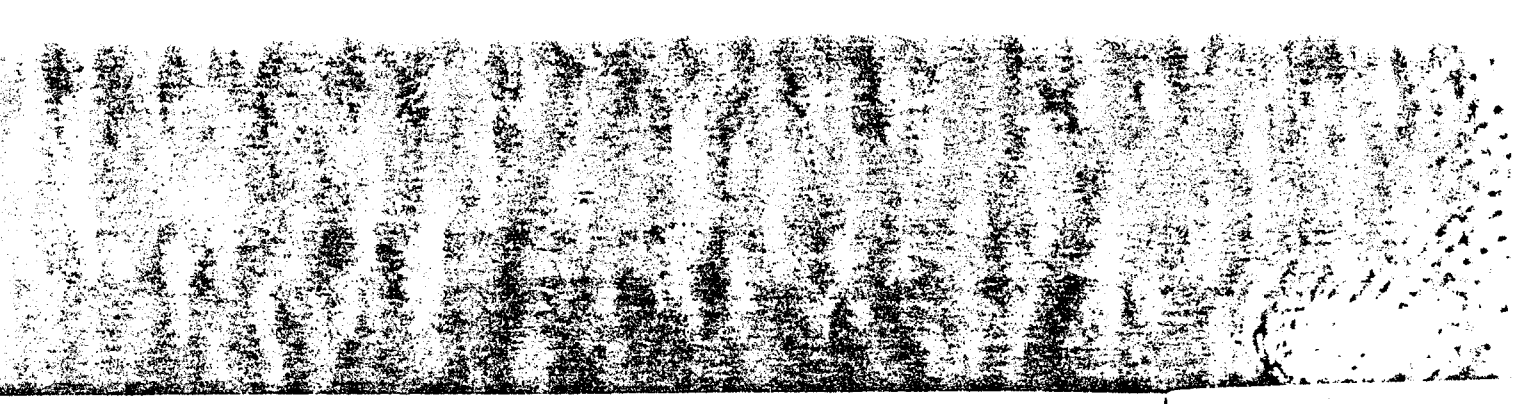
The problems are not altogether converging but the key issues are all dealt with in the schools´ responses to the questionnaire. The first issue is no problem for the schools: the aim of doctoral studies - scientific or professionally oriented training. The answer of a great majority of schools (80%) is that doctoral studies are intended for both. A more nuanced discussion is however needed as shown by the answers to the question about the aim of doctoral studies (PART III:2).

The second problem has to do with the need or not need of previous knowledge in planning for doctoral students. According to the responses it seems not to be experienced as a problem. The schools do not demand a graduate or master´s degree in planning; nor do the majority demand any introductory course in planning. This does not seem to be an effective strategy for the further development of planning education and research (Compare PARTIII:3.5). It is important to give this issue more attention and to develop the discussion about the relationship between graduate education for the profession and doctoral studies both for the profession and the academy.

The third key issue is individual - informal studies or formal studies according to a programme with taught courses. It is not a problem area mentioned by the schools. Schools with individual studies without a formal programme are still dominating in 9 countries. A few schools are emphasising that doctoral studies are an individual student´s decision and no extra studies are supplied. Most schools without formal programmes are nevertheless offering taught courses as is often the case for instance in United Kingdom with individual and informal studies. In most schools in 7 countries the doctoral studies are following a more organised programme (see Figure 5, PART II:7). The concepts informal-formal are not very distinct and the borderline between them as well as between different degrees of "formalising" is fluid. (Compare PART III:3.6).

The fourth key issue - the students´ difficulty in identifying researchable questions - is experienced by a majority of schools (PART III:3.5). They have also given often detailed explanations of the reasons. The dominating answer - lack of knowledge in research - is related to the issue about previous knowledge of the doctoral students. The possibility of introducing an orientation about research in the graduate education of planning as an option is worth a further discussion.

The last key issue - the role of doctoral theses in the building up of planning knowledge - has been valued in a very positive way. But the basic problem - the lack of accumulated knowledge - is still unsolved. A proposal for an increased dissemination of information about the theses and more publishing of them seems to be an easy way to give the doctoral students a better overview of the field.



Summary

Planning in the sense of spatial planning is a world-wide activity with growing importance not only in the Western world - in Europe and USA - but also in Asia. The urban population of the world is now exceeding the rural for the first time in history. In Europe with 79% of the total population already living in urban areas (1992) a continuous urban growth and development is creating a need for better planning to achieve a more balanced urban system.

The urban development is connected with the transition from the industrial society to the information and service society involving a deep economic, social and political transformation process in the European countries. To this process belongs the European economic integration, initiated by the European Union. In order to keep pace with the dynamic change of society planning has to be based on knowledge about the changes and their driving forces to a much higher degree than before.

The key tendencies of this development - with relevance to spatial planning - and the need of new approaches and methods are described in the AESOP Statement 1995: The State of Spatial Planning in Europe. It is emphasised that "AESOP member schools have an important role to play in undertaking research on the critical issues which need attention for an effective, facilitative form of planning. AESOP has also a responsibility to promote the education of the coming generation of planners".

The present professional and practice oriented planning education at graduate level is not sufficient to meet the complex problems of the new era. It has to be supported by a broader research. A development of research demands in turn an increase of doctorates in planning.

The aim of the Survey is to describe the present state of doctoral studies in AESOP member schools in Europe. A better knowledge about similarities and dissimilarities may contribute to an exchange of experience and ideas between schools and between staff and students and in such way stimulate an expansion of the studies.

As a background to the Survey an introduction gives some information about initiatives taken in some countries during the 1980s to introduce doctoral studies in planning and to establish planning as an academic discipline in the universities.

PART I: WHAT ARE DOCTORAL STUDIES FOR?

The planning field is a young one. It has developed from a "craft" basis rather than from an academic tradition. It has a weak position as an academic discipline and draws on a range of disciplinary traditions - architecture, social science, engineering.

Planning is developed as profession and the education is oriented to professional work. But "a profession can only survive if it is supported by its theoretically expanding discipline. Research will be decisive for the survival of planning as profession". A view expressed in the Short overviews. A development of research demands an increase of doctorates.

What is the aim of doctoral studies in planning? According to the traditional European model it is independent individual scientific work which shall lead to a doctor's degree, being a stage in an academic career.

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However, an alternative model is developed. The doctor's degree is a matter of training by means of courses giving both deeper knowledge in relevant subject areas and skills in the application of research methods. The thesis shall show the ability of the doctoral candidates to master scientific methods, useful also for work outside the university. The background of this model is the increase of investments in higher education and a change from "elite" to "mass" higher education for a wider range of occupations. The two models have become a major issue in the European university debate during the 1990s.

In which way will the two models influence the content of doctoral studies? In several countries they are an object of new thinking and reforms which deal with the structure and quality of the doctoral research training. An overview of the approaches was made in 1991 by an international committee, set up by the Dutch Ministry of Education and Science. It proposed a more formalised and structured first year of doctoral training.

The new trends are also visible in the planning field. The report presents a few examples of initiatives to adapt the doctoral training to new conditions in France, Germany, the Netherlands and Denmark. In France a doctoral programme is divided between a one year full-time organised research training and an unstructured period of normally three years, which is altogether devoted to the dissertation. In Germany a graduate school - a Graduiertenkolleg - is proposed for doctoral studies in planning at the University of Dortmund which since long has an independent graduate education in planning. The school is proposed to be oriented to the interdisciplinary theme "Planning in the Public Domain". The Netherlands has established "Netherlands Graduate School of Housing and Urban Research" with a first year of organised research training. It is a co-operation project between the four universities of Amsterdam, Delft, Eindhoven and Utrecht.

To the reforms of doctoral programmes belongs the establishing 1993 of a European Doctoral School of Technology and Science at the Aalborg University. One of its research programmes is "Planning and Development" and the students have possibility to acquire a European Doctorate according to the rules of the European Union.

A straightforward answer to the question "What are doctoral studies for" is given by the planning schools participating in the Survey. According to a substantive majority of answers (80%) they consider their doctoral training to be designed both for academic and professional careers.

PART II: SHORT OVERVIEWS OF DOCTORAL STUDIES IN 17 EUROPEAN COUNTRIES WITH AESOP MEMBER SCHOOLS

The information about the doctoral studies in AESOP member schools is given in two parts. One has the form of Short overviews of the present approach in 17 countries with schools participating in the Survey. The other gives information about the content of the studies based on responses of the schools to a questionnaire. See PART III.

The overviews comprising a majority of European countries and planning schools show some structural trends seen in an European perspective about the aim and orientation of the doctoral studies. The most visible trend is that doctoral studies in planning have an established position in the European universities. They are available in almost all European countries; in 21 countries with 77 AESOP member schools. 54 of the schools in 18 countries are participating in the Survey.

Another structural trend has to do with the aim and orientation of the doctoral studies - scientific research, professional knowledge or both. The 17 overviews show that nine or more than half of the participating countries apply the traditional model for doctoral studies, that is mainly individually designed studies with emphasis on scientific achievement. In seven countries most schools organise

some part of the studies in the form of optional or compulsory courses. The development in these countries seems to correspond with the views of a majority of planning schools (80%) which - independent of individual or formalised studies - consider the doctor's degree in planning suitable both for academic and professional careers.

The requirement for specialised courses as part of more organised doctoral programmes is an incentive for co-operation. It follows that schools with more formal organised studies should be more interested in a co-operation with other departments and universities; in particular since the planning departments often are small and may have difficulty in providing specialised courses for a small number of doctoral students. The Short overviews confirm such a conclusion and give examples of four countries (Denmark, France, Italy and the Netherlands) with developed networks for co-operation. Similar initiatives are lacking in countries/departments with individual informal studies.

The Short overviews seem also to show a tendency that planning education is advancing to a more independent position in the universities. Of the above mentioned 54 departments in 18 countries participating in the Survey 45 or 83% are specialised in planning. The seven countries with more organised studies have in common that the doctoral programmes are pursued in departments which are independent and specialised in planning. Examples drawn from the Nordic countries show a break with their old tradition of planning being subordinated to another discipline (mainly architecture).

The development of a greater independence seems to have as a consequence that the former affiliation to technical universities and faculties is weakening and is now foremost dominating in East-Europe.

PART III: DOCTORAL STUDIES AND TRAINING IN AESOP MEMBER SCHOOLS. RESPONSES TO A QUESTIONNAIRE

The second part of the information about doctoral studies is the responses to a questionnaire given by the participating 54 schools. The intention is to present some basic facts about the studies. The facts include:

I. The institutional organisation: position and size, admission rules and financing

II. The orientation, aims, structure

III. Training in research, selection of thesis themes

IV. The labour market for doctors in planning

V. National and international co-operation

Finally a few "open questions" are investigating problems and prospects of doctoral studies and their contribution to the knowledge development of planning.

The questionnaire is also including questions about some of the key issues which are of special importance to the development of planning as discipline. To them belong the basic issue about the orientation of the studies with emphasis on an academic career and/or a professional. The responses to the questionnaire show that the main part of the schools or 80% consider their doctoral studies to be suitable both for academic and professional careers. Some more differentiated

responses are given to the
the training of researchers
schools attach great impo
contribution to the devel
need of more qualified kn
issues relate to the need o
identify researchable prol

An attempt to sum up th
development. Already ha
the greater part of Europ
specialised in planning. T
schools (9%). The female
prospects are considered
have a very positive valu
knowledge.

The credit side has also a
development. The probl
resources and the other
research methodology. T
One of the key issues wh
education as preparatio
degree - a first one or a
previous knowledge in
compensation. A much
questions experienced b
related to the less discu
doctoral studies.

A concluding remark is
studies contain problem

responses are given to the question about the aim of the studies. 36% of the schools give priority to the training of researchers for work both in the academic and professional area. One third of the schools attach great importance to the scientific quality of the doctoral studies and to the contribution to the development of scientific knowledge while a smaller group (24%) considers the need of more qualified knowledge (for the professional field) to be most important. Other key issues relate to the need of knowledge in planning as preparation for doctoral studies, the ability to identify researchable problems and the role of doctoral theses in developing planning as discipline.

An attempt to sum up the overall trends of the answers gives a picture of a progressive development. Already has been mentioned (PART II) that doctoral studies are well established in the greater part of European universities. A majority of schools participating in the Survey (83%) are specialised in planning. The number of doctoral students is increasing and decreasing only in 5 schools (9%). The female part is, however, low - only 37% and lower than in USA. The career prospects are considered as good or improving in a majority of schools (67%). Most schools (70%) have a very positive valuation of the role of the doctoral theses in the building up of planning knowledge.

The credit side has also a debit side. There are problems which form barriers to the further development. The problems are of two types. One deals with insufficient human and financial resources and the other with an insufficient development of the subject-field of planning and of research methodology. The financial problems are dominating.
One of the key issues which has been given very little attention by the schools is the graduate education as preparation for doctoral studies. It is not mentioned among the problems. A graduate degree - a first one or a master's degree - is necessary but the majority of schools do not demand previous knowledge in planning and they do not offer any introductory courses in planning as compensation. A much commented key issue is the students' difficulty in identifying researchable questions experienced by a majority of schools. The cause - lack of knowledge in research - is related to the less discussed issue - the suitability of the graduate education as preparation for doctoral studies.

A concluding remark is that the outcome of the answers to the questionnaire show that the doctoral studies contain problems which need a continued discussion among the AESOP member schools.

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QUESTIONNAIRE

ON

DOCTORAL EDUCATION IN PLANNING

NAME OF DEPARTMENT, FACULTY, INSTITUTE, SCHOOL, UNIVERSITY responsible for the doctoral education in planning _____

I. THE POSITION, SIZE AND ORGANISATION OF THE DOCTORAL EDUCATION

1) According to the AESOP Directory of Planning Schools 1993 doctoral studies are available at your department/faculty/institute/school. What does it mean precisely?

Is your department/ school specialised on planning? Yes ☐ No ☐

If No:
To which discipline or disciplines (architecture, engineering, geography etc) is your doctoral education connected? _____

2) a) How many students are at present studying for a doctoral degree in planning at your department/school? Number _____

b) How many of them are women? Number _____

3) Has the number of doctoral students at your department/school been changing during the last five years (1990-1994)?

a) It is increasing ☐

b) It is decreasing ☐

c) It stays the same ☐

4) What is the average time required to complete a doctoral degree in planning at your department/school?

_____ Years

5) What is the number of doctoral degrees awarded during the latest five-year period (1990-1994)?

Number _____

6) a) How many persons are engaged in teaching planning subjects at your department/school?

Number _____

b) How many are teaching planning subjects full time?

Number _____

c) How many of them have a doctoral degree?

All ☐

75% ☐

50% ☐

25% ☐

None ☐

7) What are your admittance requirements for the doctoral education?

a) First degree in any academic discipline or corresponding knowledge ☐

b) First degree in planning ☐

c) Master's degree ☐

d) Master's degree in planning ☐

e) Work experience in planning ☐

8) If doctoral students have a first degree in different disciplines, do you require introductory courses as preparation? Yes ☐ No ☐

_____

_____

9) How are the doctoral students generally financing their studies?

1a) By scholarships ☐

b) By studentships ☐

c) By research grants ☐

d) By employment as assistants at your department/school ☐

e) Other ways ☐

2) Which is the most common way or combination of ways of financing at your department/school?

_____

_____

_____

II. THE ORIENTATION OF THE DOCTORAL EDUCATION

10) a) What is the aim of the doctoral education in planning at your department/school?

_____

_____

_____

_____

b) If no specific aim is drawn up for the doctoral education in planning: How is the more general aim for research education formulated?

_____

_____

_____

_____

11) How is your doctoral education organised?

a) Individual and informal studies ☐

b) Programmed education involving guidelines to work in different stages ☐

c) Programmed education involving taught courses (compulsory and/or optional) ☐

d) Programmed education involving examination and control stations for the thesis work ☐

12) If your programme of education is involving compulsory courses, state their subject areas

_____

_____

_____

_____

13) Is an individual study plan designed for each doctoral student, signed by both the supervisor(s) and the student? Yes ☐ No ☐

14) Is a supervisor appointed for each doctoral student? Yes ☐ No ☐

15) What share of the supervisors are women? % women_____

16) Have the supervisors a doctoral degree in planning or in another discipline?

All ☐
75% ☐
50% ☐
25% ☐
None ☐

17) Is your doctoral education designed for

a) mainly academic careers ☐

b) both academic and professional careers ☐

III. DOCTORAL EDUCATION IN RESEARCH AND TRAINING

18) How do you value the following parts of a doctoral education? Mark with a cross.

	Very important	Important	Less important
- Substantive knowledge of the planning field	☐	☐	☐
- Planning systems	☐	☐	☐
- Planning theory	☐	☐	☐
- Research methodology	☐	☐	☐
- Research training in projects	☐	☐	☐
- Learning to teach	☐	☐	☐
- Writing skills	☐	☐	☐

19) Do you have a core planning curriculum in your doctoral education? Yes ☐ No ☐

If yes:
Which topics are represented?

_____

_____

_____

20) Do the doctoral students get specific education in inter-disciplinary research? Yes ☐ No ☐

21) Are the doctoral students educated in pedagogical subjects? Yes ☐ No ☐

22) Are the doctoral students participating in undergraduate teaching and/or in research projects at your department/school?

In teaching ☐

In research ☐

No participating ☐

23) How is the theme of the thesis chosen?

a) By the doctoral student ☐

b) By the doctoral student and the supervisor jointly ☐

c) By the supervisor ☐

24) a) Is the doctoral student free to chose the thesis theme in any planning field? Yes ☐ No ☐

b) Is it demanded to relate the thesis theme to the subject field of the department/ school? Yes ☐ No ☐

25) A study of doctoral education in the US made by ACSP (Association of Collegiate Schools of Planning) showed that the doctoral students had difficulties in identifying researchable questions.

Do you have made similar observations at your department/ school? Yes ☐ No ☐

If Yes:
What do you think may be the reason?

_____

_____

_____

26) Please give examples of topics of doctoral dissertations presented during the last five-year period (1990-1994):

_____

_____

_____

_____

_____

_____

IV. THE MARKET FOR DOCTORS IN PLANNING

27) Which career do your doctors generally choose after finished studies - academic or professional?

a) Number of the doctors with a degree taken during the latest five-year period (1990-1994), who went on to academic positions — Number _____

b) to professional positions — Number _____

28) Number of the doctors with a degree taken during the latest five-year period (1990-1994), who went on to planning oriented positions — Number _____

V. NATIONAL AND INTERNATIONAL COOPERATION

29) Do you usually circulate information about the doctoral dissertations at your department/school to other departments and schools, to libraries, journals, etc?

- Yes regularly ☐
- Yes sometimes ☐
- No special initiatives ☐

30) Is your department/school participating in national or international research projects in planning? — Yes ☐ No ☐

If yes:
Please give the title _____

31) Do you encourage doctoral students to perform some of their studies in planning at an university abroad? — Yes ☐ No ☐

If yes:
Are scholarships (grants) available? — Yes ☐ No ☐

32) How many doctoral students in planning are at present studying abroad? — Number _____

VI. OPEN QUESTIONS

Please give personal views on doctoral studies with the help of the following questions.

33) What are the main problems in organising your doctoral education in planning?

34) What do you consider the future career prospects to be for Ph D graduates in planning? Are they getting worse or are they improving? Is the main future job market in the academic area or in the professional?

35) What role do the doctoral theses play in the building up of planning knowledge?

36) Other comments

THE QUESTIONNAIRE WAS ANSWERED BY

NAME: _____

DEPARTMENT/SCHOOL: _____

UNIVERSITY: _____

ADDRESS: _____

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