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Dissemination Level		
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PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
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Content

1 Preface

The SSH-FUTURES project responds to a call from the European Commission outlining the assignment as follows:

> *"The objective is to develop knowledge about Social Sciences and Humanities in Europe, particularly as regards their institutional context, knowledge content, functions and contributions in the economy and society, with a view to enabling the design of better policies for SSH in Europe." (Work Programme)*

The SSH-FUTURES project investigates the opportunities for complementary development and closer coupling of the Social Sciences and Humanities in Europe, their mutual interactions with social demands and the potential value of including such an approach within research policies in Europe. The project is organized in six work packages, four of which are conceptualized to produce new insights on the production and use of social science and humanities research now and in the future.

WP1, 'The societal impact of the Social Sciences and the Humanities' has explored and analyzed the different types of social science and humanities knowledge and its relationship to society, the economy and politics. It has provided information on the ways in which the Social Sciences and the Humanities affect society, especially in opposition to the natural and technical sciences. It has emphasized, in particular, that 'impact' is not a single process, but rather a composite set of dynamics that follows different pathways and reflects competing configurations of epistemology (the kind of knowledge that SSH is assumed to produce), knowledge production (the way in which research is organized) and utilization (how new knowledge produces effects outside the sphere of knowledge production itself).

WP 2, 'Social sciences and humanities in Europe: an overview'. Social science and humanities knowledge is produced in different settings (universities, academies, private and public research institutes as well as in the commercial sector) and has different relations to social, political and economic actors. Based on an extensive survey of participants in the knowledge production process, the relationship between the institutional setting and the type of knowledge produced, the impact of this setting on the Social Sciences and Humanities, and, vice versa, the impact of the knowledge produced on society, the economy and politics have been analyzed empirically and analytically on the basis of the theoretical insights gained in WP1.

WP 3 'Who are the stakeholders?' attempted to identify the 'stakeholders' of SSH research with a view to assessing the connections between their perceptions of the nature of SSH knowledge, the modalities of knowledge production, the issues at stake in knowledge utilization and major patterns in recent and current systemic change. Combining interview data and background analysis, WP3 reviews SSH institutions, policies & programmes in each of the countries surveyed and in Europe as a whole. Identifying three distinct levels of change – domestic, European and international –

WP3seeks to specify what is distinctively European in observable structural trends and, therefore, which policy levers are available for deployment within multi-level European research governance.

WP4, 'What future for the social sciences and humanities?' shed light on the future developments of the Social Sciences and Humanities in Europe. A foresight study assessed the SSH future impact on politics, the economy and society, developed scenarios on SSH futures and their impact on society and derived recommendations for research priorities in SSH.

WP5, 'Recommendations' is the project component reported on here. It brings together the findings of WPs 1, 2, 3 and 4. On the basis of these insights, the project partners have formulated recommendations for the future of the Social Sciences and Humanities directed at the European, national and institutional levels.

WP 6 'Raising Awareness for Social Sciences and Humanities' allowed the research partners to ensure the dissemination of the results both on the national and the international levels.

SSH-FUTURES is being implemented by a consortium comprising research institutes and universities across Europe and in collaboration with the international umbrella organization of professional social science associations (ISSC).

2 Introduction

The SSH-FUTURES project aims at better understanding the dynamics of knowledge from the Social Sciences and Humanities within the European research landscape. The project contains retrospective and prospective sections.

This document is the synthesis report of SSH-FUTURES. It assembles the main findings of the four work packages that have been completed and indicates the main points of these findings.

The purpose of this report is to summarize the findings and current concluding recommendations for the European Union, the Member States and the science community. (See chapter 7, Conclusions and Recommendations)

The following sources were used in this Deliverable:

- A theoretical exploration of the research topic and the pathways of the Social Sciences and Humanities by Nico Stehr. This focussed on the self-image of social scientists, the instrumentality model and the capacity model. Furthermore, it also included an investigation of the traditions in the Social Sciences and Humanities as well as the analysis of knowledge as a capacity to act. This concept was operationalized and then used for the analysis.
- A survey among the researchers in Austria, Belgium, France, Germany, Israel, the Netherlands, Poland, Sweden and participants in the European Unions' Framework Programmes 6 and 7. The total sample amounts to 5,343 persons, of whom 1,655 answered the online survey. This renders the SSH-FUTURES survey the largest till-date European survey of SSH researchers and a valuable database for further analyses and as a benchmark for future surveys.
- The identification of the 'stakeholders' of SSH research with a view to assessing the connections between their perceptions of the nature of SSH knowledge, the modalities of knowledge production, the issues at stake in knowledge utilization and major patterns of recent and current systemic change was researched using the data of 89 expert interviews and a background analysis. The SSH institutions, policies & programmes in each of the countries surveyed and in Europe as a whole were analyzed, identifying three distinct levels of change – internal, European and international.
- A Delphi-type online expert survey reinforced the focus on the future of the Social Sciences and Humanities in Europe. 845 experts were asked about both the structure of the Social Sciences and Humanities (SSH) in 2025, as well as the main social issues they expected society to be facing at the time. Most of the respondents were from Europe (86%), and here mainly from Western and Northern Europe (75%).

The objective of this report is to draw attention to the main findings of the SSH-FUTURES project and to lead to a range of recommendations directed at three different audiences: the scientific community in Europe, and relevant stakeholders of the Member States and the European Union. In conclusion, the findings of this synthesis report can serve as the basis for decision-making on the future of the Social Sciences and Humanities on these three levels.

The results shed light on the pathways Social Sciences and Humanities follow (see chapter 3.) and insights of the analysis of the European landscape of research with its homogeneities and divergences and some notes on dissemination (see chapter 4.). Furthermore a focus is set on the research community's ability and possibility to cross the borders of their own discipline (see chapter 5) and the future perspective is focussed (see chapter 6). This leads finally to the recommendations, which are the conclusions of the synthesized findings of the SSH FUTURES project. (See chapter 7)

2.1 Recommendations

The European research landscapes operating in a rapidly changing world encounter unavoidable obstacles, like institutional barriers to innovative approaches, which have to be overcome, if no opportunities are to be missed. The SSH-FUTURES project offered insights into a range of these issues, which have partly been presented in this report, and draws conclusive recommendations from the findings.

The policy recommendations of the SSH-FUTURES project are summarized below and also set out alongside the relevant arguments in chapter 6. They are directed at a General level (see chapter 2.1.1.), at the European level (see chapter 2.2.2.), at the Member States (see chapter 2.2.3.) and at the scientific community in Europe (see chapter 2.2.4.).

2.1.1 General Level

2.1.1.1 Disciplinary, inter- and transdisciplinary knowledge creation

- Encourage collaboration in interdisciplinary and transdisciplinary research by research programmes on the national and European levels.
- There are different ways to do this on the national and European levels and within the scientific communities: on the European level by research programming and programme evaluation, on the national level by project evaluation, and on the level of scientific communities by innovation in evaluation and career schemes.
- On the national level, there is a need to encourage interdisciplinary and combined studies, which could be supported by using the opportunities offered by the Bologna process. On the European level, this necessitates broader communication about the flexibility provided by the Bologna process, as the reforms implemented have led to different curricula in different national environments, some of them more flexible than others.
- More specific recommendations are given below concerning funding, evaluation and career schemes.

2.1.1.2 Funding

- There is a need to understand the different types of knowledge-producing institutions in terms of funding. In order to encourage the participation of all productive intelligence, different funding modes must ensure equal opportunities for different research organizations.
- Basic funding is necessary for all types of institutions. As resources are scarce, block grants should be available to all types of research organizations

on a competitive base. Basic funding must include an incentive for generic research as well as for interdisciplinary and transdisciplinary work.

- Competition must, however, respect the different modes of knowledge production by different types of institutions. Teaching and learning is relevant for all types of research, but there are different types of knowledge to be taught at universities with undergraduates and postgraduates as compared with public and private research institutions, whose primary mission is research.
- The specific feature of the European Research Area is that its diversity should be respected and addressed even more extensively. Standardization on the European level would decrease its ability to compete on an international level. However, the participation in collaborative transnational research is a basic requirement of modern research practices and should be focused on. Here the joint effort of Europe and its Member States is called for.

2.1.1.3 Evaluation

- Industrial research differs in many ways from knowledge produced within the traditional academic pathways of the Social Sciences and Humanities. Consequently, there is the need for more specific evaluation criteria paying attention to the different forms of knowledge produced – and their inherent characteristics and dynamics.[1]
- We recommend more flexibility in disciplinary research to guarantee its openness to the dynamics of research. This is not an explicit call for interdisciplinary and transdisciplinary research, but for the institutionalization of conditions in order to be able to focus on a research question without obstacles to crossing boundaries.
- To encourage interdisciplinary and transdisciplinary work in the Social Sciences and Humanities in Europe, the appropriate evaluation criteria have to be applied, which provide the opportunity to valorize co-operation across boundaries not only within the Social Sciences or Humanities, but within the academic community as a whole, and even with actors outside this circle, like civil society organizations.

2.1.1.4 Dissemination

- In some European countries like Germany or the United Kingdom there are already specialized agencies with a social sciences and humanities

[1] Impact Pathways of the Social Sciences and Humanities', SSH-FUTURES Deliverable 3.

background. They should be used more often to address the potential users of SSH knowledge.

- Social sciences and humanities knowledge is often reported in a 'friendly' way by the mass media, due to their economic logic. The actors of the Social Sciences and Humanities in Europe should engage in the public debate even more intensively to remedy errors or make new contributions.
- The flow of not only information, but also knowledge towards the public and the media necessitates competences which should be consistently trained and externalized to so-called experts in public relations, like agencies specialized in the dissemination of social sciences and humanities research.
-

2.1.1.5 Utilization

- Identify the stakeholders by type of knowledge production to prevent the impression of 'uselessness'. The knowledge of Social Sciences and Humanities has manifold target audiences, ranging from specific organizations within industry, to interest groups and civil society organizations as well as a broader mission for society in general.
- Enhance the exchange between stakeholders, the media and knowledge producers by specialized seminars and training courses, also during the dissemination of specific project results throughout the research process.
- Develop the collaboration of current and potential stakeholders with the knowledge producers within the Social Sciences and Humanities in order to create a dynamic relationship between the academic research institutions in Europe and their general public.

2.1.2 European Level

2.1.2.1 Programming

In addition to the general recommendations, more specific recommendations are:

- Enhance the dialogue with the scientific communities and develop instruments ensuring the influence of their opinions in more systematic ways.
- Ensure the inclusion of social sciences and humanities research directed at governance under multi-level conditions; citizens' participation; crisis prevention and intervention; social integration and migration; origins and combating racism, xenophobia and terrorism; multicultural integration; cultural and ethical issues and other relevant social, political and economic issues.[2]

[2] 'What Futures?' Findings from the foresight process, SSH-FUTURES, Deliverable 11.

Clarify the borders between the thematic parts of the Framework Programme and the European Research Council. The ERC cannot replace targeted social sciences and humanities research.

- Increase the participation of SSH in the other research areas by explicitly including the relevant issues in the respective call texts.
- With respect to the administrative and financial modalities of the Framework Programme, increase flexibility in such a way that it is adapted to the logic of research processes.
- Improve the relationship between the Commission and the national research authorities and research councils. Mutual learning has a different logic to RTD programmes, which calls for an adaptation of the ERA-NET procedures.
- Although the European Commission has no specific mandate in the field, specific programmes have to be established allowing for mutual learning and improving the national governance of science and research in weaker Member States.

2.1.2.2 Funding and Evaluation

In addition to the general recommendations, more specific recommendations are:

- A two-step procedure for the evaluation process is an important step in reducing the effort needed to submit proposals.
- Generalize the two-step procedure for all applications for research funding and increase the budget for evaluation.
- Ensure a more continuous process of evaluation; decrease the concentration on few deadlines, given the limited resources of research institutions and the quality of ongoing projects and applications.
- Meetings between the evaluation panel and applicants increase the transparency and the trust of the research communities in the fairness of the procedure. The current system of ranking the proposals by half-points is considered arbitrary.
- This in turn necessitates an increase in the budget foreseen for the evaluation process.
- The Member States should be encouraged financially to support the preparation of proposals.
- As a general rule, projects that involve the Social Sciences and/or Humanities should be fully financed to prevent unfair competition.
- Decrease the administrative and financial burden by providing more flexible contract conditions.
- Reach out for stakeholders to encourage the dialogue without neglecting the necessary autonomy of scientific research.[3]

[3] 'Social Sciences and Humanities – An Overview', SSH-FUTURES Deliverable 6.

2.1.2.3 Dissemination and Utilization

In addition to the general recommendations, more specific recommendations are:

- Encourage the participation of specialized dissemination agencies and public relations companies in European research projects and accept their funding on the same level as auditing companies.
- DG Research should play a more active role in disseminating the knowledge gained in the Framework Programmes to other European institutions, if necessary in conjunction with external consultants.
- The European Commission has to engage the national authorities of the Member States in the use of research results, as the access of research organizations to their national authorities is limited in many cases.

2.1.3 National Level

2.1.3.1 Programming

- Reforms of universities and research organizations cannot be based on 'best practice models', but must take national characteristics into account.
- Bi-national and multi-national co-operation between Member States has to be encouraged. Reforms of the research system necessitate a process of deliberation based on international experiences. However, the current structure of national research systems has to be respected. The Commission should assume a more important role in co-ordinating with mutual learning platforms and developing suitable instruments.
- There are obviously particular weaknesses in some Member States, (not only) due to low investment in science and research and, more specifically, in the Social Sciences and the Humanities, but in research governance as well. Specific programmes have to be developed on the bi-lateral, the multi-lateral and the European levels.
- A social science and humanities agenda must be based on the specific strength of national research traditions. However, multi-national programmes will ensure increased benefit for the European Research Area.

2.1.3.2 Funding and Evaluation

- Mutual learning procedures should ensure funding and evaluation processes that are flexible enough to take generic research, applied research and society-targeted activities into account.

- The relative weight of the Social Sciences and Humanities must be reflected in public and private research funding. Private research funding should be encouraged, but with mechanisms guaranteeing the autonomy of science and research.
- Researchers must be encouraged to conduct interdisciplinary research by means of special programmes and funding.
- Mutual learning of institutions dealing with research funding and evaluation has to find a more elaborated platform. This can be supported by the European Commission, but should be initiated by the national authorities themselves.
- Innovative SSH research requires setting up innovative institutions. Funding and evaluation must reflect their different natures.

2.1.3.3 Dissemination and Utilization

- Research communication must be professionalized and planned accordingly in research programming. This requires stronger specific skills and a close interaction between knowledge providers and professionalized science and research communication agencies.
- Researchers must become aware of the necessity to interact with stakeholders. Governance has an important role to play.
- Science and research must be aware that stakeholders are quite often actors on the national and regional levels. Researchers have to reach out to these actors as well.

2.1.4 Scientific Communities

2.1.4.1 Educational Background

- The European Commission should play a more pro-active role in encouraging student mobility.
- The European Commission should encourage collaboration between European universities beyond the already existing networks, with special consideration of weaker countries.
- The European Commission should foster combined and interdisciplinary studies by way of mutual Learning platforms and pilot projects. Interdisciplinary elements and coping with stakeholders must become part of science education – curricula have to be adapted.
- The European Commission should continue to enforce the removal of national barriers to foreign students

2.1.4.2 *Programming and knowledge production*

- Governance instruments might bring research closer to societies' needs. However, efficient and effective research requires creativity and autonomy. Researchers must play an important part in governance systems and autonomous decisions by researchers and academic freedom must be apportioned their due share.
- The balance between generic and task-oriented research is best guaranteed in universities; policy instruments must ensure autonomy options for researchers outside the university as well.
- Efficient and effective fund allocation is necessary to prevent work overload by administrative assignments.

2.1.4.3 *Funding and Evaluation*

- Funding and evaluation are key elements for successful governance; refining the instruments must become the building block for a comprehensive and appropriate evaluation culture.
- Evaluation is important, but the criteria must become more flexible. There is a need to understand diversity.
- Core funding is an important element for stimulating creativity and innovation. A balance of trust must be ensured between academic as well as transdisciplinary activities and control of the use of resources.
- Disciplinary excellence is still important, but interdisciplinary and transdisciplinary work has to be acknowledged in the evaluation procedure.

2.1.4.4 *Dissemination and Utilization*

- The scientific communities must change their attitudes towards society and become more receptive to societal needs.
- The scientific communities must play a more pro-active role in identifying stakeholders, accepting the necessity to include professional dissemination agencies in their research work.
- Where possible, stakeholders must be included in all steps of the research process, whilst avoiding the influence of specific lobbies and maintaining the necessary autonomy in decision-making.
- The dialogue with stakeholders must be intensified, possibly within a framework provided by funding institutions.

2.2 Goals of the project

The SSH-FUTURES project examines the prospects for the future development of the Social Sciences and Humanities in Europe, their potential alignment and how they relate to social demands and societal needs. The results shed light on the added value of a stronger inclusion of the Social Sciences and the Humanities in European research policies. It considers the experiences of the diverse international and national communities of scholars as well as those of knowledge stakeholders.

In Europe, on the European and on the national level, there are several barriers with regard to the adequate use of the knowledge produced by the Social Sciences and Humanities. These barriers might derive from the combined effects of four main factors:

1. The lack of a *comprehensive* social science and humanities agenda in some thematic RTD programmes.
2. National research funding schemes are now more targeted through programme orientation, but there is still a great variety across Europe.
3. Lack of institutionalized procedures at European and national levels for processing research results within and across policy agencies.
4. The failure to institutionalize and, in turn, promote multi- and inter-disciplinary forms of collaboration.

We argue that the best (or worst) practices in the user-producer or science-policy interaction can be explained with reference to the above global indicators. Projects, but especially programmes that are successful in the sense of entailing a high potential for 'use' are those that are:

- formulated and implemented in an environment characterized by a shared set of assumptions about knowledge and its role for policy, the economy and/or society, which is open enough to accept plurality and differentiation;
- enjoying support from above and institutionalized mechanisms for formulating research demand and processing research results;
- where inter-disciplinarity is understood and operationalized both with regard to the composition of research teams and/or networks and concerning method;
- and where research results are disseminated through adequate, but again different means to the wider scientific and policy community.

The larger set of science-policy interactions is, of course, a time-consuming process that often transcends the limited timetable of any particular project or programme (Sansom et al., 1999) or any pre-specified set of users (Shove and Rip, 2000). Indeed, we might only now be witnessing the tangible effects of the emergence of a European research community simply because several years are needed to institutionalize trans-national co-operation and research dissemination (whether top-down or bottom-up) (cf. INNOCULT Final Report, 2001). Furthermore, the benefit of the Social Sciences

and Humanities cannot be measured only in terms of direct applicability to policy and the economy. The contribution of Social Sciences and Humanities in more generic domains (e.g. values and culture) has also to be taken into consideration (Stehr, 1992, D3 'Pathways' of this project).

The key challenge is how to *accelerate* and *consolidate* such processes (i.e. enable them within the lifetime of a single project or programme), securing both multiplier effects and sustainability as well as legitimacy and quality control (Nowotny, 2000). The critical assessment of past experiences – both of successes and failures – can help forward strategic thinking in this respect.

We have explored the general question about the types of scientific knowledge and their impact pathways. It is important to understand the character of knowledge in order to address the need for and the use of the Social Sciences and Humanities. This leaves us, however, with the task of analyzing the modes of production of knowledge, the ways in which research is supported, and used, and hence the relationship between the knowledge producers and/or knowledge providers, on the one hand, and the stakeholders (funding institutions and users), on the other.

The empirical research shed light on the ways in which the Social Sciences and Humanities are produced, the motivation and the strategies of research institutions - as expressed in the mission statements and the interpretation of these by the research managers responsible - and the motivation and strategies of individual researchers. Underlying to this was the general hypothesis that research activities of individual researchers are shaped by a combination of several factors, among which the most important are:

- the organisational framework of the research setting and working conditions,
- the underlying institutional structure of the research landscape,
- the academic background of the researchers, and
- their opinions about new and upcoming developments in research.

While this is highly relevant as analytical background we will focus on particular types of knowledge most relevant to SSH.

Figure 1: Graphical representation of hypotheses of the SSH project

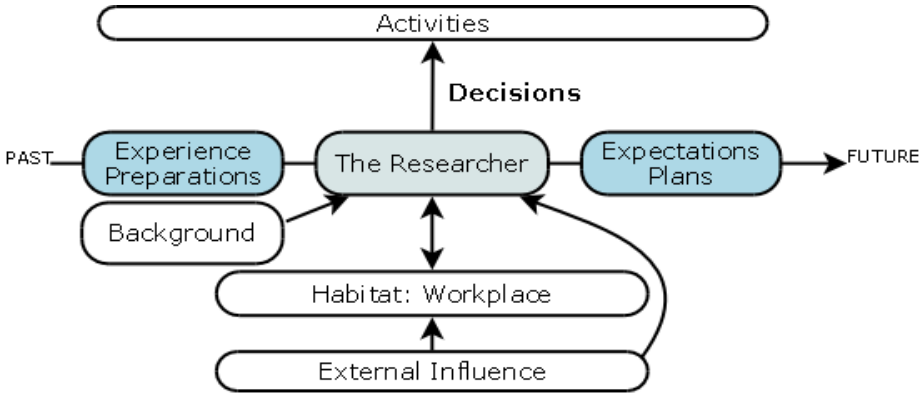

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Figure 1 shows graphically these presumed effects and interactions. Its core assumption is that whatever changes happen at the aggregate with regard to the SSH materialise through the activities, plans and expectations of individual researchers. In turn, the individual SSH researcher is 'formed' by his or her own social and academic background, his/her work place, and the external influences (career structures, funding modalities) impacting on the latter.

3 The Pathways of Social Sciences and Humanities

The Social Sciences and Humanities seem to be trapped in the traditional paradigm claiming that their knowledge is developed in an 'ivory tower', on the one hand, and that applied research is not scholarly, on the other. Academics seem to suffer from a (self-imposed) isolation from society, politics and the economy; 'Applied Social Sciences', on the other hand, quite often degenerates into mere policy consulting, guided by the interests of those who commission research.

The theoretical lead for the research of the project focussed on the pathways the Social Sciences and Humanities follow. Hence, the key issues included the self conception of SSH researchers as knowledge producers, and the perceived external expectations and pressures; the modes of knowledge production, modes of collaboration and working methods, the influence of 'governance' on research topics, methods and dissemination and the expectations about future societal, economic and cultural problems.

The development of the knowledge society, knowledge-based economy and evidence-based politics and policies has made it obvious that the traditional dichotomy between basic and applied social sciences is becoming superfluous. The complexity of knowledge production entered into by scientific discourse as early as the 1990s with Gibbons' famous concept of 'Mode-2' research (Gibbons, 1994; Nowotny, Scott & Gibbons, 2003), the idea of a tri-lateral knowledge production (the 'triple-helix' notion by Leydesdorff & Etkowits, 1998) and the importance of public participation in science and research agendas (Pohoryles & Eckstein, 1988; Nowotny, Scott & Gibbons, 2001).

Today, there is also more need for new interpretations and a reconstruction of Grand Theories to prevent the re-invention of the wheel. However, the reconstruction of a Grand Theory is a fruitless academic game. What seems to be important is the development of a *'patchwork theory'*, a way of integrating the existing knowledge, which is quite often generated in an isolated way, into an overarching framework that helps us understand society and that contributes to its transformation.

However, the reconstruction of a Grand Theory is a fruitless academic game. What seems to be important is the development of a *'patchwork theory'*, a way of integrating the existing knowledge, which is quite often generated in an isolated way, into an overarching framework that helps us understand society and that contributes to its transformation.

SSH FUTURES followed the approach of Nico Stehr (2003), who defines knowledge as the 'capacity to act', in the sense of Max Weber's social action. In this context 'knowledge' is more than 'information', which as raw material does not allow social actions *per se.* In respect of the Social Sciences and Humanities Stehr distinguishes

between two concepts of knowledge: 'instrumental knowledge' or 'capacity building' (Stehr, 2007).

'*Instrumental knowledge*' is both academic knowledge production and its application by 'experts'. Traditional academic research is characterized by an approach, which is shaped by strongly disciplinary thinking. The research activities are driven by the curiosity of the researcher himself/herself and the outcome is oriented towards the scientific community. This is also the reference for quality assessment and consequently the career path of the scholars depends on the outcome of such peer-reviewing processes. The knowledge might be further disseminated, by mediators and modifiers, but the 'travel of the knowledge' is not part of the scientific process as such and not the responsibility of the knowledge-producing scholar.

The main *loci sapientiae* are universities and public research organizations, which, however, come under increasing pressure from the reproach of 'ivory tower research' and the scarcity of funding available. The degree of persistence depends on the institutional pressures, claims by the non-scientific environments or by the changing structure of the scholars employed. Internationalization is an important factor helping scientific practices to overcome over-specialization. Research programmes that are relevant for the funding of research institutions might increase the pressure directly or via new organizational forms of traditional institutions.

The 'expert' and consulting activities are characterized by their main focus, which is on professionalism hence there is quite a 'diffuse' disciplinary structure. The research activity is initiated and defined by the client. The main impact is enhancing knowledge, which is assessed by the client according to its utility. The evaluation is performance-based, i.e. appreciated in the short term by the client, measured in the long term in monetary terms and/or by the amount of contracts acquired. The traditional providers of this type of knowledge are consulting companies. Under the growing pressure of funding necessities, universities and research organizations are increasingly entering the competition on the knowledge market. The career path of professionals is less secure than the traditional university or the career in the public sector. This is even true of those who work in the framework of a university or a public research institute.

'*Capacity building*' is a distinct concept of knowledge. It is related to specific societal needs that meet the interests of the scholars in the SSH. The approach is problem-oriented, hence based on interdisciplinary and/or transdisciplinary thinking and the knowledge created and provided is not necessarily merely scientific, but might include local, cultural and tacit knowledge as well. Other activities in this field are translation, transformation and/or adaptation of existing knowledge. The research activity is initiated and its contents are shaped by the problems and 'needs' of the subjects observed and/or involved. Observation, even participating observation, can be an appropriate method. Enhancing knowledge is one of the expected impacts, but the opinion-shaping process and the conflict over a change in attitudes might be connected to knowledge production. Furthermore, the knowledge might initialize actions as it relates to structures and processes. The career path is the most uncertain

one. In the knowledge production system there are not yet adequate forms of evaluation for this type of activity, and interruptions in the ordinary career path inside academia tend to be seen as obstacles.

The Social Sciences and the Humanities offer specific knowledge in a variety of fields, e.g. Knowledge on values and norms, on structures and institutions, and on rules, procedures, and political actions.

Social sciences can develop innovative worldviews that help advance society. To a certain extent, Karl Mannheim formulated such a claim (Mannheim, 1929). However, a basic condition for the success of such concepts must be met: the establishment of a knowledge society that enables citizens to develop and advance their worldviews. In this respect, we speak about 'learning societies'. The idea that the Social Sciences and the Humanities have to reach out from the academic milieu is not a new paradigm; it rather was the predominant paradigm, when the classics wrote with an eye on the problems of people: They addressed concerns with daily relevance and provided orientation. This approach fainted when it became more important to address the colleagues from the own discipline striving for recognition and impact factors that would further the own career. It is clear that such a capacity to provide orientation necessitates the well-informed citizen as a partner. Under such a condition, actor-centred ontology is a good response to the new challenges. The increasing role of ethical issues is evident. Many ethical committees are very closely following modern research and look at their impact on societies (Luce & Giorgi, 2009; Fuller, 2009; Kastenhofer, 2009).

One of the most obvious tasks of the Social Sciences and Humanities is analyzing social structures and institution-building. At an early date, Max Weber and Karl Marx already analyzed the role of social classes and the power structure in their contemporary society. The most influential social scientists have made structures and institutions the very focus of their work (Mills, 1956, 1958). The importance of analyzing structures and institutions becomes even more obvious when we look at the European level with its complex process of institution-building. European integration is looking for an institutional framework of policy actors at the European, national, and regional levels. As the discussion on the European Constitution demonstrates, the development is still under way. The Social Sciences and Humanities have a role to play in building the institutional framework, the development of which goes far beyond legal services.

Apart from the traditional analyses of the rules and procedures that organize societies and the influence of social actors, the impact of citizens in modern democracies is increasingly becoming an issue. The issue is the balance between traditional policy-making in the set-up of a representative democracy and civil society. At present, the influence of active pressure groups is an important element in modern democratic processes (Evers & D'Silva, 2009). Representative democracy has, however, to ensure that the influence of civil society actors does not undermine the rights of those

who are not able to voice their concerns or gain the same influence as those who are able to assert their interests themselves.

Hennen & al. (2004) offer an interesting typology of impact that can serve as a basis for understanding the contents the Social Sciences and Humanities have to offer. The core of this typology is a distinction between three dimensions of impact: Enhancing knowledge among policy-makers and social actors in public debates; Forming opinions and attitudes on the part of actors involved in policy-making and the debate; and initializing actions taken by policy-makers or other actors. It is obvious that these categories relate to the typology of the contents and concepts the Social Sciences and the Humanities have to offer. This makes it clear that the categories are not to be understood as a continuum leading from 'enhancing knowledge' to 'forming attitudes and opinions' to 'initializing actions', but are rather separate types of impacts that do not necessarily exclude one other.

Social Sciences and Humanities can offer knowledge to meet social needs and do so in various institutional set-ups. Social Sciences and Humanities potentially impact directly or through mediators and modifiers on politics and policies, societies and the economy. There are facilitating elements as much as barriers that promote the use and impact of the Social Sciences and the Humanities. The interaction process impacts feed on the paradigms and the research directions.

The future of the SSH in Europe depends to a significant extent on the reaction of Social Science and Humanities actors and the shaping of the interaction process between knowledge producers and providers and stakeholders, which was consequently one focus of the SSH FUTURES empirical study.

4 European Landscape: Homogeneities and divergences

The concept of a European research area is built upon the understanding that despite the great differences between the landscapes of the 27 Member States at a more abstract level, there are commonalities between these different cultures. The SSH-FUTURES project showed that the national research structures are very diverse in terms of institutions or disciplinary cultures.

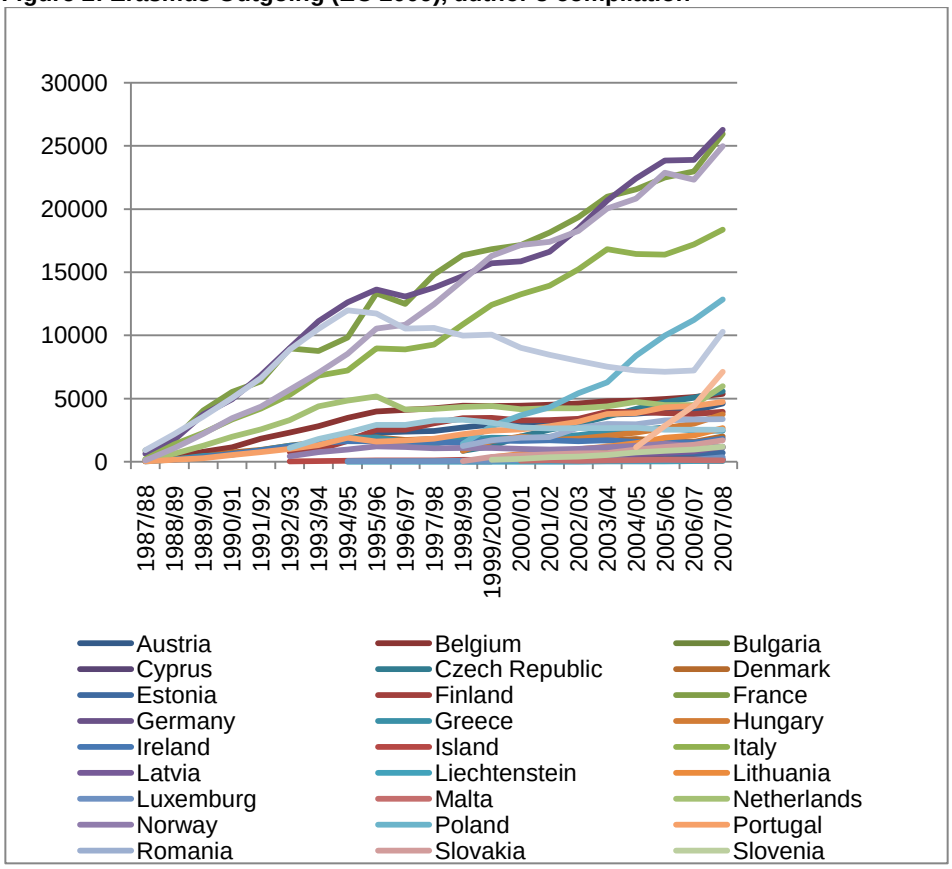
The institutionalization of the Social Sciences and Humanities at universities can partly be considered the cause of the diversification not only between countries, but first and foremost between disciplines. These distinctions were not yet clear in the late 19th and early 20th centuries. Max Weber as well as Karl Marx could be considered sociologists, political scientists, economists and/or historians. The historical development of diversification has generated scientific communities that tend to differentiate themselves from one another in the form of 'schools', and in so-called 'Bindestrich-Soziologien' ('hyphenated sociologies'). The national context is also relevant, as historical analyses show e.g. that, unlike the natural sciences, the social sciences have never transcended their national frameworks (Dienel & Peterson, 2002). The establishment of schools with their specific scientific languages was accompanied by the differentiation between the national discourses that prevented social science knowledge integration. Nico Stehr (2007) refers to this type of knowledge production as 'instrumental', as, in his view, knowledge travels: developed in the 'ivory tower' of the universities, it is available for all types of applications. He describes this process as 'pathways'.

The process of integration of the EU aims at enforcing a European space of research, but, as the results of the SSH-FUTURES project show, there are still major obstacles to the emergence of such a space, some of which should be overcome, as they hinder researchers' freedom to cross the borders of their discipline for the purposes of research, but some of them constitute a strength of the European Union, proving to be historically grown diversifications within the European research landscape.

Is there anything such as a Europeaness of Social Sciences and Humanities? The European integration of the scientific communities of the Member States is perceptible. To cite an example: 11% of all researchers in the SSH-FUTURES survey have studied in a different EU country and this is a phenomenon which is likely to increase. Among the younger respondents to the questionnaire, studying abroad in a different EU country is as high as 17%. These findings on this trend towards transnational exchange within the training of the Social Sciences and Humanities are in keeping with indications of the ERASMUS programme for the exchange of students. These statistics show evidence that there are not only institutional changes between the EU countries, but that the extent of participation in transnational activities like ERASMUS widely differs between countries and country groups. France and Germany have the highest share of the total amount of Erasmus participants over the whole time scale, with approximately 30%. By contrast, Slovakia shows a rate of 0.43%.

There is a bias, of course, due to the fact that Germany and France, for instance, have participated in the programme from the very outset, but the figures show statistically relevant differences, some of countries sticking out with high score and others still in a catching-up process. (See Figure 2)

Figure 2: Erasmus Outgoing (EC 2009), author's compilation[4]



Still, the diversity of national research frameworks is not per se an obstacle to transnational work, but at least a challenge that has to be taken into account. One of the results of this project was the identification of common patterns across nations, which allowed identifying four different types of European Research Systems within the countries of the project.

The four different research landscapes are based upon the results of the quantitative survey among researchers in Austria, Belgium, France, Germany, Israel, the Netherlands, Poland, Sweden and participants in the European Unions' Framework Programmes 6 and 7. The country groups of research landscapes show similar institutional patterns. The Anglo-Saxon research landscape is by far the most university-dominated. Furthermore, significant commonalities proved that we can

[4] The data of 2007/08 is from the Lifelong Learning Programme of the EU including 'Study mobility' and 'Placement mobility'.

speak of a Northern and a Central European research landscape and that France constitutes a case of its own.

The overwhelming majority of all respondents received their education in their home country. Studying abroad – whether in a different EU country, North America or a non-EU country – is still a minority phenomenon, and more likely to occur in some countries than in others. 84% of all respondents studied in the country of their current residence, 11% in a different EU country and 3% in the United States. In Israel, the share of SSH researchers studying in the U.S. is 26%, whereas it is 7%. in the U.K Studying in a different EU country (other than one's own) is most diffuse in Belgium (15%) and Israel (14%). Table 1: Country of study by current country of residence (in %), displays these results analytically.

Table 1: Country of study by current country of residence (in %)

		Country of study				
		Country of residence	Another EU country	North America	Other	n
Austria	row %	85.4	12.7	0.5	1.4	213
Belgium		81.3	14.6	0.0	4.2	48
France		92.6	4.9	1.2	1.2	163
Germany		84.7	13.0	1.1	1.1	177
Israel		58.9	13.7	26.0	1.4	73
Netherlands		84.1	11.3	2.5	2.0	353
Poland		98.0	0.0	0.0	2.0	50
Sweden		95.5	2.3	1.4	0.9	352
UK		79.4	12.1	7.5	0.9	107
Other		41.4	48.6	4.3	5.7	70
Total		83.9	11.5	3.0	1.6	1624

There are no significant gender differences, but age again plays a role: mobility within the EU for the purpose of study is more likely in the youngest cohort: within this group (the 35s or less), the share studying in a different EU country is 17% (as compared with 11% for the whole population).

Table 2: National SSH research fields – a characterization

	Central Europe			Poland	Northern Europe		France	Anglo Saxon	
	Austria	**Belgium**	**Germany**	**Poland**	**Netherlands**	**Sweden**	**France**	**Israel**	**UK**
Research landscape	Segmented	Segmented	University-dominated	Segmented	Segmented	University-dominated	Segmented	University-dominated	University-dominated
Funding opportunities	Limited, public	Limited, public	Diversified, mixed	Limited, public	Diversified, mixed	Diversified, mixed	Limited, public	Limited, public	Diversified, mixed
EU-FP participation	Moderate, important	Low, important	Moderate	Low, important	High	Moderate, important	High, important	Low, important	High, important
Policy reforms	Slow, contested	Advanced in non-SSH	Slow, contested	Theoretical	Completed	Not an issue	Slow, contested	Advanced in non-SSH	Completed
International outlook	EU	EU	EU, non-EU	EU	EU, non-EU	EU	EU, non-EU	Non-EU	EU, non-EU

4.1 The Anglo-Saxon research landscape

The United Kingdom and Israel comprise what the SSH-FUTURES project designates the Anglo-Saxon research landscape. Despite the differing historically occasioned institutional settings of the Social Sciences and Humanities, there are commonalities in their structure, allowing this categorization. The Anglo-Saxon research landscape is dominated by universities. In the United Kingdom, most social sciences and humanities research is carried out by universities (106 in total). In the UK, the universities are also the largest employers of RTD personnel in SSH: around 4,000. A further 2,000 are employed in central government and research councils. (See also Table 2: National SSH research fields – a characterization)

The total sample size for the SSH-FUTURES survey was 211 persons for Israel, the response rate of 33.6% led to 71 researchers responding; for the United Kingdom, 394 researchers were contacted, of whom 25.4% or 100 persons replied. Additionally, co-ordinators of EU projects from the Framework Programmes 5 and 6 were contacted, in total 277, of whom 30.7% answered the survey. (See Table 3 for more details)

Table 3: Sample size, valid responses and response rate for the Anglo-Saxon research landscape

	Sample Size	Responses	Response rate (%)
Israel	211	71	33.6
United Kingdom	394	100	25.4
Coordinators of EU FP5 and FP6 projects	277	85[5]	30.7
Snowball sample[6]	1009	255	25.3
Total[7]	5343	1655	(32.3)

** Note: the response rate indicated for the (total) sample corresponds to the response rate for the sample without the snowball.*

Practically all the researchers addressed in the survey worked at universities. Their academic qualification was high. In Israel 95.9% and in the United Kingdom 88.8% had a Ph.D. or higher qualification. Only 4.1% (Israel) and 11.2% (United Kingdom) of the researchers indicated that they had only obtained a Bachelor's or Master's degree. (See Table 4)

[5] Of whom 22 (25.8%) are from a Southern European country and 9 (11%) from a 'new member state' of the European Union.
[6] For all research landscapes.
[7] For all research landscapes.

Table 4: Highest academic qualification (in %) of respondents of the Anglo-Saxon research landscape

		Highest academic qualification			
		Bachelors or Masters	Ph.D. or higher	Total	n
Israel	row %	4.1	95.9	100	73
United Kingdom		11.2	88.8	100	107
Other European country		20.0	80.0	100	70
Total		9.6	90.4	100	1632

Nearly all of the respondents from the Anglo-Saxon research landscape had an educational background in the Social Sciences and Humanities. 47.9% (Israel) and 34.3% (United Kingdom) of the respondents had been trained in the Humanities. 42.3% (Israel) and 56.2% (United Kingdom) had been trained in the Social Sciences. (See Table 5)

Table 5: Academic (disciplinary) background in the Anglo-Saxon research landscape

		Disciplinary background				
		Humanities	Social Sciences	Non-SSH	'Combi' studies	n
Israel	row %	47.9	42.3	2.8	7.0	71
United Kingdom		34.3	56.2	0.0	9.5	105
Other		17.4	63.8	5.8	13.0	69
Total		36.4	49.0	4.9	9.7	1582

The survey showed commonalities between these countries. Older universities were stated to be more important than newer ones, unlike e.g. in the Netherlands and Germany. Moreover, the gender differentials were least pronounced in the Anglo-Saxon research landscape, where the position in the organization (junior, senior, head of unit) as a variable was matched with the variable 'gender'.

The Anglo-Saxon research landscape showed further commonalities in the research programming (see chapter 4.1.1.) and the research funding (see chapter 4.1.2.). The European dimension was particularly pronounced in these two countries (see chapter 4.1.3.).

4.1.1 Research programming

Governmental institutions and the scientific community are more likely to be recognized as important stakeholders for social sciences and humanities research in the Anglo-Saxon research landscape (and in France). International and, especially, EU programmes play a comparatively unimportant role. They are considered 'very important' only by 16.3% of researchers in the United Kingdom and Israel. This compares with 11.1% for the total population.

Furthermore, the influences on the research agenda of the researchers were perceived as major; 88.1% of the Anglo-Saxon respondents stated that they were setting their agenda and this is aligned to the aggregate results. (See Table 6)

Table 6: Influences on research agenda in the Anglo-Saxon research landscape

	% marked 'Very high influence'						
	Int. & EU[8]	Authorities	National[9]	Private corporations	Scientific community	Own institution	Myself
	16.3	11.0	31.0	1.6	35.9	14.1	88.1
All	11.1	9.9	24.7	2.3	47.3	28.1	85.9

**p < 0.05; chi-squared test; n=184 for Anglo Saxon, n=1545*

In Israel, the institutional reforms in the research landscape may have a major influence on the future development of the field, since they affect the priorities of research and the spreading of expert centres throughout the country. They are therefore sketched in the following paragraphs.

Science policy has been redefined in Israel, since the National Council on Civilian R&D was established in 2002. It consists of setting up priorities for specific research areas, such as infrastructure development, or awareness-raising for new technologies among young people. However, these measures are mainly oriented towards the natural sciences and the new emerging technologies especially. Thus, the priorities for knowledge centres eligible for receiving infrastructure support are bio- and nanotechnology, electro-optics, material sciences, ICR, and water and environmental sciences. Little has been done for the Social Sciences and Humanities.

In order to ensure that science and research is not concentrated in the main cities of Israel, the Science and Technology Ministry, in collaboration with regional institutions, has established regional R&D centres throughout the country. Regional R&D centres serve as a link between the periphery and the centre. In order to realize the full scientific, social and economic potential found on the periphery, regional R&D centres rely on leading researchers with a personal involvement and interest in the region. Apart from regional centres, learning centres have been established to improve general knowledge levels, thus reducing social and inter-generational gaps, in addition to increasing interest in a research career among the young generation.

[8] International and European Unions' programmes.
[9] National programmes.

4.1.2 Research funding

The funding structures of the research landscapes have undergone major changes in response to the pressures of the modern world. The importance of competitive funding has increased and this has changed the practice of research. In this respect, the Anglo-Saxon research landscape has adapted comparatively well in comparison with e.g. Central Europe.

The science budget in the United Kingdom doubled between 1997 and 2007, mainly due to the significant increase in industrial contributions. But this money was mostly fed to the natural and technological sciences, and not to the Social Sciences and Humanities. Indeed, between 1990 and 2006, government expenditures on RTD decreased; over the same period, the budget allocated to higher education and research councils increased. In other words, the research component of financing increased and the core funding decreased. Most of the R&D expenses from 2006 have been financed by Business Enterprises with 45%, followed by R&D financing from abroad that amounts to 17% and the Research Councils that fund 11.7% of R&D in the UK. The funding for R&D of Government and Higher Education corresponds respectively to 11% and 1.2% of the total. With 4.6% of total R&D funding, the private non-profit sector funds nearly four times of what Higher education funds in R&D.[10]

Israel shows similar patterns of funding structures. It is among the countries with the highest expenditure on RTD in relation to GDP (4.5%), but it mostly comes from the private sector. The share of the public sector in RTD is smaller than in the EU; it is about 25% whereas it is 35% in the EU-25. As a result, 40% of the R&D expenditure is market-oriented.

The United Kingdom and Israel are by far the most advanced countries with respect to the adoption of a multi-tier financing strategy. Besides institutional core funding and national competitive public research funding, tuition fees and donations are also important financing sources. The share of respondents in the UK and Israel mentioning three or more sources of funding for their organizations was 61% and 58% respectively. This compares with under 20% in most other countries. (See Tables 7 and 8)

[10] -Source: Office for National Statistics.

Table 7: Reputation of different funding sources in the Anglo-Saxon research landscape

	Institutional core funding	National competitive research funding	EU Framework Programme	
	% marked very good reputation			
	45.5	80.0	58.7	140
Total	46.7	67.6	44.1	1282
Chi square	0.72	0.00	0.00	

** Average of n: The number does not stand for the total sample due to the missing cases.*

Table 8: Number of financing sources marked as 'very important' in the UK and Israel

	% marking x sources as 'very important'.				
	1	2	3+	Total	n
UK	10.5	28.6	60.9	100	105
Israel	20.3	21.7	58.0	100	69
Total	37.5	36.8	17.2	100	1393

Note: In descending order according to '3+ sources'.

Universities in the United Kingdom are funded through three streams: core funding from the state budget, funding from the higher education council budget and funding from research councils. Research funding in the UK is allocated by seven research councils. There is one research council in charge of the Social Sciences – the Economic and Social Research Council (ESRC) – and one in charge of the Humanities – the Arts and Humanities Research Council (AHRC). The ESRC especially has grown into a major actor in social science research policy not only in the UK, but also at the European level. The ESRC and AHRC use two main funding instruments: they support individual projects for three to five years and/or institutions as centres of excellence for a period of five to ten years. Thematically, both the ESRC and the AHRC follow an open approach, supporting projects defined by the researchers.

In Israel, the main funding agency for SSH research is the Israeli Research Foundation (ISF) – albeit on a comparatively small scale: 12 to 18% of the annual budget, which does not amount to more than 2.5 million Euros (new funding) per year. The ISF mainly allocates individual grants.

4.1.3 The European dimension

The United Kingdom is the most Europeanized and international of all European countries in terms of RTD. Collaborations with non-EU countries, especially the United States, are equally important, but via EU funding programmes. It is probably correct to say that the UK is today more European than it used to be during the 1980s and the early 1990s.

The UK has always strongly participated in research conducted at the European level. Not only has this country adapted to the transformations in research on the European level, but it has itself also become an influential actor in the shaping of this process in the SSH. The government is very keen on further permitting UK researchers to have access to EU funds – there is a support service for UK-based organizations interested in exploiting the opportunities provided by FP7, including a website, help line and a network of National Contact Points (NCPs).[11]

Israel is the only non European country to be highly involved in the European framework programmes. Apart from the main funding agency in Israel ISF, which largely assigns individual grants, all other SSH research is either carried out independently at universities or through external funds – mainly US and EU. Israel is the only non-European state to have full membership in the framework of the EU Research and Development Programme.

Since Israel first participated in the Framework Programme in 1996, R&D co-operation with the EU has enjoyed remarkable success. More than 700 Israeli companies, research institutes and universities have taken part in projects under the auspices of the 6th Framework Programme. There is a particularly strong track record of co-operation in information technology and life science. Moreover, a growing number of Israeli researchers are taking part in exchange and mobility programmes.[12] This is partly due to the creation of the ISERD (Israel Europe Research and Development Directorate) in 1996, an institution that actively encourages the access of the Israeli research landscape to the European Framework Programmes.

Following our hypotheses and the results of the SSH FUTURES survey, the Anglo-Saxon research landscape thus belongs to the group of countries that show a high alignment in SSH research with the policies of the European Union.

[11] For further details see: www.fp7uk.co.uk.

[12] http://www.iserd.org.il/images/public/About/Files/ISERD.pdf.

4.2 The French research landscape

France features a different and unique system. The research structure is mostly based on public research and higher education institutions. Furthermore, universities and (public) research organizations largely depend on state funding. All ministries have their own think-tanks, or research organizations, at their disposal, largely financed by block grants (the 'ministère tutuelle' of quasi-state institutions).

The SSH-FUTURES project therefore opted for the conclusion that there is a French research landscape which is characterized by its structural divergence from the other groups of countries analyzed in this project. The following therefore refers only to the results of the survey and analysis of France, unlike the other research landscapes, which group countries.

The total sample size for the SSH-FUTURES survey in France was 504 researchers; the response rate of 26.8% led to 135 persons answering the online questionnaire on their research landscape. (See Table 9)

Table 9: Sample size, valid responses and response rate in France

	Sample Size	Responses	Response rate (%)
France	504	135	26.8
Co-ordinators of EU FP5 and FP6 projects	277	85[13]	30.7
Snowball sample	1,009	255	25.3
Total	5,343	1655	(32.3)

** Note: the response rate indicated for the (total) sample corresponds to the response rate for the sample without the snowball.*

The respondents mainly specified that they had a Ph.D. or higher as their academic qualification (see Table 10) and most had a training background in the Social Sciences and Humanities: 50.9% in the Social Sciences and 35.6% in the Humanities, which largely corresponds to the balance determined in the other research landscapes.

Table 10: Highest academic qualification (in %) of respondents in France

		Highest academic qualification			
		Bachelors or Masters	Ph.D. or higher	Total	n
France	row %	11.0	89.0	100	163
Other European country		20.0	80.0	100	70
Total		9.6	90.4	100	1632

[13] Of which 22 (25.8%) are from a southern European country and 9 (11%) from a 'new member state'.

Table 11: Academic (disciplinary) background in France (in %)

		Disciplinary background				
		Humanities	Social Sciences	Non-SSH	'Combi' studies	n
France		35.6	50.9	3.7	9.8	163
Other European country		17.4	63.8	5.8	13.0	69
Total		36.4	49.0	4.9	9.7	1582

The French research landscape was analyzed with respect to its research programming (see chapter 4.2.1.), its research funding (see chapter 4.2.2.) and its European dimension, i.e. in terms of its participation in European projects and orientation towards European research policies. (See chapter 4.2.3.)

4.2.1 Research programming

In accordance with the other research landscapes analyzed in the project, respondents from the French research landscape perceived themselves as very much influencing the research agenda, which at least indicates the self-perception of the autonomous researcher prevailing in the Social Sciences and Humanities. Following this came the perceived influence the scientific community has on the research agenda. 55.2% of the respondents saw a strong role for themselves in the power game of defining research topics. Private corporations were considered relatively harmless, as only 3% of the respondents identified them as influential. (See Table 12))

Table 12: Influences on research agenda in France

	% marked 'Very much influence'						
	Int. & EU *[14]	Authorities*	National [15]	Private[16]*	Scientific community*	Own Institution*	Myself *
	14.6	12.8	18.8	3.0	55.2	34.5	87.2
All	11.1	9.9	24.7	2.3	47.3	28.1	85.9

**p < 0.05; chi-squared test, n= 165 for France, n=1545*

The French science and research system is built around universities, '*grandes écoles'* and public research institutions such as the CNRS. The division between research and teaching is less accentuated than in smaller countries of the EU, but is still relevant. The social sciences and humanities research landscape in France has undergone major reforms in recent years (SNRI 2009,

[14] International and European Union Programmes.
[15] National Programmes.
[16] Private corporations.

p.6). Since the creation of the ANR in January 2007, some programmes have been centralized within this institution. Furthermore, ministries and agencies regularly launch applied research programmes. Of importance are 'mixed structures' as well. Whilst in SSH not more than 26 research units belong directly to the CNRS, the CNRS is involved in 335 that belong jointly to the CNRS and the universities. Furthermore, there are 1,038 university research units, of which 607 are in the Humanities and 431 in the Social Sciences. ('Rapport Godelier', 2002).

In terms of employment, the human resources of the SSH are mainly concentrated on public establishments of higher education and research. Only a small proportion of SSH researchers work in the private sector.

4.2.2 Research funding

From 1980 to 1993 the annual growth of R&D projects undertaken in France (4.4% per year) was more rapid than the growth of GDP (2.0% per year). Since 1993, this tendency has been reversed and national expenditure on R&D (DIRD) has grown by only 1.3% per year while GDP has continued to grow at a rate of approximately 2.3% per year. The temporary reversal of this trend between 1999 and 2002 was due principally to renewed activity by business enterprises (with a rate of annual R&D growth of over 4%). Since 2003, however, the share of business in R&D has somewhat diminished. In 2005, business DIRD represented 1.33% of GDP as against 0.8% for public administrations.

As regards the financing strategies followed by the respondents of the survey, mostly Social Scientists and Humanists, France shows an inclination towards one source of funding, which contrasts strongly with research landscapes like the Anglo-Saxon or Northern European ones. (See Table 14) The reputation of the different funding sources, institutional core funding, national competitive research funding and the EU Framework Programme, indicates no special preference for one specific source, which is related to the comparatively low importance of national competitive research funding, an interesting difference to the other research landscapes analyzed. (See Table 13)

Table 13: Reputation of different funding sources in France

	Institutional core funding	National competitive research funding	EU Framework Programme	
	% marked 'very good reputation'			n
	48.3	46.2	46.0	141
Total	46.7	67.6	44.1	1282

** Average of n: The number does not stand for the total sample due to the missing cases. Chi square=0.72 for institutional core funding, chi square=0.00 for national competitive research funding and EU FP.*

Table 14: Number of financing sources marked as 'very important' in France

	% marking x sources as "very important".				
	1	2	3+	Total	n
France	54.0	31.7	14.4	100	139
Total	37.5	36.8	17.2	100	1393

Note: In descending order according to '3+ sources'.

4.2.3 The European dimension

In FP6, France ranks second in funding received and third in the percentage of participation in accepted research proposals. Of the 74,731 research groups that participated in the programmes funded by the FP5, 12.1% were French. Approximately 48.5% of the projects in which French researchers participated were in SSH, but fewer than 20% of SSH projects were co-ordinated by France. In 2005-06, SSH teacher mobility within the EU-25 was 9% for France, as compared with 13% for Germany and 7% for the UK.[17]

As the structural reforms within the research system in France show, there is a strong tendency towards integration within the European system, and, as the high participation in the Framework Programmes show, with at least some success at the moment.

[17] http://ec.europa.eu/education/programmes/llp/erasmus/stat_en.html.

4.3 The Central European research landscape

The Central European system, covering Austria, Belgium and Germany in the SSH-FUTURES project, is segmented, with universities and research organizations displaying quite distinct and different behaviour. Public and private non-university research organizations are an important component of the German, Austrian and Belgian research landscapes. The results for the New Member States, included in the SSH-FUTURES survey extensively by Poland are for merely pragmatic reasons included in this chapter.

The total sample size for this region in the SSH-FUTURES survey was 453 researchers from Austria, the response rate of 36,6% led to 166 respondents in this country; in Belgium 203 researchers were contacted, and 18.7% of them responded to the questionnaire; in Poland the response rate was 29.1%. Of 148 researchers contacted, 43 responded to the online survey. (See Table 15 for more details)

Table 15: Sample size, valid responses and response rate for the Central European research landscape and Poland

	Sample Size	Responses	Response rate (%)
Austria	453	166	36.6
Belgium	203	38	18.7
Germany	448	149	33.3
Poland	148	43	29.1
Coordinators of EU FP5 and FP6 projects	277	85[18]	30.7
Snowball sample	1009	255	25.3
Total	5343	1655	(32.3)

** Note: the response rate indicated for the (total) sample corresponds to the response rate for the sample without the snowball.*

The survey mainly addressed researchers working at university, as concerning academic qualifications in the Central European research landscape it can be stated that most researchers had a Ph.D. or higher qualification: 86.4% in Austria, 87.5% in Belgium, 91% in Germany and 86% in Poland. The percentage of respondents who indicated a Bachelor's or Master's degree as their highest academic qualification ranged from 8.5% to 14%. (See Table 16)

As regards the disciplinary background of the respondents, nearly all of them had completed their training in the Social Sciences and Humanities. For the Humanities, the percentage ranged from 23.4% (Belgium) to 54.2% (Austria). There were more social scientists among the respondents of this research

[18] Of whom 22 (25.8%) are from a Southern European country and 9 (11%) from a 'new member state' of the European Union.

landscape, with a percentage ranging from 34.9% (Austria) to 57.4 (Belgium). (See Table 17)

Table 16: Highest academic qualification in the Central European research landscape and Poland

		Highest academic qualification			
		Bachelors or Masters	Ph.D. or higher	Total	n
Austria	row %	13.6	86.4	100	213
Belgium		12.5	87.5	100	48
Germany		8.5	91.0	100	177
Poland		14.0	86.0	100	50
Other European country		20.0	80.0	100	70
Total		9.6	90.4	100	1632

Table 17: Academic (disciplinary) background in the Central European research landscape and Poland (in %)

		Disciplinary background				
		Humanities	Social Sciences	Non-SSH	'Combi' studies	n
Austria	row %	54.2	34.9	5.2	5.7	212
Belgium		23.4	57.4	(4.3)	(14.9)	47
Germany		46.6	46.0	2.9	4.6	174
Poland		36.0	52.0	(6.0)	(6.0)	50
Other		17.4	63.8	5.8	13.0	69
Total		36.4	49.0	4.9	9.7	1582

As a new Member State and a country still undergoing structural transformation, Poland should be in a group of its own. Currently, the Eastern European research landscapes are all in transition. Given their distinct academic and institutional heritages, they face unique challenges in the process of European integration. Thus, it is at present unclear in which direction Poland's research landscape will develop. Based on our data, the Polish research landscape appears to be tending towards either the central European or the French model. The majority of Polish respondents interviewed for this survey work at universities, but a significant number also work at non-university research organizations. Institutional core funding is less important than for French organizations, but competitive research funding remains quite low.

Considering that the Polish sample for the survey is small and hence does not allow the calculation of any meaningful statistics, it was decided – merely for pragmatic reasons – to group the Polish respondents together with the samples from Austria, Belgium and Germany.

The majority of the SSH researchers in Europe responding to the survey work at only one institution. Only 12 percent work at two institutions. Nevertheless, this practice is more diffuse in Austria (24%). This country displays a rather segmented research landscape with universities in charge of higher education and research organizations (or academies) responsible for research. The prevalence of more than one employer in these countries reflects, in part, this situation – with researchers employed at universities for teaching and in research organizations for research.

The Central European research landscape and in Poland as example for the Member States will be further analyzed in terms of research programming (see chapter 4.3.1), research funding (see chapter 4.3.2.) and the European dimension (see chapter 4.3.3.).

4.3.1 Research programming

First and foremost, it is the scientific community and one's own institution that is perceived as the major stakeholder. Governmental institutions are least relevant for researchers working in Central European universities. Moreover, CSOs are the least relevant for researchers in France and Central Europe. (See Table 18)

Table 18: Influences on research agenda in the Central European research landscape (and Poland)

	% marked 'Very much influence'						
	Int. & EU[19]	Authorities	National[20]	Private corporations	Scientific community	Own institution	Myself
Uni	12.3	10.9	23.2	3.9	40.4	27.0	88.0
ROR[21]	20.3	15.0	31.6	4.5	36.6	46.6	80.9
All	11.1	9.9	24.7	2.3	47.3	28.1	85.9

**p < 0.05; chi-squared test, n=358 for C. EU/Uni, n=132 for C. EU /ROR, n=1545 total*

Still, major institutional reforms, e.g. in Austria, are changing the importance of the government as a stakeholder. With the University Organization Law (UOG 02), the Austrian State has set itself up, more explicitly than ever before, as the stakeholder and financier. In 2002, to implement the Bologna guidelines, the government passed the UOG 02, which was revised in the following years (since 2004 every year until 2009) and introduced major paradigmatic changes as regards research practice at the universities. It altered the relationship between the universities and the government, or the public, the main stakeholder. Although the government released the universities from public administration into autonomy, the financial dependence on the government

[19] International and European Unions' Programmes.
[20] National programmes.
[21] ROR = Research Organization.

increased the portfolio of steering instruments. As they are now investing in an autonomous organization, it is completely legitimate to ask for specific outputs. The implementation of the Bologna process reforms has also changed the institutional structures of the higher education system in Germany. It has led to more autonomy for higher education institutions, an increasing competition between them and quality assurance as well as internationalization.

The most challenging reforms Belgium has undertaken were linked to the process of turning Belgium into a Federal State, which took place in five main phases of institutional reform (1970, 1980, 1988/89, 1993, 2001). At present, the Federal Council of Ministers determines the priorities of the federal authorities with respect to science policy and a highly federalist and multi-level governance system that informs research programming in Belgium.

The reforms in Poland are still ongoing and are slow to materialize for structural reasons. Various initiatives are being launched, several of which are modelled on EU actions. Poland has launched its own 'Technology Platform' programme, mirroring the equivalent programme at EU level. It organizes research priority planning around so-called National Plans or National Framework Programmes.

4.3.2 Research funding

Researchers working at Central European universities are content to rely on institutional core funding; researchers working in (public and private) research organizations are more attuned to competitive funding. The significance of competitive funding in these countries is on the increase, but research organizations and universities continue to rely mostly on core funding.

The least advanced organizations with respect to attracting funding from different sources are those in Austria, Belgium, Germany and Poland (and France). In these countries we continue to find the relative majority of respondents to the SSH-FUTURES survey mentioning only one source of funding for their organizations: 52% in Poland, 47% in Austria, 42% in Germany and 37% in Belgium. (See Table 19)

Table 19: Number of financing sources marked as 'very important' in the Central European research landscape (and Poland)

	% marking x sources as 'very important'".				
	1	2	3+	Total	n
Belgium	36.4	29.5	34.1	100	44
Germany	42.2	37.3	20.5	100	161
Austria	46.9	34.2	18.9	100	196
Poland	52.4	40.5	7.2	100	42
Total	37.5	36.8	17.2	100	1393

Note: In descending order according to '3+ sources'.

The reputation of the different funding sources shows that national competitive funding has a comparatively good image, with 67.6% of the Central European respondents marking this with a very good reputation, in contrast to the EU Framework Programme (44.1%) and institutional core funding (46.7%). (See Table 20)

Table 20: Reputation of different funding sources in the Central European research landscape (and Poland)

	Institutional core funding	National competitive research funding	EU Framework Programme	
	% marked very good reputation			n
Uni	43.1	65.0	45.4	310
ROR[22]	48.7	62.6	52.3	112
Total	46.7	67.6	44.1	1282

** Average of n: The number does not stand for the total sample due to the missing cases.*[23]

The different degrees of disciplinary concentration in different countries are also revealing. Overall, the three most popular disciplines account for just under 40% of all SSH researchers working in national or international research projects. The strongest concentration can be observed in Poland, Belgium and Israel, where the three most popular disciplines include between 50 and 55% of all SSH researchers. The least concentration or greatest dispersion can be observed in Austria and the Netherlands with just around 40% (followed by France and Germany with 43 and 44% respectively).

With the UOG in Austria, which was passed partly to set up the institutional changes for the reforms of the Bologna process, universities are now expected to be more active in combining different streams of funding. Core funding by the state is subject to stricter evaluation criteria, including the meeting of so-called 'societal goals' such as gender mainstreaming. Competitive funding, and external funding especially, is becoming an increasingly important financing source for universities. Yet, the academic social science sector remains less competitive than the natural science sector.

4.3.3 The European dimension

The European dimension of the current debate on the future of the Social Sciences and Humanities in Germany and Austria is highly influenced by the issue of the so-called Bologna process, in the course of which the SSH of these countries have seen budget cuts and the closing of departments as a result of a stronger profiling on the part of the universities.

[22] Research Organization

[23] Chi square: 0.72 for institutional core funding, 0.00 for national competitive funding and EU Framework Programme

Nevertheless, in Germany, the political actions for supporting the SSH disciplines are increasing. The German research infrastructure has seen changes in accordance with the policy stipulations of the European Union. In this context, two major initiatives of relevance for SSH research are the Pact for Research and Innovation (Pakt für Forschung und Innovation, 2005), the Initiative for Excellence (Exzellenz-Initiative, BMBF 2005) and the Higher Education Pact 2020 (Hochschulpakt 2020, BMBF).

In 2003, 72.8% of Germany's international collaborations, including almost all its SSH collaborations, were performed in conjunction with a member of the EU-15. Hence, the role that Germany ascribes to the EU within an international research landscape is important. The reforms which Germany is undergoing were initiated to increase the core contribution towards aligning Germany with EU programme lines. Europeanization is judged as both directly and indirectly affecting these reforms, directly through the Bologna process and indirectly through its own research programmes. In terms of funding, Germany is less dependent on or oriented towards the EU, and this probably has something to do with its size and the diversity of its funding mechanisms, including those for SSH.

Austria has not adapted its national research policies in the Social Sciences and Humanities to those of the European Union. Concerning its participation in EU framework programmes, it ranks in the midfield of the European Union, behind countries of similar size like Sweden or Belgium. Austria is aligned with the EU science policy developments as they affect the SSH, insofar as funding is concerned; and also with respect to the modalities for project funding and evaluation that are playing an increasingly important role. Austria is less aligned with EU research policy in the SSH field, insofar as normative views are concerned. Unlike the EU level, which prioritizes the problem-solving type of research even for academic projects, the Austrian research landscape favours basic research.

The European Union occupies an important place also within the Belgian research landscape. Belgium is less dependent on EU funding overall, albeit quite extensively so in the social sciences. On the other hand, whilst its research policies follow the EU logic in terms of seeking to achieve critical mass and the prioritization of research that is oriented towards problem-solving, relevant reforms have yet to be completed at SSH level.

In this context, Poland has participated in the EU Framework Programmes since 1999, first as an associated country and currently as a Member State. Even though there have been reforms to the way the Polish research landscape works, these have not yet made it possible better to access the EU research system. The status given to the EU in the context of an international system is not very important. To this extent, despite the self-conscious policy objective, Poland remains comparatively unaligned with the EU research dynamic.

4.4 The Northern European research landscape

The Northern European system (here Sweden and the Netherlands) is likewise dominated by universities, but is more oriented towards a two-tier financing system combining a good mixture of institutional core funding and competitive project funding – both in reality and also in the perception of SSH researchers.

The total sample size for the SSH-FUTURES survey was 930 researchers from the Netherlands, of whom 34.2% (318) responded; a similar response rate (38.5%) was reached in Sweden – 295 persons answered the online questionnaire on the status quo and the expected future of their research landscape. (See Table 21)

Table 21: Sample size, valid responses and response rate for the Northern European research landscape

	Sample Size	Responses	Response rate (%)
Netherlands	930	318	34.2
Sweden	766	295	38.5
Coordinators of EU FP5 and FP6 projects	277	85[24]	30.7
Snowball sample[25]	1009	255	25.3
Total[26]	5343	1655	(32.3)

** Note: the response rate indicated for the (total) sample corresponds to the response rate for the sample without the snowball.*

The academic qualifications of the respondents, most of them university researchers, were high. 88.1% (Netherlands) and 98% (Sweden) evinced a Ph.D. or higher degree as their academic qualification. (See Table 22) Their disciplinary background was mostly the SSH. 54.5% (Sweden) and 47.4% (Netherlands) of the respondents trained as social scientists and 39.9% (Netherlands) and 21% (Sweden) trained as humanists. (See Table 23)

Table 22: Highest academic qualification (in %) in the Northern European research landscape

		Highest academic qualification			
		Bachelors or Masters	Ph.D. or higher	Total	n
Netherlands		11.9	88.1	100	353
Sweden		2.0	98.0	100	352
Other European country		20.0	80.0	100	70
Total		9.6	90.4	100	1632

[24] Of whom 22 (25.8%) are from a Southern European country and 9 (11%) from a 'new member state' of the European Union.
[25] For all research landscapes.
[26] For all research landscapes.

Table 23: Academic (disciplinary) background in the Northern European research landscape (in %)

	Disciplinary background				
	Humanities	Social Sciences	Non-SSH	'Combi' studies	n
Netherlands	39.9	47.4	4.3	8.3	348
Sweden	21.0	54.5	8.5	16.0	343
Other European country	17.4	63.8	5.8	13.0	69
Total	36.4	49.0	4.9	9.7	1582

The Northern European research landscape showed commonalities in the research programming (see chapter 4.4.1.) and the research funding (see chapter 4.4.2.). The European dimension displays the strong orientation and endeavour towards international (and European) co-operations prevailing in both countries. (See chapter 4.4.3.)

4.4.1 Research programming

As point of reference, the scientific community as a whole is judged as more important, measured by the perceived influence it has on the research agenda in Northern Europe. This is comparable with France and unlike Central Europe, where one's 'own' institution is more important. This is obviously related to the institutional framework. Furthermore, the survey showed that the majority of the scientific community (84.9%) in the Northern European research landscape perceives they are setting their own agenda: this does not allow any conclusion as to the extent of freedom researchers currently and actually enjoy in deciding on what their research will be about, but it shows the importance of academic freedom to the respondents. (See Table 24)

Table 24: Influences on research agenda in the Northern European research landscape

	% marked 'very important' audience						
	Int. & EU[27]	Authorities	National[28]	Private corporations	Scientific community	Own Institution	Myself
	6.5	7.4	23.9	1.1	53.8	27.4	84.9
All	11.1	9.9	24.7	2.3	47.3	28.1	85.9

**p < 0.05; chi-squared test; North Europe n=707, All n=1545*

Governmental institutions are least relevant for researchers working in Northern European universities. As regards the importance of different audiences for SSH researchers, civil society organizations enjoy no recognition as stakeholders, nor do citizens and industries. (See Table 25)

[27] International and European Union Programmes.
[28] National Programmes.

Table 25: Importance of different audiences in the Northern European research landscape

	% marked "very important" audience					
	Government	Public agencies	Industry	CSOs	Citizens	n
	21.6	13.2	2.7	10.1	16.9	449
Total	25.8	17.5	2.5	11.0	16.2	1045

For a long time the Dutch science system was divided between a purely academic system dealing with fundamental research and fulfilling its educational tasks and a semi-public contract system, oriented towards the needs of the industrial sector and the government. This goes back to the 1920s and 1930s, when the Netherlands still had to catch up with other industrialized countries and therefore deemed it necessary to develop applied research in laboratories outside the university system and in line with the government's interests. The first was the Water Management Institute, established in 1927. In 1930, the Dutch Parliament passed the TNO Act, which regulates applied scientific research, and in 1932 the Netherlands Organization for Applied Scientific Research (TNO) was established by law. TNO is a large contract research organization which provides a link between fundamental research and practical application that can be commercially exploited. For decades, there had hardly been any linkage between these two systems. Since the 1950s, however, the university system in the Netherlands has changed substantially, leading to the large degree of autonomy these institutions now have.

Historically, the landscape was shaped differently in Sweden, resulting in a relatively homogenous research system (in terms of knowledge producers). The university sector concentrates on training and research, receiving generous funds from government institutions for fundamental research. Those universities better known abroad are those displaying a mixed funding base and a combination of basic and applied research.

4.4.2 Research funding

In Sweden, the largest share of funding comes from industry, however almost all of this money remains in the business sector, where almost no SSH research is done. In 2001, Social Sciences accounted for 11% of R&D resources in higher education resources and research in the humanities for 6%, which indeed corresponds to most of the research done in the SSH in Sweden.

In the Netherlands, the SSH operate with a considerably smaller scale of funding. The social sciences division of the NWO, with an annual budget of up to € 40 million, funds over two hundred new multi-annual research projects every year. The universities owe their largest source of income (60%) to 'first-stream' funding, basic subsidies or core resources made available by the

Ministry of Education, Culture and Science. The funding system is based on a strong egalitarian ethos: funding is still mainly allocated on the basis of the number of students registered.

Compared with the results of the SSH-FUTURES on the reputation of different funding sources in the Northern European research landscape, which show an inclination on the part of the respondents towards national competitive research funding (71.6%), as opposed to institutional core funding (48.1%), the current changes in the funding structure of these countries becomes obvious. (See Table 26)

Table 26: Reputation of different funding sources in the Northern European research landscape

	Institutional core funding	National competitive research funding	EU FP
	% marked very good reputation		
	48.1	71.6	37.8
Total	46.7	67.6	44.1

Chi square 0.72 (institutional core funding), 0.00 (national competitive research funding and EU Framework Programme

The SSH research field has responded to modern pressures for change. The growing importance of competitive funding has changed the practice of SSH research – and the Northern European research environments are undoubtedly more advanced in this respect. Sweden and the Netherlands follow a preference for a two-tier strategy. The relative majority in both countries (45 and 40% respectively) mention that their organizations rely on two sources of funding. A further 29% in the Netherlands (and 16% in Sweden) mention three or more sources. (See Table 27)

Table 27: Number of financing sources marked as 'very important' in the Northern European research landscape

	% marking x sources as 'very important'.				
	1	2	3+	Total	
Netherlands	31.4	39.4	29.2	100	325
Sweden	39.1	44.6	16.4	100	312
Total	37.5	36.8	17.2	100	1393

Note: In descending order according to '3+ sources'.

4.4.3 The European dimension

The Netherlands have a publication output rate that puts this country among the most productive countries in the world. Most of these publications have been realized in conjunction with Germany, the United Kingdom and the United States, and a considerable proportion of them have been produced in the field of Social Sciences and Humanities. More than half of the co-publications are realized with a member of the European Union.

This effort for international co-operations is palpable in the Northern research landscape at on the whole. It is also reflected e.g. in the Swedish participation in the European Framework Programmes, which increased sharply during FP4 (1994–98), and was twice as high as during FP3 (1990–94). FP5 (1998–2002), was the first programme Sweden had an opportunity to participate in shaping. In FP5, Dutch research organizations were present in 28.9% and participated in 8.5% of projects as co-ordinators. The Netherlands ranked fifth in terms of the co-ordination of projects, but this share decreased by 21% after FP4.

Nevertheless, internationalization is also explicitly and actively promoted. The NWO institute for social science, one of the biggest funders of SSH in the Netherlands, considers the development of the European Research Area a central priority also for the Netherlands. Participation in EU R&D and the recent reforms to the Dutch research landscape are further indicators of the importance attributed to the European Union by Dutch research. It is the same case in Sweden, where the further development of European co-operation, including the creation of a European science infrastructure, the fostering of mobility programmes and the harmonization of European and national research funding is supported by the government. [29] The reactions to the Green Paper published by the European Commission on the future of the European research landscape were positive:

In terms of alignment with EU policies, Sweden would appear to be in a class of its own. The commitment to policy-relevant applied research, without giving up basic research, is long-established here and is institutionally consolidated. Europeanization is therefore perceived and experienced mainly as an instrument for strengthening internationalization – understood both as opening towards European partnerships and partnerships with non-European countries. Following our hypotheses and the results of the SSH-FUTURES survey, the Northern European research landscape thus belongs to the group of countries that partly shows a high alignment in SSH research with the policies of the European Union, and an important or high participation in EU Framework Programmes.

[29] http://www.sweden.gov.se/content/1/c6/10/84/56/99cfe6a5.pdf (pp. 24).

4.5 Some notes on dissemination

> "*Social scientists participate because they like to be heard. At the same time, if you ask them to write a booklet about the main findings of their research, they start to withdraw. [...] In the current system, there is not much appreciation for scientists who do more than others to disseminate their results outside the field.*"[30]

The problem of the issue of dissemination no longer primarily concerns solving technological barriers to the diffusion of knowledge from the Social Sciences and Humanities to policy-makers, the scientific community and the broader public. The new media offer e.g. a wide range of possibilities to communicate research findings in innovative ways, and this issue has also been explicitly addressed, at least on the European level. Still, the diversity of broadcasting infrastructures, which the European Commission has put into place since 2000 to ensure that researchers can publicize the results of their activities and the funding of workshops and conferences for European projects, contrasts with the prevalent practical difficulties of reaching the public.

Dissemination, which etymologically refers to the Latin for 'abroad' (*dis*) and 'seed' (*semin*), is an issue that affects the language used for the purpose of communicating research objectives, processes and findings, as well as the circulation pathways of knowledge and related barriers to the stakeholders involved. The question as such has been addressed in the SSH-FUTURES project, with the analysis of European and national governance policies, interviews with stakeholders and the survey among European researchers. The following chapter refers to the main findings of this research.

In the current European research landscape, there are major obstacles to the flow of information. Among them, the SSH-FUTURES project identified translational issues (see chapter 4.5.1.) and failures in trust, which affect the relationship between the different stakeholders and researchers (see chapter 4.5.2.). It is, notwithstanding the value of their research and the focus of the EC research governance, still a crucial problem that "social scientists continue to face a major challenge when trying to make visible the impact of their work"[31] (see chapter 4.5.3).

[30] Int. 57, the Netherlands, producer.
[31] ftp://ftp.cordis.europa.eu/pub/fp7/ssh/docs/sshleaflet_en.pdf.

4.5.1 Translational issues

> *"If I were to organize a meeting with a Minister and bring in a professor…I don't want (her) to start every sentence with, on the one hand, on the other….because in five minutes you have lost the Minister and the Minister is looking at her or his watch and you've lost the debate."* [32]

The language used in the Social Sciences and Humanities has to be changed and adapted for dissemination activities, especially in order to reach a public outside academia or even a disciplinary circle. Opting for a more comprehensible language to express research questions and findings can guarantee a certain impact on politics and solicit the interest or support of society. The quest for more emphasis on translational issues was especially noticeable in the stakeholder interviews in the German-speaking country group (Austria, Germany).

There was among the researchers and stakeholders interviewed by this project an understanding that to a certain extent the complex language of the SSH cannot simply be avoided; specialization of research has led to this. Moreover, not every researcher is prepared to summarize complex research questions and later findings in order to catch the attention of his/her public. Consequently, researchers were not generally perceived as deliberately hiding behind a non-comprehensible expert jargon, but as partly helpless in the light of the ambitious task of communicating their specific knowledge to stakeholders and the public as a whole. It was problem that was perceived as specific to the SSH.

When e.g. obstacles to the circulation of knowledge from the scientific world to the media were discerned in language, the interviews showed evidence that, although there is a recognition of this issue, no systematic consequences have been drawn for the institutional shaping of organizations. Only few stakeholders reported on special strategies implemented within their institutions to translate findings systematically for the media. Aligned to this, the results of the survey point out the focus of European projects on the internal and not (to the same extent) external level. The issue of translating the expert knowledge of a scientific micro-community or a self-contained project team is crucial.

The translation process of scientific knowledge into commonly understandable knowledge was related to a possible danger of language distortion, and it is here that the issue of trust in the dynamics of dissemination becomes evident.

[32] Int. 46, UK, producer.

4.5.2 Circulation pathways of knowledge

There is a certain risk of consolidating epistemic micro-communities within the Social Sciences and Humanities; the dynamic circulation of knowledge to the public at large is all but obvious. Furthermore, the issue of impact and effective use has more to do with the existence of an interface between research and policy than it does with dissemination in the conventional sense. And such an interface, while it may use a range of information tools, is necessarily at least partly human, relying on the relations between different actors. Consequently, dissemination not only concerns impasses in one direction, but dynamic relationships between different actors and a circulation of ideas, and this was reflected in the results of the SSH FUTURES stakeholder interviews. This affects different constellations of actors, beginning with the researchers involved in the project, the academic community and also the public at large.

Civil Society Organizations were accorded only a minor role, as they were merely considered sources of information, and only few respondents referred to CSOs as potential equal partners, used not only by the Social Sciences but themselves producers and users of the Social Sciences.

The media were usually understood as a monodirectional phenomenon: the researcher and his/her possibilities of influencing media content and the media as an intermediary organization for enlarging the public audience for the research community. The role of the media as a controller of the scientific world was an issue that was not raised. The crucial role of the media in the diffusion of scientific knowledge was largely recognized by the stakeholders, and it was clear that this places special demands on translation. (See chapter 4.5.1. 'Translational issues')

The analysis of the expert interviews shows a general recognition of the need to engage in a discourse with politics, but without giving up scientific independence. There was a range of failures identified in the circulation of ideas on both sides. On the one hand, there was a lack of interest in or even awareness of the political stakeholders and, on the other, the metaphor of scientists living in ghettos and politicians who were not making any effort to establish connections and exchange ideas. The Social Sciences and Humanities should engage more strongly in a political discourse, not only delivering results to the politicians, but engaging in the discourse and reacting when the wrong decisions have been taken.

The obstacles to the circulation of ideas between the Social Sciences and Humanities and the public at large are due to the different operational realities which have to be confronted. The expectations of what constitutes relevant results in the SSH and what these results ideally should be, is most probably different, implying that civil society organizations want to use the results for

action, whereas, following the metaphor of the ivory-tower researcher, this might even be satisfied if it represents a contribution to the scientific world and is not yet translatable into any concrete measure or useful in e.g. negotiations.

Unlike the case of Civil Society organizations, where mistrust was not an issue, the stakeholders mentioned that the relationship with the media and the circulation of ideas in this sphere was linked to possible misunderstandings and the same picture was sometimes painted in a more radical way, speaking of an abuse of the Social Sciences and Humanities by journalism. Stakeholders reported aligned to the media on some abuse of science by politics, but this was perceived as a failure in communication that might partly be avoided and might be partly inherent, not specifically to SSH, but to science in general and unavoidable with the improved communication of findings.

> "*Media live from scandalizing or aggravating things. We cannot avoid this. There is also pressure to be visible in the media. But you realize that you only get into the media when you scandalize issues, some positions that can be expected do not make it into the press.*"[33]
>
> *"It happens all the time and it's not surprising". [They] have a gene to get re-elected*, *so they will use social science if suits their purpose*."[34]
>
> "*Politics has its own logic. It works quite often in my view so that you decide to make social policy reforms, but at the same time they do not listen to what research has to offer since more comprehensive tests are never done. May this lead to good results? Reforms are made and at best some follow up may later be done in order to see if things worked out or not.*"[35]
>
> *"[…] there is certainly a need better to involve NGOs and to create direct links with those fragments of civil society which are directly operational in certain fields.*"[36]

[33] Int. 30, Germany, funder.
[34] Int. 45, UK, producer.
[35] Int. 77, Sweden, producer.
[36] Int. 6, Belgium, stage-setter.

4.5.3 The European dimension

The Seventh Framework Programme has included in its general priorities the reinforcement of dissemination channels through which SSH knowledge is circulated – under its 'Capacity' specific programme, but also indirectly in its 'Co-operation' specific programme, where the use of state-of-the-art technologies is promoted as a way of increasing access to SSH knowledge (Commission 2007a, p. 9). And, as the SSH FUTURES project indicates these steps have to be intensified for the future establishment of a European research landscape responding to the needs of its users within academic freedom.

Most consortia concentrate on their internal activities, at least during the lifespan of European projects. Moreover, following the results of the SSH FUTURES survey, little suggests that dissemination to the outside world starts on completion of the contract. Anecdotic evidence demonstrates that even the websites of projects disappear shortly after the completion of projects.[37] Hence, the time for external research communication is quite limited. This seems to be true both of interactions within the research communities and with potential users: the lack of external dissemination activities seems to be one of the weak points of European projects.

To put it in a nutshell, more than 95% of respondents to the SSH-FUTURES survey consider internal communication very important. By contrast, this number decreases to about one third for activities outside the consortium. (See Table 28, types of interaction and dissemination activities)

Table 28: Types of interaction and dissemination activities

Types of dissemination activities[38)]	Very important
Internal activities (n=312)	95.2%
Pro-active external activities (n=309)	36.9%
Externally induced activities (n=303)	32.7%

This indicates that explicit concern at EU level about knowledge utilization does not really translate into specific mechanisms to ensure it. While effective dissemination of research results is encouraged, it is not systematically monitored. The results of commissioned research are available for input into the policy process, and if the priority setting and programming process has been

[37] This information has been gained by sampling projects for the studies at hand and has recently been confirmed by another project. Using the Cordis database containing the link to the project websites, it can frequently be seen that the website mentioned no longer exists.

[38] Multiple response question. Percentages refer to columns, e. g. 95% of all co-ordinators consider internal dissemination activities very important.

adequately designed, they are presumably potentially relevant. But lengthy academic reports are unlikely to be read in policy circles. And, of course, dissemination in itself cannot be equated with impact.
One clear difference between policy processes at national and at EU level appears quite clearly, reflecting fundamental (albeit not necessarily permanent) differences in the political processes themselves. Due to the logic of political competition at national level, policy actors can rely on a highly dynamic field of production of knowledge for policy purposes that is driven by the desire to seek influence on the part of intellectual entrepreneurs whose services are typically available to the user for free. Without this ongoing connection between the research process and public debate, mediated inter alia by the quest for political influence, it is unlikely that a productive research-policy interface, operating purely as such, could be established. The idea that it might, via a direct link between policy priorities and academic endeavour, perhaps be regarded as the 'technocratic fallacy'. By contrast, modes of political engagement at the EU level, while they do not preclude the kind of committed research that drives much of the national policy process, provide fewer incentives.

Addressing this problem is obviously not within the scope of EU research policy. It is, however, important to keep in mind that the performance of a knowledge production / utilization system is powerfully determined by background conditions and cannot necessarily be enhanced solely by the comparatively limited policy tools available within the research field itself.

5 Crossing the borders

Disciplines offer the possibility to control the reproduction of the Social Sciences and Humanities, is Van Langenhove's explanation for the persistence of old-fashioned academia. 'Disciplines are the gatekeepers in academia to curricula, appointments and the establishment of departments. Scholars who aim for a career as social scientists cannot escape publishing in disciplinary journals. National and international associations of social scientists are also largely organized according to disciplines.' (van Langenhove, 2007, 135).

The assertion that disciplines 'largely control entry, award prestige, and govern career advancement in the scholarly hierarchy' (Wallerstein, 1999, 47) proves to be the obstacle per excellence to inter-, intra- and transdisciplinarity in Europe, as the SSH-FUTURES project shows. The research followed the definition of Wallerstein (2004), for whom the term 'discipline' refers to the splitting of the bulk of human knowledge into three 'superdisciplines' (natural sciences, humanities and social sciences). Subsequently, specific 'disciplines' develop within the framework of the 'superdisciplines', such as economy, sociology, philosophy, political science, and anthropology.

This process cannot only be explained by intellectual reasons, but is the result of structural developments as well, or, in Wallerstein's terms, the building of 'organizational containers' (Wallerstein, 2004). The circulation of knowledge from the academic world to a broader public and vice versa is part of a discussion on forms of co-operation which involve crossing borders. The issue of interdisciplinarity and transdisciplinarity in the Social Sciences and Humanities is nothing new, as the debate on these research approaches has a long tradition. However, over the last decade the discussion has become more pronounced (Wallerstein, 1996 and 2004, van Langenhove, 2007) and the growing policy quest for these approaches requires further inquiry as to what the motives for and the understanding of these are.

The SSH-FUTURES project differentiated between intra-, inter- and transdisciplinarity within the quantitative research part, as though this differentiation could not have been used just as well for the qualitative expert interviews identifying the stakeholders of social science and humanities research, as they approached the term 'interdisciplinarity' with the same fuzzy understanding. The fuzziness of the term 'interdisciplinarity' has tended to increase with use. Almost all types of knowledge combination, whether in terms of methodology or theme, are referred to with this label. This is a phenomenon that can be observed for the natural sciences as well.

- Intradisciplinarity stands for combinations of disciplines *within* the overarching dimensions of the 'social sciences', on the one hand, and the 'humanities', on the other. A situation of intra-disciplinarity occurs

when a researcher employs methods and/or theories from disciplines inside the realm of the social sciences or inside the realm of the humanities, or when researchers in teams from different disciplines of the same realm work together. This is the case, for instance, for a combination of sociology with political science (for the social sciences), or literature and philosophy (for the humanities).

- Interdisciplinarity stands for a combination *across* the realm of the disciplines of social sciences and the humanities. Examples are the collaboration between economics and linguistics or sociology and literature.
- Transdisciplinarity stands for knowledge produced in teams that include social sciences and/or humanities as well as natural sciences. An example of this is the collaboration of ethics and/or social sciences with biology and/or nanotechnology.

Strengthening inter-, intra- and transdisciplinary research is part of the necessary innovation process for the Social Sciences. In line with the above findings are the results of the SSH-FUTURES survey, which show that the overwhelming majority of SSH researchers (89%) are of the opinion that interdisciplinary research is important for the SSH and will increase in importance in the future. The future of the Social Sciences and Humanities is crucially dependent on the successful interaction between the different stakeholders, including civil society organizations and researchers. Consequently, one focus of the research on the future of Social Sciences and Humanities in Europe was to identify the stakeholders and, more specifically, the perceptions of who the major stakeholders are. Insights into these questions were allowed by the results of the survey and the interviews with stakeholders.

In the following, the synthesis of results focuses on the relations of SSH researchers to their stakeholders (see chapter 5.1.), forms of co-operation in the academic world, i.e. inter-, intra-, and transdisciplinarity (see chapter 5.2.), and the still extant obstacles to the establishment of a highly innovative field of social and humanist science open to both their stakeholders, their public and the flexible employment of methods and theories not belonging to one's own state of the art disciplinary knowledge (see chapter 5.3. and 5.4.)

5.1 Reaching out for the stakeholders

The production of knowledge within the Social Sciences and Humanities, which is of high policy relevance for crucial issues and not only affects governmental institutions, but also actors like Civil Society Organizations and the public debate, is one major objective of European research governance. It is to respond to 'knowledge demands'. The survey results in the SSH-FUTURES project shows reality to be partly in opposition to this policy goal, as these actors were not perceived as the major stakeholders of SSH research. It was governments and public agencies that were overall perceived as the most important stakeholders. This is particularly true of the Anglo-Saxon and French environments.

With the exception of the Anglo-Saxon research landscape, civil society (or at least CSOs) was not perceived as a major stakeholder outside the academic world. 30.6% of the respondents of the Anglo-Saxon research landscape considered Civil Society Organizations a very important audience for their research, and, to a comparable amount (29.9%) they also included citizens as an important public. This is a contrast to the Central European research landscape, especially to university respondents. Only 6.5% of them considered CSOs as an important public. By contrast,-the government was ascribed a major role. (Table 29) The same was reflected in the stakeholder interviews carried out within the project. Major patterns of scepticism towards non-conventional approaches to research were identified, as well as the different expectations, of stakeholders,due to different operational logics .

Table 29: Importance of different audiences by research landscape

	% of respondents indicating very important audience*				
	Government	Public agencies	Industry	CSOs[39]	Citizens
Anglo-Saxon[40]	35.2%	20.8%	3.8%	30.6%	29.9%
Northern European [41]	21.6%	13.2%	2.7%	10.1%	16.9%
Central Europe Universities [42]	20.8%	15.5%	1.5%	6.5%	13.8%
Central Europe ROs [43]	28.6%	27.7%	2.7%	8.9%	15.3%
France [44]	41.9%	25.7%	2.6%	8.5%	7.1%
Total	25.8%	17.5%	2.5%	11.0%	16.2%

**Multiple responses encouraged.*

[39] Civil Society Organizations.
[40] (n=106).
[41] (n=449).
[42] (n=449).
[43] (n=112).
[44] (n=115).

5.2 European Researchers and Co-operations

European policy stresses that Social Sciences have an important contribution also to make to other disciplines, which presumably indicates co-operations broader than interdisciplinarity in the project-design sense. It concerns crossing boundaries within the academic community and with different actors. The SSH-FUTURES project shows that there is still a long way to go before these objectives are self-evident, although the scientific communities have already opened up to a certain extent.

Inter-disciplinary research is a common research practice in the European research landscapes analyzed. Only 22.8% of the researchers are involved merely in research in their own disciplines. One in four works on intra-disciplinarity projects and one in three on interdisciplinary ones. With respect to the future of task-oriented research, even one in five researcher works on transdisciplinary research combinations. (See Table 30)

Table 30: Disciplinary and other research orientations

% of respondents performing research in this manner	n=1,658
Own discipline only	22.8%
Intra-disciplinary research	26.3%
Inter-disciplinary research	30.9%
Transdisciplinary research	20.0%

The analysis of the research co-operations crossed with the European research landscapes induced by the SSH-FUTURES project shows divergences. The result is that inter-disciplinarity is widespread in the Anglo-Saxon research environment, less so in France, and extra-disciplinarity is the exception, even more so in the Northern European research landscape and most extensively in the French research landscape, where monodisciplinarity prevails. (See Table 31, 'Influences of research landscape and organization on research')

Table 31: Influence of research landscape and organization on research

	Share carrying out X type of research (in %)				
	Mono-disciplinary	Intra-disciplinary	Inter-disciplinary	Extra-disciplinary	n
Anglo-Saxon	17.1	27.8	35.3	19.8	187
Northern European	20.7	22.9	31.4	24.9	706
Central Europe / University	25.8	28.5	30.5	15.2	361
Central Europe / ROR	19.5	29.3	31.6	19.5	133
France	33.0	28.3	29.7	9.0	83
All	23.o	26.0	31.3	19.7	1,552

p < 0.05; chi-squared test

5.3 Institutional obstacles

> "*I didn't see much evidence of interdisciplinarity. I did see quite a lot of evidence of academics in different disciplines not talking to one another, to the detriment of the projects. They were working on similar projects, but not connecting them up – so you thought, why don't you just talk to each other? […] There is not enough joining up*."[45]

The problem is that the mainstream in the Social Sciences and the Humanities is still focused on disciplinary research and mere academic performance. The prevailing disciplinary fragmentation is a dilemma that results from the fact that 'the intellectual distinctions of the disciplines have in many ways gotten blurred (….), whereas the organizational containers have been relatively resistant to redefinition' (Wallerstein, 2004, 23).

The SSH-FUTURES project shows that research structures are apparently quite averse to opening up to interdisciplinary and transdisciplinary research. Nearly all the researchers consider single disciplinary activities as the most important dimension for advancing their careers; the highest score for this perception is reached for Central European researchers at universities, of whom 94.1% confirm this view. This is an institutional obstacle and not necessary fragmentation due to specialization, as the responses to the importance of interdisciplinarity for the Social Sciences and Humanities show. Unlike the perceived career conditions, co-operations between disciplines are considered significant progress for SSH. (See Table 32)

Table 32: Perception of interdisciplinarity by type of research landscape

Is it true of your own organization that career promotions depend on single disciplinary activities?			Interdisciplinarity is an important advance for SSH	
	True	n	True	n
Anglo-Saxon	90.3	124	87.2	188
Northern European	89.8	462	87.5	712
Central Europe /Universities	94.1	287	90.1	362
Central Europe/ ROs	75.0	80	91.7	133
France	92.1	151	90.9	165
All	90.2	1104	88.8	1,560

This result was reflected in the interviews with the stakeholders of SSH. There was a consensus that the institutional structure of the research landscape has not yet adapted to the changes in research approaches crossing disciplinary borders. The consequences are that working in an interdisciplinary manner possibly involves the risk of encountering hurdles, and these obstacles concern

[45] Int. 42, UK, intermediary.

the academic structure, the training of students and the career pathways for which the logic of separate disciplines is dominant.

Academic institutions, especially universities, were criticized by the researchers interviewed, who were in favour of interdisciplinarity, for not giving incentives to co-operation, but rather favouring work within one discipline – with the consequence that researchers need to be especially motivated to enter interdisciplinary research fields. This is in keeping with the results of the survey. Furthermore, they stated that even the willingness to co-operate is often underdeveloped within universities, so not even a prerequisite is given for an implementation of the trend towards interdisciplinarity. Thus, if the current trend towards greater interaction to improve the 'utilization' of results is to be further emphasized, this requires the capacity of researchers to go beyond traditional modes of thinking, as they were trained within disciplinary cultures, but also the adaptation of the institutional structure of research institutions.

The mode in which training and specialization is organized at universities can be expected to affect scientists' subsequent career choice as well as the research fields they go into, as disciplines are also a way of organizing professional networks, including publication opportunities. Moreover, as the results of the survey show, if a relationship can be discerned between the disciplines of training and the inclination towards interdisciplinarity, it cannot be seen between the Humanities and the Social Sciences, but it is obvious that people trained in combined studies will be more inclined to engage in projects crossing the traditional structure of research. (See Table 33) Enabling students to participate in academic co-operations consequently means that the training curricula have to adapted, not necessarily dissolving disciplinary training, but at least offering the possibility to combine disciplines during training.

Table 33: Influence of academic background on current research

	Carrying out research in the following manner			
	Mono-disciplinary	Intra-disciplinary	Inter-disciplinary	Trans-disciplinary
Humanities (n=586)	20.0%	25.3%	43.3%	11.4%
Social Sciences (n=787)	30.9%	32.5%	21.9%	14.7%
Combined studies (n=156)	4.5%	6.4%	48.1%	41.0%
All (n=1529)	23.0%	26.0%	31.3%	19.7%

An additional indicator of the institutional dominance of disciplinary organization per se at the level of higher education is the degree of concentration (or dispersion) of disciplines per country. Those countries where a few popular disciplines absorb the majority of social sciences and humanists graduates are more likely to display more dominant disciplinary institutional settings than those with greater dispersion. (See Table 34)

Table 34: Three most popular SSH disciplines by country (in % selected)

		Most popular disciplines				
		1st	2nd	3rd	% cum	n
Austria	row %	History	Economics	Literature	39.9	213
Belgium		Sociology	History	Economics	53.5	48
France		History	Sociology	Linguistics	43.0	164
Germany		Language	Sociology	Pol. Science	44.1	177
Israel		History	Psychology	Linguistics	52.1	73
Netherlands		History	Psychology	Linguistics	41.3	353
Poland		Economics	History	Education	56.0	50
Sweden		Sociology	Psychology	History	47.4	352
UK		Sociology	History	Pol. Science	47.7	107

According to the academic structure, funding organizations operate within the logic of disciplines and this structure is an obstacle to interdisciplinary research projects. The climate of competitive funding, in which every discipline has to fight for its own stake, can even result in the consolidation of barriers between disciplines, as long as the trend towards interdisciplinary research does not lead to the adaptation of the funding structure to this changing institutional setting.

This problematic situation was acknowledged by the national funders interviewed. Apart from some few exceptions, the structures of their institutions, which can be considered one potential driving factor for initiating change within the European research landscape, were described as oriented along disciplinary lines and not towards the promotion of innovative research approaches; and although all of the stakeholders interviewed opted for a generally positive view of interdisciplinary currents in research activities, they emphasized the problems linked to these trends and the possible difficulties arising from an absolute quest for interdisciplinarity. There were no major differences between country groups concerning these positions of the funders.

Their concerns related to what impact the explicit pushing of interdisciplinary projects by stage-setter preferences might have on the research landscape, and they were linked to questions of quality. If researchers tended towards interdisciplinary working groups only because of funding incentives and not because of a topic-related necessity for this approach, it might have disastrous effects on the quality of research. These were described as examples of applications with an interdisciplinary approach, but not fulfilling the criteria of either of the disciplines covered.

Changing the funding structures, often organized along disciplinary lines, might therefore not be the best thing to do, if it means that interdisciplinary projects would be explicitly promoted, regardless of the topic of research. This approach would reverse the original intention of providing the structure for innovative approaches. If funding structures were changed only to push interdisciplinarity, so the assumption, less money would be available for those researchers

working within one discipline. Consequently, the idea of further promoting interdisciplinarity as such may have negative consequences on single-discipline research and jeopardize its existence.

> "*When you start with real problems, then sooner or later the research becomes of an interdisciplinary nature, but if you deliberately sit down purposefully to do interdisciplinary work just because it a good thing to do, then the prognosis ought to be much worse. The problem as such must always be at the centre and not interdisciplinary research as such*."[46]

The search for further interdisciplinary approaches should emerge from the research topic itself was the assumption of both stakeholders with a sceptical and positive attitude towards research crossing disciplinary boundaries. Knowledge producers in favour of approaches overcoming the constraints of specific disciplines stressed that they would create additional benefit, added value, as the best-fitting methods and theoretical guidelines are employed to answer research questions in optimal fashion. This understanding of interdisciplinary research did not correspond to the definitions used for the survey, but this reflected that the discussion on interdisciplinarity goes hand in hand with a demand for more entrepreneurial researchers, who co-operate more actively not only within the academic framework, but also with external actors, like companies, CSOs and policy makers, with the objective and assumption that leaving their own specialized world will generate more useful knowledge.

This quest for problem-oriented research was especially emphasized in the stakeholders' interviews, where the criticism of the institutional obstacles to academic co-operation crossing disciplinary boundaries did not lead to the conclusion that this approach to overcoming disciplinary boundaries should be the ideal per se. Hence, so the consequence, the underlying condition for funding should not consist of demanding interdisciplinary research, but of requesting an open-minded employment of methods and theories as needs arise. To ensure this, some funding institutions stated they had switched to thematic programmes, instead of the disciplinary fragmentation of funding.

Alongside the funding structures, the evaluation criteria for succeeding in the academic world, e.g. the culture of accumulating publications in rated journals of one's own discipline, were also perceived as obstacles. Secondly, the assessment itself was problematized, and this was related to a structure within funding or academic institutions that tends to inhibit interdisciplinary research, as it demands an additional effort to organize peer reviewers able to act as experts in both fields. Another question that underlay many of the sceptical positions of how best to assess interdisciplinary work was: Should

[46] Int. 74, Sweden, producer.

interdisciplinary projects fulfill the quality criteria of both scientific disciplines or is there a need for a different quality measurement?

This problem has to be addressed on different levels. On the micro-level, researchers from different disciplines co-operating have to agree on what each discipline can contribute, and this challenge concerns the methods and theories chosen ex-ante as well as the way quality is measured ex-post. Ideas touching upon the topics of relevance and quality might have different solutions in different disciplinary traditions. On the macro-level, funders and stage-setters have to agree on what interdisciplinary work should aim at. There is no common understanding of how interdisciplinary projects might be reviewed, which is clearly asserted by this explorative study.

> "*The […] researchers have brought new and differing literature to the group. Everyone has worked slowly and carefully forward with the same literature. Right now we are putting together a book, […]. Several chapters contain exchangeable texts. […] Everyone is writing from the same background of literature and we have talked so much that we have the same perspective*."[47]

These practical dimensions of interdisciplinary-orientated research groups apparently pose some problems and raise questions, like how to implement a sustainable mode of co-operation if there are elements of success for this that need to be further trained at universities? 'As individual disciplines develop their own theories, methods, and cultures, each becomes a separate social world, fully understood only by its inhabitants' (Pierce 1999: 273). Consequently, not without reason, there is the fear that, instead of reaching a higher quality, the process of mutual rapprochement of disciplines will eliminate important differences. The process of finding a common language is difficult, and as the grand theories lose ground, researchers cannot rely on embracing theoretical cultures to communicate; they have to handle this on a case-by-case basis. This holds two risks. It might take too long to develop a common language. And there is the risk that the result might be a reduction, as a consequence of the fact that all have agreed on the lowest common denominator, instead of leading a discourse that might lead to a not perfectly balanced, but more adequate combination of knowledge to answer the research question.

These, mainly institutional, obstacles, were widely discussed and it shows – in conjunction with the results of the survey - that the European research landscape is undergoing a major transformation, which is far from nearing completion. Research leaving the ivory tower, or expressed more objectively, inter-, intra-, extra- and transdisciplinary research, is going on despite the low impact it has on career advancement. Looking into the future, this seems to be encouraged by the 'governance' of SSH, as external funding is increasingly dependent on task-oriented research programmes in the European FP.

[47] Int. 78, Sweden, producer.

6 The Future Perspectives

It is quite an ambitious goal of the project to attempt predictions as to the future of the Social Sciences and Humanities in Europe. These can be partly derived from the analysis of the current research landscapes with their strengths and weaknesses, and partly this necessitates an additional backup. The future dimension was also included and focussed on throughout the research process, most extensively although with a Delphi-type online survey among the most important stakeholders of SSH in Europe.

The field of institutionalized future studies is very diverse both with respect to the underlying motives and the techniques used. There are researchers who claim an ability objectively to predict the future with e.g. mathematical tools, but others following the French philosopher Bertrand de Jouvenel have the ambition to open up dialogues on alternative pathways of future developments, thus partly also influencing them. (Andersson 2008) The SSH-FUTURES project has not followed methodologies with an objective of predicting the future of the Social Sciences and Humanities, assuming that these developments cannot be fully anticipated, but, on the contrary, has taken the approach that identifying social and institutional obstacles to future developments and the anticipating relevant stakeholders will have an impact on the future of the Social Sciences and Humanities research landscape; and that the collection and analysis of the predictions of experts within the European field of Social Sciences and Humanities, who have a role in the power play of shaping the future, can provide main insights.

The Delphi-type online expert survey of the SSH-FUTURES was carried out with the objective of collecting experts' opinions about both the structure of the Social Sciences and Humanities (SSH) in 2025 and the main social issues they expect society to be facing then. 845 experts from various fields, but mainly from the Social Sciences and Humanities participated in the survey. Most of the respondents were from Europe (86%), mainly from Western and Northern Europe (75%). (For details see Table 35)

Nearly 30% of the respondents came from the social science fields of economics or sociology, while nearly 20% came from the humanities fields of history and archaeology or languages and linguistics. 88% of respondents came from some field or other of the social sciences or humanities,[48] with 55% of respondents coming from the social sciences, and 33% coming from the humanities.

[48] The remainder came from cognitive science, medical and health sciences, engineering and technology, natural sciences, agricultural sciences.

Table 35 - Summary of demographic data

Gender				
Male		Female		
66.3% (n=487)		33.7% (n=248)		
Age				
20-29	30-39	40-49	50-59	>60
4% (n=32)	26% (n=195)	29% (n=215)	24% (n=180)	16% (n=116)
Title				
Mr./Mrs./Ms.		Dr.		Prof.
14%, (n=100)		43%, (n=303)		43%, (n=301)
Organisation				
University	Research institute		NGO	Government
80%, (n=583	17%, (n=125)		1%, (n=7)	2%, (n=13)
Research area				
Natural or other sciences		Humanities		Social sciences
12%, (n=77)		33%, (n=210)		55%, (n=350)
Country				
UK & Israel	Nordic countries & Netherlands	Central Europe and Belgium	France	Other
6%; n=41	40%; n=273	35%; n=238	14%; n=97	6%, (n=38)

The method used, the Delphi survey, permits the anonymous interaction of experts through repeatedly circulated questionnaires, in this case it required two rounds. Especially when the first round reveals significant disagreements among the experts, the subsequent rounds offers the experts the possibility to give feedback to the first results and re-assess their judgements accordingly. This is how the anonymous interaction between the expert groups is achieved. In many cases, two rounds of such a process are sufficient to achieve a convergence of the responses to a reasonable consensus or stability of dissents, as the persisting disagreement on certain topics can also provide important information to decision makers. All results presented in the following section relate to the answers given in the second round, as the analyses of both the means[49] and the standard deviations[50] for questions from both rounds of the SSH FUTURES Delphi survey show that there was no significant change in the

[49] The mean (or average) of a list of numbers is the sum of the list divided by the number of items in the list.

[50] A statistic used as a measure of the dispersion or variation in a distribution. The higher the standard deviation, the greater the dispersal of the values around the average.

answers given. There was, furthermore, no process of convergence around the average (i.e., a lower standard deviation).

The results reflect *professional estimates* and *judgments* of the participating experts, as well as their *expectations* or *wishes*. Unlike many Delphi surveys, we decided to ask the experts about the desirability of various developments in addition to their likelihood so that we could compare their objective judgments and subjective expectations that a given phenomenon will occur. The results show a number of statistically significant differences between the respondents' views on the future of Social Sciences and Humanities in Europe based on their age, country, type of organisation, research area and gender. Of particular note here is the distinctiveness of French respondents in relation to the General Statements on research funding and the collaboration between universities and industry e.g. as well as the higher importance scores given by women to issues related to gender.

Forecast exercises for 2025 will not necessarily represent the actual situation in 2025. The Social Sciences and Humanities relate to developments in society, the economy, politics and policies. The statements are based upon assumptions as regards future developments. Specific pathways to another future might (and most likely will) come, which in turn will change the issues in SSH research. The same holds for methodologies (eScience is in its infancy, and it is hard to assess how useful it might become in the future). Furthermore, developments in other sciences and the concept of knowledge in general might lead away from specialization to knowledge integration. This has implications for SSH as well.

6.1 Research issues in 2025

Nevertheless, the foresight exercise is still very useful. It gives the reader a glance at what the current view of the key element in research is: the researchers themselves, who, at least in the near future, will have some effect on the research agendas in Europe, at both the national and European levels.

- Expected Social and Cultural Changes

The ageing of European society is expected to constitute a major social change by 2025. This was considered a major issue. Furthermore, the proportion of Europe's immigrant population is expected to have increased significantly by 2025, raising questions about how immigrants are to be incorporated into society. No major progress, however, is expected in the area of gender equality: experts consider it highly unlikely that women and men will spend equal amounts of time on childcare, and that both genders will have equal opportunities in the workforce.

Sociology, demography and economics are the disciplines that the respondents think deal best with these. They think that interdisciplinary research within SSH will be paramount. The strongest impact of this research is expected to be on policy, though this impact is not thought to be much stronger than changing public behaviour or enhancing public awareness.

Furthermore, a focus was placed on culture and values. The respondents expressed the view that, generally speaking, Europe's main religions will have diminished influence in 2025. They think that individual belief systems will have become more prevalent and that the major monotheistic religions will not have credible answers to new challenges. Sociology, religious studies and cultural studies are considered the most important disciplines for the issues in this group. Research is expected to enhance public awareness, and most of it is expected to be interdisciplinary research within the field of SSH.

- Environment, Sustainability and Economics

The European researchers expressed their view that environmental issues will be very likely to have caused new conflicts and greater global inequality by 2025. They think it unlikely that the consumption of natural resources will have been reduced. Environment studies are by far the most important discipline for dealing with such issues, although economics, international relations and

political science are also seen as important. Nearly half of the research into these issues in 2025 is expected to involve collaboration between SSH and non-SSH disciplines. The main impact of this research is expected to be on policy.

Concerning Economics and Employment, the respondents think that by 2025 China and India will be major consumers. They also think that immigrant and ethnic populations will experience the problems associated with social inequality and exclusion to a greater extent than other social groups. In 2025, the major issues in this field will be those of social exclusion and inequality. The disciplines of economics and sociology were selected as the most important disciplines for researching these areas, with interdisciplinary research within SSH being seen as the most appropriate. Research is mainly expected to initiate policy changes and enhance public awareness.

- Governance and Citizenship

In the section of questions on Governance and Citizenship, respondents thought it most likely that civil rights and citizens' privacy will have been impaired both by the war against terrorism and the introduction of governmental digital control systems. It is not expected that e-governance will have become the dominant mode of political participation. Political science and sociology are the disciplines expected to be most called upon in researching these issues. Most research is expected to be conducted on an interdisciplinary basis within SSH. It is expected that public awareness will be raised and policy changes initiated to roughly the same degree, with a slightly weaker impact on public behaviour.

6.2 The Research Landscape in 2025

Overall, based on our survey data, the issues that will occupy SSH researchers in 2025 are those related to the environment and to various aspects of social inequality, especially for immigrants and ethnic minorities. Ageing will also be an important issue in 2025, particularly as regards the size of the working population and the possible pension crisis. Education focusing on lifelong learning will be a consequence of this. The most relevant disciplines for dealing with these issues will be sociology, economics and political science, as well as education, cultural studies, demography and environment studies.

While respondents think that SSH research will continue to be conducted within the universities with public funding, they also think and hope that it will become much more interdisciplinary in nature. However, they soundly rejected the optimistic notion that SSH funding would equal technological R&D funding in 2025 and they do not think that a model of collaboration between academic researchers and the private sector is likely to emerge. Interdisciplinarity is both likely, important, and, it appears, inevitable. The respondents would also like to see funding for SSH at levels equivalent to those enjoyed by technological R&D, and they think that it is desirable for SSH research to remain publically funded. They would also like to see SSH research play a more significant role in the development of new technologies and products (though they do not think it is likely that SSH research will be performed in collaboration with industry).

In the section of questions that we designated ‘Europe as a Knowledge-Based Society’, the experts expressed their opinion that lifelong learning will become an essential element in citizens’ lives by 2025. However, they also think it likely that digital divides will remain. These may be intensified by the expected increasingly rapid changes in society caused by technological innovations. Along with education studies, sociology and media and communications studies are expected to be the disciplines that will investigate these areas, with interdisciplinary research within SSH and between SSH and non-SSH disciplines expected to be equally important. Research is expected to enhance public awareness more than initiate policy or change public behaviour.

6.3 Scenarios of future developments

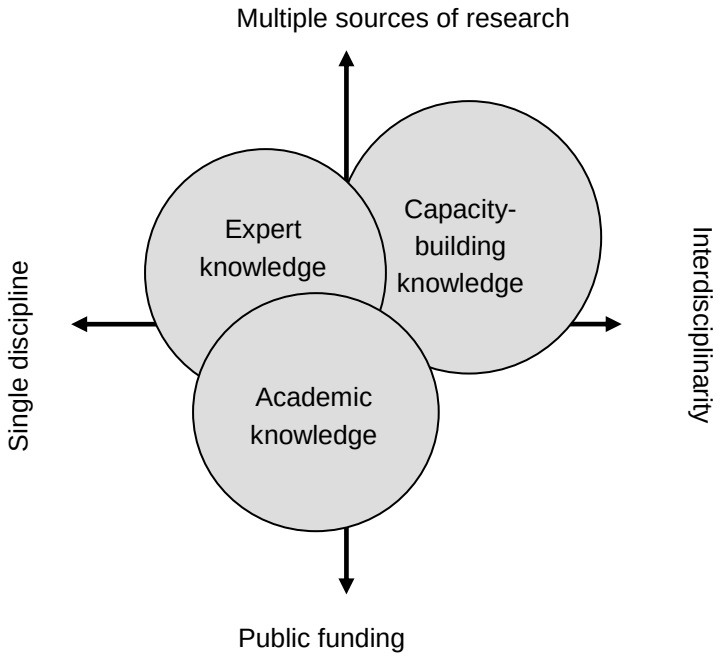
Building on definitions and concepts of the SSH-FUTURES project, scenarios were constructed on the basis of the dimensions of 'supply' and 'demand'. The 'supply' side is represented by researchers and research organizations which offer knowledge that runs along a continuum from single- to interdisciplinary research. The 'demand' side, which reflects the extent to which SSH knowledge is sought, runs from 'solely public funding', standing for a mediocre demand for SSH knowledge, to 'multiple sources of research funding', which indicates a heightened demand for SSH knowledge'.

The three scenarios put forward are: academic knowledge, expert knowledge, and finally and capacity-building knowledge, in which much SSH research no longer abides by traditional disciplinary divisions.

1. The scenario of greatest change is the capacity building knowledge, which stands for an increased demand for knowledge of the Social Sciences and Humanities not only by the public but also by the private sector. It is related to the definition of capacity building knowledge of Nico Stehr, as there is a direct relation between the generation and use of the knowledge and by the fact that the task-oriented research is not organized around disciplines.
2. The bottom left-hand area mostly reflects the current state of art, academic knowledge, which sees SSH research as mainly single-disciplinary, as publicly-funded, and as university-based.
3. The scenario of expert knowledge, in which the disciplinary structure of research has not changed at all and research is carried out by researchers from single disciplines with no input from other disciplines. However, the funding for this research comes from a multiplicity of sources, primarily from the private sector, and the research itself is not necessarily conducted at university.

The respondents were allocated to the scenarios according to the crossing of variables relevant for the scenario-building and the results show that roughly equal numbers o f respondents fall into each of the categories. No specific link between variables like gender or country could be made to the correspondence of specific scenarios. A cluster analysis for deriving the scenarios from the questionnaire itself led to the same results.

Figure 3 - Scenario Matrix



These results of the SSH-FUTURES foresight study lead to these conclusions (see chapter 7, Conclusions and Recommendations): encouraging interdisciplinarity; paying special attention to the research issues identified by the experts as likely to be most crucial in 2025; ensuring that humanities research continues to be supported; and to ensuring that the effects of SSH research are fully realized.

7 Conclusions and Recommendations

The future of the Social Sciences and Humanities depends on the close and fruitful interaction between the very differing stakeholders in a multi-level governance system. The project has collected and analyzed a wide range of information and data on the SSH research landscapes of the Member States and European commonalities and divergences.

Based on the literature review, the survey among researchers in the Social Sciences and Humanities, the forecast survey and the qualitative expert interviews with stakeholders, this study has generated a number of recommendations for the further improvement of the flows of knowledge across national borders and the building up of an innovative and competitive European research landscape for the future. These recommendations cover both institutions at European and national levels and the research community itself. The recommendations are inspired by the ambition further to stimulate the exchange of knowledge within the European Union and to enhance the importance of social sciences and humanities research.

The main recommendations can be summarized as follows:

7.1 General Level

7.1.1 Disciplinary, inter- and transdisciplinary knowledge creation

The endeavour to cross boundaries within the academic world also has to encompass overcoming the logic of division even within disciplines themselves between so-called generic and applied research. The consideration that knowledge constitutes the capacity to act is crucial for the future of the Social Sciences and Humanities.

Social sciences and humanities knowledge can be employed in different concrete fields of action: as a means of power, as a justification for a decision, as a means of orientation, as new social icons for society or as a means of rationalization. This also renders the perennial historical and ongoing debate on the use of the Social Sciences and Humanities obsolete.

- Encourage collaboration in interdisciplinary and transdisciplinary research by research programmes on the national and European levels.
- There are different ways to do this on the national and European levels and within the scientific communities: on the European level by

research programming and programme evaluation, on the national level by project evaluation, and on the level of scientific communities by innovation in evaluation and career schemes.

- On the national level, there is a need to encourage interdisciplinary and combined studies, which could be supported by using the opportunities offered by the Bologna process. On the European level, this necessitates broader communication about the flexibility provided by the Bologna process, as the reforms implemented have led to different curricula in different national environments, some of them more flexible than others.
- More specific recommendations are given below concerning funding, evaluation and career schemes.

7.1.2 Funding

One of the major challenges concerning funding is the problem of subsidiarity with respect to the European Research Area. National, European and regional funding should operate in such a way that it ensures the highest efficiency and effectiveness of the budgets available. Does complementarity in Europe and its Member States mean that the Member States should match their research strategies to the European framework, or should the Member States develop their own strengths and contribute to diversity in the Social Sciences and Humanities?

It is obvious that the problems observed in the SSH-FUTURES project are an obstacle to fulfilling the potential of the European Research Area. The challenge here is to optimize resources and to ensure that the talents and gifts of European scholars in the Social Sciences and Humanities benefit European research as a whole. Globalization means global competition between the best in science and research. If Europe cannot fully exploit the knowledge, creativity and potential of its researchers, this will be a major obstacle in this competition.

- There is a need to understand the different types of knowledge-producing institutions in terms of funding. In order to encourage the participation of all productive intelligence, different funding modes must ensure equal opportunities for different research organizations.
- Basic funding is necessary for all types of institutions. As resources are scarce, block grants should be available to all types of research organizations on a competitive base. Basic funding must include an incentive for generic research as well as for interdisciplinary and transdisciplinary work.
- Competition must, however, respect the different modes of knowledge production by different types of institutions. Teaching and learning is relevant for all types of research, but there are different types of

knowledge to be taught at universities with undergraduates and postgraduates as compared with public and private research institutions, whose primary mission is research.

- The specific feature of the European Research Area is that its diversity should be respected and addressed even more extensively. Standardization on the European level would decrease its ability to compete on an international level. However, the participation in collaborative transnational research is a basic requirement of modern research practices and should be focused on. Here the joint effort of Europe and its Member States is called for.

7.1.3 Evaluation

The evaluation procedures and cultures prevailing should be questioned in view of these not new, but increasingly important developments. The evaluation of proposals within the Social Sciences and Humanities has to be adapted to the interdisciplinary and transdisciplinary work carried out, but not at the expense of excellent academic disciplinary research.

Evaluation has to be adapted also in the academic community to ensure that the career expectations of young researchers are not only contingent on the necessity to follow specific schools within one discipline, but open to new and innovative approaches.

In a more general way, these questions concern the criteria of evaluation, which should meet the changes and needs within the Social Sciences and Humanities.

- Industrial research differs in many ways from knowledge produced within the traditional academic pathways of the Social Sciences and Humanities. Consequently, there is the need for more specific evaluation criteria paying attention to the different forms of knowledge produced – and their inherent characteristics and dynamics.[51]
- We recommend more flexibility in disciplinary research to guarantee its openness to the dynamics of research. This is not an explicit call for interdisciplinary and transdisciplinary research, but for the institutionalization of conditions in order to be able to focus on a research question without obstacles to crossing boundaries.
- To encourage interdisciplinary and transdisciplinary work in the Social Sciences and Humanities in Europe, the appropriate evaluation criteria have to be applied, which provide the opportunity to valorize co-

[51] Impact Pathways of the Social Sciences and Humanities', SSH-FUTURES Deliverable 3.

operation across boundaries not only within the Social Sciences or Humanities, but within the academic community as a whole, and even with actors outside this circle, like civil society organizations.

7.1.4 Dissemination

The demanding task for the future of the Social Sciences and Humanities is to avoid reinforcing the 'ivory tower' logic, in which the SSH are partly trapped. Therefore, there is the need for the realization that dissemination necessitates different qualifications to the usual academic ones.

The relevance of translational issues is crucial and imposed by different policy-makers on the regional, national and European/international levels, as well as by civil society organizations and the public at large. The different stakeholders have to be addressed with the appropriate tools.

This requires awakening trust. Methodologies and funding must be transparent. Quite often, information is dubious and abridged by the media, and controversies between different scientists are understood to be arbitrary. But this represents a distorted picture of the research landscape, which can be at least partly contradicted by social sciences and humanities knowledge producers contributing to the public debate with criticism and corrections.

Consequently, the dissemination of knowledge is not a simple task consisting of the distribution of information. The time-lag that follows dissemination underlines the challenge that dissemination needs attention and funding far beyond the conclusion of the project.

- In some European countries like Germany or the United Kingdom there are already specialized agencies with a social sciences and humanities background. They should be used more often to address the potential users of SSH knowledge.
- Social sciences and humanities knowledge is often reported in a 'friendly' way by the mass media, due to their economic logic. The actors of the Social Sciences and Humanities in Europe should engage in the public debate even more intensively to remedy errors or make new contributions.
- The flow of not only information, but also knowledge towards the public and the media necessitates competences which should be consistently trained and externalized to so-called experts in public relations, like agencies specialized in the dissemination of social sciences and humanities research.

7.1.5 Utilization

The role, the potential and the limitations of the knowledge produced by the Social Sciences and Humanities have to be recognized by their stakeholders on a very general level to prevent misconceived requests for more intensive efforts towards utilizing social sciences and humanities knowledge.

In this context, there is a need to create an understanding of the blurred borders between 'generic' and 'applied' research, following the theoretical approach of the SSH-FUTURES project that knowledge is the capacity to act as a starting point, as well as the insight that knowledge 'travels'.[52]

In more general terms, the logic of the 'ivory tower' should be overcome to open up the Social Sciences and Humanities to innovative co-operations or contributions to and from differing scientific spheres. This requires the active co-operation of the relevant academic actors as well as their audiences. Expressed in a more general way, interaction has to be improved.

- Identify the stakeholders by type of knowledge production to prevent the impression of 'uselessness'. The knowledge of Social Sciences and Humanities has manifold target audiences, ranging from specific organizations within industry, to interest groups and civil society organizations as well as a broader mission for society in general.
- Enhance the exchange between stakeholders, the media and knowledge producers by specialized seminars and training courses, also during the dissemination of specific project results throughout the research process.
- Develop the collaboration of current and potential stakeholders with the knowledge producers within the Social Sciences and Humanities in order to create a dynamic relationship between the academic research institutions in Europe and their general public.

[52] 'Impact Pathways of Social Sciences and Humanities', SSH-FUTURES Deliverable 3.

7.2 European Level

7.2.1 Programming

The first challenge is to raise awareness and clarify the role of the Social Sciences and Humanities in targeted policy research. From its beginnings in the 4th Framework Programme, in some policy milieus and academia there was a debate as to whether the social science programmes fitted in with the philosophy of the task-oriented research of the Framework Programme for research and development. Up to now, there has not been enough clarity about the necessity of the themes dealt with in this programme line.

Another challenge is the use of social science knowledge in interdisciplinary projects in the other thematic programme lines ('Themes') of the Co-operation Programme. There seems to be high satisfaction with the incorporation of the Social Sciences and Humanities in all the consortia that have had experience in collaborating with these disciplines. However, roughly half of the consortia in the other themes have not yet had experience with this type of collaboration. [53]

Furthermore, there is not enough flexibility in the course of the projects. The regular timeframe of projects quite often necessitates changes in timing and methodology. The current contractual obligations hence demand bureaucratic contract amendments that cause administrative burdens both for the Commission and for researchers. The challenge is to formulate more flexible contract regulations that are more oriented towards the goals and objectives of projects rather than towards milestones. Work package structure has to be adapted to the reality of the logic of knowledge production.

Finally, the diversity in the European research landscape poses a further challenge. Europe needs to build upon the diversity of the SSH research landscapes. However, there are particular shortcomings in the Southern European countries and in the New Member States, which is a weakness of the European Research Area as a whole, as Europe cannot fully take advantage of creativity and talent from throughout Europe.

In addition to the general recommendations, more specific recommendations are:

[53] Strengthening the role of the Social Sciences and Humanities in the ERA development, PLATON+, Deliverable 2.

- Enhance the dialogue with the scientific communities and develop instruments ensuring the influence of their opinions in more systematic ways.
- Ensure the inclusion of social sciences and humanities research directed at governance under multi-level conditions; citizens' participation; crisis prevention and intervention; social integration and migration; origins and combating racism, xenophobia and terrorism; multicultural integration; cultural and ethical issues and other relevant social, political and economic issues.[54] Clarify the borders between the thematic parts of the Framework Programme and the European Research Council. The ERC cannot replace targeted social sciences and humanities research.
- Increase the participation of SSH in the other research areas by explicitly including the relevant issues in the respective call texts.
- With respect to the administrative and financial modalities of the Framework Programme, increase flexibility in such a way that it is adapted to the logic of research processes.
- Improve the relationship between the Commission and the national research authorities and research councils. Mutual learning has a different logic to RTD programmes, which calls for an adaptation of the ERA-NET procedures.
- Although the European Commission has no specific mandate in the field, specific programmes have to be established allowing for mutual learning and improving the national governance of science and research in weaker Member States.

7.2.2 Funding and Evaluation

The increase of the budget for the 7th Framework Programme and, more specifically, for RTD projects does not seem to be realistic. This is why there is a need for more efficient ways of how to obtain funding from the European projects. Furthermore, more transparency in the evaluation procedure and in the selection process of the evaluators seems to be an issue.

A further challenge is the necessity of co-funding the projects obtained from the Framework Programme. For social sciences and humanities projects there is no interest from the private sector and national co-funding is only available in a small minority of Member States. This creates unfair competition between public and private research organizations.

In addition to the general recommendations, more specific recommendations are:

[54] 'What Futures?' Findings from the foresight process, SSH-FUTURES, Deliverable 11.

- A two-step procedure for the evaluation process is an important step in reducing the effort needed to submit proposals.
- Generalize the two-step procedure for all applications for research funding and increase the budget for evaluation.
- Ensure a more continuous process of evaluation; decrease the concentration on few deadlines, given the limited resources of research institutions and the quality of ongoing projects and applications.
- Meetings between the evaluation panel and applicants increase the transparency and the trust of the research communities in the fairness of the procedure. The current system of ranking the proposals by half-points is considered arbitrary.
- This in turn necessitates an increase in the budget foreseen for the evaluation process.
- The Member States should be encouraged financially to support the preparation of proposals.
- As a general rule, projects that involve the Social Sciences and/or Humanities should be fully financed to prevent unfair competition.
- Decrease the administrative and financial burden by providing more flexible contract conditions.
- Reach out for stakeholders to encourage the dialogue without neglecting the necessary autonomy of scientific research.[55]

7.2.3 Dissemination and Utilization

The European Framework Programme spends a significant amount of public money and has to be justified to policy authorities as well as to European citizens. Whereas expenditure in the technological fields can prove effectiveness and more often than not the efficiency of these expenditures, investment in the Social Sciences and Humanities does not enjoy the same recognition yet. When it comes to the legitimization of generic research, this is even more the case than in the task-oriented and/or applied fields.

The European Commission with its Capacities Programme encourages the utilization of knowledge. With respect to dissemination, however, there are clear shortcomings that need to be redressed. Dissemination must increasingly reach policy decision makers as well as mediators such as consultants.

Another challenge is how to improve the involvement of public relations companies and dissemination agencies with specialized skills.

In addition to the general recommendations, more specific recommendations are:

[55] 'Social Sciences and Humanities – An Overview', SSH-FUTURES Deliverable 6.

- Encourage the participation of specialized dissemination agencies and public relations companies in European research projects and accept their funding on the same level as auditing companies.
- DG Research should play a more active role in disseminating the knowledge gained in the Framework Programmes to other European institutions, if necessary in conjunction with external consultants.
- The European Commission has to engage the national authorities of the Member States in the use of research results, as the access of research organizations to their national authorities is limited in many cases.

7.3 National Level

Science and research as well as higher education are a predominantly national agenda. National science and research systems vary to a significant degree between different groups of Member States and even between those Member States evincing similarities and hence grouped accordingly for the purpose of this project. Obviously, this circumstance is related to historical and cultural traditions. In all countries under observation, there are reforms in progress, so it is difficult to generalize findings. Reform processes proceed from different research landscapes and are in different phases, facing different forms and strengths of resistance. On the whole, an earlier study refers to 'unintended harmonization.'[56] The situation should probably be revisited in some years' time. It is quite clear that, as a process, 'alignment' is unlikely to be linear or proceed at the same pace across different dimensions.

The objective of this chapter was to explore the extent of the 'Europeanization' of national research landscapes in the SSH. This was done by considering developments along three dimensions: first, the practical involvement in EU research by participating in European research programmes; second, the character of reforms in the SSH sector and the extent to which they are directly or indirectly linked to developments on the EU level; third, the role of European collaboration in SSH in the context of internationalization.

7.3.1 Programming

- Reforms of universities and research organizations cannot be based on 'best practice models', but must take national characteristics into account.
- Bi-national and multi-national co-operation between Member States has to be encouraged. Reforms of the research system necessitate a process of deliberation based on international experiences. However, the current structure of national research systems has to be respected. The Commission should assume a more important role in co-ordinating with mutual learning platforms and developing suitable instruments.
- There are obviously particular weaknesses in some Member States, (not only) due to low investment in science and research and, more specifically, in the Social Sciences and the Humanities, but in research governance as well. Specific programmes have to be developed on the bi-lateral, the multi-lateral and the European levels.

[56] Internationalization of Research: institutional innovation, culture and agency in the framework of competition and co-operation: The INNOCULT Project, 2004; see also: Pohoryles & van der Meulen (eds. 2002), Institutional Innovation and European Research, in: *Innovation – The European Journal of Social Science Research*, 15 (4).

- A social science and humanities agenda must be based on the specific strength of national research traditions. However, multi-national programmes will ensure increased benefit for the European Research Area.

7.3.2 Funding and Evaluation

- Mutual learning procedures should ensure funding and evaluation processes that are flexible enough to take generic research, applied research and society-targeted activities into account.
- The relative weight of the Social Sciences and Humanities must be reflected in public and private research funding. Private research funding should be encouraged, but with mechanisms guaranteeing the autonomy of science and research.
- Researchers must be encouraged to conduct interdisciplinary research by means of special programmes and funding.
- Mutual learning of institutions dealing with research funding and evaluation has to find a more elaborated platform. This can be supported by the European Commission, but should be initiated by the national authorities themselves.
- Innovative SSH research requires setting up innovative institutions. Funding and evaluation must reflect their different natures.

7.3.3 Dissemination and Utilization

- Research communication must be professionalized and planned accordingly in research programming. This requires stronger specific skills and a close interaction between knowledge providers and professionalized science and research communication agencies.
- Researchers must become aware of the necessity to interact with stakeholders. Governance has an important role to play.
- Science and research must be aware that stakeholders are quite often actors on the national and regional levels. Researchers have to reach out to these actors as well.

7.4 Scientific Communities

7.4.1 Educational Background

The 'European Research Area' and 'Globalization' are not merely glamorous slogans, but also real challenges. European programmes like 'People' seem to have a certain impact. Nonetheless, there is a need to intensify exchange and mobility programmes.

A more difficult issue is overcoming disciplinary boundaries and improving the interaction between science and society, at least in the Social Sciences. In most countries, there is no particular incentive for interdisciplinary (combined) studies and curricular modules for transdisciplinarity. Higher education is usually a national and, in some Member States, even a regional agenda. The Bologna process allows for a certain flexibility, whilst opening up mobility options across Europe. It has not yet fully been understood or is differently implemented in European Member States.

- The European Commission should play a more pro-active role in encouraging student mobility.
- The European Commission should encourage collaboration between European universities beyond the already existing networks, with special consideration of weaker countries.
- The European Commission should foster combined and interdisciplinary studies by way of mutual Learning platforms and pilot projects. Interdisciplinary elements and coping with stakeholders must become part of science education – curricula have to be adapted.
- The European Commission should continue to enforce the removal of national barriers to foreign students

7.4.2 Programming and knowledge production

Governance of science and research is a key topic. Despite the fact that researchers insist on their autonomy in agenda setting, they are obviously quite responsive to their career development, the evaluation procedures and funding structures.

Research agendas are thus clearly determined by national and European research programmes, *albeit* there are clear national and institutional differences. The challenge is to sustain the correct equilibrium between generic-disciplinary, interdisciplinary and transdisciplinary activities. This, in turn, means that governance and autonomy also need the right balance. Knowledge production requires a sphere of creativity and independence in

order to contribute to societal needs and economic and technical innovation. However, researchers must be aware of their responsibilities in democratic societies.

Financial pressures increase the workload of researchers on related activities apart from research. Research and teaching have to be balanced. The growing administrative burden, however, decreases the efficiency and effectiveness of research.

- Governance instruments might bring research closer to societies' needs. However, efficient and effective research requires creativity and autonomy. Researchers must play an important part in governance systems and autonomous decisions by researchers and academic freedom must be apportioned their due share.
- The balance between generic and task-oriented research is best guaranteed in universities; policy instruments must ensure autonomy options for researchers outside the university as well.
- Efficient and effective fund allocation is necessary to prevent work overload by administrative assignments.

7.4.3 Funding and Evaluation

Funding and evaluation procedures vary according to national research systems, which, in turn, are clearly differentiated from the European regimes as well.

With respect to funding, the importance of core funding is obvious; its relative weight is, however, on the decline. Furthermore, in most cases core funding is not available for private research institutions. The challenge is not to overuse the directive governance instruments (funding and evaluation) and to accept the necessity of core funding, which should also be made available to private research organizations.

The researchers address a clear misfit between evaluation criteria and the advancement of the Social Sciences and Humanities: for their career, disciplinary excellence is the key; for the advancement of the Social Sciences and Humanities, however, interdisciplinary and transdisciplinary work is equally relevant.

The challenge is to define an evaluation culture that is more sophisticated and, where implemented, less rigid. Apparently, there is no comprehensive evaluation culture. Where evaluation is applied, there are relevant differences. In some cases, formal evaluation procedures exist for institutions, in other cases for individual researchers. A comprehensive evaluation culture that increases efficiency and effectiveness must take the different types of

knowledge, i.e. academic knowledge, capacity building and applied research, into account and develop specific methodologies.

- Funding and evaluation are key elements for successful governance; refining the instruments must become the building block for a comprehensive and appropriate evaluation culture.
- Evaluation is important, but the criteria must become more flexible. There is a need to understand diversity.
- Core funding is an important element for stimulating creativity and innovation. A balance of trust must be ensured between academic as well as transdisciplinary activities and control of the use of resources.
- Disciplinary excellence is still important, but interdisciplinary and transdisciplinary work has to be acknowledged in the evaluation procedure.

7.4.4 Dissemination and Utilization

The partly contradictory findings – extensive involvement in dissemination-related activities, on the one hand, low levels of appreciation of stakeholders, on the other – indicate a governance problem that has to be addressed in appropriate manner. It is obvious that the dissemination strategies of the researchers reflect this contradiction. They are considered unsatisfactory by most stakeholders and, in turn, lead to the unsatisfactory use of social sciences and humanities knowledge.

- The scientific communities must change their attitudes towards society and become more receptive to societal needs.
- The scientific communities must play a more pro-active role in identifying stakeholders, accepting the necessity to include professional dissemination agencies in their research work.
- Where possible, stakeholders must be included in all steps of the research process, whilst avoiding the influence of specific lobbies and maintaining the necessary autonomy in decision-making.
- The dialogue with stakeholders must be intensified, possibly within a framework provided by funding institutions.

7.5 The research-community and the SSH Futures findings

What will the future provide for the Social Sciences and Humanities? The two days' final conference of the SSH-FUTURES project, which took place in Brussels on 22 and 23 October 2009, covered the major issues of the SSH-FUTURES project with 42 presentations, providing additional insights and new perceptions into the results of the project. (See the annex for the presentations.) Clearly, the ability of the Social Sciences and Humanities better to meet the needs of societies in the future was one of the main issues. To reach the public at large, good interaction is required between politics and policies; this interaction is intended to overcome traditional feuds (between schools and disciplines) not only between different intellectual communities, but also towards the public at large outside academic circles. This discourse on a user-oriented science, new modes of knowledge production and transgressive competence sometimes raises concerns.

The following section will summarize the main issues, to which the researchers at the final conference of SSH-FUTURES made substantial contributions, with indications as to the respective presentations/papers.[57]

7.5.1 Meet the challenge of co-operation – Leave the Ivory Tower

The performance of the Social Sciences and Humanities in practice was treated with the issue of trans- and interdisciplinarity. The co-operation with civil society and its corresponding organizations (CSOs) is a challenge which has to be met with an exact and extensive preparation of the process beforehand and which in turn creates added value not only with respect to new knowledge, but also and especially as regards the dissemination pathways followed. The same way, interdisciplinarity was focussed on as a challenge, supplying new options. There was an exploration of how these co-operations can succeed, an example being 'Cultural Memory. The Potential of an Inter- and Transdisciplinary Research Project' by Carin Franzén (Linköping University).

Andrea Ricci (Institute of Studies for the Integration of Systems, ISIS) presented the results and conclusions from experiences gained in the 'Move Together' project, which has the objective of raising citizens' awareness on EU research on sustainable urban transport; a project funded under the 7th Framework Programme. The approach of this project was to call for the participation of the citizens themselves, and they were selected from each of the EU 27 countries. Action at this micro-scale might yield an impact on the macro-scale. This was in line with the research experiences of the social scientist Sandra Karner (Inter-

[57] Not all of the presentations at the final conference will be mentioned in this chapter, for further details see the annex.

University Research Centre on Technology, Work and Culture, IFZ) and her project partner from a CSO, Sonja Petrovics (Via Campesina, Austria). They presented 'The potential for intervention through Co-operative Research', focussing on the FAAN project (Facilitating Alternative Agro-Food Networks: a Stakeholders' Perspective on Research Needs), funded under the 7th FP and involving five academic institutions and five Civil Society Organizations from Austria, Poland, Hungary, UK and France. The transdisciplinary work process was analyzed in terms of mutual processes of differentiation and integration, which requires additional effort. Civil Society Organizations have a key role in raising the impact of the knowledge, as they aim at action for change. This results in the dissemination of knowledge not only after the research process, but all through the process. Furthermore, these modes of co-operation require the exact report of changes during the research process, techniques to be able to handle the work with non-academics and the stakeholders involved and should be responded to with new concepts for utilizing the results. The emphasis was on not only using Civil society organizations as sources for information, but on considering them as equally valuable partners in the research process.

The close co-operation with non-academic stakeholders opens up sources of information and knowledge to academics which might be difficult to attain from the outside, but, as the expectations of the stakeholders outside the academic world differ, this can create a power play in which the researcher has to find an equilibrium to maintain the independence of research. The scientist from the German Bundeswehr Institute of Social Sciences Phil C. Langer, ('Doing Research in the Name of War? Experiences from a Social Science Institute Within the Army') provided insights into the power play of stakeholders involved in very close co-operations between science and its users.

7.5.2 Adapt and use complex methodologies

Imagine a world full of ready-to-use cars and people still close their eyes and try to ignore them, instead of passing their driving licences. This metaphor was used by exact scientists at the final conference of SSH-FUTURES to describe social scientists and humanists seemingly frightened by the methods developed by the exact sciences. 'Measuring the Evolution of Socio-Economic Structures in a Massive Multiplayer Online Game' by Stefan Thurner (Santa Fe Institute) was in line with this hypothesis. The presentations showed that while there are advanced groups employing interdisciplinary research and advanced methods of large scale internationally comparative data collection, as well as complex data modelling and sophisticated statistcal data analysis the take up of exact methods is not as high as one would expect. That is even more so on the background of modern data e-infrastrucure technologies that efficiently support large scale data collection, access and analysis. Edwin Horlings (Rathenau Institute) focussed on the question 'Will Computational Social Science

Dominate or Divide the Social Sciences of the Future?' and drew the conclusion that the Social Sciences are still diverging in a parallel universe. There is a gap between the tool the exact sciences offer and publish and social sciences research – researchers are still reluctant to adapt and use them. This was in line with the presentation by Jeffrey Johnson (Open University) on 'The SSH in the Science of Complex Systems', drawing the conclusion that there is a need to co-operate more closely with the exact sciences, be it to utilize the tools in order to make better predictions about future developments.

Another methodological issue in the context of the paradigm of sustainable development concerned Social Indicators. 'Their Origin and Uses Between Social Control and Democratic Participation' was focussed on by Paolo Parra Saiani (Universitá Cattolica di Milano). The problem perceived was the public perception of social and economic indicators, and that the quantitative representation of such indicators is mainly used. Very little awareness of social and economic indicators is revealed in the European population (e.g. only 12% of Europeans know the GDP levels of their countries). However, when political debate was launched in European countries (election campaigns), the awareness of several indicators was better, due to the inclusion of the media in a process; the politically used indicator is, for example, the unemployment rate. Another problem identified was the low level of public trust regarding official statistics. The final conference thus revealed a need to develop new social sciences methodologies, based on the heuristic approach.

The Social Sciences and Humanities need to adapt the university curricula in order to transmit the skills required to understand and use complex methodologies developed by the exact sciences, otherwise these research communities will drift further apart and find themselves in concurrent instead of co-operative situations. Hitherto,the tools provided have not been user-friendly, but in the future it will be easier to use them. The interaction of the exact sciences and the SSH is needed. There is, furthermore, a necessity for the Social Sciences and Humanities to redefine their role within these tools. They do not need to reinvent them, there are actually experts from the exact sciences who could transmit their technical knowledge. The important thing is to establish a connection, so that the Social Sciences and Humanities ask for the 'why?', so that they look at the intersections.

7.5.3 The Case of diversity and the need for co-operation in Europe

The Europeanization of the Social Sciences and Humanities is sandwiched between a great variety of national scientific communities and schools and the objective of enhancing the exchange between these different actors strongly to promote a European research landscape in the world. There are not only culturally and historically differing research landscapes, but also not all of them are equally integrated in transnational research and have equally developed

their strengths. In the case of the new Member States of the European Union there was a debate on the functions of SSH in their societies and the problems of transferring the use of this knowledge into the polity sphere. Roger Schoenman (University of California at Santa Cruz) requested new approaches to this question and presented his paper on 'Toward a Complex Vision of Creative Agents: Revitalizing the Study of Institutions and Economic Reform'. While this is a challenging perspective it can also be observed that Europe is already using its great potential as natural laboratory for comparative research (e.g. European Social Survey (ESS), European Values Survey, SHARE, and has lead or made significant contributions to global comparative research (World Values Survey, ISSP, Comparative Study of Electoral Systems).

There are centre-periphery syndromes observed by scientific communities in the new Member States. Gad Yair (Hebrew University of Jerusalem) presented a paper written with Marina Blagojevic (Institute for Criminological and Sociological Research, Belgrade) on 'The Catch 22 Syndrome of Sociologists on the European Semi-Periphery: Exploratory Sociological Observations'. They emphasized that the hierarchical relation between scientists in the centres of science and their peers in semi-peripheral countries is a threat to the inclusion of the variety of knowledge. In the extreme, there is a tendency towards a homogenization of the social sciences and humanities which drops the social sciences. Elisabeth Sundin (Helix Vinn Excellence Centre, Department of Management and Engineering) talked about 'The Suicide of the Social Sciences'.

The evaluation and impact criteria of peer-reviewed publications are designed predominantly for the Anglo-Saxon community and do not appreciate what is written in (even edited) books or address the public sphere. Tereza Stöckelova (Academy of Sciences of the Czech Republic) focussed on 'The Shaping of Social Sciences through Research Assessment'. While there was full agreement in the discussion that evaluations are indispensable, there was equally a strong plea to review and adapt the evaluation systems to respective needs.

'Collaboration in Social Sciences and Humanities: A Guaranteed Thing?' by Ülle Must (Archimedes Foundation) focussed on the issue of transnational co-operation from a broader perspective. The significantly differing grades of international co-operation are linked to the size of the countries, whereas a further issue is proximity that is the incentive for the choice of specific partners. Although there is the 'Potential of and Possibilites for the SSH in the European Framework Programmes for Research', as identified by Nanna Rosenfeldt (Danish Business Research Academy), there are a number of 'Obstacles to the Emergence of a European Space of Social and Human Research' as the results of the ESSE projects prove, presented by Gisèle Sapiro (CNRS, Paris).

8 Bibliography

Ackers & De Vries, 2004. Evaluation of NOW/Novem Incentive Programme on Energy Research. Bosch en Duin.

Andersson, J., 2008. The Future Landscape. Arbetsrapport 5, Instituted för Framtidsstudier.

Arthur, S. and Nazroo, J., 2003. Designing Field Work Strategies and Material. 109-137 in: Lewis/Ritchie, Qualitative Research Practice. London: Sage Publications.

Boer, Y., Gier, A., Verschuur, M. and Wit, B., 2006. Building Bridges. Researchers on their experiences with interdisciplinary research in the Netherlands. RMNO, KNAW,NWO, COS.

Carerra Suárez, I., Suárez, L., 2006. The Bologna Process : Impact on Interdisciplinarity and Possibilities for Women's Studies'. NORA – Nordic Journal of Feminist and Gender Research, Vol 14(2), 103-114.

Caswill, C., 2004. Turbulent delegation: the governance of European research councils and research policy. Cross-National Research Papers, 7(5): The Impact of Social Science Research on Social Policy: governance and management, 7-16.

Davies, H., Nutley, S., Walter, I., 2005. Assessing the impact of social science research: conceptual, methodological and practical issues. Report of the ESRC symposium on assessing the non-academic impact of research 12th/13th May, Research Unit for Research Utilisation, University of St. Andrews. www.st-and.ac.uk/~ruru

European Commission 2009. Erasmus student mobility (outgoing students): 1987/88-2007/08. http://ec.europa.eu/education/erasmus/doc920_en.htm

Evers, J., & D'Silva, J., 2009. Knowledge transfer from citizens' panel to regulatory bodies. (J. Luce, & L. Giorgi, Eds.) Innovation - The European Journal of Social Science Research , Vol. 22(1), 125 - 142.

Fuller, S., 2009. Knowledge Politics and new converging technologies: a social epistemological perspective. (J. &. Luce, Eds.) Innovation - The European Journal of Social Science Research , Vol. 22(1), 7 - 35.

Gibbons, M., Limoges, C., & Nowotny, H., 1994. The New Production of Knowledge: The Dynamics of Science and Research in Contemporary Societies. London: Sage Publications.

Giddens, A., 1987. Social theory and modern sociology. Cambridge: Polity Press.

Hennen, L., & al., 2004. Towards a Framework for Assessing the Impact of Technology Assessment. In: M.D. Ladikas (Eds.), Bridges between Science, Society and Policy. Berlin: Springer Verlag.

INNOCULT, 2002. Internationalisation of Research: Institutional Innovation, Culture and Agency in the Framework of Competition and Co-operation.

Jakab, E., Lukic, J., 2006. Disciplinization: Process and problematics; a comparative report of eight European countries. http://www.york.ac.uk/res/researchintegration/ April, 2006.

Karstenhofer, K., 2009. Debating the risks and ethics f emerging technosciences. (J. Luce, & L. Giorgi, Eds.) Innovation - The European Journal of Social Science Research , Vol. 22 (1), 77 - 104.

Lewis, J. and Ritchie, J., 2003. Generalising from Qualitative Research. 263-285 in: Lewis/Ritchie, Qualitative Research Practice. London: Sage Publications.

Leydesdorff, L., & Etzkowitz, H., 1998. The Triple Helix as a Model for Innovation Studies . Science and Public Policy, 25(3) , 195-203.

Luce, J., & Giorgi, L., 2009. Knowledge Politics and Converging Technologies. Innovation - The European Journal of Social Science Research , Vol 22(1), 1-6.

Marimon Report, 2004. Evaluation of the effectiveness of the New Instruments of Framework Programme VI.

Meusen, M. and Nagel, U., 2009. Experts and Changes in Knowledge Production. In: Bogner, A., Littig, B. and Menz, W., 2009. Interviewing Experts. New York: Palgrave Macmillan.

Mills, C., 1956. The Power Elite. Oxford: Oxford Press.

Mills, C. (1958). The Structure of Power in American Society. The British Journal of Sociology, Vol. 9(1), 29 - 41.

Nowotny, H., Scott, P., & Gibbons, M., 2001. Rethinking Science: Knowledge and the Public. Oxford: Blackwell Publishers.

Pohoryles, R. and Schadauer, A., 2009. What Future for the European Social Sciences? Innovation – The European Journal for Social Science Research, Vol. 22(2), 147-187.

Robinson, J., 2008. Being undisciplined: Transgressions and intersections in academia and beyond. Futures 40, 70-86.

Pierce, S., 1999. Boundary Crossing in Research Literatures as a Means of Interdisciplinary Information Transfer. Journal of the American Society for Information Science 50(3), 271-279.

Palmer, C., 1999. Structures and Strategies of Interdisciplinary Science. Journal of the American Society for Information Science 50(3), 242-253.

Rapport Godelier, 2002. L'état des Sciences de l'Homme et de la Société en France et leur rôle dans la construction de l'Espace Européen de la Recherche. Etat des lieux et propositions. Rapport à l'attention du Premier ministre. ftp://trf.education.gouv.fr/pub/rechtec/rapport/.../godelier.pdf

Snape, D. and Spencer, L., 2003. The Foundations of Qualitative Research. 1-23 in: Lewis/Ritchie, Qualitative Research Practice. London: Sage Publications.

SNRI, 2009. Rapport du groupe de travail “sciences humaines et sociales”. www.enseignementsup-recherche.gouv.fr/cid28982/ snri-les-rapports-des-groupes-de-travail.html

Social Research Association, 2003. Ethical Guidelines. http://www.the-sra.org.uk/ethical.htm

Steele, C., Butler, L., Kingsley, D., 2006. The publishing imperative: the pervasive influence of publication metrics. Learned Publishing, 19, 277–290.

Stehr, N., 2007. Impact Pathways of Social Sciences and Humanities. Vienna: Manuscript..

Weitzmann, E., 2005. Software and Qualitative Research. 802-820 in: Denzin, Norman K. and Lincoln, Yvonna S. (Ed.). Handbook of Qualitative Research, Second Edition. London/New Delhi: Sage Publications.

9 Appendices

9.1 Annex I: Methodologies

9.1.1 The stakeholders

The methodology adopted by WP3 of the SSH project comprised two main activities. First, the European and national social science and humanities landscapes were mapped and analyzed in terms of key organizations, research policy priorities, programmes and evaluation mechanisms. Second, interviews were carried out with stakeholders in the public and private sectors, with the aim of collecting additional information for the mapping of the national social science and humanities landscapes within the European framework.

In order to map the institutional landscape and also identify specific persons for interviews, each partner was first requested to develop a structured database of relevant entities, reflecting key information about their significance (in terms of legal competence, expenditure, accountability etc.) at the various stages of the knowledge production / utilization process, as outlined earlier. With respect to public bodies, the background mapping was intended to be as comprehensive as possible at the national and at the European levels. With respect to sub-national and private entities, on the other hand, only illustrative examples were requested.

On the basis of the background mapping, each country team was requested to try to conduct up to 20 interviews per country with interviewees holding significant institutional positions in relevant entities – public and private – with due regard for pragmatic constraints and special circumstances. Diversity was to be ensured by dividing interviewees as far as possible according to territorial and/or sectoral specialization at the public level, and between profit and not-for-profit in the private sector.

The aim of the interviews was to complement the mapping and analysis of the national research landscapes with information not accessible through an extensive sifting of the data available. The objective of conducting 10 to 20 interviews in each country could not fully be met in every Member State participating. Still, in sum, 89 interviews were carried out between November 2007 and June 2008 with European experts in the field of Social Sciences and Humanities in nine countries – some of the expert interviews were carried out with two interviewees, so that in total 95 persons contributed to the results. The results of this research were integrated in the mapping of the research landscapes of the Member States as informational enrichment as well as to make this rather dense information readable.

We opted for expert interviews because this specific qualitative approach differs from other types of interviews not only in matters of questioning and evaluation procedures, but also in the cognitive interest and respondent groups. As a term, the word expert needs more clarification, as in a tight and constructivist sense everybody can be considered an expert on at least his own life. The qualitative approach of expert interviews ascribes these persons a specific form of knowledge, so-called expert knowledge that is not easily accessible to external actors. More specifically, it differs from everyday knowledge, and although the interviewer decides upon the question of who is to be designated an expert, this is not a fully arbitrary decision.

According to Meuser & Nagel (2009), experts are endowed with authority and their perception and attitudes are consequently institutionally reflected and not only limited to their personal view of things. The emergence of new forms of knowledge demands a broader definition of the term expert, traditionally linked to academic and disciplinary knowledge. The new forms of knowledge, sometimes referred to as mode2 knowledge, no longer distinguish between the layperson and the expert and are no longer limited to academic disciplines, and this imposes a broader definition of experts that also comprises stakeholders from Civil Society Organizations (Meuser & Nagel 2009, 21-25) and policy-makers from the public and private sectors in the case of SSH-FUTURES. Therefore, the stakeholders for the expert interviews of SSH-FUTURES were chosen because they were active figures in the structure of social science and humanities research who may potentially influence a research institution's priorities, agenda, funds allocation, and research initiatives.

The respondents of the interviews were guaranteed full anonymity. In accordance with ethical standards, no detailed specification is made that might hint at their identity. The stakeholders answered questions with critical dimensions, with the objective of not only using these gatekeepers for obtaining information officially available, but of demanding their critical assessment of the challenges and future developments of the research landscapes. This implies that, according to ethical guidelines (Social Research Association, 2003), the qualitative expert interviews had to be treated anonymously for two reasons: firstly, to acquire information not explicitly public, and, secondly, to enable the interviewer to explore underlying attitudes of stakeholders that might not be in keeping with institutional self-conceptions and policy-makers' expectations.

With minor exceptions, interviews were recorded digitally and archived for future reference. Where this was not possible (because of technical constraints, interviewee objections or other factors), an extensive report was kept on file in the original language for future use. The interviews were conducted in the national languages and the transcripts of the interviews were translated into English by the project partners with a first analysis effort, summarizing the information and attitudes collected in each participating country. Overall, each

partner provided the WP leader with two elements for the purposes of analysis and interpretation:

- a summary report in English on each interview, in semi-standardized format following the agreed guidelines;
- A detailed practical report on fieldwork performed and an overview interpretation, drawing on relevant background information from the desk review and other sources, of the interview data.

Of the 89 interviews conducted between November 2007 and June 2008, some countries provided extended qualitative data material on stakeholders' attitudes towards the future of social science and humanities knowledge. The material from the expert interviews could be used for an in-depth qualitative analysis in the case of six countries participating in the project: Austria, Belgium, Germany, the Netherlands, the United Kingdom and Sweden. The objective of this analysis was to gain an understanding of the expectations (discourses, opinions, prejudices, values, reported experiences, etc.) of different types of stakeholders, vis-à-vis the Social Sciences and the Humanities.

We therefore opted for an additional, extensive qualitative analysis of these interviews. The analysis was done by the ICCR Vienna to ensure the coherence of the research analysis.

The analysis follows a qualitative approach, identifying major issues and arguments of stakeholders instead of imposing a priori categories and ideas, respecting the uniqueness of the cases as well as trying to make comparisons across countries and stakeholder groups and developing explanations at the level of meaning rather than cause (Snape & Spencer, 2003). The result is not representative, nor does it attempt any quantification for the purpose of comparison, e.g. the frequency a word was mentioned. The analysis explores attitudes and perceptions of a range of stakeholders in Europe. It can be used to promote more specific research on subtopics, as it delivers a broad overview of a range of topics that all embrace the future of the Social Sciences and Humanities.

In the theoretical field, there is a debate on the question if any generalizations can be drawn from the analysis of expert interviews. The danger of a distortion of qualitative methods towards semi-quantified approaches underlies this debate. The issue of generalization is essential to treat the context of this analysis, as the number of interviews varies between each country group, and the diversity of stakeholders (private and public, user and producer) could be met for Europe as a whole, but in this case not for every country group.

Following Lewis & Ritchie (2003), we do not agree with the view that no generalizations at all can be drawn from the analysis of expert interviews. But there has to be a description of the frameworks within these generalizations to

ensure the quality of research. Critics of the representational, inferential and theoretical generalization of qualitative expert interviews are partly driven by the wrong application of quantitative criteria to qualitative approaches (Lewis & Ritchie 2003: 265). Representational generalization concerns the question as to whether the conclusion of the analysis of specific sample stakeholders in the European Union can be applied to the total parent population. Inferential generalization refers to the question if the results can be transferred to other situations and population patterns. In the specific case of these expert interviews, this question is of no further relevance. The third and most important aspect of generalization is the theoretical generalization that concerns the question whether the results are theoretical contributions to e.g. policy. Generalizations constitute an important aspect of qualitative research, but the usefulness of research cannot only be measured by this question (Lewis & Ritchie, 2003: 266). From our point of view, the theoretical generalizations that can be drawn from the results of these expert interviews with stakeholders in Europe are linked to the underlying processes and patterns of attitudes.

The interview guideline

The qualitative interviews had to include two structural dimensions: the country-specific characteristics of the research field reflected in the country sheets and the European or at least common perspective of all the respondents. To ensure that the diversity of attitudes of stakeholders due to their country or position/working field would not be erased for the sake of a convergence on the European level, the interviews had both to guarantee flexibility and to follow a guideline. The interviews were therefore semi-structured with the purpose of giving the interviewers the possibility freely to emphasize question fields on which the specific stakeholder interviewed offered inside knowledge. Interviewers could alter the sequence of blocks and reformulate the questions in order to ensure the fluidity of the interview and not interrupt with pre-formulated questions. The balance between national and organizational specificities and a certain homogeneous background was to be guaranteed for the purpose of comparison. The following interview guideline gives a theoretical and methodological insight into the underlying objectives of the 'blocks' chosen for structuring the expert interviews, as well as a range of exemplary questions suggested to the project partners. This guaranteed the structural commonality of the differing interviews, but, of course, it was adapted according to specific interview partners.

1. Block I: Socio-demographic data:

The first part of the interview was intended to focus on the question 'who'. It was an attempt to shed light on context, biography, career paths, and individual background. This was the 'opening section', a getting-acquainted moment; although seemingly straightforward, these questions are essential to personalize and humanize the stakeholder and position him in the larger scope of social science research. This section was also used to gain insight into the

material conditions of the stakeholder and his or her 'narrative'. Following Arthur/Nazroo (2003), this block was chosen as the introduction for the expert interviews for the sake of the fluency of the interview, as it was considered important to put the participant at ease first. Questions were to be innocuous in order to ensure the following interview process would succeed. So before generally putting the focus on attitudinal questions, it is recommended to use sections asking for descriptive information about the stakeholders' activities (Arthur/Nazroo, 2003, 113). The following sample of questions contains procedural ones, but also questions with a solely descriptive objective, asking about the background of the interviewees and the narratives of their professional (academic) pathways and foresight expectations.

Sample of questions to be adapted to the corresponding interviewee:

- Procedural questions: how they got the job (co-optation, election, etc.).
- Academic background/ qualifications (general or specific civil service qualifications).
- Career path (substance/ form); what made you interested in this research orientation?
- Briefly describe your work, areas of responsibility and daily tasks.
- Have you always worked in research whether in the private or public sector, and if not, what did you do before and have you had any use of those work experiences in your present work? What factors influenced your choice of profession? Prospects

2. Block II: Definition of objectives – Policy formulations:

This section focused on the narratives of the interviewees concerning his/her working schedule. It was to help further to distinguish between how the institution operates and to which extent the interviewer is involved in these procedures. The questions pertained to the stakeholders' actual position and its relationship to the research institution. Block II was intended to reveal the larger institutional ethos and its attitudes towards the research that it promotes. Although it can be assumed that, like the first block of the interview, this part did not fully generate descriptive answers, but rather subjective descriptions, the questions were worded in such a way that did not imply that the objective might be answers about attitudinal characteristics.

Sample of questions to be adapted to the corresponding interviewee:

- How does the organization you represent view itself and its own role in the research community?
- How does your organization work in terms of working out strategies and making priorities
  and how independent is your organization?
- Can it set its own agenda?
- What is your role in this context?

- What affects research trends and how do they influence the research community in terms of competition, publishing and funding?
- What is your take on the social sciences? Is that a concept covering what your group is dealing with or does it in any sense direct you wrongly? What is its relation to the humanities?

3. Block III: Social and epistemological issues:

The third part of the interview focused on the attitudes of the respondents concerning issues of 'change', 'science' and the phenomenon of so-called 'ivory-tower' researchers. The objective was to open up reflection on the history of social science and humanities research, its mutation and shifting pertinence. This should then be enlarged into broader questions concerning interdisciplinarity, methods and types of knowledge production.

Sample of questions to be adapted to the corresponding interviewee:

- What changes have SSH met with in recent years? Are there observable and fundamental changes in method, paradigm and research objects? How are these changes to be explained and how do they affect your organization and what are their causes?
- Has the contact between interests formulated at EU level, national level, institutional level and academic research increased? Have these levels experienced a rapprochement?
- Do you consider SSH research as unique in any sense?
- How do you judge the relationship between basic research and applied research?
- Do you support a special sort of research, any research directed at meeting specific social needs?
- It is a truism to talk about interdisciplinary research. Is that in accordance with your experience and are SSH interdisciplinary in their character? Is a higher degree of interdisciplinary research necessary?
- As regards your organization, what is its view on 'soft' and 'hard' sciences? Is SSH soft or hard and which one prevails in your organization?
- How has society adjusted its academic research and has this had any significant impact upon the social development of society? How do you describe the difference between academic research and that carried out by NGOs and interest organizations?
- How do you measure the quality of the research you support; how should it be measured? Do the SSH generally produce good research? If not, what research should be done?

4. Block IV: Politics: This section investigated the relationship between Social Sciences and policy-makers. Ultimately, this section of the interview concerned the stakeholders' and institutions' use and employment of money, language and influence.

Sample of questions to be adapted to the corresponding interviewee:

- Are SSH useful within the political sphere and why or why not?
- Has the relationship between science and politics undergone a change during the past years and, if so, why and what does it mean to have influence?
- What is the relation between the researchers' will to earn an income, satisfy intellectual curiosity and to have an impact upon the political/societal sphere?
- What is the driving force behind the interests of scholars and why do they devote themselves to research?
- How do you perceive the body of researchers and their living conditions?
- Is there any research that is taken more seriously by politicians and to what extent might that have something to do with language, research object and forms of funding?
- Good or bad ways of using SSH?
- Should politicians have a higher degree of scientific training?
- Can failures in the domain of social policies be traced to the lack of will on the part of politicians to listen to social scientists or do they have anything to do with a lack of understanding or wrongly drawn conclusions or are there more or less visible obstacles that prevent politicians understanding?
- Do politicians distort the language of social scientists for political instrumental aims and purposes in order to make their policies more palatable?
- What does language mean on the whole in SSH research and are there concepts and terms used only to raise attention? Do researchers deliberately use a language that appeals to politicians and the public? What do SSH researchers have to do to make their research more useable?
- Do SSH researchers know what politicians consider to be useful knowledge?
- Which recurring intellectual and material obstacles are researchers in your organization struggling with and what does the future look like for social science research?
- What impediments, intellectual and material, do you see the researchers in your organization constantly challenged with? What are some examples of these constraints?

5. Block V: Future: The final section of the interviews was dedicated to the perception of the future developments in the field of social sciences and humanities research in Europe. The idea of putting this block of questions at the end of the interview was to offer the possibility to subsume and conclude issues

thematized in the course of the interview and to end it with personal reflections on the question of the future.

Sample of questions to be adapted to the corresponding interviewee:

- What does the future hold?
- What will be the leading research fields in SSH (in your discipline) in the next 15-20 years?
- Could you specify new fields that will emerge in your discipline of SSH in the next 15-20 years?
- Will the total research allocation to SSH increase, remain the same, or decrease during the coming decade?
- What new methods of research in your field do you foresee emerging in the next 15-20 years?

Will the development of methods within SSH be influenced by methods used in other fields of science, e.g. Biology?

9.1.2 The foresight study

The online expert survey was based on the Delphi process. The Delphi survey is one of the common foresight methods employed by many countries and organizations in order to support the process of shaping national or regional policies in the light of future anticipated technological and/or societal developments. The method is based on an anonymous interaction among a group of experts, through repeatedly circulated questionnaires. Usually such surveys are performed in two rounds or more, especially when the first round reveals significant disagreements among the experts. In each subsequent round the experts are informed about the results of the previous round (feedback) and can re-assess their judgments accordingly. In this way an iterative (anonymous) group interaction is achieved among the experts. In many cases, two rounds of such a process are sufficient to achieve a convergence of the responses to a reasonable consensus or stability of dissents. Persisting disagreement on certain topics can also provide important information to decision makers. The Internet provides an opportunity to involve many experts all over the world in online Delphi surveys, including the possibility of real-time feedback.

The experts in this survey were selected from the database that was established and used in WP2, as described in Deliverable 6: Social Sciences and Humanities - An Overview.

The target population of the SSH-FUTURES survey were researchers active in research in the field of Social Sciences or Humanities. No distinction was made with respect to the type of research – i.e. basic, applied or contract research.

The survey was implemented in nine European countries and organized as a stratified (random) sample. The sample was drawn on the basis of project lists (and participants) set up for national SSH research programmes (as managed by national councils or ministries7) and for the European Fifth and Sixth Framework Programmes (likewise for the SSH).

Lists of ongoing SSH projects funded by national programmes were compiled using existing databases provided by ministries and funding organizations. Depending on the size of the population, we considered for our sample either all projects listed (e.g. in Austria) or a random sample of projects (e.g. for the UK and Germany). An additional sample was established using the snowball sampling method: respondents were asked to provide e-mail addresses of colleagues who might be interested in participating in the survey. Finally, to the national and snowball samples, we added the sample of EU projects funded by the EU SSH programmes under FP5 and FP6.

For a more detailed description of the methodology, please see D10: WP4 Methodology of the Foresight Exercise.

9.1.2.1 SSH-FUTURES Expert Survey Questionnaire

The online Delphi expert questionnaire includes 88 future-oriented statements regarding various issues that were identified as topics that might be important in 2025. The questionnaire consisted of four main parts: demographics, general issues in SSH research, social issues relating to six major areas, and open questions.

Part I included questions of a demographic nature. Specifically, respondents were asked their title, their current occupation, the type of organization for which they work, their main research area, their age, gender, and country of residence.

Part II of the survey was comprised of general statements about SSH research that refer to issues such as the institutional conditions for SSH research, levels of interdisciplinary collaboration, and the type and degree of funding for SSH research. Based on the results of previous WPs and consultations with SSH academics (see D10: WP4 Methodology of the Foresight Exercise), 12 statements were selected that cover the areas considered to be central to the future of SSH:

1. Funding of research for societal needs is equal to technological R&D funding
2. SSH research has become an integral part in the development of new technologies and products
3. Research in various areas of the Humanities has ceased to exist
4. Disciplinary boundaries have entirely collapsed
5. Most SSH research is publicly funded
6. Most SSH research is conducted by the academy and industry in collaboration
7. Most SSH research is carried out in the framework of public/private partnerships
8. Researchers are required to have a wide range of interdisciplinary skills
9. Most SSH research is conducted within the universities
10. Post-modernism has greatly modified the value system on which much Humanities research is based
11. A significant proportion of SSH research is carried out in collaboration with other disciplines
12. SSH research is heavily dependent on methodologies that have been enabled by technological developments in other scientific disciplines

After submitting their answers to Part II, respondents were taken to a page where they were presented with the 6 groups of statements. On this page they

were able to choose which group they wanted to access first. It was explained to the respondents that, after completing the questions pertaining to the statements in their chosen group, they would return to this page, where they could either choose another group to answer, or, alternatively, go directly to the final section of the questionnaire. Respondents were encouraged to answer as many groups as possible, but given the time required to complete each group, we assumed that only a minority of respondents would complete all six groups.

Part III of the expert survey was the major part of the survey and included 76 statements divided into six groups (see below). At the beginning of each group, respondents were asked how they rate their level of expertise in that subject area (possible answers were unfamiliar, familiar, knowledgeable, or expert). Following that question, the statements for that group were presented. For each statement the respondents were asked a number of questions. On a Likert-type scale from 1-5, respondents were first asked how likely they thought it was that the future described in the statement would come about, and how important the statement was as a research issue. They were then asked to choose up to three most important disciplines from a list of 35.[58] Next they were asked what impact the research would have on the research issue. The types of impact were 'Raising public knowledge', 'Initiating policy changes', 'Changing public behaviour', or 'No impact', and respondents could choose more than one type. Finally, they were asked what type of collaboration they thought would be most appropriate for researching the issue (single discipline; interdisciplinary within SSH; interdisciplinary: SSH + non-SSH; academy/industry cooperation).

At the end of each group, respondents were asked which three disciplines (from the list of 35 mentioned above) would be most important in researching the group as a whole. They were also asked to write down in their own words any disciplines they thought were not covered by the questionnaire, and the likely impact of that discipline (like the question about impact for each statement).

After completing as many groups as they wished, respondents were finally directed to **Part IV** of the survey. This part enabled respondents to offer statements of their own and to answer the same questions about them as had been asked about the statements in Part III. This provided them with an opportunity to highlight issues that they thought had been neglected by the survey.

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[58] The disciplines were: Anthropology; Archaeology; Arts; Business Administration; Classical Studies; Cognitive Science; Criminology; Cultural Studies; Demography; Economics; Education; Environment Studies; Ethnic and Race Relations; Foresight, Forecasting; Geography; Gerontology; History; International Relations; Labour Studies; Languages and Linguistics; Law; Leisure Studies; Literature; Media and Communication; Philosophy; Political Science; Psychology; Religious Studies; Science and Technology Studies; Social Work; Sociology; Statistics; Women's/Gender Studies; Other - Humanities; Other - Social Sciences.

9.1.2.2 Selecting the statements

The crucial stage in constructing a Delphi survey is the selection of the statements. The statements for this survey all referred to possible futures in European and world society and made a claim about a certain state of affairs in the year 2025. The topics referred to in each statement were derived from a careful study of prior work on important themes in SSH both today and in the future. The Lisbon agenda, for instance, set up a list of key research issues in the SSH fields, based on the needs and problems that Europe will have to confront in the future. It includes, for example, economic, social and political impacts of globalization, Europe's aging population and demographic changes, modes of governance, ethnic and religious diversity, the depletion of traditional energy resources, global warming, and environment sustainability. In addition, a recent report on the future agenda and needs of the SSH in Europe reviewed several studies of the key issues in the fields of SSH. The report identified a list of issues and problems where SSH research could positively contribute to Europe's future.[59] In particular, the report identified the following key issues for future research in SSH:

- Economic performance/socio-economic sustainability
- Democracy, government, citizenship
- European culture/Multi-culturalism and diversity
- Science, technology & innovation/science and society
- Welfare and welfare sustainability
- International migration and ethnicity
- Racism, xenophobia, discrimination
- Ethnic and human rights
- Environment and sustainability
- Societal regulation and development
- Security

Another project, named ESSHRA,[60] aimed at stimulating dialogue on SSH research findings among researchers and policymakers. The project identified critical SSH research topics in Turkey, Bulgaria, Malta and Switzerland. This project was based on ten themes in SSH. These were:

- Economic development models and dynamics
- Challenges of European integration and enlargement
- Development of a knowledge-based society

[59] Gaskell, George, (2005): LSE ftp://ftp.cordis.europa.eu/pub/foresight/docs/kte_social_humanities.pdf.

[60] ESSHRA (2007), Towards PF7 enlarging the SSH research agenda. http://esshra.tubitak.gov.tr.

- Resolution of conflicts and restoration of peace and justice
- Citizenship and cultural identities
- Social change, societal trends, and quality of life
- Migration and social cohesion
- Employment/unemployment and changes in work
- Education, training, and new forms of learning

According to the Eurobarometer[61] (2008) the most important issues facing the EU at the moment are: unemployment (27%), prices/inflation (26%), crime (24%) and healthcare (21%).. Compared with previous years, the majority of Europeans think that their personal situation will improve and unemployment is not considered such a major problem as before. On the other hand, inflation, healthcare and immigration issues have become more important. Additional statements came from a range of publications in journals, research reports and various institutions' websites.

Following a series of brainstorming discussions and consultations with all partners in the project, it was decided to divide the statements into six groups. The following six groups were defined:

- Group 1: Economics and Employment
- Group 2: Social Change
- Group 3: Environment and Sustainability
- Group 4: Europe as a Knowledge-Based Society
- Group 5: Governance and Citizenship
- Group 6: Culture and Values

Next, based on extensive reading and research about each subject, including consultations with experts both from the project consortium and from the academy, the most important themes for each group were decided upon as follows:

[61] Eurobarometer 68, Public opinion in the European union, Fieldwork: September – November 2007, May 2008.
http://ec.europa.eu/public_opinion/archives/eb/eb68/eb_68_en.pdf.

Table 36 - Themes in the Delphi survey

Economics and Employment	Globalization – national, regional and international economic integration
	Patterns of employment/unemployment
	Leisure
	Economic structures and productivity
	Poverty and stratification;
	Social exclusion/inclusion
	Privatization
Social change	Ageing
	Family structures
	Health care and quality of life
	Gender
	Immigration
Environment and Sustainability	Green economics
	Renewable energy
	Urban and rural development
	Sustainable development
Europe as a Knowledge-Based Society	Education and new forms of learning
	Technological innovation
	The digital divide
Governance and Citizenship	Political participation (the role of government)
	Citizenship and rights
	National and European institutions
	Democracy and accountability/ transparency
	Terrorism
	Crime
	Privacy
Culture & Values	Cultural diversity
	Religion and religious forms
	Ethics

The groups were then populated with statements, all of which refer to the year 2025. While it is not possible here to reproduce the intellectual and creative process behind the formulation of each and every statement, an example can be provided of the kind of research and thinking that went into each statement or, in some instances, groups of statements. Let us take the issue of ageing as an example. The ageing of Europe's population is an unmistakable trend. The literature indicates three major aspects of it. Firstly, in terms of general ageing, the proportion of over 65s in Europe is forecast to be around 22% of the population of the EU-15 countries by 2025 (from around 17% today). Secondly, the old are getting older: between 2004 and 2020, in EU-25 countries, a 50% increase in the proportion of over 80s is expected, with the dependency ratio rising from 24.5% in 2004 to 31.9% in 2020. Thirdly, the workforce is ageing, with 56.8% of 55-64 year olds expected to be in work in 2025, as compared to 39.9% in 2003 (Economic Policy Committee and the European Commission, 2005).[62]

The implications of this clear process of ageing are far-reaching. To start with, there are implications for the financing of state pensions and health budgets, which currently operate on a 'pay as you go' basis. These suggest extending people's working life (raising the retirement age) and reconfiguring the funding of the health and pension systems. It is not clear whether the state will take on the full costs of these trends, and private institutions and the family might be called into play.

Furthermore, the ageing of the population implies new patterns of consumption, especially given the large amounts of leisure that retirees have at their disposal. It might also inspire a wave of age-friendly design and specifically age-friendly products. An ageing population is also likely to be a high consumer of health services. This is particularly likely to be the case given the growing interest in the notions of 'quality of life' and active ageing, defined by the World Health Organization as "'he process of optimizing opportunities for health, participation and security in order to embrace quality of life as people age'.[63] Much work is already underway regarding active ageing and ensuring a high quality of life among older people. If the findings of this research are well assimilated by the ageing population, we might find that life expectancy will be extended further and that the older members of the population in 2025 will be healthier than today's over 65s.

The ageing of the workforce is of particular interest for two main reasons. Firstly, it is the aspect of ageing that will be upon us soonest, and as such requires more urgent treatment. Secondly, workplaces will have to adapt to a

[62] Economic Policy Committee and the European Commission. (2005). The 2005 projections of age-related expenditure (2004–50) for the EU-25 Member States: Underlying assumptions and projection methodologies.
[63] http://www.euro.who.int/ageing.

growing proportion of older workers and become age-friendly, implying a reduced reliance on a young and mobile workforce. This also has implications for the notion of lifelong learning: if there are fewer younger workers coming into the labour market with up-to-date knowledge and qualifications, it follows that current workers are going to have to attain that knowledge instead.

From these observations of ageing in the European context, it is clear that it is a subject that should be included in any survey of future issues in Europe. Indeed, there are no fewer than three statements that directly concern the issue of Europe as an ageing society. It should be noted, however, that the statements are not hypotheses about a future that the authors of the questionnaire necessarily think will come about. The survey in itself does not make predictions about the future or try to create causal linkages between various variables and possible futures. Rather, as described above, it aims at asking experts how likely they think certain futures are to come about.

9.1.2.3 The online tool

The survey was conducted online using the 'Surveylet' tool offered by Calibrum.[64] There are numerous advantages to using an online tool for conducting a survey such as this one. These include considerations of cost, smooth page branching (see description of the survey above), respondents' ability to complete the questionnaire in more than one sitting by saving their results so far and coming back to them, and, of course, the elimination of the necessity to input respondents' answers into a computer.

The Calibrum 'Surveylet' tool is suitable for Delphi surveys in two ways: (1) when completing the second round, respondents are able to see their own answers from the first round, and, more importantly; (2) when completing the second round, respondents are able to see the distribution of the results for each question from the first round. In other words, they are able to see what the other respondents thought, and, if they wish, adjust their own answers accordingly.

The survey tool offered by Calibrum lets survey designers construct their own surveys and invite respondents using an internal email-based invitation system. The data from the survey were provided to ICTAF in an Excel file that was later imported into SPSS.

[64] www.calibrum.com.

9.1.2.4 The implementation of the survey

Respondents were invited to participate in the survey through an email sent via Calibrum's own email system. The list of addressees was that used in WP2. After erroneous email addresses were removed, around 5,200 email invitations were sent to experts in the ocial Sciences and Humanities.[65] The survey was opened on 25 September 2008. Reminders were sent one week later. 666 people participated in Round 1 of the survey. Round 2 was opened on 12 October 2008, when the questionnaire was sent to all participants in the first round. A reminder email was sent out one week later. Round 2 was closed on 30 October 2008. 179 new respondents participated in Round 2. A total of 845 people participated in the survey, making a response rate of 16.3%. A series of Independent Sample T-tests shows there are no statistically significant differences between the answers given in Round 1 and those given in Round 2. Therefore, the analyses that follow refer to the answers provided in the second round by all respondents.

9.1.3 The survey

9.1.3.1 Hypotheses, operationalization and questionnaire

As worked out in the Deliverable 2 - Methodology "the empirical research will have to take three elements into consideration:

- The way in which knowledge is created, disseminated and used
- The potential use of the social sciences and humanities
- The way in which social science and humanities knowledge production and diffusion is influenced by users and "governance"

The empirical exploration of these key issues necessitate an analytical frame. The operationalization for the empirical part of the study is partly based upon the theoretical concept outlined in deliverable 3 ("Pathways"). It has, however, to be complemented by a critical assessment of the modes of knowledge production to enable a careful analysis of the actual situation. " (*Methodology* - Deliverable 2, p. 5)

Furthermore, "the empirical research of this project has to concentrate on [...} specific aspects. We will survey the attitudes, opinions and visions of the key actors in the social sciences and the humanities policy, the representatives of research institutions, the researchers themselves and the stakeholders and research funding organizations." (*Methodology* - Deliverable 2, p 6)

[65] For more on the potential participants in the survey, see Deliverable 6: Social Sciences and Humanities - An Overview of the SSH-FUTURES project.

For further operationalization "[..] it is relevant to look at the type of knowledge the social sciences and humanities can offer.

- Social Sciences and Humanities offer institutional and process knowledge and knowledge on values and attitudes. Contents and concepts differ according to the visions and strategies of the knowledge producers and relate in different ways to the "societal needs". In this respect, understanding the different types of knowledge plays an important role. As shown earlier in this projecti, "Instrumental Knowledge" as much as "Capacity Building" enable to act, albeit in different ways.
- Knowledge and information are produced in different types of institutions with different organizational structures. The institutions differ in visions and mission. Social sciences and humanities were traditionally the domain of the public sector, of universities and public research institutes. The pressures on the public sector caused two major changes that have affected this system:
- on the one hand, the appearance of private non-profit research institutes and knowledge providers in the private sector;
- on the other hand the increase of social science and humanities knowledge in the private commercial sector within or without big corporations. This leads to the distinction between knowledge and information, whereby information is the base for the production of knowledge. Information becomes a directly marketable good, and there is an obvious demand for databases. It is hence fair to assume that different types of institutions respond in different ways to different "societal needs".
- The type of organization varies furthermore according to the discipline and the national context. Little is known about this differentiation, and even less about the ways in which different types of organizations relate to interdisciplinary and transdisciplinary activities.
- The different types of organizations depend on different funding structures (type and size of funding) that impacts the type of knowledge produced and the methods applied. The funding structures might be appropriate, or might be inappropriate. The perception of research actors will be explored and confronted with the view of the stakeholders, the clients and the funding organizations." (*Methodology* - Deliverable 2 p, 10)

Two empirical questions emerge out of this elaboration of the type of knowledge.

- "What contents do social sciences and humanities produce, and how does this knowledge relate to societal needs? [,,,] In a nutshell we can distinguish between two types of contents: Knowledge about structures and processes; and Knowledge about attitudes and behaviour." (Methodology - Deliverable 2, p 10)

- "In what form is this knowledge produced, and how is this related to institutional set-up in which the knowledge is produced? " (*Methodology* - Deliverable 2 p. 10)

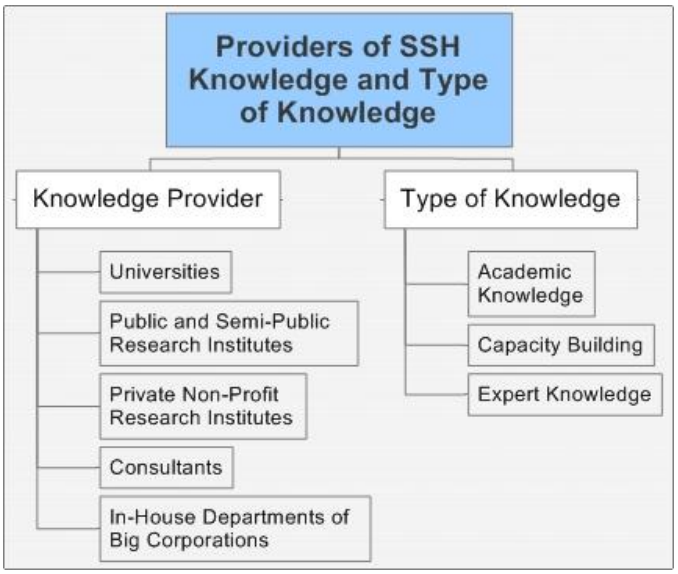
Based on the concept elaborated in Deliverable 3, three types of SSH knowledge production can be distinguished:

- "'instrumental knowledge' can follow the traditional path that is identified with "positivism", following its traditional academic mode of production, submitted to the traditional academic logic of verification; the use outside academia is then not any more under the control of the researcher(s) and hence under the sole responsibility of the modifier(s) and user(s); we will call this model "*Traditional academic research*";
- Alternatively it might be produced for the direct interest of clients, verified or falsified by the practice that is based on the knowledge provided. We will call this model *"expert knowledge".* The term "expert" does not refer to any specific qualification that distinguishes "expert" from "layman". It is not achievement, but ascription that defines the status: "Expert knowledge" is merely defined by the fact that there are clients that pay persons or institutions for the expertise required.
- The *capacity building model* is produced in a specific context in which knowledge is gained and used. Hence, there is a direct relation between the generation and the use of knowledge. Knowledge production of this type is by definition goal- and task- oriented and not organised according to specific disciplines. A distinction between "applied" and "generic" is here irrelevant." (*Methodology* - Deliverable 2, p. 11f)

Against this background, "Work Package Two deals with the empirical work on SSH knowledge producing and knowledge mediating organizations. The research will shed light on institutional organization, contents, methodologies applied and the relation between the SSH and their stakeholders and beneficiaries.

This empirical study will look at the institutional organization of social science and humanities across Europe and its impact on contents, methodology and its understanding of the relation between the social sciences and humanities and the stakeholders and beneficiaries." (*Methodology* - Deliverable 2 p. 15).

Figure 4: Providers of SSH Knowledge



The design of the questionnaire for the SSH-FUTURES survey therefore was guided by the study's research questions and the theoretical framework, elaborated in '*Impact Pathways of Social Sciences and Humanities'* (Deliverable 3) of WP1. This concept was operationalized in '*Methodology'* (Deliverable 2) of WP1, which guarantees coherence between the WPs in terms of content.
As described and theoretically elaborated in '*Impact Pathways of Social Sciences and Humanities'* (Deliverable 3), knowledge in Social Science and the Humanities, cannot be measured directly and the same is true of the flow of Social Science and Humanities knowledge:

"Since social science knowledge does not enter the public domain without in the process being transformed in ways that are difficult to avoid, let alone preemptively anticipate, the exact impact on social science knowledge as mediated by various groups and institutions (teachers, priest, journalist, politicians etc.) is rather difficult to trace." (ibid., p.43)

What could and should be explained by the survey is the process of knowledge production.

Insofar as standard background questions were concerned, we relied on known procedures established by large and well-known surveys such as the European Social Survey or fieldwork institutions like ZUMA.[66]

[66] The tool ZIS compiled and published by ZUMA Mannheim also provided useful information and references. See http://www.gesis.org/methodenberatung/zis/index.htm

The full questionnaire of the survey can be read in Annex I and the codebook can be read in Deliverable 5. Here suffice to reiterate its main components and indicate how they relate to our research questions

Research landscape. In 'Who are the stakeholders? *SSH institutions, policies & programmmes in the multi-level european research system*' (D9) of WP3 it was shown that research organisations in different countries displays varying degrees of reliance on different funding sources; and it was further argued that this has something to do with both the national structures for research, and the type of research organisation. Accordingly, and in order to identify the position of the organisation's 'home' institution in the national research landscape, the respondent was asked to specify the main funding sources of his/her organisation. Six options were provided: institutional (national and international) core funding; national competitive public research funding; EU Framework Programme; private sponsoring or funding organisations; contract research / consultancy / services / commercialisation of research (e.g. royalties); tuition fees / donations.

Organisational framework[67] - SSH research is currently being carried out by different types of organisations. The most important – also tapped on by the questionnaire – are universities, public and private research organisations (commercial or, more often, non-profit), research divisions within commercial enterprises and research divisions within government departments. In addition, respondents were asked to indicate the size of their organisation, its structure (i.e. whether it is made up of smaller units) and its age.

Research activities. Respondents were asked to specify what their work comprises in terms of the share of research, teaching, administrative and management duties and participation at meetings. The involvement in other intellectual activities not necessarily directly linked to research (such as evaluations, political activism, mediation or journalism) was also explored.

Disciplinary orientation. In order to establish the extent to which the research done by respondents is interdisciplinary (and, if so, in what manner) and whether this has anything to do with the type of academic training received, we asked respondents to indicate the disciplines covered to a significant degree by their training and in their current research.

Attitudes. A series of attitudinal questions were posed to explore the views of respondents on the contemporary thematic and methodological orientation of

[67] As researchers may be employed in more than one organisation, we used two questions to identify the relevant organisation. First, we asked respondents to indicate in which type of organisation(s) they are employed in, whereby they could mark more than one. If they marked more than one, we asked them to indicate in which organisation they spend most of their research time.

the SSH; inter- and trans-disciplinarity; gender mainstreaming; and the possible existence of discriminatory practices in research careers. We also asked the respondents to assess the academic reputation of different funding sources.

Socio-demographic variables. Besides gender and age, respondents were asked to indicate their highest academic qualification, the country in which they studied and the educational and occupational background of their parents.

9.1.3.2 Survey design and sample

The survey's sampling strategy is based on the conviction that the future of social science and humanities lies in research realized by research projects and not in the general field of activity of researchers. The target population of the SSH-FUTURES survey were therefore researchers active in the field of social science or humanities in this sense. No distinction was made with respect to the type of research – i.e. basic, applied or contract research.

The survey was implemented in nine European countries and organised as stratified (random) sample. The sample was drawn on the basis of project lists (and participants) set up for national SSH research programmes (as managed by national councils or ministries[68]) and for the European Fifth and Sixth Framework Programmes (likewise for the SSH). The sample details are provided in the Annex.

Lists of ongoing SSH projects funded by national programmes were compiled using existing databases provided by ministries and funding organisations. Depending on the size of the population, we considered for our sample either all projects listed (e.g. in Austria) or a random sample of projects (e.g. for the UK and Germany). An additional sample was established using the snowball sampling method (Barnett 2002): respondents were asked to provide e-mail addresses of colleagues who might be interested to participate in the survey. Finally, to the national and snowball samples, we added the sample of EU projects funded by the EU SSH programmes under FP5 and FP6.

[68] The exception was France where universities and (public) research organizations largely depend on state funding. All ministries dispose over their own think-tanks, or research organizations under their control, largely financed by block grants. The system is built around universities, grandes écoles and public research institutions such as the CNRS. The research landscape has undergone major reforms in the recent years (SNRI 2009, p.6): Since the creation of the ANR in 2007 some programmes are centralised within this institution and ministries and agencies regularly launch applied research programmes. Of importance are "mixed structures" as well: Whilst in SSH not more than 26 research units belong directly to the CNRS, the CNRS is involved in 335 that belong jointly to the CNRS and the universities. Furthermore, there are 1'038 university research units: 1038, of which 607 in Humanities, and 431 in Social Sciences. (« Rapport Godelier », 2002).

The total sample, including researchers working in European projects and researchers identified through the snowball principle, amounts to 1,655.[69] This renders the SSH-FUTURES survey the largest till-date European survey of SSH researchers and a valuable database for further analyses and as a benchmark for future surveys. The following table presents some key information about the achieved sample regarding gender and age.

Table 37: Age and gender (total %)

	Gender (% of Total)			
Age	Female	Male	Total	n
up to 35 years	8.4	6.7	15.1	246
36 to 50	18.0	23.9	41.9	681
51 to 65+	11.6	31.3	42.9	697
Total	38.1	61.9	**100**	1624

62% of all respondents are men, 38% are women. This can largely be explained by our sampling strategy – i.e. namely through projects, and focusing on project coordinators – which reproduces the lower number of woman researchers in this group. It also explains the age distribution with a tendency towards senior researchers older than 35. These findings are corroborated in all countries.
The sampling procedure reflects the low participation of new member states in the European research Framework Programmes in general and in the SSH priority in particular. This problem has been mentioned in various reports, most of which are informal, however, and not to be quoted. The problem cannot be blamed on the project, but is one caused by the research policy the commission has to pursue. In this respect a separate study would be advisable. A similar argument applies to the low representation of southern European countries.

In general, the response rate of researchers from different countries is quite varied. There was no obligation for the potential respondents to participate in the survey. However, this had no consequences on the analyses. All variables were analyzed separately by countries and by type of research landscape clustering countries. Only in cases where no differences could be observed according to country and type were the aggregated data specified. For this reason weighting of the data was not required either.

As expected a low number of researchers are working in the private sector. However, this does not pose a problem, as we are interested in SSH research and not in the fields of activities of SSH researchers.

[69] In various tables that follow – especially beginning chapter 4, the totals listed do not always correspond to the total – sample size. This reflects the item non-response (i.e. missing entries for specific questions).

9.1.3.3 Fieldwork

Fieldwork was based on the premises of the tailored design method for internet and mail surveys elaborated by Don A. Dillman[70].Data collection was organised as an online survey with controlled access. The survey was set up by using the open source tool Limesurvey[71] and installed on the server of the Interdisciplinary Centre for Comparative Research in the Social Sciences (ICCR) in Vienna. Respondents were informed about the survey one week in advance to the survey launch. The participants had to use their internet browser to fill in the questionnaire. Three reminders within one month were sent. The survey period lasted from the beginning of January to the end of February 2008. The information, invitation, reminder mails and the questionnaire were translated by the partners.

[70] DON, A. D. (2007). Mail and Internet Surveys: The Teilored Design Method. Hoboken, New Jersey: John Wiley & Sns, Inc.
[71] www.limesurvey.org

9.2 Annex II: Questionnaire of the SSH FUTURES survey

Questionnaire: English Version

Interdisciplinary Centre for Comparative Research in the Social Sciences - ICCR
Schottenfeldgasse 69/1 1070 Wien

9.3 Annex III: Presentations of the SSH FUTURES Final Conference

Presentations of the

SSH FUTURES Final Conference

22 and 23 October 2009, Brussels

Interdisciplinary Centre for Comparative Research in the Social Sciences - ICCR
Schottenfeldgasse 69/1 1070 Wien

1 Enclosed presentations

Academic Narcissism and the Problem of Knowledge Accumulation in the Social Sciences
Saša Božić, University of Zadar

Legal science and its developments in interdisciplinarity: The example of management / conservation of the marine environment.
Bertrand Cazalet, Research engineer in public law, Gaius Project, Laboratory CERTAP

The Future of the Social Sciences and Humanities: Some methodological issues
Rossitsa Chobanova, Bulgarian Academy of Science

The Conflict of Cultural Spheres and the Future of the Social Sciences
Gregor Fitzi, University of Florence

Cultural Memory. The potential of an inter- and transdisciplinary research project
Carin Franzén, Linköping University

International Comparisons in Sciences Studies: what and why do we compare?
Anne-Sophie Godfroy-Genin, École Normale Supérieure de Cachan

Social Justice as the Problem for Research and Social Administration in Lithuania
Arvydas Guogis, Mykolas Romeris University

Evaluating Social Science and Humanities Knowledge Production: An Exploratory Analysis of Dynamics in Science
Patricia van Hemert, Free University of Amsterdam

Will computational social science dominate or divide the social sciences of the future?
Edwin Horlings, Rathenau Institute and Peter van den Besselaar, Free University Amsterdam

The SSH in the Science of Complex Systems
Jeffrey Johnson, Open University

The potential for intervention through Co-operative Research
Sandra Karner and Nicoleta Chioncel, Inter-University Research Centre for Technology, Work and Culture
Sonja Petrovics and Irmi Salzer, Via Campesina Austria

Futures of SSH in the European Research Area
Philippe Keraudren, European Commission, DG Research

The ESFRI Roadmap – an opportunity for Social Sciences
Marko Tadić, University of Zagreb and Steven Krauwer, Utrecht University

Doing research in the name of war? Experiences from a social science institute within the army
Phil C. Langer, Bundeswehr Institute of Social Science

Doing Co-operative Research with CSO: Challenge and Implications for Social Sciences
Les Levidow, Open University, Steve Hinchliffe and Sue Oreszczyn, University of Exeter

Collaboration in Social Sciences and Humanities: a guaranteed thing?
Ülle Must, Archimedes Foundation

Introductory Speech: 'Mind the Gap'
Peter Nijkamp, Free University of Amsterdam

The Future of Social Sciences and Humanities – Results from the SSH-FUTURES project
Ronald J Pohoryles, ICCR

What is the role of the Social Sciences and Humanities in futures research?
Rafael Popper, University of Manchester

Potential of and possibilities for the SSH in the European Framework Programmes for Research
Nanna Rosenfeldt, Danish Business Research Academy, DEA
Mikkel Bülow Skovborg and Henrik Stampe Lund, DEA

Social Indicators: their Origin and Uses between Social Control and Democratic Participation
Paolo Parra Saiani, Universitá Cattolica di Milano

Working for and with the European Citizens
Andrea Ricci, Vice President of ISIS, Institute of Studies for the Integration of Systems, Rome and Carlo Sessa, President of ISIS and co-ordinator of the MOVE TOGETHER and RAISE projects

The obstacles to the emergence of a European Space of Social and Human Research
Gisèle Sapiro, CNRS, Centre de sociologie européenne

Toward a complex vision of creative agents: revitalizing the study of institutions and economic reform
Roger Schoenman, University of California at Santa Cruz

Foresight Study on the Future of SSH
Tal Soffer, Interdisciplinary Centre for Technological Analysis and Forecasting (ICTAF), Tel Aviv University

The shaping of social sciences through research assessment
Tereza Stöckelová, Academy of Sciences of the Czech Republic

The suicide of the Social Sciences
Elisabeth Sundin, Helix VINN Excellence Centre and Carin Holmquist, Stockholm School of Economics

Emerging Patterns of Depoliticization and Engagement to Inform the Future of STS Research: A Case Study in Nanotechnologies
Francois Thoreau, Scientific and Public Involvement in Risk Allocations Laboratory, University of Liege
Pierre Delvenne and Martin Erpicum, SPIRAL Laboratory, University of Liege

The Future of SSH in Innovation Policies
Henriette van Eijl, European Commission, DG Enterprise

Use and abuse of social sciences in the policy-making process. Lessons from the past, warnings for the future
Wojciech Wozniak, University of Lódź

THE NEW HEROSTRATUS

Academic Narcissism and the Problem of Knowledge Accumulation in the Social Sciences

Saša Božić,
University of Zadar

- **Herostratus** (Ἡρόστρατος) was a man who set fire to the Temple of Artemis at Ephesus in his quest for fame on July 20, 356 BC
- Also a 1967 film by the Australian director Don Levy, about a young man who wants to commit suicide in public by jumping off a tall building.

- Social reality of an academic life encourages an academic narcissism
- Preoccupation with the self and its presentation, concentration on the image rather than the content, lack of empathy (co-operation)
- Academic equivalent – always in search for new subjects, novelties (without looking for scientific or public relevance); CV concentrated; fixation on citation; disinterest in 'old' publications and theories; need for power and prestigious titles

Inter-dependency between the academic narcissism and epistemological preferences

- It is not the goal of social sciences to make generalizable, testable, falsifiable or predictive accounts. They should exclusively address human subjectivity, particularly motivations, goals and opinions of individual and occasionally collective actors. /epistemological scepticism and relativism/
- Policy-oriented studies and problem-focused transdisciplinary research share the same scepticism and increasingly apply only 'workable' problem-resolving concepts and ad hoc methodology. /epistemological pragmatism/
- Or, zero epistemology?

- 'Real' science is neither achievable nor desirable in the case of many social sciences (particularly sociology and social anthropology, but less so in economy and psychology).
- It is not our goal to make generalizable, testable, falsifiable or predictive accounts.
- Always new and always limited concepts do not follow and should not follow the idea of knowledge accumulation and a scientific revolution as the main mechanism for scientific growth.

Intrinsic reasons for the dismissal of epistemological realism

- Does social reality exist independently of a social researcher?
- Is there an objective social world? Can there be a *causal description* of social processes?
- Why are the accounts of a social scientist more valid (or simply more valuable) than the interpretations of actors?
- Are predictions possible and desirable in the social sciences?

Extrinsic reasons for the dismissal of epistemological realism

- The social reality of theorizing, research and publishing favours the construction of new classifications, taxonomies, 'applicable', mid-range empirical generalizations over co-operative theory-building and testing.
- In order to be successful, within the situational logic of their academic work, social scientists are encouraged to seek limited co-operation, individual publication, politically defined funding programmes and a substantial citation.

- Functional social scientists' traits resemble narcissistic personality traits.
- In order to make a 'career', they ought to be highly competitive, image-oriented, substance-avoiding, ultra-innovative, quotation-obsessed individualists who choose grants for short–term, well paid projects over longitudinal, co-operative research (i.e. hard work without any guarantees of success).

Costs of epistemological realism

- Objectivity/Confirmability (subjects and conditions of the research)
- Reliability (stability of process over time and across researchers and methods; triangulation)
- Credibility (process of checking, questioning and theorizing)
- Validity/Generalizability (connecting beyond the immediate study)

- Epistemological realism demands – time, multiple interconnected researchers or research teams, triangulation of researchers, methods, perspectives….
- Longitudinal research, integration of methods

Career

- PhD – an exercise in individualism or how to make a grand thesis with minimum research
- Stuffing the CV: qualifications, research, conferences, public engagement, committees, reviewing, counselling, teaching, publications, citation…
- Digesting the literature
- Individual evaluation – orientation towards self-presentation and image construction

Research

- Substantial funding in the realm of politics – 'relevant' subjects
- Problem oriented funding
- Funding the 'novelty', not innovation and consistency
- constraints – time and money
- results, applicability

Publishing

- Individual publishing
- Citation
- Articles over books
- Domination of English language

Possible measures (cures for academic narcissism)

- Re-integration of fundamental propositions (epistemological and paradigmatic) in the research and the research funding
- Division of research and other academic duties
- Peer reviewing pools
- Long term team building
- Citation of titles not of authors

LA SCIENCE JURIDIQUE ET SES EVOLUTIONS AU SEIN DE L'INTERDISCIPLINARITE

L'exemple de la gestion/conservation de l'environnement marin

Bertrand CAZALET
Research engineer in public law
CERTAP (CDED EA 42 16)
University of Perpignan, France

GAIUS

SOCIAL SCIENCES & HUMANITIES FUTURES

22-23 October 2009
Hôtel Métropole,
Brussels, Belgium

LA GOUVERNANCE: UNE NOTION AU SERVICE DE L'INTERDISCIPLINARITE ?

LA GOUVERNANCE, UNE NOTION AMBIVALENTE

- Notion de **science politique** car relative à l'organisation des sociétés au sens large: analyser le **fonctionnement et l'efficacité d'un Etat** dans sa dynamique, au moyen de critères d'évaluation (global ou spécifiques) des politiques publiques
- Multiples définitions, contenu large et hétérogène: **règles de droit, processus et comportements**
- Dimension **idéologique** de la **« bonne »** gouvernance: d'origine anglo-saxonne et véhicule la théorie de l'**Etat minimum** - contestation de l'appareil d'Etat au plan politique et administratif

LA GOUVERNANCE ET LE DROIT

DES REGLES DE DROIT

- **Perception** la plus **classique** et la plus spontanée du rôle de la science juridique:
  - **Eclairer**: état de l'art des règles en vigueur (nature et contenu), « que dit la loi, que dit le juge »
  - **Transposer**: traduire en termes juridiques des décisions, des recommandations techniques et/ou scientifiques.
- **Fonction essentielle** de la science juridique: maîtrise du droit « positif » et des principes de construction de la norme.
- **Fonction insuffisante…**

DES PROCESSUS

- **Processus historique**: comprendre la règle dans sa dynamique historique (droit de l'environnement)
- **Processus décisionnel**: comment sont élaborées et adoptées les règles (typologie des décisions) ?
- **Processus institutionnel et administratif**: analyser les statut juridiques et l'exercice des compétences administratives (effort administratif, origine et utilisation des financements, détermination des fonctions…)
- **Processus d'application** : quelle efficacité de la mise en œuvre et du contrôle des normes ? surveillance, sanction, répression

DES COMPORTEMENTS

- **Quels comportements à l'égard de la norme ?**, Comportements individuels et/ou collectifs (représentation): perception et acceptabilité de la règle pour mieux comprendre son applicabilité, l'intégration des acteurs au processus de décision, les problèmes de conflits, les liens avec le territoire et les usages économiques. Dimension culturelle très forte des comportements
- **Quel comportement à l'égard des institutions administratives ?** : relève de la dialectique entre l'Etat et la société civile. Quelle légitimité des autorités ? Existe-il d'autres niveaux de légitimité ? Locaux, informels, traditionnels…

L'INTERDISCIPLINARITÉ INDISPENSABLE A L'ANALYSE DE LA GOUVERNANCE

- L'analyse des **PROCESSUS** et des **COMPORTEMENTS** suppose un effort réel d'observation, d'étude approfondie et contradictoire
- Ce travail complexe est conditionné par **l'apport d'autres sources d'information non juridiques** et donc par le **croisement de données disciplinaires.**
- **Quelques exemples** dans le domaine de la gestion/conservation de l'environnement et plus particulièrement l'étude des **aires marines protégées (AMP)**…

Project CONSDEV

(2002-2005)

COHERENCE OF CONSERVATION AND DEVELOPMENT POLICIES OF COASTAL AND MARINE PROTECTED AREAS IN WEST AFRICA

n ICA 4-2001-10043 (INCO-DEV Programme, European Commission, Research Directorate-General)

-**Approche interdisciplinaire en SHS** : droit, économie, socio-économie, sociologie, histoire, anthropologie (3 sites)
- **Analyse de territoires complexes** (espaces de police) théoriquement régulés par les administrations d'Etat et mise en conformité avec les objectifs internationaux de "bonne" gouvernance environnementale.
-**Résultats**: Discours sur la gouvernance en total décalage avec la situation des Etats (capacité, légitimité), très faible applicabilité des normes (moyens, centralisation, bureaucratie, caractéristique des activités économiques), négociation permanente et mécanismes de droit syncrétique, administrations off-shore

Scientific publication (2007)

Projet GAIUS

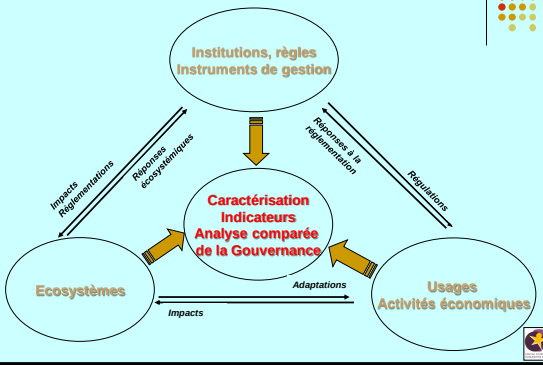
(2008-2010)

GOUVERNANCE DES AIRES MARINES PROTEGEES POUR LA GESTION DURABLE DE LA BIODIVERSITE ET DES USAGES CÔTIERS

n Blanc 07-3 194041(Programme 'Blanc' interdisciplinaire, Agence Nationale de la Recherche

- **Interdisciplinarité SHS-SVT** : droit (coordination), géographie, économie, socio-anthropologie, biologie, écologie, sur 6 AMP.
- **Buts: 1)** caractériser des « modèles » de gouvernance d'AMP françaises; **2)** proposer une analyse comparée; **3)** construire un modèle générique alimenté par des indicateurs; **4)** contribuer au suivi et à l'évaluation de la gouvernance des AMP françaises

Approche pluridisciplinaire et intégrée du projet GAIUS



Projet PAMPA

(2008-2010)

INDICATEURS DE LA PERFORMANCE D'AIRES MARINES PROTEGEES POUR LA GESTION DES ECOSYSTEMES CÔTIERS, DES RESSOURCES ET DE LEURS USAGES

Programme LITEAU - MEEDDAT

- **Interdisciplinarité SHS-SVT** : droit, géographie, économie, socio-anthropologie, biologie, écologie(coordination), sur 9 AMP.
- **Buts: 1)** construire et tester des tableaux de bords d'indicateurs de performance des AMP (écosystèmes, usages et gouvernance); **2)** évaluer la pertinence de ces indicateurs en fonction des objectifs et des contraintes des gestionnaires des AMP (fonctionnalité et confrontation)

Projet GRAMP

(2009-2012)

RECHERCHE SUR LES PROJETS DE GOUVERNANCE DE DEUX GRANDES AIRES MARINES PROTEGEES (MEDITERRANEE ET POLYNESIE FRANCAISE)

Programme LITEAU - MEEDDAT

- **Interdisciplinarité SHS-SVT : droit (coordination), biologie, écologie, sur 2 AMP.**
- **Buts: 1) analyser le développement des AMP de grand périmètre en France 2) le changement d'échelle spatiale induit des transformations dans les modes de gouvernance et l'élaboration des protocoles scientifiques de suivi/évaluation; 3) s'inspirer des expériences existantes (extérieures); 4) construire des tableaux de bord**

Thank you all

THE FUTURE OF SOCIAL SCIENCES AND HUMANITIES
International conference

22-23 October 2009, hotel Metropole, Brussels

Some methodological issues: USERS & PRODUCERS OR DEMAND & SUPPLY

Rossitsa CHOBANOVA, D.Sc., Senior researcher
Bulgarian Academy of Sciences – Institute of Economics
3 Aksakov str., 1040 Sofia, Bulgaria, e-mail: r_chobanova@iki.bas.bg

Topics

I. Questions to be discussed in the future: definition of the SSH development
- State of the art: sociology of social sciences (R.Pohoryles)
- Suggestions: including new approaches

II. Questions to be discussed in the future: Definitions of terms
- Definition of knowledge as a term of philosophy, sociology, psychology, economics, …
- Demand for knowledge

Thesis: Questions to be discussed:

NOT ONLY

- Users & Producers

BUT ALSO

- Demand and Supply of knowledge on national level
- Factors affecting demand and supply of knowledge on national level

I. Questions to be discussed: state of the art

The main issue identified by the SSH-FUTURES project is:
How can the Social Sciences and Humanities better cope with the needs of society?

This issue is contingent on three elements:

- What are society needs?
- What do the Social Sciences and Humanities have to offer?
- Can the knowledge-producing institutions deliver the expertise requested?
- The approach suggested: sociology of social sciences.

II. Questions to be discussed:
comments on the defined problems by SSH-FUTURES

How can the Social Sciences and Humanities better cope with the needs of society? What are society needs?

Comments:

- Which society? – European, national, information, of artists …The role of national society in definition of the subjects and aims of social sciences research. The role of EC….
- Who defines the needs of society? – sociology – individuals, groups, politicians…Where are the regions? Ethics? Moral? Identity? Prosperity?
- Is the society realise its needs as an user? The role of SSH research and education.

II. Questions to be discussed:
comments on the defined problems by SSH-FUTURES

How can the Social Sciences and Humanities better cope with the needs of society? What do the Social Sciences and humanities have to offer?

- New knowledge.
- New approaches –EC: Lisbon strategy, Lund declaration (2009), "GDP and beyond Measuring progress in a changing world" – 20.8.2009
- New concepts for development –contribution to the new EU innovation plan (draft of 2.9.2009) "GDP and beyond Measuring progress in a changing world" – 20.8.2009
- New methods for re/or definition of national technology and social platforms

II. Questions to be discussed:
comments on the defined problems by SSH-FUTURES

- How can the Social Sciences and Humanities better cope with the needs of society? Can the knowledge-producing institutions deliver the expertise requested?
- question: what to do to make knowledge-producing institutions delivering expertise required?
- Comment: The expertise will answer the questions and interests of the funding organisations. Interests of society?
- Is it the time for single intellectuals (like Schumpeter) to develop new concepts for developing the society?

Questions to be discussed: state of the art

- In this respect, one of the problems suggested for discussion in the future is

1. Approach: to identify the expectations of policy makers, NGOs and other funding organizations of the Social sciences and Humanities

and

2. The Social Sciences potential to respond to these expectations.

III. Second group of questions to be discussed: better definition of the terms

- How to define knowledge from different social disciplines' perspectives ? How to define it from economic perspective – what does it mean knowledge based economy?
- How to define the demand of knowledge from economic perspective, instead of (need of knowledge)

III. Questions to be discussed: demand for knowledge (SSH)

- The demand for social sciences and humanities knowledge could be defined as
  - market-driven (e.g. outside the science community) and
  - driven internally by the science community.

On the other hand, the demand for SSH knowledge outside the science community consists of a demand to solve the problems of different societal institutions and groups and of humankind as such. A definition of the demand is based on the identification of needs and awareness of the needs and factors influencing them.

The demand is also defined as solvent (market-driven), and propelled by other forces. The supply of SSH knowledge corresponds to the issue of the potential to respond to demand and the factors defining the concrete parameters.

- Demand for knowledge

on EU level

on national level

On regional level

CONCLUSION

In the future we have to discuss not only

- Users & producers of knowledge

But also

- Demand and supply of knowledge

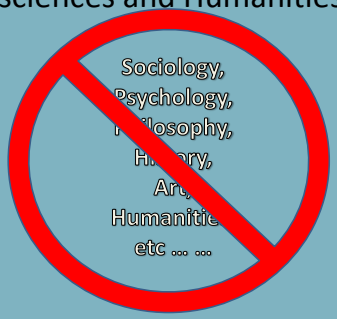
Thank you!

Rossitsa CHOBANOVA, D.Sc., Senior researcher
Bulgarian Academy of Sciences – Institute of Economics
3 Aksakov str., 1040 Sofia, Bulgaria, e-mail:
r_chobanova@iki.bas.bg
Rossitsa.chobanova@gmail.com

The conflict of cultural spheres and the Future of social sciences

Dr. Gregor Fitzi.
University of Florence

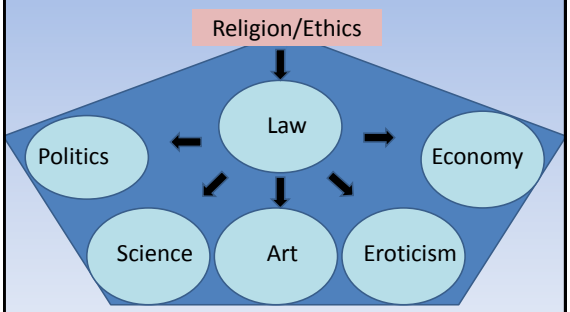
Social sciences and Humanities?



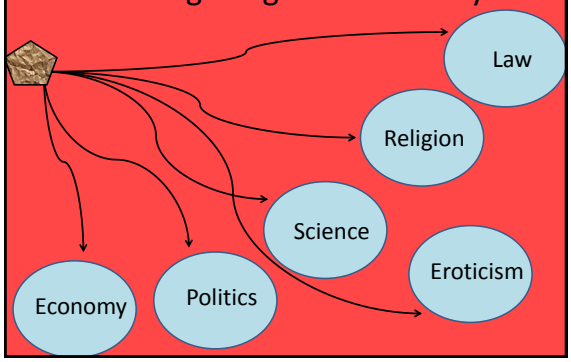
No thanks!

New "opacity"

The compact society of the Middle Ages



The "big bang" of modernity



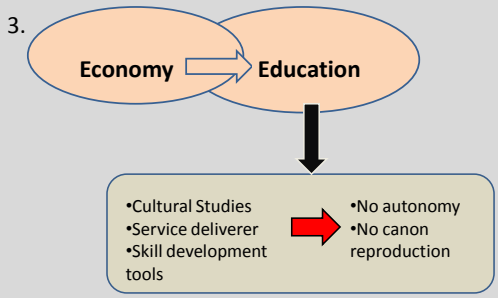
Conflict, Colonization, Fragmentation

3 examples:

1. **Media** → **Politics**
2. **Economy, ...** → **Art**

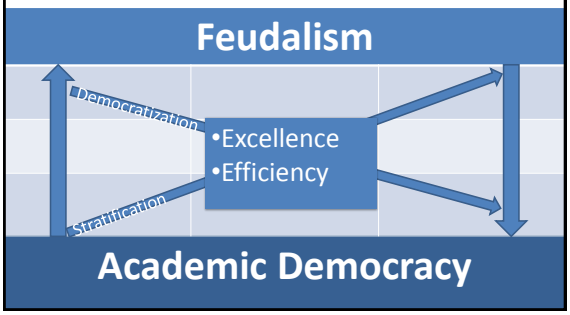
… … Fragmentation

3.



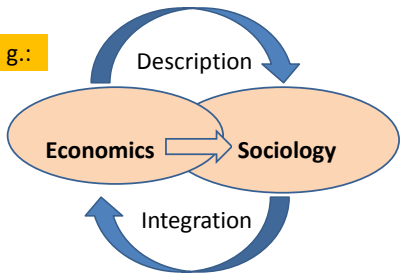
Which Interaction between Social sciences and society?

Feudalization versus efficiency and excellence



Inter- and transdisciplinary research

e. g.:



Cultural Memory

The potential of an inter- and transdisciplinary research project

Carin Franzén
Linköping University
Sweden

Department of Culture and Communication Linköping University

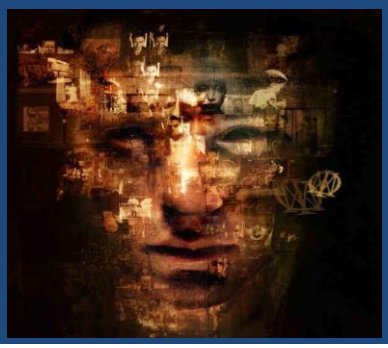
- Interactional linguistics
- Intertextuality
- Literary experience; identity and gender
- Translation; the meeting of cultures

Cultural Memory

'Collective concept for all knowledge that directs behaviour and experience in the interactive framework of a society'

Jan Assmann, 'Collective Memory and Cultural Identity', *New German Critique*, No. 65, 1995

Cultural Memory as a Process



Cultural Memory is a Process

'Whereby discourse can be both an instrument and an effect of power, but also a hindrance, a stumbling-block, a point of resistance and a starting point for an opposing strategy'

Michel Foucault, *The Will to Knowledge: The History of Sexuality, Vol. 1*

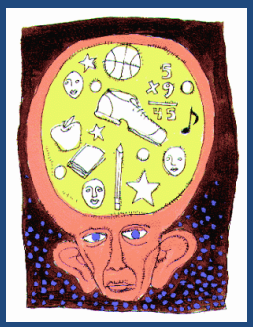
Theoretical Framework

Historical time:
A dialectic relationship between experience and expectation

The temporal structure of modernity:
'The lesser the experience, the greater the expectation'

Reinhart Koselleck, *Future Past. On the Semantics of Historical Time*

Figures of Memory



Cultural Memory and Identity

'A store of knowledge from which a group derives an awareness of its unity and peculiarity' (Jan Assmann)

'Every symbolic community is rooted in a specific 'logic of repartition', where identity is determined by a sequence of separation' (Julia Kristeva)

Interdisciplinary and Transdisciplinary Research

Historical, social and cultural studies; psychoanalytic and discourse theory

Integration of disciplinary research on pre-modern and modern literature and culture

Cultural memory is both a research object and a constituent part of transdisciplinary methodology

A Concrete Research Example

'Cultural memory is always about the distribution of and contested claims to power'

Marianne Hirsch and Valerie Smith, 'Gender and Cultural Memory', *Signs*, Vol. 28, No. 1, 2002

Court and Church Fontevraud

Marguerite of Navarre *The Heptameron* (1559)

Hegemonic Perspectives

'In this story as almost everywhere in the Middle Ages, women's voices are not heard' (Jacques Dalarun, *L'impossible sainteté*)

'What do we know about them [women]?' (George Duby, *Le Chevalier, la femme et le prêtre*)

Cultural Memory Revisited

Events occur 'once and for all, but the experience which is based upon them can change over time' (Koselleck)

What cannot be remembered must be repeated (Freud)

International comparisons in Science Studies:

What and why do we compare?

Anne-Sophie GODFROY
University Paris Est & Ecole Normale Supérieure de Cachan

stef ens CACHAN

UNIVERSITÉ PARIS 12 VAL de MARNE — CONNAISSANCE ACTION

Overview

1. Experiences from EU-funded projects

2. Comparative methodology issues

3. What and why do we compare?

1

Reflexions from EU-funded projects during the last ten years

The projects:

- About gender and engineering education: INDECS, WOMENG, HELENA
- About gender and science images at secondary school: MOTIVATION
- About women in SET professions: WOMENG, PROMETEA

Common issues:

- Projects had a common topic: gender and SET (Science Engineering & Technology)
- A common aim: to compare national settings, to develop a better understanding, to identify good practice
- Common methodological issues:
  - to collect and combine various levels of data, qualitative and quantitative
  - to analyse the data
  - to propose effective measures to policy makers

Overview of International Comparative Methodology issues

1) the cultural and linguistic issues raised by any international and interdisciplinary project,

2) the specific issues of cross-comparisons, either a variable-oriented approach, or a case-oriented approach;

3) the standard problems of research design in human and social sciences, first of all the choice of qualitative, quantitative or mixed methodology, according to the needs of the research topic;

4) the large-scale issue, generating a huge amount of data.

Methodological issues in these projects

- Definition of «SET» and «gender»
- Definition of research activity, research jobs
- Assumption that technology has a specific culture, but how to assign the border between technology and science?
- Inside SET: multiple classification problems

INDECS: lack of harmonisation

- the «questionnaires»: from interviews to multiple choice
- translations issues:
  - Greek male engineers are «emotional»
  - «critical thinking»
- the «synthesis»

WOMENG & PROMETEA: the 4 steps toolbox*

- 4 steps method to achieve harmonisation and proper comparison:

1. Designing common research tools: collaboration is essential
2. Common procedures for a documented fieldwork
3. Reporting in a common database: direct access to the data, common presentation
4. Analysing and interpreting: need for tools to analyse tons of data. Iterative mixed methodology.

* See Godfroy-Genin & Pinault: «The Benefits of Comparing Grapefruits and Tangerines», European Journal of Engineering Education, Vol. 31, n°1, March 2006, 23-33

Toolbox results?

- Disappointing!
  - Comparisons was properly achieved
  - Results were already known
  - Not enough attention to each case
  - Tons of data remain unused for analysis
- Better results, but a balance to find between harmonisation and attention to singularities

HELENA & MOTIVATION:

- More attention to singularities, less harmonisation, more freedom
- Result: less comparisons!
- Interesting national studies, poor comparative added value.
- How to achieve the right balance?

2

Comparative methodology issues

The large scale issue

- Not much literature and experience beyond 3 or 4 terms (Lallement/ Spurk 2004)
- Tons of data, simply browsing results is difficult: multiplicative effect, data in 7 countries means 7 times the amount of data.
  - WOMENG= c.a. 1400 questionnaires (200X7) with 600 items and 4 different samples + 700 to 1000 pages of English summary
- No-direct access to data, many filters:
  - Translation
  - Poor knowledge of national settings : Procedures to report and to provide background information on context
  - Technical tools required to browse the database, especially for transversal reading (e.g. the same question in different settings).

Timing and expansion

- Timing:
  - Not everybody is available at all times during the year. Need to identify the kairos in each country.
  - If you miss it, all the project is delayed, because all results are connected
  - Difficult to find equivalent settings
- Additions leads to expansion:
  - Collegial research design leads to expansion
  - Use of common instruments increase the length of each instrument.
  - Try to be less cumulative and more integrated

Main difficulties for analysis

- Technical difficulty to browse the data, no immediate, intuitive overview of results
- Epistemological difficulties: which comparisons are meaningful?
- Methodology for qualitative data comparison?
- How to mix quantitative and qualitative approaches?

Potentials of iterative mixed methodologies

- Mixed methodologies are still emerging (Cresswell 2003)
- Opportunity to use all available data, even if heterogeneous
- Concurrent progress of qualitative and quantitative strategies in an iterative approach
- Example: 3 levels of data collection
  - Set 1: overall statistical framework built from existing gendered statistical data, harmonised in international classifications.
  - Set 2: Specific quantitative data collected by the project on specific issues.
  - Set 3: qualitative data from interview, focus groups, participant observation and document analysis
- Same issues are addressed by the different sets of data

Beyond case-oriented and variable approach

- Two main traditions in cross comparison (Ragin, 1987):
- Variable-oriented, based on quantitative approach. It misses social bases, empirical phenomena, but provide easy large scale comparison
- Case-oriented: sensitive to complexity and specificity, but impossible to extend to a large scale comparison because of complexity and cultural diversity.
- Ragin's recommendation: to go beyond qualitative and quantitative, to "formalise qualitative comparative methods", and to examine "constellations, configurations and conjunctures"

2 traditions of comparison: OECD benchmarking and comparative literature

- OECD: benchmarking approach
  - quantitative (statistical data, indicators)
  - large numbers of cases
  - From business and marketing (Xerox, beginning of '80s)
  - Tool for EU policy: %of women researchers, % of GDP invested in research, etc.
- Comparative literature (cf. Yves Chevrel, La littérature comparée, PUF 1989)
  - qualitative
  - sensitive to languages and cultural issues
  - difficult if more than 2 or 3 cases

3

What and why do we compare?

What? Classifications issues

- Example: What is a researcher?
- Somebody who works in the research sector or somebody who does research?
  - Are technicians preparing experiments researchers?
  - Are research managers or deans researchers because they used to be researchers?
- In industrial research, is R&D department synonym of research department?
- Sometimes existing quantitative data mix different definitions.

What is research?

- Research combines research itself, research management and administration and sometimes teaching
- Definition by positions? positions and activities are not always correlated.
- Definition by degrees? Which ones? PhD in engineering or sciences? Engineering

What is «engineering & technology»?

- Classifications are not the same in the different countries
  - ICT with maths? Agronomy? Architecture? Physics and engineering in one group?
  - Even in a same country, classification may vary
  - There is no classification at all (or too broad)
- A same laboratory may belong to many disciplines
  - Pluridisciplinary research interests or many research interests
  - People have different academic backgrounds, sometimes many
- Self-perception of multiple identities by the researchers themselves
  - Academic background and/or actual research topic
  - Engineer identity is privileged in the industry, researcher identity in governmental and academic research.

Classification of industrial activities is not relevant

- Classification by sectors (NACE) not very useful to study research. Product oriented, not sensitive to research in some cases. E.g. : textile.
- A company may have different activities and different locations. Corporate culture stronger than sectorial or national cultures.
- No centralised data collection.
- In R&D, where is the border between R and D?
- Easy to study empirically one company, hard to provide a national or sectorial picture or to compare.

Rebuild classifications

- Classifications not relevant:
  - Activities have changed
  - Created before the development of comparative approaches
- Need for new classifications
- Harmonisation: build new classifications in the perspective of comparative research without neglecting local cultures

Why do we compare?

- Comparison as a research strategy? Comparative approach reveals new hypotheses (comparative literature)
- To identify «styles»?
- To benchmark? (OECD)
- To identify good practices? (OECD)
- New classifications should reveal new research questions
- Policies linked to comparative research: New classifications means new policies.

Conclusion:

If SHS used to serve evidence based policies:

- Need to clarify the aims of comparative research
- Need for appropriate tools:
  - Large scale
  - Mixed methodologies
  - Balance between harmonisation and singularities
  - Classification issues

SHS Future

- SHS for science in use: expert results
- To address epistemological issues: what and why do we compare?
- To renew tools: new comparative methodologies
- Huge contribution to European research, EU policies

Social Justice as the Problem for Research and Social Administration in Lithuania

Arvydas Guogis
Mykolas Romeris University

Purpose

- Provide an overview of social justice, connected to research and social administration in Lithuania.
- Seek to explain what can be done in order to improve social justice conditions by means of research and social administration.

Why is it necessary?

- "Shock therapy" in Lithuanian development from 1990-ies and liberalization in many places of the world during the last two decades diminished the values of social justice
- Even imposing the traditional scheme of efficiency by 3 E concept (economy, efficiency and effectiveness) is not enough in Eastern European context where reforms suffered more from the lack of social justice than in the developed Western democracies.
- The fourth - 4 E – equity (or social justice) is necessary to add to the scheme of efficiency

Efficiency scheme

3 E concept:	4-th E:	5 (or even 6) E concept:
Economy, Efficiency, Effectiveness	Equity (social justice)	Economy. Efficiency, Effectiveness Equity ? Equality ?, ? Ethics ?

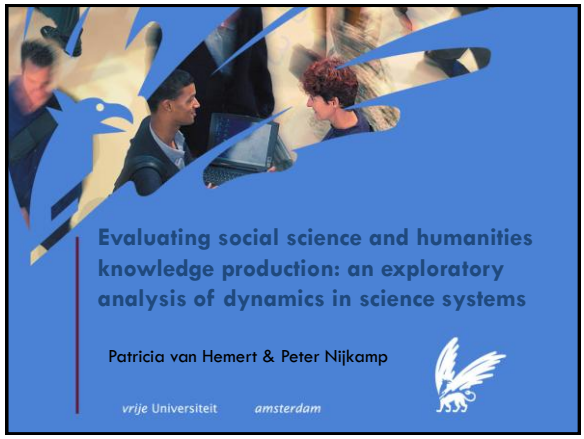
Social reintegration

- Social reintegration, not the benefits have to be the aim of social system
- All possible social reintegration methods and indicators have to be used in administration and research

Methods of research and social administration

- Benchmarking in research and administration
- Clients satisfaction surveys
- "Participatory" ("collaborative") research
- "New Public Management" methods
- "New Governance" methods

- Thank You for attention



Evaluating social science and humanities knowledge production: an exploratory analysis of dynamics in science systems

Patricia van Hemert & Peter Nijkamp

vrije Universiteit amsterdam

1. Aim of paper

- 1) assess most likely development of SSH by means of discovery of relevant subsets of factors influencing university knowledge production by means of rough set analysis
- 2) discover if the knowledge production factors show characteristics of a general development similarly to the 'Mode 2' concept introduced by Gibbons et al. (1994)
- 3) shed further light on perceptions that exist about the role of modern science systems and their future

1.1 Movements in SSH science systems

- 3 movements seem to affect SSH university system (European Science Foundation, 2008):

1) Further differentiation of SSH
2) Further synthesis between various sub-disciplines of SSH and other (natural) sciences
3) Changing paradigms for SSH

1.2 Literature

- Most famous account: Gibbons et al. (2004), The Production of Knowledge: the Dynamics of Science and Research in Contemporary Societies
- Hessels and van Lente (2008): systematic reflection of Mode 1 and Mode 2 approach by means of 7 criticisms

1.3 Mode 1 and Mode 2 concept

- Referred to in over 1000 scientific articles
- Highlights important trends in science systems requiring further empirical efforts

Mode 1	Mode 2
Academic context Disciplinary Homogeneity Autonomy Traditional quality control (peer review)	Context of application Transdisciplinary Heterogeneity Reflexivity/ social accountability Novel quality control

Source: Hessels and van Lente (2008)

1.4 The 7 criticisms in Hessels and van Lente

1) Quality control (Godin, 1998; Hemlin and Rasmussen, 2006)
2) Generality of Mode 2 (Weingart, 1997; Godin, 1998)
3) Long-term historical perspective(Rip, 2000; Etzkowitz and Leydesdorff, 2000)
4) Coherence of the concept (Rip, 2002)
5) Theoretical underpinning (Shinn, 2002)
6) Implicit support of trends (Godin, 1998)
7) Lack of future outlook (Weingart, 1997)

2. Towards new research framework

which:

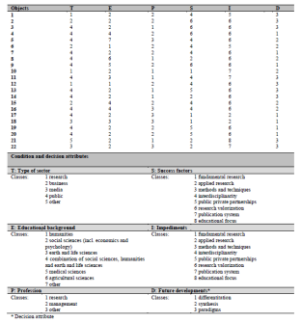
- a) provides empirical evidence on dynamics in knowledge production attributes based on 22 interviews;
- b) makes no distinction between Mode 1 and Mode 2 attributes;
- c) analyses attributes in specific disciplines and national context

2.1 Alternative attributes of knowledge production and their assignment to Mode 1 or 2

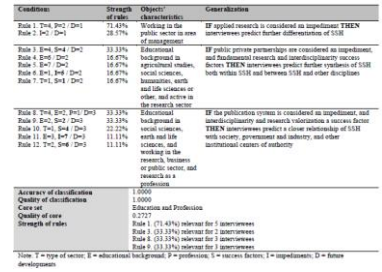
- Categorization based on 22 semi-structured interviews
- Questions : personal, institutional, role SSH in institution, role institution with society, futures of SSH

Alternative attributes	Mode 1 or Mode 2
1 Fundamental research	M1
2 Applied research	M2
3 Methods and techniques	M1
4 Interdisciplinarity	M2
5 Public private partnerships	M2
6 Research valorization	M2
7 Publication system	M1
8 Educational focus of university	M1

2.2 Representation of Rough set analysis decision table



3. Outcomes of the rough set analysis



3.1 Interpretation of the rough set analysis

- Subdivision: those who see research system as academic affair and those who see stronger interaction SSH and society.

Latter group mainly university experts;

"The trend in research used to be scientific excellence only. We all wanted to be Einsteins. But nowadays it is clear that we are not all Einsteins and that research that is applicable in practice get much more attention."

"In the past students were prepared solely for a scientific career. Nowadays this is different."

"If you get funding for a project of about 70 to 90 million euro, then you have a social task to tell something about it."

First group mainly in policy management;

"Its all about rating and in what journals you publish. That's the only impact factor for universities."

"Only an academic approach of a societal problem does not solve this societal problem. You need practical experience and the ability to see things in perspective."

3.2 Effect of knowledge production factors on futures SSH

	Differentiation	Synthesis	Paradigms
1. Fundamental research		+	
2. Applied research	-		
3. Methods and techniques			
4. Interdisciplinarity		+	+
5. Public-private partnerships		-	
6. Research valorization			+
7. Publication system			-
8. Educational function			
Total interviewees	**7**	**6**	**9**

3.3 Interpretation

- Small majority in favour closer interaction with society.
- Strong preference interviewees for further interdisciplinarity.

"The best things in research often take place near the boarders. Finding those borders and creating new research that is what I find interesting and that is policy of this faculty." (university)

"You need to become familiar with the terminology of someone from a different discipline, but overall it turns out to be very compatible." (university)

"The connection between disciplines is becoming more important than disciplines an sich (this in relation to how social sciences is helpful in making cooperation between employees better and more efficient)." (business)

"Discussions about innovation were always about nanotechnology or science and technical applications. But we also need to organize it and as far as I can see, it is usually about human mistakes when something goes wrong." (university)

" Sometimes it can be very opportunistic, because if cooperate with my neighbor then I may well have a better chance to get funding than when I do it on my own." (policy)

4. Implications Mode 1 and 2 concept

Our research supports critics Hessels and van Lente:

- Mode 1 and 2 attributes do not mutually correlate and should be disconnected and investigated separately
- I.e. interdisciplinarity stands out in further synthesis future (M1) and shifts in paradigm future (M2)

But our research also supports Mode 1 and 2 concept:

- Apparent divide between traditional and more societal and transdisciplinary research seems real but goes beyond research system, i.e. largely based on perceptions and personal agendas

4.1 Suggested ways forward

"The main goals of universities are to produce knowledge and share knowledge, so by means of research and education. That needs to be done in a reasonably independent manner without the discipline of the market." (business)

"In the social sciences there is a tendency to copy the exact sciences and publish in journals and make things objective, but social science is about people which is much more difficult to grasp and let alone turn into formulas. Sometimes a beautiful essay gives so much insight and I really find it a shame that they try to be such a copy of something that they are not and cannot be." (media)

"You need scouts that help the faculties and departments how the market looks at their activities." (policy)

"A management summary should be included to make research results better readable." (policy)

"The financing of universities should be linked more to its achievements." (policy)

"You recognize someone by his or her good ideas, but also the preciseness with which this person puts these ideas to the test and the willingness to do this. So methodological robustness is very important to me." (university)

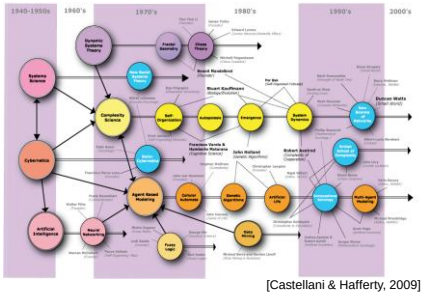
THANK YOU

- *"Everybody claims to have an opinion about social sciences. For trade unions we used to do a yearly research and every time we handed in the report they used to say that the results predicted what they already thought. I got so fed up with this that I once asked them beforehand to predict the outcomes on the basis of a questionnaire. They could not have been more wrong." (Quote, Dean Faculty of Social Sciences)*

The emergence of eSocial Science

Will computational social science dominate or divide the social sciences of the future?

Long heritage of complexity science



[Castellani & Hafferty, 2009]

An emerging field

- Computational social science is an emerging field, boosted by ICT revolution
- Advocates are highly optimistic:
  - computer simulation as a new way of doing science [Axelrod, 2005; Gilbert, 1999; Ostrom, 1988]
  - rapid growth: new journals, special issues, associations, online communities, conferences, summer schools [Frank, Squazzoni, & Troitzsch, 2009]
  - applied to a wide range of issues and emergence of specialised niches (e.g. econophysics) [Fontana, 2006; Macal & North, 2006]

Outside the mainstream

- Ten years ago, computational social science was not a mainstream activity or a coherent field [Halpin 1999; Liebrand 1998; Gilbert 1999]
- Even today, economists frown upon the use of agent-based models by econophysicists [Cho, 2009]
- Integration of computational economics in mainstream:
  - internal barriers: lack of standards, no coherent core of methods and techniques, economists lack the required skills
  - institutional barrier: acceptance by and awareness of computational economics in mainstream journals [Judd, 1997]

Questions

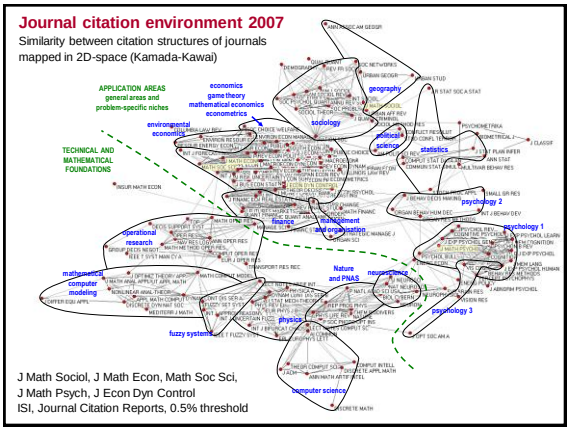
- What is the extent to which computational methods are used in social science research?
- What is the background of those scientists who do computational social science and with whom do they collaborate?
- What is the status of computational methods in different fields? Is it (becoming) a mainstream activity or does it remain peripheral?

Journal structure

- Looking for pattterns in scholarly communication
  - existing, stable fields: journals as points of convergence
  - emerging fields: field not yet coherent but disjointed
  - test of similarity between citation environments of relevant journals: only degree of coherence in computational economics and psychology
- No journals that together form a coherent cluster of computational social science

Journal citation environment 2007

Similarity between citation structures of journals mapped in 2D-space (Kamada-Kawai)



J Math Sociol, J Math Econ, Math Soc Sci,
J Math Psych, J Econ Dyn Control
ISI, Journal Citation Reports, 0.5% threshold

Publications

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- Data
  - Web of Science
  - Problem of coverage for the social sciences: 30% to 40%
- Method
  - tools to extract patterns: still in development
    - community detection and network analysis
    - semantic web technology
- Intermediate results of a dynamic project with feedback loops

Where do we find it?

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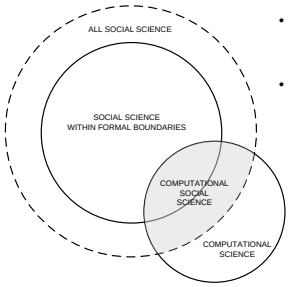

- Extensive set of keywords to capture computational science
- Precision versus recall: at present bias towards recall

Detecting patterns

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- Publications have properties
  - words used in titles, abstracts and keywords
  - references to other publications
  - authors and their institutional identities
- Title word-cited reference co-occurrence
  - words tell you what an article is about
  - cited references show the context within which the article is placed
  - combination is a strong indicator for similarity between papers

Patters of word-reference similarity

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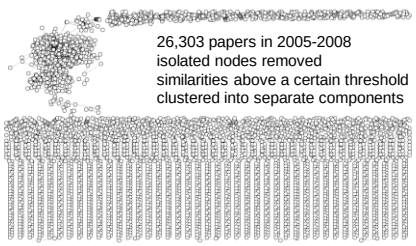

26,303 papers in 2005-2008
isolated nodes removed
similarities above a certain threshold
clustered into separate components

Patters of word-reference similarity

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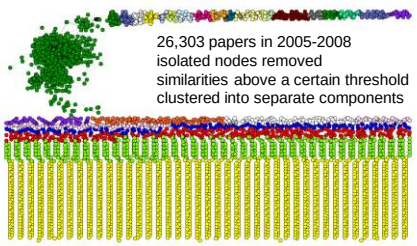

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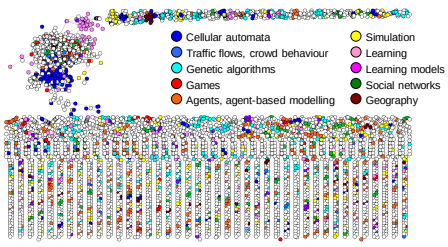
October 2009 | Science System Assessment



Example of a cluster of papers

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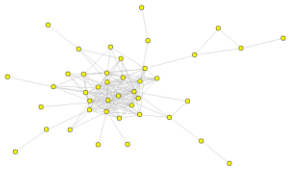
October 2009 | Science System Assessment



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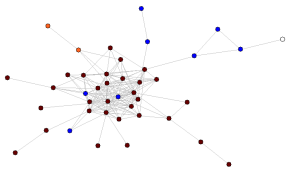

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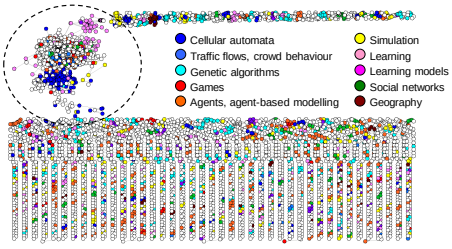

The most connected cluster

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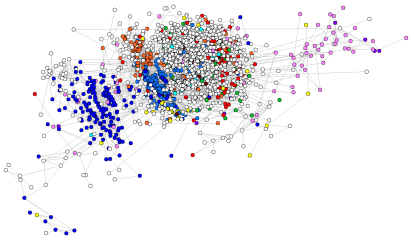

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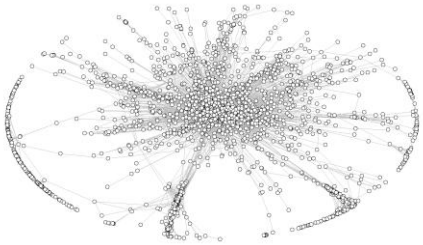

3012 articles, notes, reviews, letters, conference proceedings

The most connected cluster

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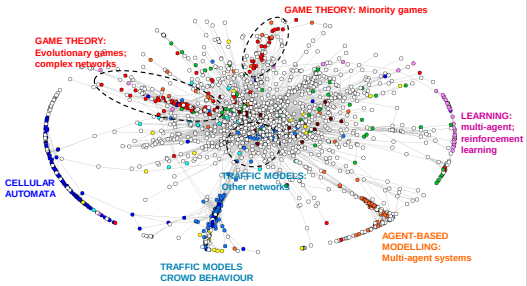

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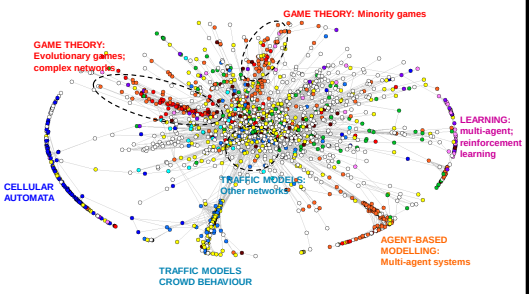

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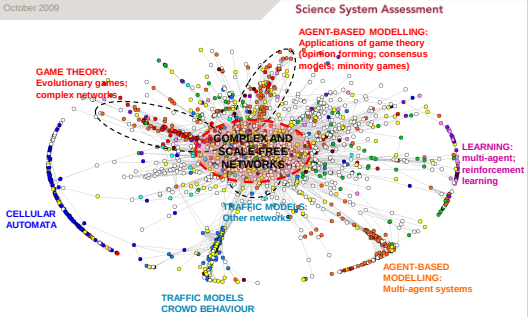

Which disciplines?

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- We would like to know the (disciplinary) identity of the authors
- We use the type of journal as a proxy for author identity

Physics

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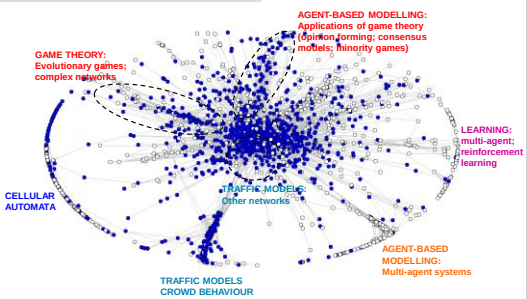
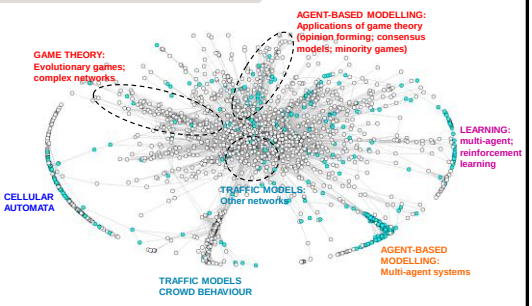
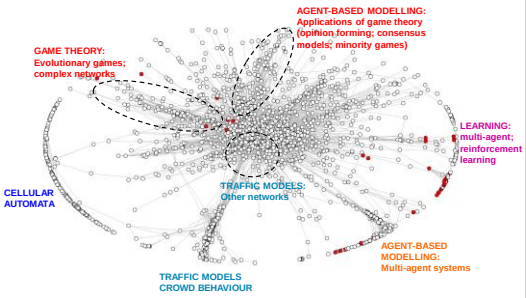


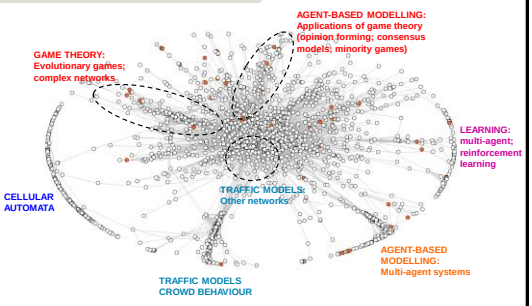
Computer and information science



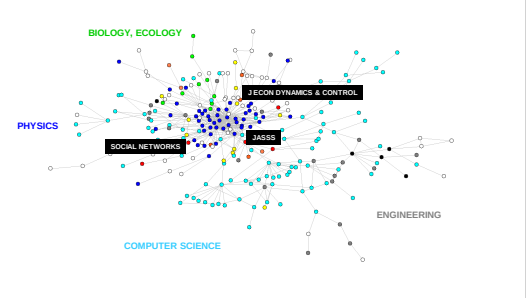
Economics



Social sciences



Journals that share authors



Conclusions

- Find clusters of social topics in computational science
  - various applications of agent-based modelling
  - social network analysis
  - urban growth and planning; land use modelling
  - quantitative finance
- But:
  - often theoretical or methodological rather than substantive
  - concentrated in physics and computer science, not social science
  - no evidence of coherent cluster of papers which we can call computational social science
  - the field is scattered and as yet marginal

Towards a computational future?

- The power of agent-based modelling
  - all social sciences deal with complex systems
  - populated by multitudes of heterogeneous actors who interact
  - with individual preferences, information, motivations
- Able to link micro-behaviour to macro-outcomes
  - how individual actions lead to aggregate dynamics
  - how macro-structures affect (constrain, direct, etc.) micro-behaviour
- Rise -> matter of time

Possible scenarios

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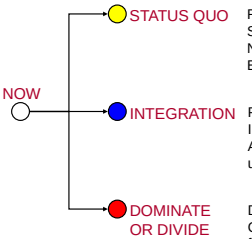

Remains a small niche
Self-contained community of experts
Not linked to social sciences
Embedded in physics, computer sciences

Part of formal domain of social sciences
In or near the mainstream
Accumulation of skills and adaption of university curriculae

Dichotomy descriptive and computational
Computational social sciences attract more funding
Other social sciences crowded out

Likelihood of scenarios

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- **STATUS QUO**: Essentially where we are now, but:
  - Communities are growing and self-organising
  - Now an emerging field, but expect convergence
- **INTEGRATION**: Would seem logical, but:
  - Social scientists lack computational and mathematical skills
  - Physicists and computer scientists lack social science skills
  - Requires degree of epistemic and cultural convergence
- **DOMINATE OR DIVIDE**: Seems far-fetched, but:
  - Science is competitive and so are funding structures
  - Potential of a strong, emerging field that converges
  - Computational science as 'disruptive technology' in social science

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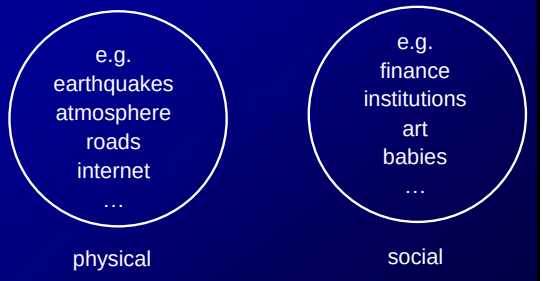
THANK YOU
FOR YOUR ATTENTION

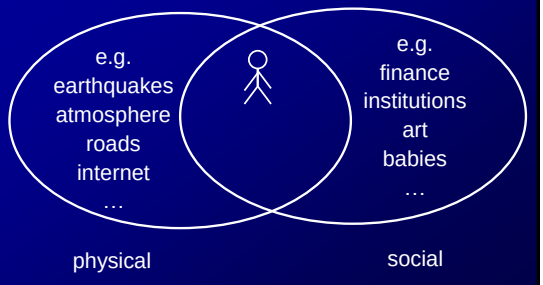
The Social Sciences & Humanities in the Science of Complex Systems

Jeffrey Johnson
The Open University
Milton Keynes
UK

Most problems today - physical & social systems



Most problems today - physical & social systems



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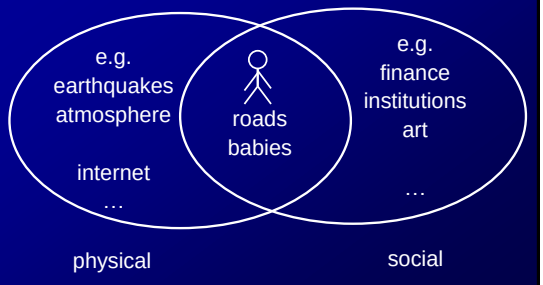

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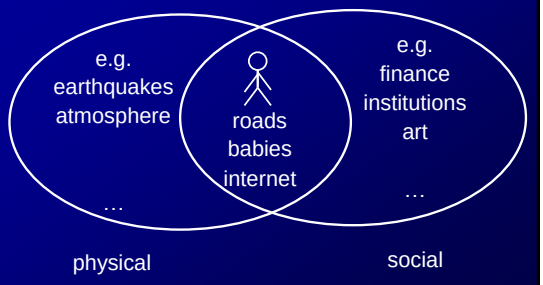

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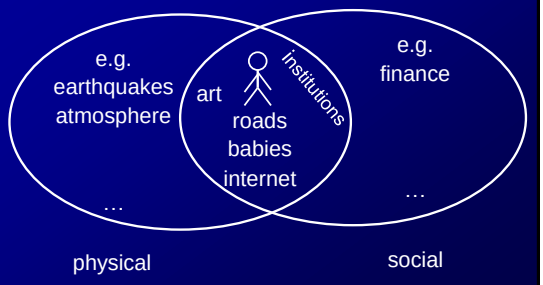

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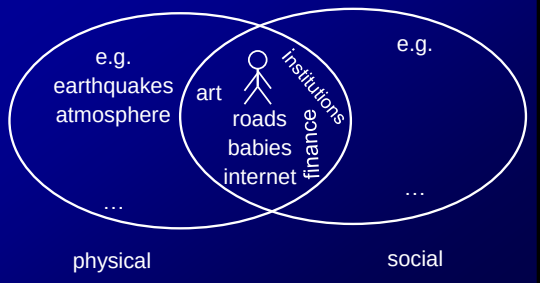

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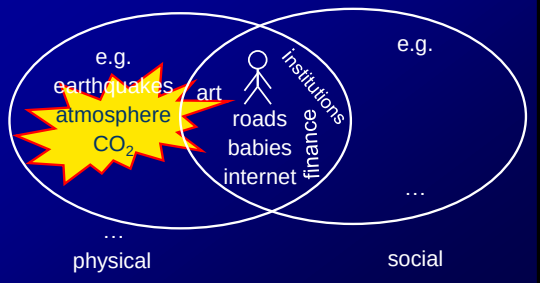

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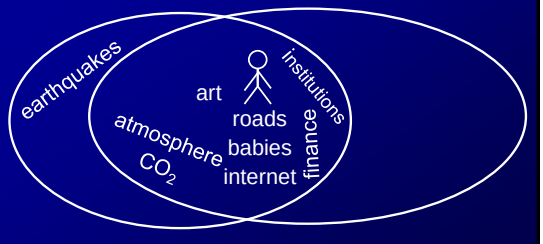

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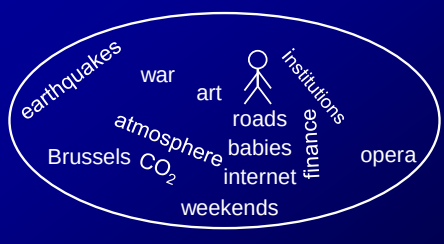
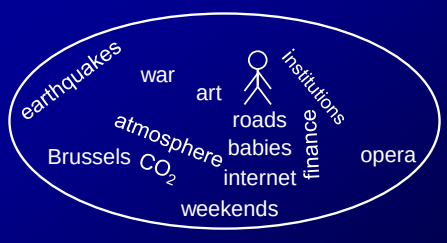


Most problems today - physical & social systems

The future of the Humanities & Social Science is within



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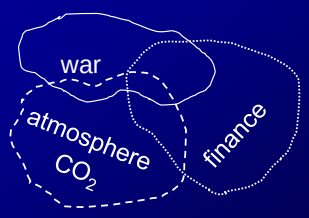

Systems of systems of systems with ill-defined boundaries

socio-technical systems

Most problems today - physical & social systems

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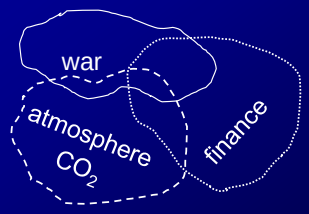

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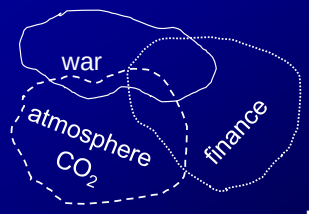

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Need new science !

Most problems today - physical & social systems

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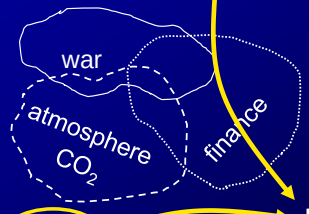

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Science and Policy

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in two years (and this is good)

We design and make the future !

The future is a self-fulfilling prophesy

Science and Policy

The future is a self-fulfilling prophesy

we hope !

Science and Policy and **Prediction**

Most systems – sensitive to initial conditions

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therefore no ‘point predictions’

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a range of possibilities in uncertain time

Science and Policy and **Prediction**

Most systems – sensitive to initial conditions

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a range of possibilities in uncertain time

Science tries to map out the possible futures

and test these as 'predictions'

The Future of the Social Sciences and Humanities Brussels 22-23 October 2009 FP6: Social Sciences & Humanities Future

Complex systems =/= traditional science

Cannot perform active experiments

can't - build a bridge to test predictions of traffic flows
- implement epidemic stay-at-home policy
- implement a radical energy policy in climate change
- declare war or take measures to keep the peace.

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Initiating change assumes purpose - how future systems *ought* to be (Herbert Simon, 1969).

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Initiating change assumes purpose - how future systems *ought* to be (Herbert Simon, 1969).

Only policy makers have the mandate & the money to experiment on large complex socio-technical systems

The Future of the Social Sciences and Humanities Brussels 22-23 October 2009 FP6: Social Sciences & Humanities Future

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To perform in-vivo experiments on complex socio-technical systems scientists must align themselves with **policy makers**

they have the mandate & the money ($ billions!)

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Science of the Artificial = *Design*

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The Design Process

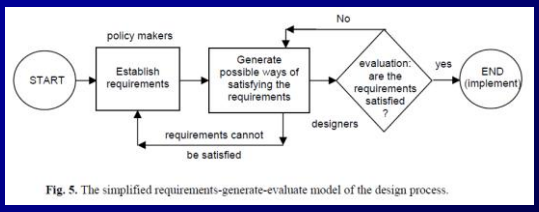
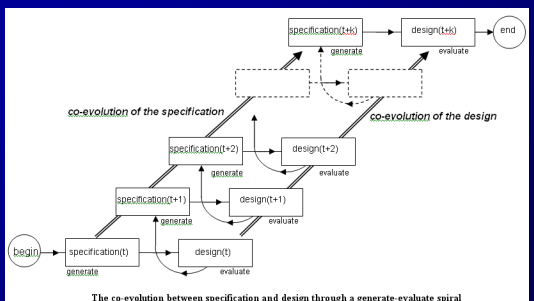


Fig. 5. The simplified requirements-generate-evaluate model of the design process.

Problem – solution co-evolution in design



The co-evolution between specification and design through a generate-evaluate spiral

Complex Systems have multilevel dynamics

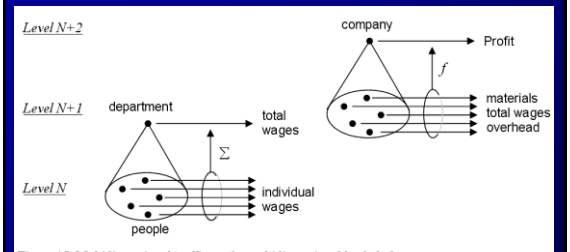
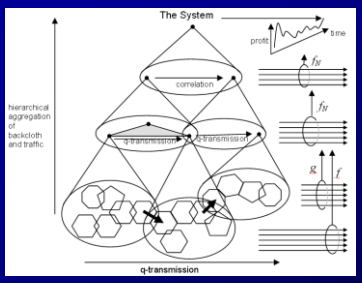


Figure 15. Multidimensional traffic on the multidimensional backcloth

Relational structure and mappings

Traffic on the multi-level backcloth

Representing Complex Systems & Dynamics



Cannot look at just one level

Numbers must aggregate coherently over the structure

Design as top-down bottom-up reasonsing

Level N+k **"The System"** - abstract

Level N+k-1

…

observe emergent properties

hypothesise substructures and relationships

Level N+2

Level N+1

assemble

instantiate

Level N **Components** - concrete

Embracing Complexity in Design

- designing complex systems requires a scientific understanding of their dynamics
- design processes can be complex, e.g. manufacturing processes, supply chains
- the environment of design can be complex , e.g. regulation, fashion, economy
- design is a complex collaborative cognitive process

Design involves ***prediction***

Simple Type-I predictions: changes in mappings

Type-I-1, Fixed Level.

k: $(M_{N+i}\ (B_{N+i}), t) \rightarrow (M_{N+i}\ (B_{N+i}), t + \Delta t)$

Type-I-2, Inter-Level.

k: $(h_{ij}\ M_{N+i}\ (B_{N+i}), t) \rightarrow (M_{N+j}\ (B_{N+j}, t + \Delta t)$

Simple Type-II predictions: changes in relational structure

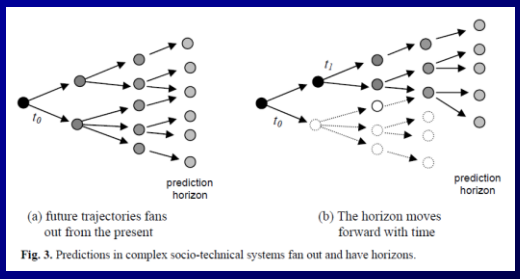
Type II-1, Fixed Level.

k: $(B_{N+i}, t) \rightarrow (B_{N+i}, t + \Delta t)$

Type II-2, Inter-Level

k: $(B_{N+i}, t) \rightarrow (B_{N+j}, t + \Delta t)$

Predictions have a horizon



(a) future trajectories fans out from the present

(b) The horizon moves forward with time

Fig. 3. Predictions in complex socio-technical systems fan out and have horizons.

Design involves ***prediction***

How can predictions be tested?

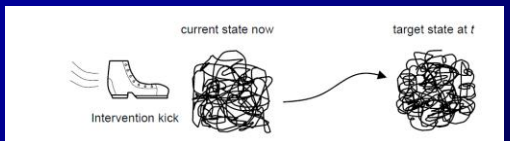


Fig. 1. Experiments: predicting that given interventions will result in future system states.

Design involves ***prediction***

Implementation '**kicks**' system to a new predicted state – observe as experiment

How can predictions be tested …

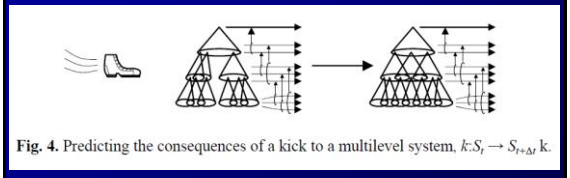


Fig. 4. Predicting the consequences of a kick to a multilevel system, k:$S_t \rightarrow S_{t+\Delta t}$ k.

when the 'target' is hard to define ?

How can predictions be tested …

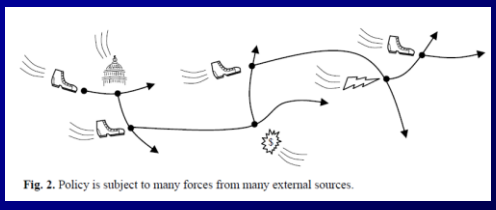


Fig. 2. Policy is subject to many forces from many external sources.

when predictions get knocked off trajectory by external events ?

The New Statistics

Prediction in policy and design more complicated than conventional experiments - contrived & simple.

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A completely new approach to statistical analysis waiting to be discovered and developed !

Conclusions

Scientist must work with policy makers to experiment

!

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Policy makers are *designing* the future.

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The future of the Humanities & Social Science is very bright indeed

The potential for intervention through ‚Co-operative Research'

Sandra Karner and Nicoleta Chioncel
Inter-University Research Centre on Technology, Work and Culture (IFZ)
Schloegelgasse 2, A - 8010 Graz, Austria

Sonja Petrovics and Irmi Salzer
ÖBV Via Campesina Austria (VCA)
Mariahilferstraße 89/22, A – 1060 Wien, Austria

Content

- ‚Co-operative research' (CR)
- FAAN a CR project
- Transdisciplinary in the FAAN research process
- Austrian partners involved in the FAAN CR process
- Connecting research and social movements
- CR – potential for intervention

Co-operative research (CR)

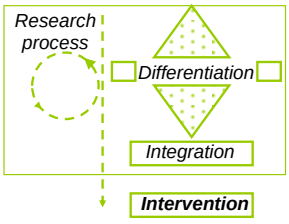
- European Commission allowing ‚CR' within FP7
- EU Comission Workshop ‚From Science and Society to Science in Society' (Stirling 2006)
- CR definded as *„a new form of research process, which involves both researchers and non-researchers in close co-operative engagement"*
- CR aims at supporting the empowerment and agency of participants in research
- CR process is as important as outcomes

FAAN a CR project

- FAAN Facilitating Alternative Agro-Food Networks: a Stakeholders' Perspective on Research Needs
- Funded under FP7: project duration 26 Mon (2008-2010)
- Five academic institutions and five civil society organisations (CSOs/resp NGOs) from Austria, Poland, Hungary, UK and France as equal partners

Further information: www.faanweb.eu

TDR in the FAAN research design/process



Main characteristics of TDR (Pohl & Hirsch Hadorn 2007)

- ***transcending & integrating disciplinary paradigms***
- ***participatory research***
- ***relating to complex life-world problems***
- ***searching for unity of knowledge beyond disciplines, integrated knowledge***

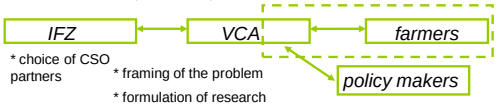
Austrian partners involved in the FAAN CR process?

- **CSO partner: ÖBV Via Campesina Austria:** mountain farmers' association: *„active and critical player in the field of Austrian agrarian politics by underlining the importance of small and medium scale peasant production."* Part of the world wide movement Via Campesina (‚The peasant way') lendless, woman and small scale producers, claiming for 'Food Sovereignty'
- **Academic partner: IFZ** (Inter-University Research Centre for Technology, Work and Culture): *„contribute to socially and environmentally sound, sustainable and gender-equitable techn. Design"*; participatory approach; group of students;

=> action/research for change

Connecting research and social movements

- researchers and CSOs aiming at societal more relevant outcomes
- „problem formulation within a social movement; research for a social movement" (Mies 1978)



* choice of CSO partners

* framing of the problem
* formulation of research questions
* definition of ‚alternative'
* choice of case studies
* choice of methodology
* interpretation of results
* question for future research

* ongoing interaction with members, political stakeholders
* validation through feedback

CR – potential for intervention

CSOs/NGOs key role for intervention => aim at action for change

- interventions already through the process
- ongoing interaction with the „subjects of research" – mediated through CSOs' daily business
- using research findings to inform intervention strategies

examples for intervention from FAAN:

- networking
- discussions with political stakeholders
- intervention in national implementation of European Hygiene Regulation
- rural communities start to think about role & potential of AAFNs
- recounting AAFNs economic potential

=> CR as powerful tool for intervention!

Thank you for your attention!

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Futures of SSH in the European Research Area

Final Conference SSH FUTURES
« *The future of the Social Sciences and the Humanities* »
Brussels, 22-23 October 2009

Philippe Keraudren, DG RTD, Directorate L

ERA objectives and developments

- Not all made for SSH… :
  - * End of fragmentation
  - * Critical mass and networking
  - * Open to the world
- But some tests of "europeanisation" (infrastructures, NoEs, IPs, ERA-NETs…)
- A world apart?
  (3%, JTIs, Techn. Platforms, Art. 169)

Thinking practices in SSH

- A number of projects try to think of SSH in Europe and beyond: ESSE, Global SSH, EU-NESCA and SSH-Futures
- SSH Futures. "The SSH Futures project will study the opportunities fro complementary development and closer coupling of the SSH in Europe, their mutual interactions with social demands, and the potential value of including such an approach within research policies in Europe… SSH Futures comprises a retrospective and a prospective part and in-depth explorations of specific programmes and policies both from the demand and supply side".

SSH Futures roadmap

- The societal impact of SSH: "the ways in which SSH have an impact on society, especially in contrats to the natural and technical sciences".
- An overview of SSH: « special attention… to the differences between the SSH in terms of their self conception as knowledge producers and in terms of the external expectations that are typically linked to the outputs of different fields of knowledge and disciplines ».
- Who are the stakelholders? « New empirical evidence » on the involvement of the public and private sectors.

The issues for SSH: circulations…

- Circulations of ideas and people within SSH and within Europe? International institutions and networks, voluntary or non voluntary migrations, role of non university actors, role of FP. The barriers of disciplines and nations (methodological nationalism…).
- Circulations of ideas and people from SSH to the political arena (policies and public debate). Many examples of interchange (anthropologists in enterprises) and many fears. Being autonomous and… heard…

The ESFRI Roadmap – an opportunity for Social Sciences and Humanities

Steven Krauwer
Utrecht University, Institute of Linguistics
Marko Tadić
University of Zagreb, Faculty of Humanities and Social Sciences, Department of Linguistics

The Futures of Social Sciences and Humanities
Final International Conference, Bruxelles, 2009-10-23

ESFRI Roadmap

- a number of emerging research infrastructures (RI) related to our environment and climate change
  - Lifewatch (biodiversity)
  - COPAL (atmosphere)
  - ICOS (carbon budget)
  - IAGOS (tropospheric trace gases)
  - EISCAT_3D (space weather)
  - EMSO (ocean margins)
  - EPOS (tectonic plates)
  - Aurora Borealis and SIAEOS (Arctic)
  - EURO-ARGO (oceans)
- research programmes based on these measures/monitorings
  - enables us to analyse the data
  - help policy makers in receiving early warnings of what is coming, and in taking protective measures

ESFRI Roadmap 2

- at the same time a number of RIs include Social Sciences and Humanities
  - ESS (social survey)
  - SHARE (health, ageing and retirement)
  - CESSDA (social science data archives)
  - DARIAH (digital humanities and cultural heritage)
  - CLARIN (language resources and technology)
- they could also be used for measuring and monitoring of different phenomena in social environment and detect changes
- it has never been proposed to connect these infrastructures with social environment and 'Social Climate Change'
- 'Social Climate Change' is a real issue that deserves as much attention

Social Climate Change

- some social changes are visible without much expertise
  - increased level of education
  - ageing population
  - immigration
  - mobility
  - multilinguality
  - role of internet and role of media
  - ...
- some are more subtle and harder to detect or even predict
  - outbursts of violence between fans at football matches
    - in CEE countries last few months, in WEE countries decades ago
  - change in attitude towards a certain topic
    - e.g. analysis of texts from (micro)blogs
  - switch in directions of stock-exchange indices
    - e.g. daily tracking and linguistic analysis of financial news (1.5 Mwords/working day)
  - …

Social Climate Change 2

- what is lacking?
  - general recognition that Social Climate Change is at least as relevant for our society as climate change
  - it should be taken just as seriously
- ESFRI RI in SSH provides us with a powerful collection of instruments to monitor continuously what is happening in society by
  - collecting statistical data (ESS, CESSDA, SHARE)
  - gathering data related to our culture and cultural heritage (DARIAH)
  - using language technologies to detect changes in attitudes reflected in media (CLARIN)
- ESFRI RI in SSH will soon be operational (2011-)
  - most of them in preparatory/planning phase (-2010)
  - followed by development phase where certain nodes will already be operational (2011-)
- RI project CLARIN

The role of text

- behind the CLARIN: epistemological hypothesis
  - text is important for SSH
    - object of research is text itself (and language of that text)
    - object of research is mediated through text
- research data for SSH in e-text format: growing rapidly
- (computational) linguistics (i.e. formal approaches to languages)
  - mathematics in SSH
  - at least for 'text-based' or 'text-dependent' sciences
- Language Resources and Technologies (LRT) = its application

What is CLARIN?

- Common LAnguage Resources and technology INfrastructure (www.clarin.eu)
- basic idea
  - European **federation of digital archives** with language data and tools (text, speech, multimodal, gesture…)
  - target audience: **humanities and social sciences** scholars
  - access: **single uniform sign-in access** to the archives
  - means: **language and speech technology tools** to retrieve, manipulate, enhance, explore and exploit data
  - coverage: **all languages** are equally important
  - location: **all EU and associated countries** included

Who we are?

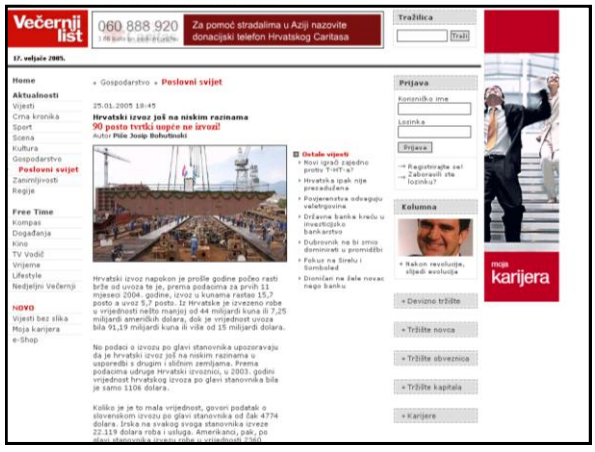
- at this moment a core consortium of 33 partners in 23 EU and associated countries (and more to join)
- outside the consortium ca 140 contributing institutions in 32 countries in Europe
- mostly academic institutions and a number of digital archives
- contributions consist typically of data, technology, or expertise

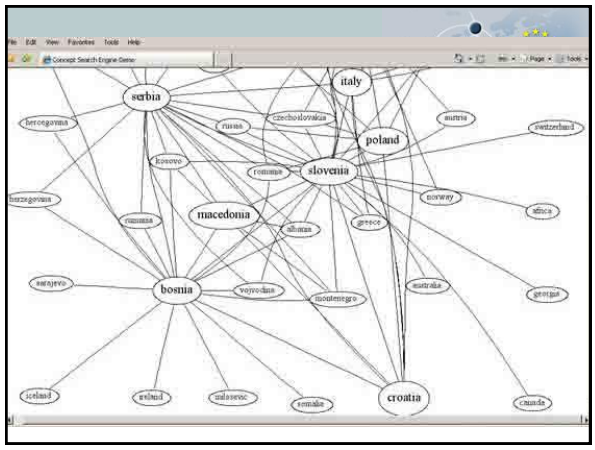
When will it start?

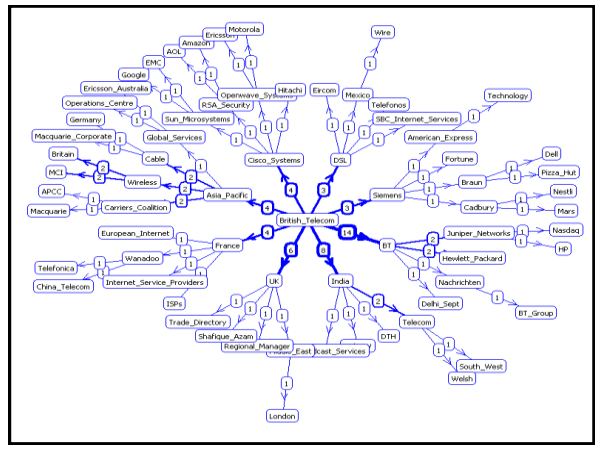
- 2008-10: *Preparatory phase*
  - funded by the EU (grant 212230)
- 2011-14: *Construction phase*
  - to be funded by the member states
- 2015-…: *Exploitation phase*
  - to be jointly funded by national governments, with contributions from EC

Examples

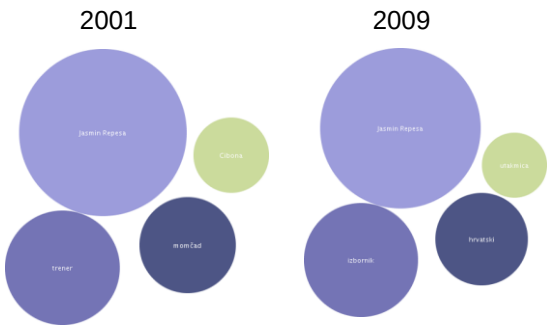
- SSH researcher should be able to ask soon:
  - *Give me digital copies of all contemporary documents that discuss the Great Plague of England (1348-1350)*
  - *Give me all negative remarks about Islam or about football in the 2008 proceedings of the European Parliament*
  - *Find TV interviews that involve German speakers with a Spanish accent*
  - *Summarize all articles in* Le Figaro *of August 2009 about Mr Barroso – in Polish*
  - *Who was mentioned in the same documents with Konrad Adenauer during 1951?*
- example: named entity recognition in the web version of daily newspaper for under-resourced language (Croatian)



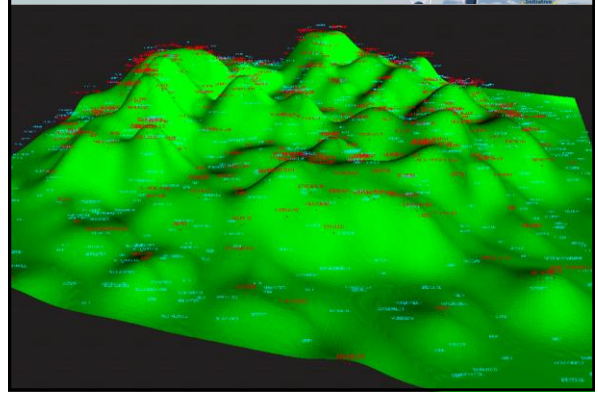




Tracking NE over time



Key-words visualisation



Social Climate Change again

- automated tools that help SSH researchers in 'content analysis' on a large scale
  - vast document collections (also multilingual)
  - European, international, national, regional, local level
- what we advocate here is
  - a concerted Social Climate Change programme around the SSH infrastructures based on their integrated observations
  - it should be part of the ERA
  - it would enable the eScience paradigm in SSH
  - this should allow us to get a better understanding of what is happening and to issue early warnings for upcoming Social Tsunamis

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The Futures of Social Sciences and Humanities
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BUNDESWEHR INSTITUTE OF SOCIAL SCIENCES

Doing Research in the Name of War?

Experiences From a Social Science Institute Within the Army

Phil C. Langer

The Future of Social Sciences and the Humanities Conference

October 22nd, 2009 in Brussels

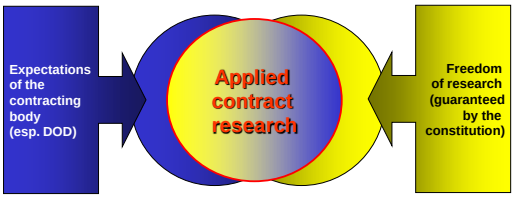
The presentation is about...

- general conditions of contract research for the army;
- implications of researching intercultural competence in this context;
- strategies to cope with these challenges.

(1) General conditions of contract research for the army

- Contract research for the Department of Defense (DOD) since 1974.
- Providing data, analysis, and recommendations related to defined needs of the armed forces.
- Current projects imply public surveys on attitudes towards the army, analyses on soldierly identities in a post-heroic time, studies on the ISAF mission in Afghanistan.
- Surplus value: field access, research resources, institutional insights.
- Complex interplay of own initiative, request from different areas within the army, and ministerial orders structure the field of research.

(1) The double bind situation of research



- Different systems of reference and strategies of legitimization
- Institutional demands to produce “adequate” and publicly “worthy” knowledge (scientific “protection of the flanks“)
- Attempts to functionalize research as strategic stake within organizational power games

(2) Implications of researching “intercultural competence“

- Project at the institute since 2006
- Institutional context: foundation of a network center, integration of the topic in officer's trainings
- Background: international missions in regions that are perceived as culturally “different“
- Challenge: Systematical examination of intercultural experiences, the extent of intercultural competence, and the effectiveness in deployments abroad

(2) Refections of the double bind situation in the project

	Military dispositive	Scientific discourse
Research questions	• How can intercultural competence in the army be strengthened? • How can it be measured • How can intercultural trainings be evaluated • How useful is intercultural competence in concrete missions?	• What does intercultural competence mean in military contexts? • How is „otherness“ be constructed in and by discourses and practices? • What consequences does it have for culturally significant actions?
Application	functional	power-sensitive
Methods	conservative	participatory
Audience	German army	scientific community
Critical focus	**politics of research, ethical position of the researcher**	

(3) Scientific coping strategies of doing research in this context

- Becoming aware, how power is *permanently* inscribed in the process of knowledge production.
- Creating a network with scientific and other partners *outside* the institution.
- Making *transparent* the very conditions of research.

Dr. Phil C. Langer
Email: PhilippChristophLanger@Bundeswehr.org
www.sowi.bundeswehr.de

Doing Co-operative Research with Civil Society Organizations:

Challenges and Implications for Social Science

Les Levidow, Steve Hinchliffe, Sue Oreszczyn

Open University

Societal needs?

- How can social science research take into account societal needs and views of civil society?

EU policy for the European Research Area: 'It is responsive to the needs and ambitions of citizens and effectively contributes to the sustainable development and competitiveness of Europe'.

EU Council: Governance of the ERA needs a long-term vision, supported by EU citizens and stakeholders, including civil society.

Co-operative research

- Although Civil Society Organizations (CSOs) have been involved in research for a long time, FP7 has introduced special measures to promote their involvement.
- 'Science in Society Unit: Co-operative research should involve researchers and non-researchers, and should develop new knowledge through mutual learning.
- SSH work programmes have included special calls to involve CSOs in research, e.g. on climate change and sustainable living.
- Co-operative research processes could be the embryo of a specific European way to define and implement research priorities, engaging citizens and respecting common ethical norms' (Commission Green Paper, 'The European Research Area: New Perspectives', 2007).

CREPE project

- We coordinate an FP7 project, 'Co-operative Research on Environmental Problems in Europe' (CREPE).
- CSO partners lead studies on agri-environmental issues: agro-fuel production, community-supported agriculture, water scarcity, local agri-food networks, and agri-research priorities.
- CSO researchers are linked to each other, academic researchers and wider CSO networks. From our experience of CR, here we reflect on its processes and then its policy implications. Process aspects:
  - Multiple identities
  - Socio-cultural relations
  - Cooperative process

Techno-fix for sustainability?

- Our research questions challenge assumptions of prevalent research priorities. These promote professional-expert knowledge to provide innovation for European economic competitiveness**.**
- 2006 renewed Sustainable Development Strategy calls for 'Gaining and maintaining a competitive advantage by improving resource efficiency, *inter alia* through the promotion of eco-efficient innovations'.
- EU policy foresees and pursues a techno-fix for sustainability problems.

Biofuels

- EU policy expects that novel eco-efficient biofuels can overcome the sustainability problems of current biofuels, e.g. competition for land use, indirect global changes in land use, doubtful savings in GHG emissions, etc.
- This expectation assumes that sustainability problems result from inefficient production methods and so can be solved by technological innovation for greater efficiency, e.g. by horizontally integrating energy with other industrial sectors.
- However, unsustainability has causes in political-economic drivers, e.g. for extending monocultures to more land, for subordinating land use to global markets, for gaining a competitive advantage in global value chains.
- More efficient methods per se would not counteract those drivers of harm.

Water scarcity

- For problems of water quality and scarcity, EU policy emphasises innovations for using water more efficiently, e.g. irrigation methods with drip-feeding and humidity controls.
- Such methods are already widespread among larger agricultural producers in Andalucia.
- Investment brings political-economic pressure to maximise returns by increasing the cultivated area, rather than a reduction in water usage by agriculture.
- To satisfy the greater water demand, moreover, the government aims to build more desalination plants, whose operation will increase greenhouse gas emissions, among other harmful effects.
- In this case, eco-efficient innovations sustain the exhaustion of natural resources.
- Our study explores alternative means to satisfy water needs of agricultural production, while maintaining livelihoods.

Democratising knowledge production?

- Our project questions prevalent EU policy, research agendas and technoscientific trajectories.
- Our CSO partners have developed different problem-definitions for societal needs, while also posing alternative solutions.
- Co-operative research can help to broaden societal visions, as a basis for citizens' participation in shaping a future Europe.
- Social science should critically analyze EU policy assumptions and research priorities.
- Civil society may find opportunities to democratize knowledge production – and potentially democratize decisions.

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Collaboration in SSH – guaranteed?

Ülle Must, Archimedes Foundation, Estonia

SSH Futures final conference 22-23 October 2009, Brussels

Questions:

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1. Has FP influenced the traditional performances of researchers?
2. Or, vice versa - researchers' traditional performances have influenced the FP?

Sources:

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- **EU Sixth Framework Programme (2002-2006) funded projects' database.**
  - CIT priority area – 146 projects, and 1949 partners
  - To find out cooperation trends of coordinators, we created two datasets. One reflected collaboration with all partners, the second – collaboration with core partners (up to 5).
- **ISI Web of Knowledge (Arts & Humanities Citation Index, Social Sciences Citation Index, and Conference Proceedings Citation Index for SSH – since 2002) for the period 2000-2007.**
  - Searches were conducted by field "Author" and "Country". Data of seven most active coordinators countries were derived by
  - Further analysis were made from data of Austria, Belgium, France, Germany, Italy, Netherlands, and UK (by institution, collaborator, subject area).
- For social network analysis were used UCINET and NetDraw.

Overall ISI coverage by main field (Henk F. Moed)

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EXCELLENT (> 80%)	VERY GOOD (60-80%)	GOOD(40-60%)
Biochem & Mol Biol	Appl Phys & Chem	Mathematics
Biol Sci – Humans	Biol Sci – Anim & Plants	Economics
Chemistry	Psychol & Psychiat	Engineering
Clin Medicine	Geosciences	MODERATE (<40 %)
Phys & Astron	Soc Sci ~ Medicine	Other Soc Sci
		Humanities & Arts

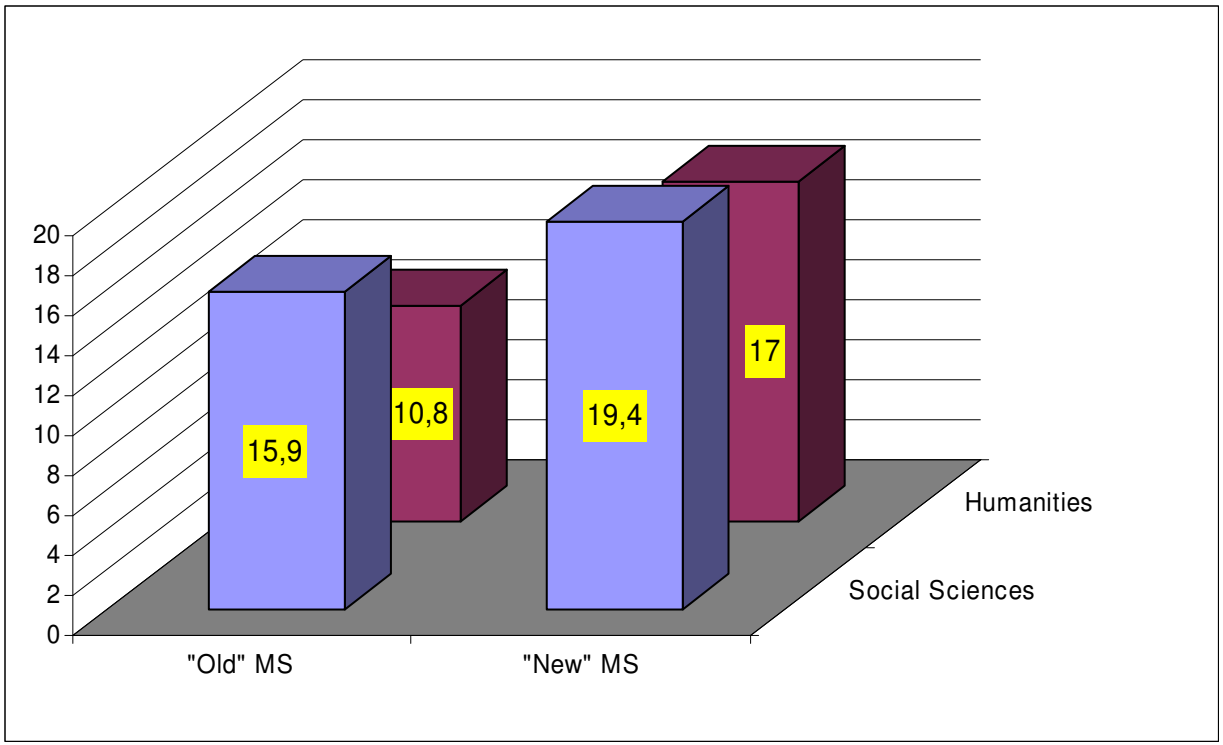
Important factors (Henk F. Moed)

ARCHIMEDES

Mathematics	**CompuMath included as from 1993 only**
	Preprints
Engineering & Applied sciences	**Conference proceedings**
	Reference works
Other Social Sciences	**Books**
	Language barriers
Humanities and Arts	**Books**
	Language barriers
	References to study object included

Proportion of SSH researchers (FTE) in EU-27

ARCHIMEDES



Collaboration network in CIT programmes – all partners (■- partner, ● – coordinator)

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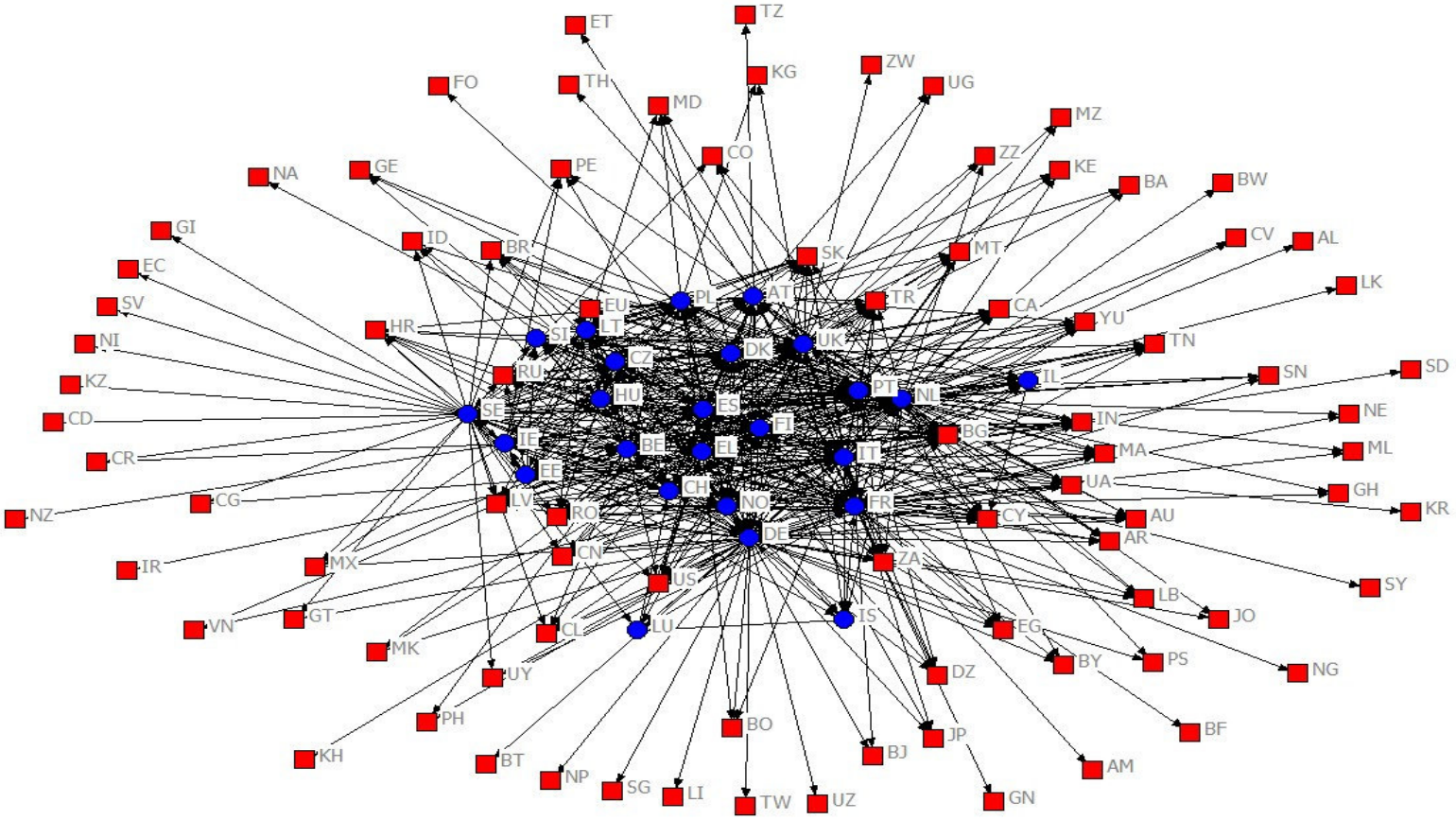

Collaboration networks in CIT programmes – core partners (■- partner, • – coordinator)

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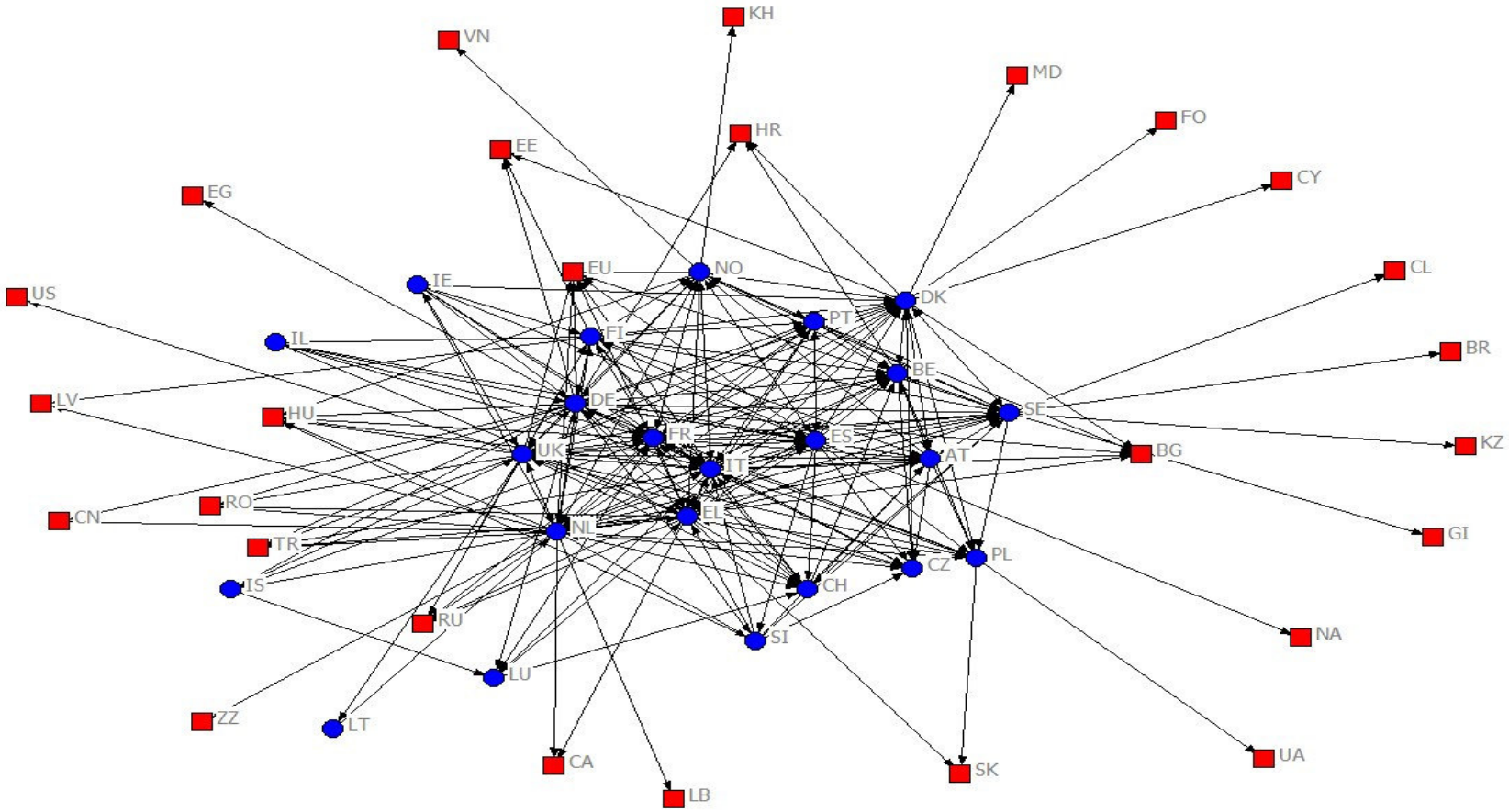

An average of 27. 8% of total partners acted as core partners.

The most collaborative partners – from total

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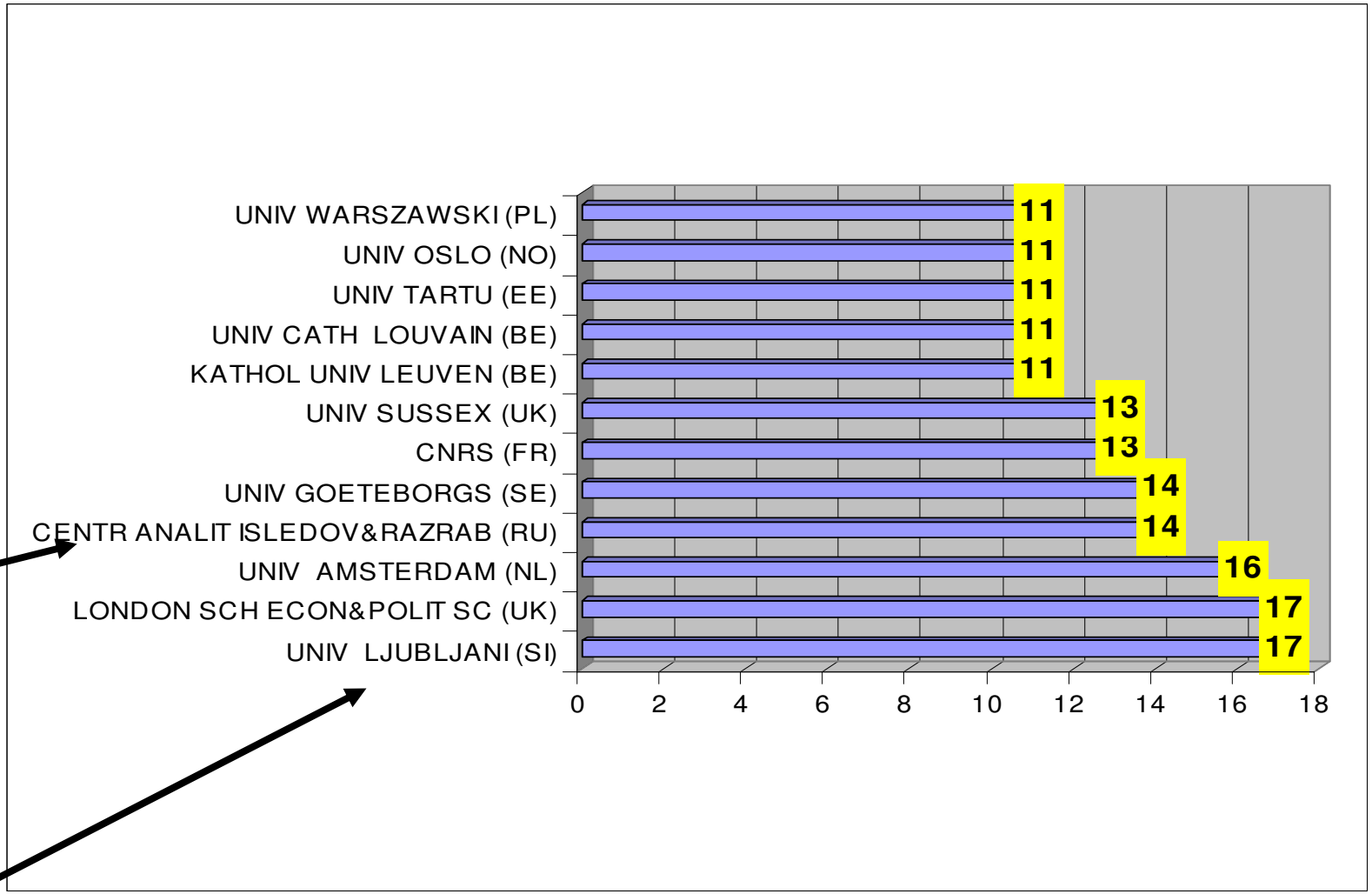

The most collaborative partners - core

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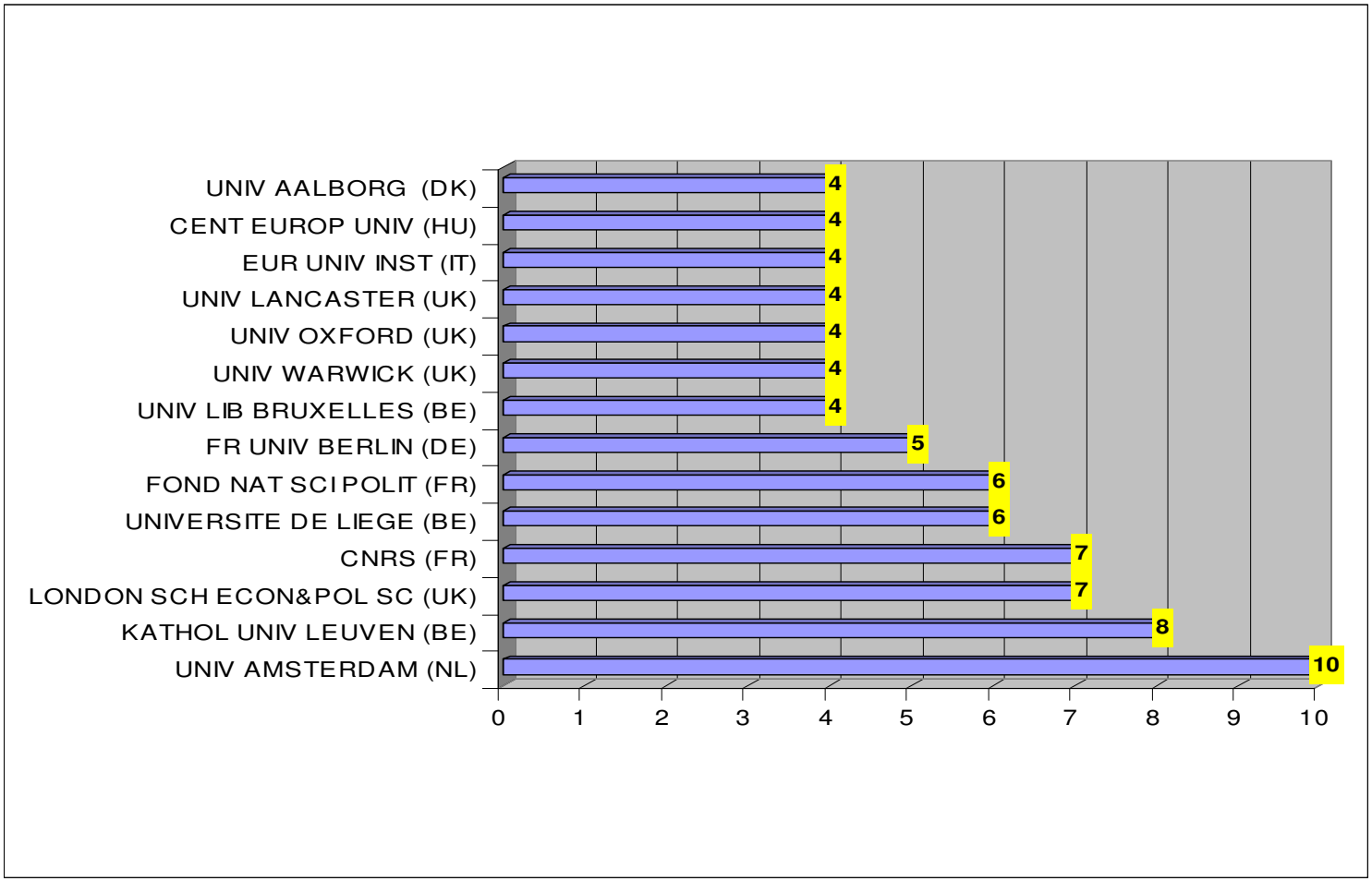

Bridging role of these organizations

UNIVERSITEIT VAN AMSTERDAM (■-partner, ● – coordinator)

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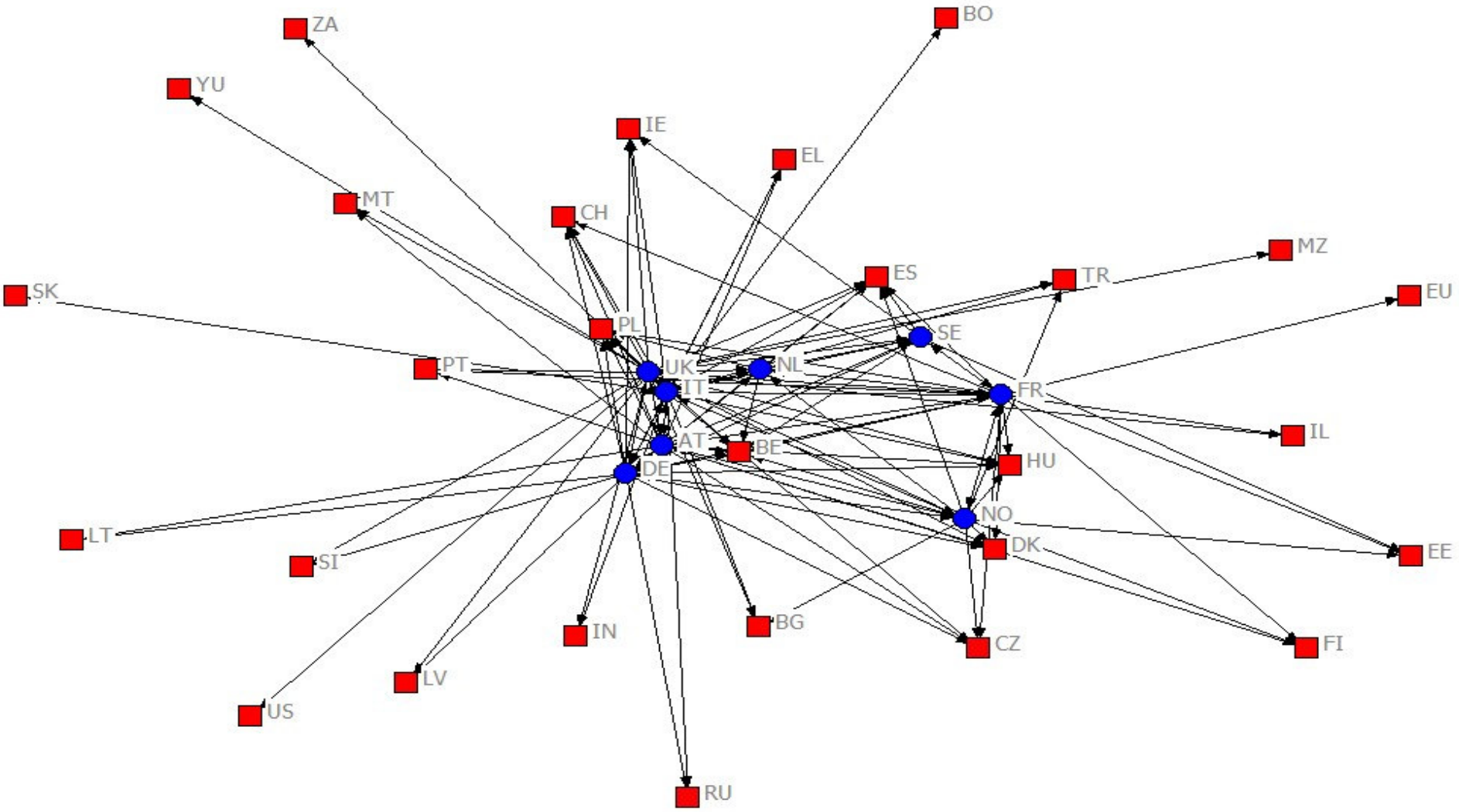
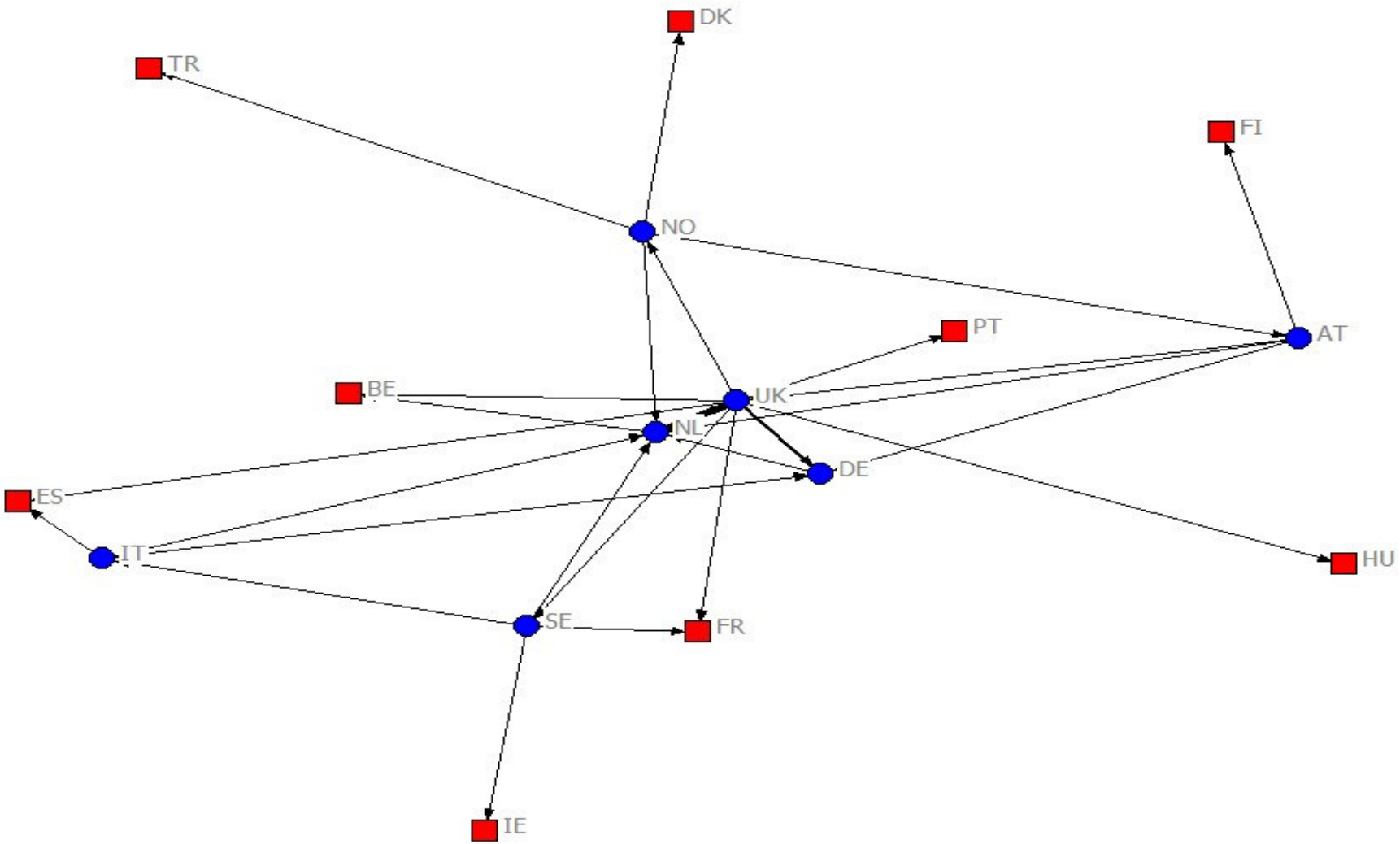


UNIVERSITEIT VAN AMSTERDAM-CORE
(■- partner, • – coordinator)

ARCHIMEDES



Proportion of Domestic Consortium members in FP6

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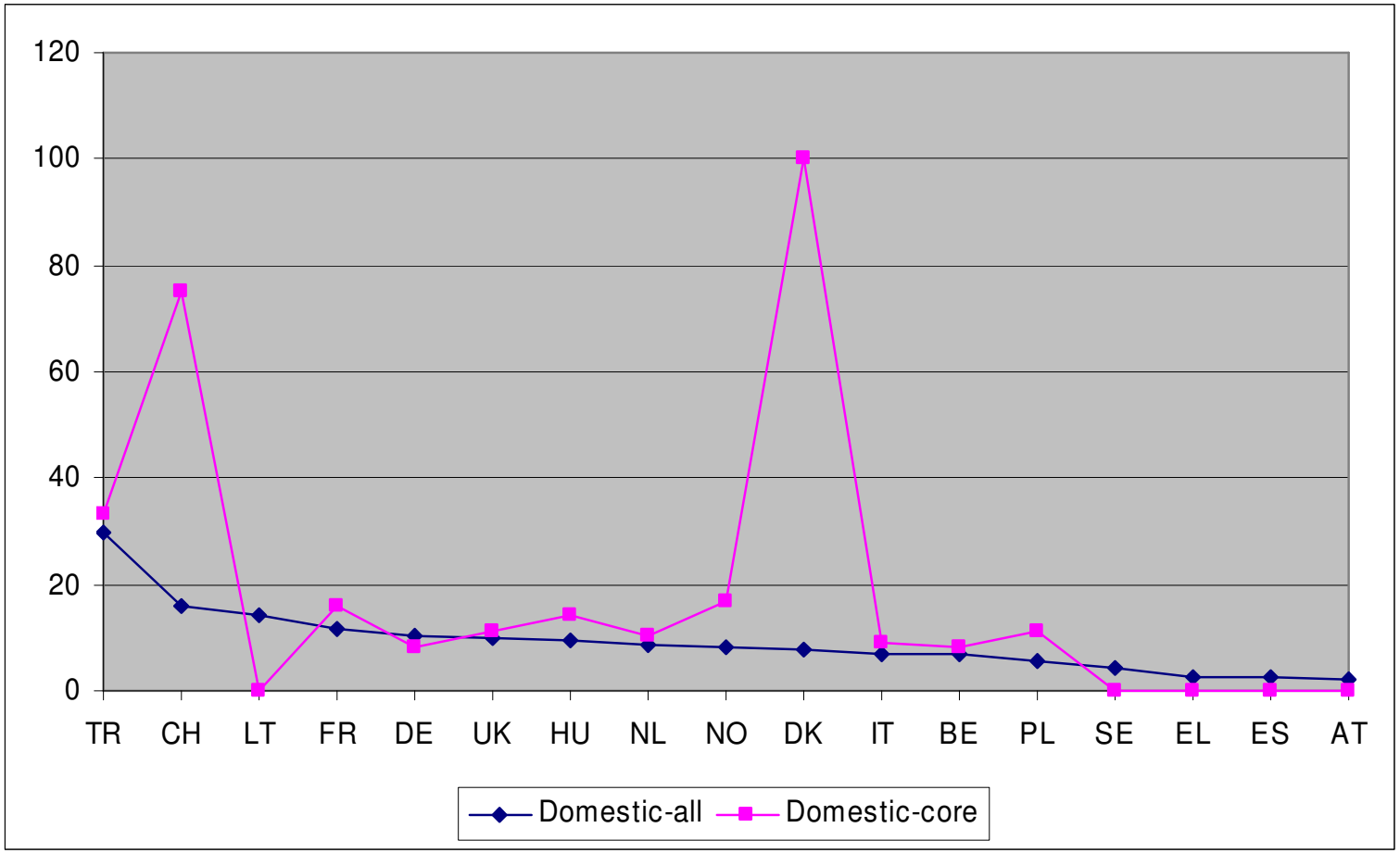
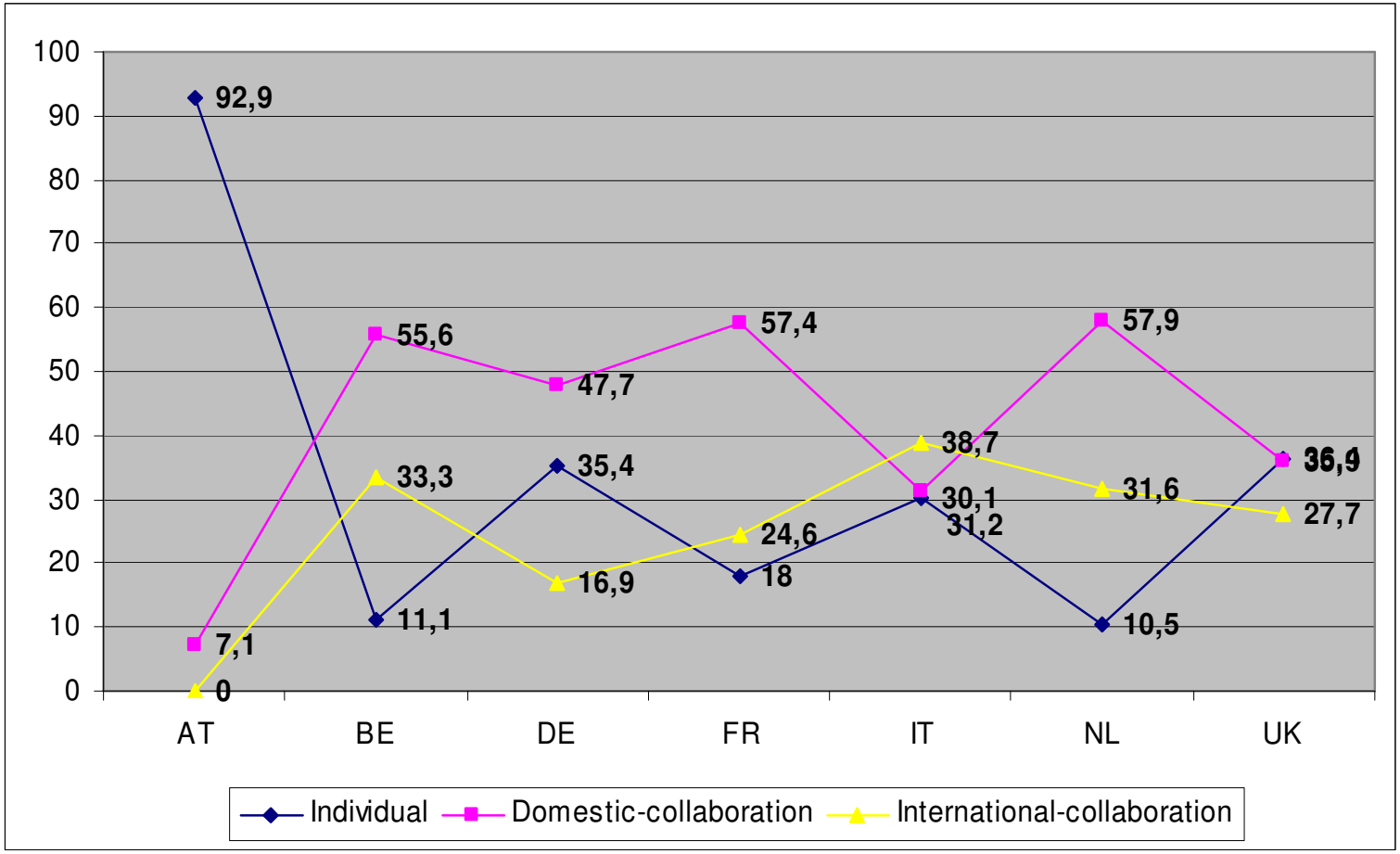


The origin of authors and co-authors



The proportion of domestic organisations and authors in 7 selected countries

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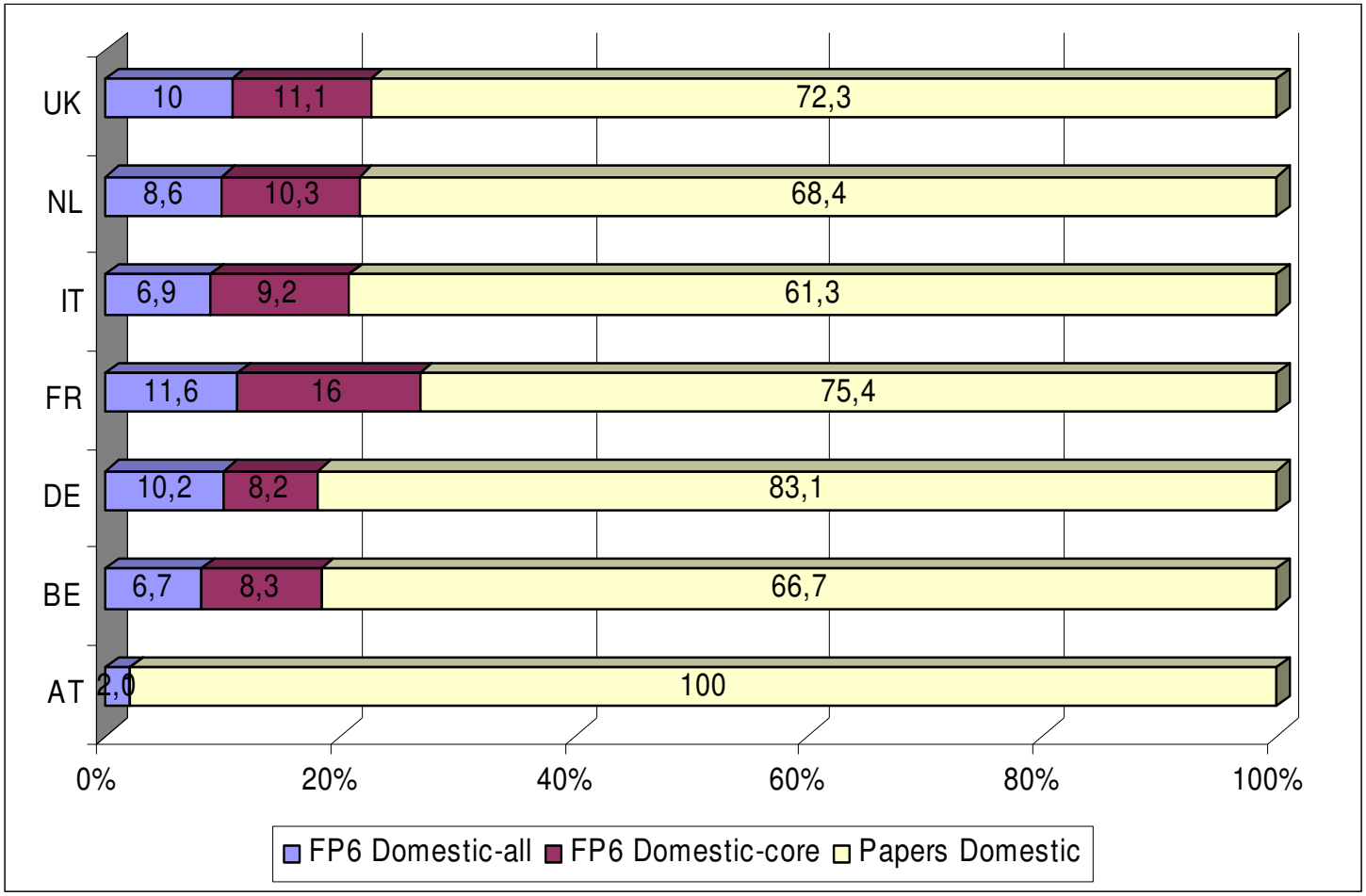

Co-authors geography of selected seven countries by WoK (■- co-author, • – coordinator)

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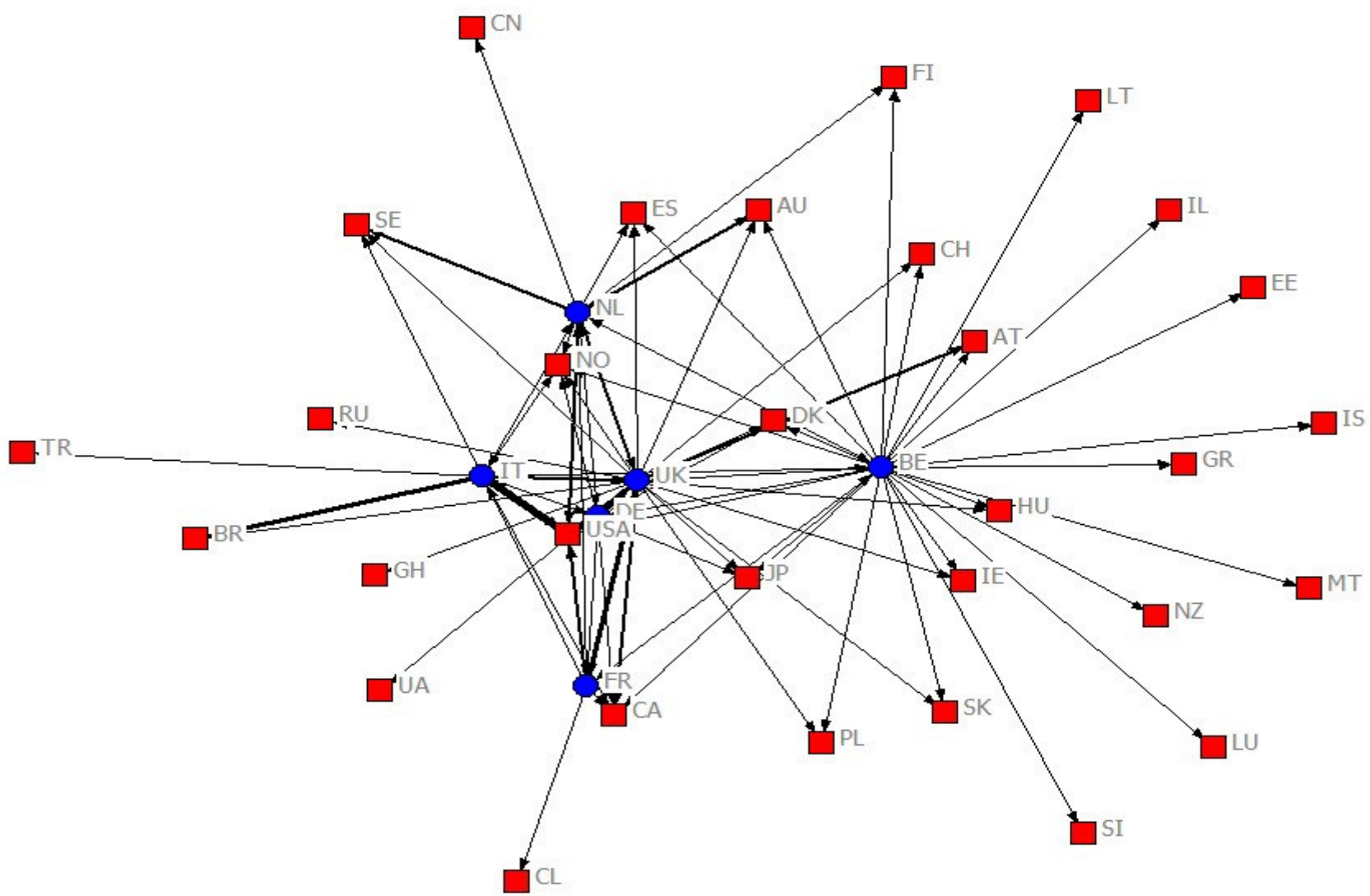

Third countries partners in Priority Area CITIZENS by coordinator

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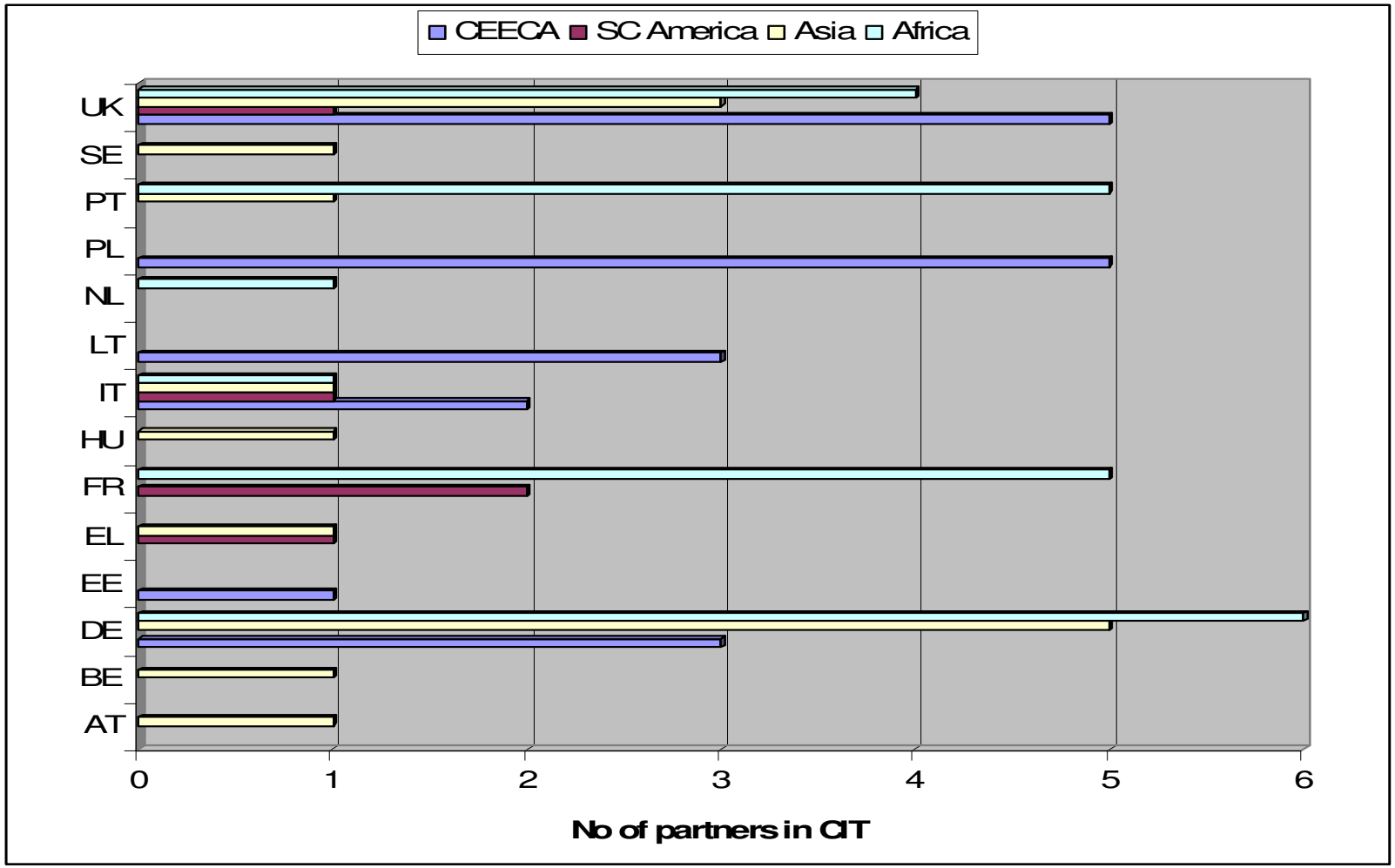

Proximity effect

Subject areas in WoK and FP6 by 7 selected countries

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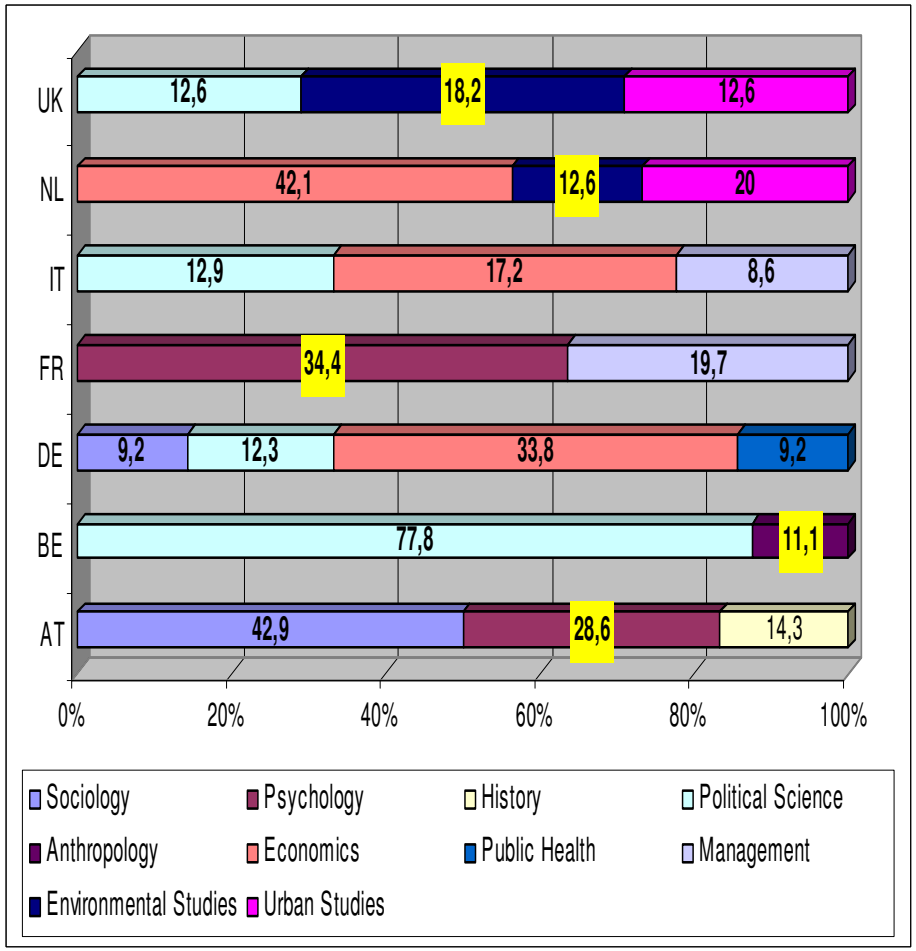

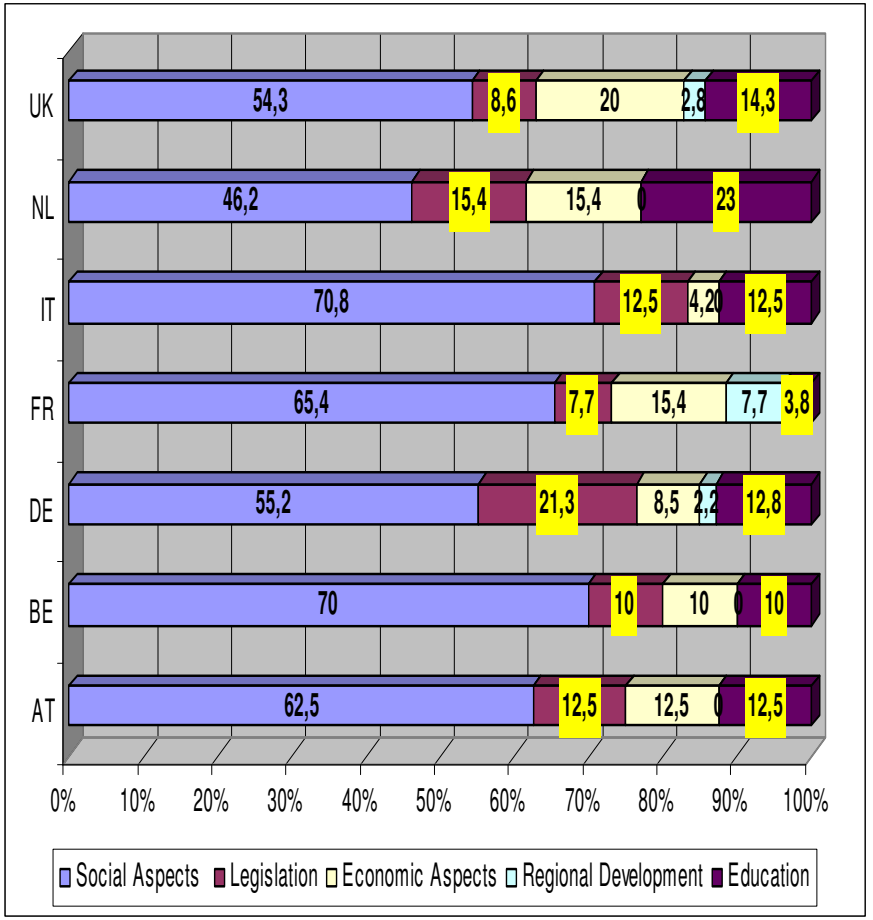

Conclusions

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- Performance in the SSH is still an individual activity. At the same time we can follow tendencies which may cause changes in the whole area - new technologies used in research, even other research areas are becoming entrenched in the field. The effect of FP projects is mostly seen in the possibilities they give for collaboration.
- The extent of international cooperation differs significantly between small and large countries.
- "Proximity" plays role also in choice of partners. Historical, cultural background and strategical interests play big role in collaboration in countries level;
- Most third countries (counties which do not belong to EU) are involved in projects as strategic partners. Those countries, which are involved as core partners more frequently, are mostly big countries which respectively participate in a bigger number of projects (Russia, China), traditional partners in research (United States, Australia, Canada), and neighbouring countries (Ukraine, Croatia, Egypt).
- Average 27, 8% from total partners acted as core partners. What to do, that these networks will be opened to new actors? We have to take into account that research performance is long term activity, and well established contacts continue for years. The network chards of core partners show the same tendency – they are as boles of the tree, showing the history of collaboration networks.
- Organisations which participate as partners in numerous projects play bridging role in FP. They act as „invisible panels", which is the most acceptable form of suggesting the new partners in research collaboration.

Did we find answers to asked questions?

ARCHIMEDES

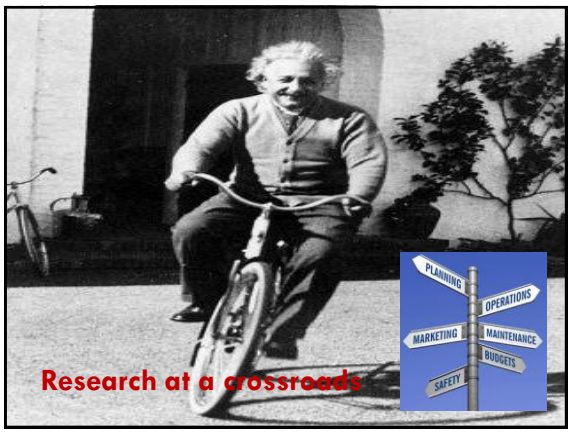
YES and **NOT**

ARCHIMEDES

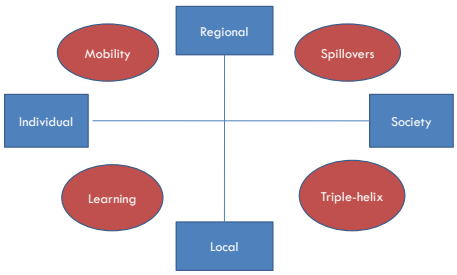
Thank you! Questions?

Contact:
Ulle.Must@archimedes.ee

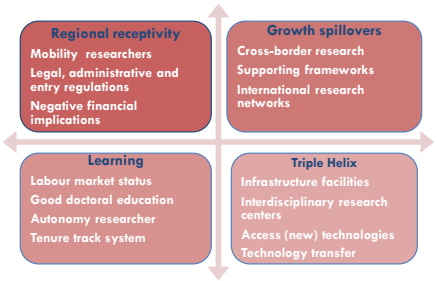
Peter Nijkamp



Illustrative forces in the science domain



Research bottlenecks and opportunities



Ways forward


SCENARIO A: Improve the inflow and exchange of qualified people


SCENARIO B: Improve the career perspectives for (young) researchers


SCENARIO C: Exploit the regional research scale


SCENARIO D: Improve university-industry-government interactions

Bottlenecks and solutions directions

Scenario	Bottlenecks	Solution strategies
A.	Mobility of researchers Entry regulations Financial implications	Increasing research grants and positions Opening up national regulations/ programmes Running down formal/informal barriers
B.	Labour market status Doctoral education Career opportunities	Structure doctoral education Tenure track system Funding instruments Career and research autonomy
C.	Cross-border research Research conditions Supporting Frameworks	Investment facilities and infrastructure Formation research concentrations
D.	Infrastructure facilities Research centers (New) technologies Technology transfer	Better conformity industry requirements Open bidirectional flow researchers Portability granting instruments

Epilogue

"You are completely free to carry out whatever research you want, so long as you come to these conclusions."

Ronald J POHORYLES
The Interdisciplinary Centre for Comparative Research in the Social Sciences (ICCR)

The future of social sciences and humanities – Results from the SSH-FUTURES project

The Future of SSH – Final Conference
Hôtel Metropole, Brussels, 22 – 23 October 2009

The aims of the presentation

- ✓ **Some theoretical background: Social Sciences and Humanities in the Knowledge Society**
- ✓ **The scientific communities and the governance of SSH in Europe: current situation, developments and barriers**
- ✓ **A view on the future**
- ✓ **Preliminary conclusions**

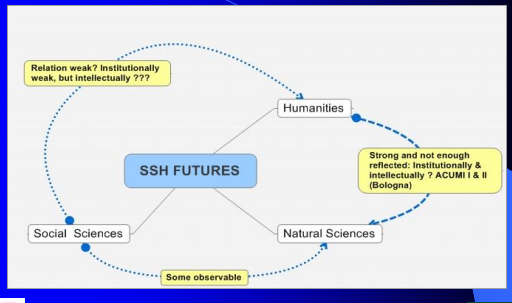
1 - Social Sciences and Humanities in the Knowledge Society

- ✓ **Knowledge and Information: Information as raw material**
- ✓ **The transformation of information to knowledge: knowledge 'travels'**
- ✓ **Knowledge based economy, evidence based politics, knowledge society**
- ✓ Knowledge = Empowerment to Act

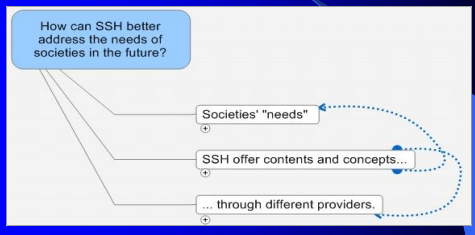
1 - The character of social science and humanities knowledge

- ✓ **Jürgen Habermas (1967)**
  - o **Natural Sciences: Pragmatic knowledge**
  - o **Humanities: Hermeneutical knowledge**
  - o **Social Sciences: Critical & emancipatory knowledge**
- ✓ **What chances for interdisciplinary knowledge integration?**

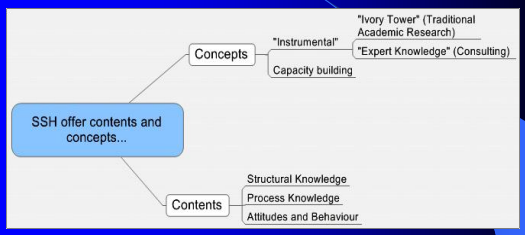
1 - Scientific Knowledge



1 - Social Sciences and Humanities: What is their mission?



1 - Social Sciences and Humanities: Knowledge provided by SSH



2 – SSH research landscape: The view of the research communities

- ✓ The future of the Social Sciences and Humanities depends on:
  - o **Research agendas** with a set of assumptions about knowledge and its role for policy, economy & society
  - o **Open research frameworks and institutions** that accept plurality and differentiation
  - o **Understanding** for the need for co-operative and inter-disciplinary research
  - o **Researchers enjoying support** from institutionalized mechanisms
  - o Appropriate **dissemination strategies**

2 – SSH research landscape: The view of the research communities

- ✓ Research activities by individual researchers are determined by :
  - o the social and academic background of the researchers;
  - o the institutional and organizational framework of the research agenda setting and working conditions;
  - o the underlying institutional structure of the research landscape; and
  - o the opinions of the researchers on new and upcoming developments.

2 – SSH research landscape: The view of the research communities

- ✓ Based on these assumptions, the following issues are relevant:
  - o **differences and communalities** in the European research landscape;
  - o the **institutional and organizational framework** (working conditions for researchers, 'governance issues'); and
  - o the appreciation of **interdisciplinary and transdisciplinary research** by the researchers.

2 – Research in the SSH

- ✓ The sample represents fairly the European and the national levels.
- ✓ As stated in the TA the sample units are research projects in specific SSH research programmes.
- ✓ Not all countries have a comprehensive SSH-agenda; however, it is fair and reasonable to base the assumptions on the future of SSH on research agendas.

2 – Differences in Research Organisation

- ✓ Research systems have historically developed differently in different European countries and this has resulted in varying structures regarding the role of universities, academies and public and private research organizations.

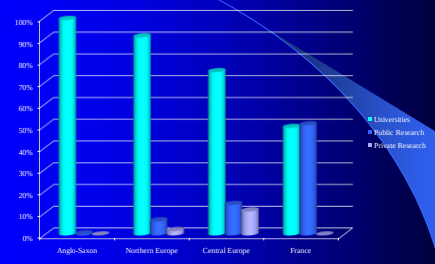
2 – Differences in Research Organisation

- ✓ As far as the Social Sciences and the Humanities are concerned, the 'research landscape', i.e. the respective role of universities, academies and research organizations in research systems, there are significant differences.

2 – The sample

- ✓ The European projects were sampled from the list provided by CORDIS.
- ✓ The national samples were drawn from a list provided by the project partners.
- ✓ 5,343 researchers were sampled; the response rate was 32.3% with national variations between 25.4% (United Kingdom) and 38.5% (Sweden).

2 – Type of Institution (n=1.616)



The four types of research landscapes (I)

- ✓ The **Anglo-Saxon type:**
  - o dominated by universities, predominently based on core funding, but competitive as well in terms of funding and relying on a multi-tier financing system.
- ✓ The **Northern European system**
  - o likewise dominated by universities. However, research is financed by a mixture of core funding and competitive project funding.

2 - The four types of research landscapes (II)

- ✓ The **Central European** system
  - o more segmented
  - o Universities rely on institutional core funding. Research organizations are more attuned to competitive funding.
- ✓ **France** features a unique system.
  - o research structure is mostly based on public research institutions
  - o universities and (public) research organizations largely depend on state funding.

2 - National variations of funding structures

- ✓ Funding structures play a major role:
  - o The importance of competitive funding is increasing all over Europe.
  - o In France and Central Europe the importance of competitive funding and of third-party funding is lower than in the UK and in Sweden.

2 - Funding Structures of Research Organizations

- ✓ *With respect to the type of research organization,* there are significant differences:
  - o Universities are more active in the national environment, the European Framework programmes play a much lesser role in their funding
  - o The opposite is true for research organizations.

2 – Stakeholders as seen from the research communities

- ✓ *With respect to the stakeholders,,* there are significant differences as well:
  - o Researchers see government as most important stakeholder (25% on average), but in the Anglo-Saxon environment and in France significantly more often.
  - o Citizens and/or CSOs are not seen as important stakeholders (less than 10% on average). In the UK this is quite different (30% emphasize the relevance).

2 – Working conditions

- ✓ The majority of SSH researchers, 81%, work in universities.
- ✓ One in five respondents has a non-permanent work contract.
- ✓ The share of researchers working part-time is lower (13%).
- ✓ One in four researchers across Europe can devote most of his/her time to research.
- ✓ There are siginificant national variations.

2 – Job satisfaction

- ✓ Only 12% of SSH researchers consider leaving the research profession.
- ✓ Every second SSH researcher – indeed every three in four up till the age of about 50 – is concerned with upward mobility and is looking for a better job.
- ✓ Researchers working in private research organizations are less likely to look for a better position. However, one in four is considering quitting the research profession entirely.

2 - Governance issues: Agenda setting

- ✓ Nearly all claim to set their research agendas on their own.
- ✓ Scientific communities are ranked second.
- ✓ National research programmes come second in the Anglo-Saxon environment.
- ✓ International and European programmes are considered less important.

2 - Governance issues: Evaluation

- ✓ One in three respondents mentions 'competitive research' as an important issue in the evaluation procedures of their institutions, only second to traditional peer reviewing (41.2% on average)
- ✓ In private research organizations, success in competitive research is even more important than peer-reviewing.
- ✓ One in three researchers in public research organizations is submitted to formal research procedures, as compared with just one fifth in the other groups.

2 - Interdisciplinarity

- ✓ Inter-disciplinary research is a widespread research practice. Only 20% of the researchers are involved only in research in their own research discipline.
- ✓ One in four works on intra-disciplinarity projects and one in three on interdisciplinary ones.
- ✓ In task-oriented research, even one in five researchers works on transdisciplinary research combinations.

2 – Interdisciplinarity: Variations

- ✓ Mono-disciplinary research is more widespread where the research sector is structured in the traditional academic manner, as in France and Central Europe.
- ✓ Inter-disciplinarity is more widespread in the Anglo-Saxon research environment and in private research organizations.

2 – Educational background and openess

- ✓ Graduates of studies combining a number of disciplines are the most open for innovative forms research relating to other disciplines as well as to social and economic actors.
- ✓ Preparation for task-oriented research has to start at the level of higher education.

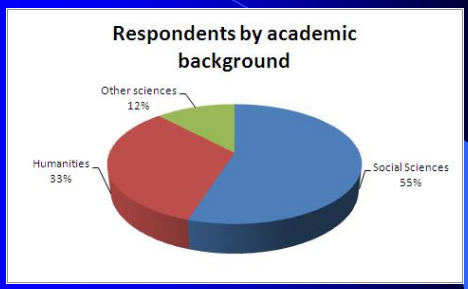
2 – Barriers to interdisciplinary research

- ✓ Research structures are quite averse to to interdisciplinary and transdisciplinary research.
- ✓ Nearly all the researchers consider these activities important for the future of Social Sciences and Humanities research.
- ✓ Nearly all researchers confirm that their career advancement is largely contingent on strictly disciplinary activities (with the exception of research organizations outside traditional academic institutions).

3 – An agenda for 2025? Results of a foresight study

- ✓ Under the SSH-FUTURES project a Delphi-type online expert survey was carried out as well.
- ✓ The sample was based upon the exercise reported before.
- ✓ The objective of the survey was to inquire about experts' opinions on both the structure of and expected topics for of the social sciences and humanities (SSH) in 2025.

3 - Academic Background of the Researcher in SSH (n=518)



3 – Topics for SSH Research in 2025

- ✓ Group 1: Economics and Employment
- ✓ Group 2: Social Change
- ✓ Group 3: Environment and Sustainability
- ✓ Group 4: Europe as a Knowledge-Based Society
- ✓ Group 5: Governance and Citizenship
- ✓ Group 6: Culture and Values

3 – Most important topics till 2025

- ✓ Social inequality, social exclusion and knowledge divide
- ✓ Immigration and ethnic minorities
- ✓ Environment and sustainability
- ✓ Education
- ✓ Aging and the likeliness of pension crises

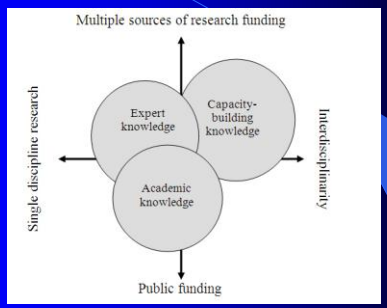
3 - Caveat

- ✓ Topics are very difficult to predict, as social, political and economic developments are difficult to predict
- ✓ In 2006, for instance, just a minority thought about the likeliness of cyclical crises (with the exception of crises in the welfare system.

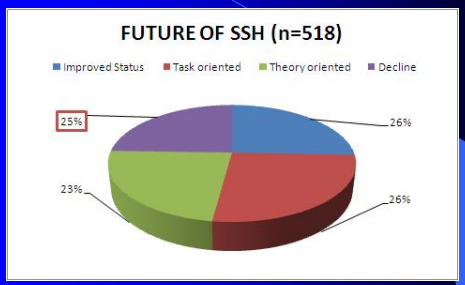
3 – Driving forces for the enhancement of SSH

- ✓ Two main driving forces for a successful development of the SSH were identified:
  - o The level of interdisciplinarity, and
  - o the source and amount of funding.

3 - Type of Knowledge, Funding, Type of Research



4 - Assessment of the SSH-FUTURE

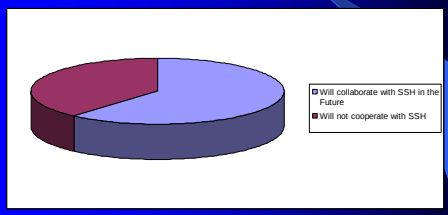


3 - Differences in the assessment

- ✓ A number of statistically significant differences were found between the respondents' views according to age, country, type of organisation they work in, research areas and gender.

4 - Interdisciplinary Cooperation: A view from outside (PLATON+)

The results reported so far just concerned the projects in the SSH domain. A view from other disciplines is encouraging:

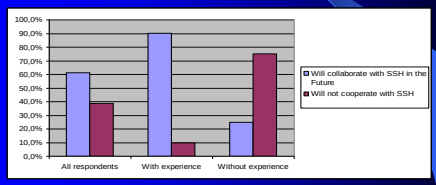


n=656

4 - Assessment of collaboration with Social Sciences & Humanities Source: PLATON+

4 - Experience Matters Source: PLATON+

There is, however, a down-side: Lacking experience in collaboration means lacking desire as well.



5 – Some preliminary conclusions: The European level

- ✓ Message to the European Commission with respect to FP 8:
  - o The ERC is important, but cannot replace the SSH specific programmes i.a. on democracy, social policy, economics and human rights
  - o Increase the participation of SSH in the other research areas
  - o Support institution building for the laggards to increase their attractivity

5 – Some preliminary conclusions: The national level

- ✓ National Governments
  - o Reforms of Universities and Research Organisations cannot be built upon 'best practise models'
  - o A social science and humanities agenda must be based on specific strength
  - o Innovative SSH research might mean the building of innovative institutions
  - o Increase collaboration in research and higher education

5 – Scientific communities

- ✓ Scientific Communities
  - o There is a need to understand diversity
  - o Evaluation is important, but the criteria must become more flexible
  - o Disciplinary excellence is still important, but interdisciplinary and transdisciplinary work has to be rewarded
  - o Interdisciplinary elements must become part of science education – curricula have to be adapted

Thank you for your patience!

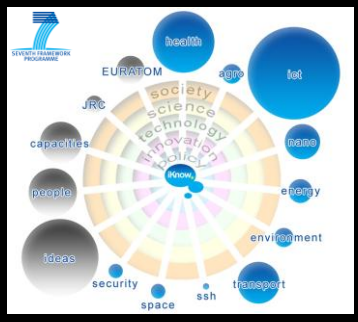
A research question inspiring the work of the iKNOW project (www.**iknowfutures**.eu) and the Mapping activities of the European Foresight Platform (**EFP**)

What is the role of social sciences and humanities (SSH) in Futures Research?

This presentation is based on the ***Mapping Foresight*** (Popper, 2009) research carried out for the European Foresight Monitoring Network (**EFMN**) now transformed into the **EFP** (2009-2012)

Rafael Popper
rafael.popper@manchester.ac.uk

Mapping the role of SSH Research in FP7



Outline

1. Is **futures research** a fashion?
- How to **map interdisciplinarity** in futures research?
- What is **the role of SSH** in futures research?
- Final remarks and **recommendations** for the future of SSH?
- References and **further reading**

Section 1: Is futures research (foresight) a fashion?

About futures research & foresight

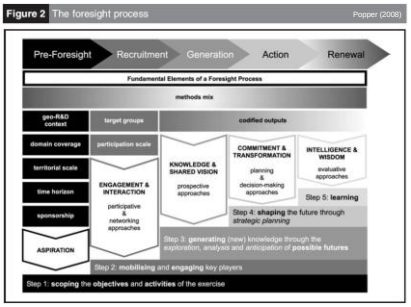
"The future's not what it used to be"

As argued in **Miles (2005, 2008)** and **Miles and Keenan (2002)**, ***Foresight*** *is a set of approaches to bringing longer-term considerations into decision-making, with the* ***process*** *of engaging informed stakeholders in analysis and dialogue being important alongside the formal* ***products*** *that can be codified and disseminated.*

- ***Policy-making*** *approaches adopt a longer-term perspective in the form of strategic planning, allowing flexibility and preparedness to deal with uncertainty, disruptive events and innovations.*
- ***Participative approaches*** *involve interaction of wider ranges of stakeholders and experts in envisioning the future.*
- ***Prospective (forward-looking) approaches*** *involve traditional forecasting efforts, using systematic methods to explore future dynamics, enabling development of coping strategies.*

Key features (phases & elements) of a systematic foresight process

Today's futures research is increasingly becoming a key and systematic instrument for the development and implementation of research and innovation policy



Key features of foresight methods: The Foresight Diamond (Popper, 2008)

SSH's role

- What Creativity?
- What Evidence?
- What Expertise?
- What Interaction?

SSH's role

C O N T E X T U A L I S A T I O N

Evolution of national (technology) foresight programmes

Futures research (foresight) is not a mere fashion!

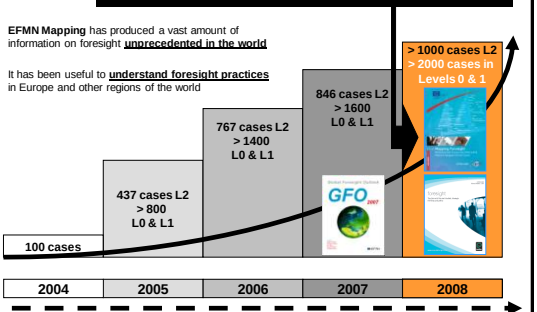
Year	Country	Exercise/Programme	Method(s)
Since 1971	Japan	1st to 8th STA surveys	Delphi
1991	Japan	5th STA survey	Delphi
	USA	Critical Technologies	Others
1992	New Zealand	Public Good Science Fund	Others
	Germany	BMFT, T 21	Others
1993	South Korea	Foresight Exercise	Others
	Germany	Delphi '93	Delphi
1994	UK	1st TF Programme	Delphi + Others
	France	Technology Delphi	Delphi
1995	France	100 Key Technologies	Others
	Japan–Germany	Mini-Delphi	Delphi
1996	Austria	Delphi Austria	Delphi
	Japan	6th STA survey	Delphi
	Australia	Matching S&T to futures needs	Others
	Spain	ANEP	Delphi + Others
1997	Hungary	TF Programme (TEP)	Delphi + Others
	Netherlands	Technology Radar	Others
	Finland	SITRA Foresight	Others
1998	South Africa	Foresight Exercise	Delphi + Others
	Germany	Delphi '98	Delphi
	Ireland	Technology Foresight Ireland	Others
	New Zealand	Foresight Exercise	Others
1999	UK	2nd UK Foresight Programme	Others
	Sweden	1st Swedish Foresight	Others
	Spain	OPTI Technology Foresight	Delphi
	South Korea	Korean Technology Delphi	Delphi
	Thailand	ICT Foresight	Delphi + Others
	China	TF of Priority Industries	Delphi + Others

Year	Country	Exercise/Programme	Method(s)
2000	Japan	7th STA Survey	Delphi
	Brazil	Prospectar	Delphi
	Brazil	TIP Brazil (UNIDO/MDIC)	Delphi + Others
	France	2nd 100 Key Technologies	Others
	Portugal	FUTOP	Others
2001	Venezuela	TIP Venezuela 1st cycle	Delphi + Others
	Chile	TIP Chile	Delphi
	Germany	FUTUR	Others
	Czech Republic	TF Exercise	Others
2002	Turkey	Vision 2023	Delphi + Others
	Colombia	TIP Colombia 1st cycle	Delphi + Others
	UK	3rd UK Foresight Programme	Others
	Cyprus, Estonia, Malta	eForesee	Others
	Denmark	National TF Denmark	Others
	USA	NIH Roadmap USA	Others
	China	TF Towards 2020	Delphi + Others
2003	Greece	Technology Foresight Greece	Others
	Norway	Research Council 2020 studies	Others
	Sweden	2nd Swedish TF	Others
2004	Japan	8th Japanese Programme	Delphi + Others
	South Korea	Korea 2030	Delphi + Others
	Ukraine	Ukrainian TF Programme	Delphi + Others
	France	FutuRIS	Others
	France	AGORA	Others
	Venezuela	TIP Venezuela 2nd cycle	Others
	Russia	Key Technologies	Others
2005	Colombia	TIP Colombia 2nd cycle	Delphi + Others
	Brazil	Brazil 3 Moments	Delphi + Others
	Romania	Romanian S&T Foresight	Delphi + Others
	Finland	Finnsight	Others
	Luxembourg	FNR Foresight	Others
	USA	21st Century Challenges GAO	Others
2006	Finland	SITRA Foresight	Others
	Poland	Poland 2020 – TF Programme	Delphi + Others

Others include: scenarios, panels, roadmapping, critical technologies, etc.

Mapping Foresight (Popper, 2009)

- **EFMN Mapping** has produced a vast amount of information on foresight **unprecedented in the world**
- It has been useful to **understand foresight practices** in Europe and other regions of the world



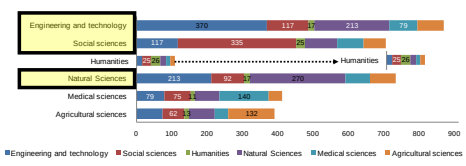
Section 2: How to map interdisciplinarity in futures research?

iKnow

Step 1:	mapping foresight practices linking practices to *Frascati* research areas
Step 2:	identifying key areas 'knowledge hubs' 'knowledge junctions'
Step 3:	recognising key sub-areas 'knowledge maps'
Step 4:	mapping foresight outputs (e.g. recommendations, wild cards, weak signals, roadmaps, scenarios, etc) linking outputs to *EC FP7* research areas & GCs
Step 5:	recognising emerging and interdisciplinary issues

Step 1: mapping linkages to research areas using the FRASCATI taxonomy

- In total, we mapped **841 cases against the Frascati taxonomy**
- The results show that **Engineering and Technology** (44%), **Social Sciences** (40%), and **Natural Sciences** (32%) are by far the most popular categories characterising our foresight sample.
- These results reveal the existence of **uneven or asymmetric interconnections** between research areas **at an aggregated level**.



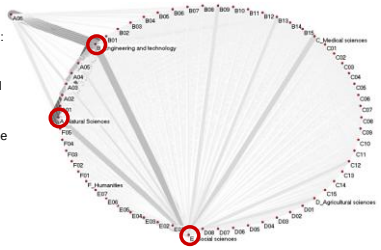
Step 2a: identifying key research areas 'knowledge hubs'

The figure shows very strong linkages between:

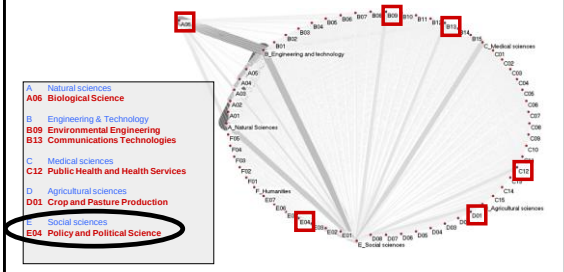
- **Engineering & Tech.**,
- **Natural Sciences**, and
- **Social Sciences.**

These three areas can be considered as the main **'knowledge hubs'** of futures research.

These results simply confirm the interdisciplinary nature of foresight.



Step 2b: identifying key research areas 'knowledge junctions'



A Natural sciences
A06 Biological Science

B Engineering & Technology
B09 Environmental Engineering
B13 Communications Technologies

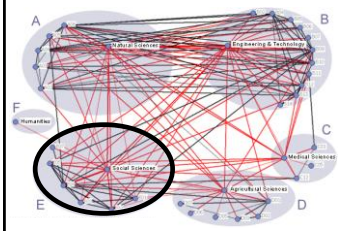
C Medical sciences
C12 Public Health and Health Services

D Agricultural sciences
D01 Crop and Pasture Production

E Social sciences
E04 Policy and Political Science

Step 3a: recognising 'key sub-areas' in the 'foresight knowledge maps'

In a way, Social Sciences functions as the 'binder' of research topics in foresight studies. This is quite the opposite with Humanities.



A Natural sciences
A04 Chemical Science (key broker)
A06 Biological Science

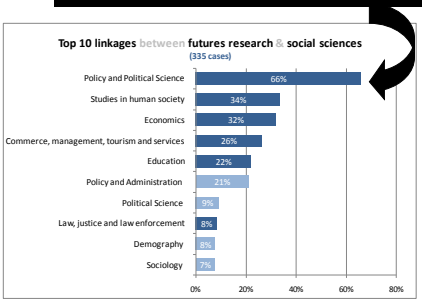
B Engineering & Technology
B02 Industrial Biotechnology & Food Sciences
B04 Manufacturing Engineering
B09 Environmental Engineering (key broker)
B10 Materials Engineering
B11 Biomedical Engineering
B12 Electrical and Electronic Engineering
B13 Communications Technologies (key broker)

C Medical sciences
C01 Medicine General
C05 Pharmacology & Pharmaceutical Sciences
C12 Public Health & Health Services (key broker)

D Agricultural sciences
D01 Crop and Pasture Production (key broker)

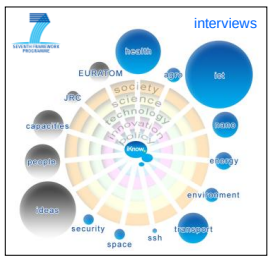
E Social sciences
E01 Education
E02 Economics
E03 Commerce, management, tourism & services
E04 Policy and Political Science (key broker)
E05 Studies in human society

Step 3b: analysing the role of key sub-areas E.g. Policy and Political Science



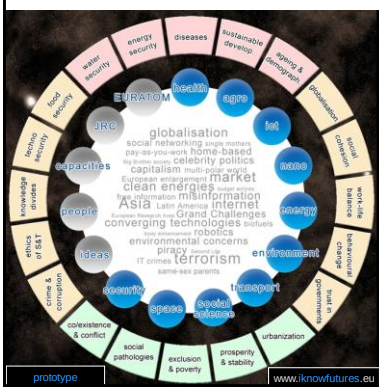
Step 4: linking **outputs** to EC FP7 research areas and Grand Challenges (GCs)

2009



2010

Step 5: recognising **emerging** and **interdisciplinary** issues



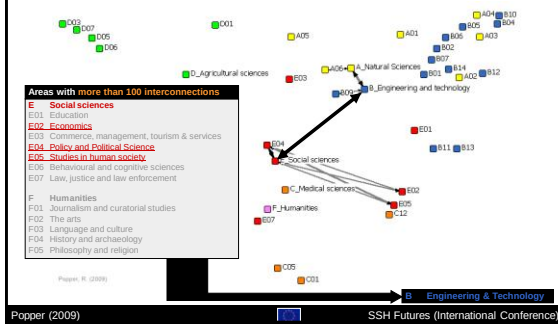
iKNOW Oracle
interconnecting knowledge
(convergence-interdisciplinary)

new research questions
impact on Grand Challenges
identification of problems
identification of solutions
relevance to FP7 research
pattern recognition
emerging issues
informing policy
possible futures
sense-making

Section 3:
What is the role of SSH in futures research?

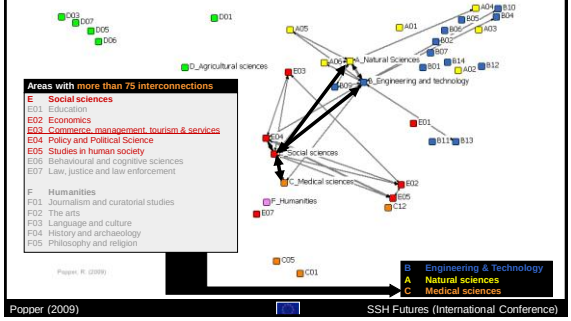
MANCHESTER 1824
The University of Manchester

The role of SS&H in Futures Research / Foresight



Popper (2009) SSH Futures (International Conference)

The role of SS&H in Futures Research / Foresight



Popper (2009) SSH Futures (International Conference)

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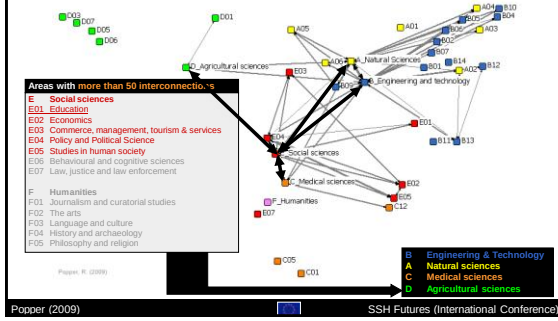

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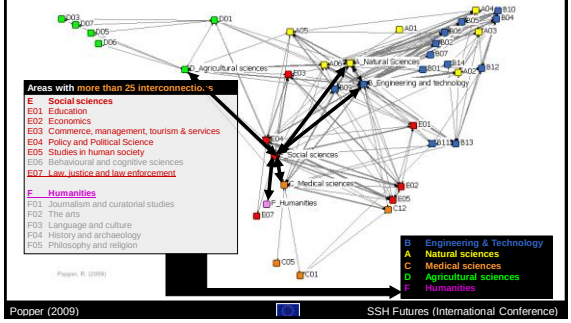
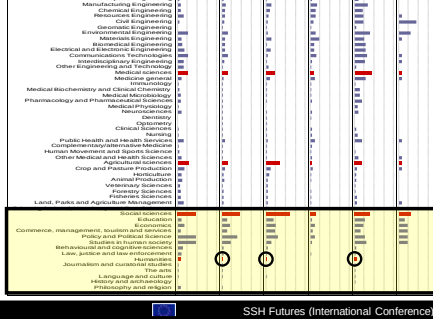
The role of SS&H in Futures Research / Foresight



Popper (2009) SSH Futures (International Conference)



The role of SSH in Foresight is **not** only an European phenomenon.

In particular, Latin America has much in common with Europe, and the role of SSH is one of those commonalities.

Popper (2009) SSH Futures (International Conference)

Section 4:
Final remarks and recommendations for the future of SSH

Final remarks (1/2)

Social Sciences

Research Areas	A	B	C	D	E	F
A Natural Sciences		79%	26%	27%	34%	6%
B Engineering & Technology	58%		21%	20%	32%	5%
C Medical Sciences	50%	56%		27%	54%	8%
D Agricultural Sciences	55%	56%	29%		47%	10%
E Social Sciences	27%	35%	22%	19%		7%
F Humanities	65%	65%	42%	50%	96%	

Humanities

Research Areas	A	B	C	D	E	F
A Natural Sciences		79%	26%	27%	34%	6%
B Engineering & Technology	58%		21%	20%	32%	5%
C Medical Sciences	50%	56%		27%	54%	8%
D Agricultural Sciences	55%	56%	29%		47%	10%
E Social Sciences	27%	35%	22%	19%		7%
F Humanities	65%	65%	42%	50%	96%	

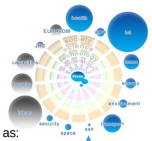
- **Social Sciences** plays a **vital** role in futures research on Humanities (96%), an **important** role in foresight on Medical (54%) and Agricultural (47%) sciences, and a **moderate** role in foresight on Natural Sciences (34%) and Engineering and Technology (32%)
- **Engineering and technology** plays a **moderate** role in futures research on Social Sciences (35%)
- **Humanities** seems to play an **insignificant (!)** role in futures research on Social Sciences (7%)
- **All research areas** play an **important** role in futures research on Humanities (from 42% to 96%)

Final remarks (2/2)

- **Social Sciences is the 'binder' of most research topics in foresight**
  - Except for…
    - Behavioural and Cognitive Sciences and
    - Law, Justice and Law Enforcement,

    most SS topics are highly interconnected with other areas of the Frascati taxonomy.
- The results highlight the **cohesive role of foresight on sub-areas of the SS**
  - This is mainly because foresight projects are designed in such a way that, at some time in the process, linkages are established with the policy dimension or (using the Frascati terminology) with sub-area Policy and Political Science.
- **This is quite the opposite with research within Humanities**, which have the least salient links to other research topics.

Recommendations



These findings suggest the need:

1. **To promote futures research on Social Sciences areas**, such as:
   - behavioural and cognitive sciences and law, justice and law enforcement;

   and Humanities areas, such as:
   - journalism, religion or history, for example.
2. **To involve SSH researchers in activities aimed at informing and shaping foresight practices**, for example:
   - By challenging and enriching the relevance of research methods
   - By continuously contextualising research processes and products
3. **To inform SSH researchers, policy-makers and business communities about the role of SSH in futures research**, such recognition could:
   - increase the profile of SSH;
   - increase the interdisciplinary nature of research, networking and co-operation; and
   - help identify more coherent and bottom-up Grand Challenges by interconnecting knowledge from a wide range of domains.

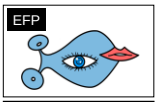
References and further reading

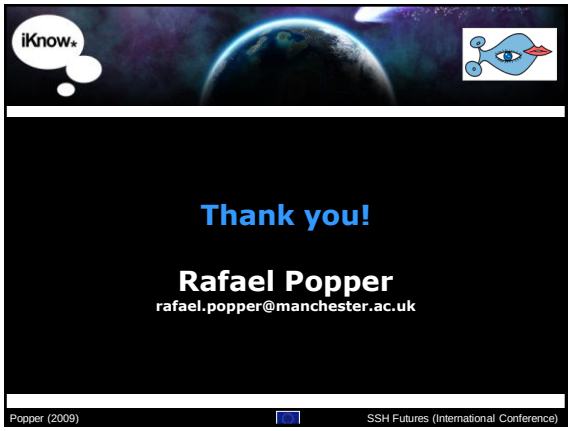
References & further reading

***The Handbook of Technology Foresight* (2008)**
Luke Georghiou, Jennifer Cassingena Harper, Michael Keenan, Ian Miles and Rafael Popper (Eds)

***Mapping Foresight**: Revealing how Europe and other world regions navigate into the future* **(2009)**
Rafael Popper

***Foresight*, Volume 10, Number 6, 2008**
Editors' introduction to the European Foresight Monitoring Network
Maurits Butter, Felix Brandes, Michael Keenan and Rafael Popper
Comparing foresight 'style' in six world regions
Michael Keenan and Rafael Popper
How are foresight methods selected?
Rafael Popper




iKnow
Thank you!
Rafael Popper
rafael.popper@manchester.ac.uk
Popper (2009)
SSH Futures (International Conference)

The Future of the Social Sciences and Humanities
Final International Conference

Working for and with the European citizens

Andrea Ricci and Carlo Sessa
ISIS – Institute of Studies for the Integration of Systems

Brussels, 22-23 October 2009

This presentation

- Connecting science, policy and society: why and how to involve citizens
- Pilot projects in the area of urban sustainable mobility
- Looking ahead: engaging citizens in the governance of complex systems

The challenge

Involving citizens in the governance of complex systems

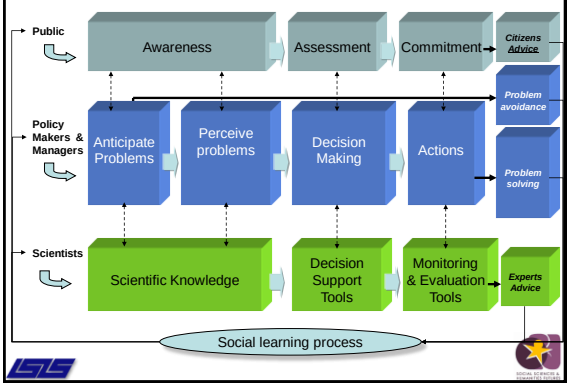
•Why (added value)

•How (process, methods and instruments)

Why

- **Participation as a basic dimension of democracy:** public questions reflect public values, and should be welcomed as a form of public engagement
- **Citizens ask new/different questions:** public and stakeholder questions tend to focus on *what we don't know.*
- **More "connections" with real life policy:** public knowledge often draws explicit political connections.
- **Suggestions:** Evidence from the public may not add to scientific knowledge, but points to the need for further research (early warning)

How? – the process



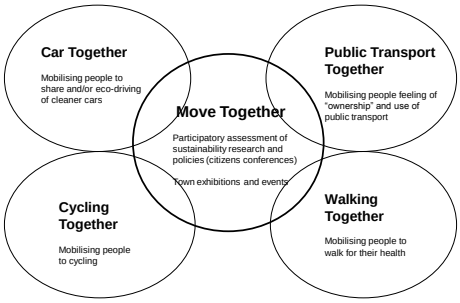
How? pilot projects

MOVE TOGETHER

Raising citizens awareness on EU research on sustainable urban transport

- Creating a **new culture of urban mobility** in Europe (responding to the EU Green Paper)
- Acting at the micro-scale to produce impacts at the macro-scale

MOVE TOGETHER CULTURE



MOVE TOGETHER

Acting with citizens at the micro-scale:

- Call for citizens applications
- Random selection (one citizen for each EU27 countries) and recruitment of the European citizens panel
- EU citizens conference:
  - two citizens workshops to produce a citizens' statement
  - Presentation and discussion of the citizens statement at a Citizens and Stakeholders conference (EESC)
- Replication of the citizens conference process at local level (e.g. local panel of 25 citizens in the metropolitan area of Rome)

MOVE TOGETHER

…to produce impacts at the macro-scale:

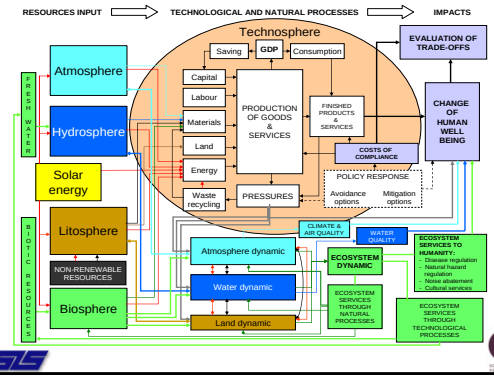
- Move Together communication **tools**:
  - video
  - physical exhibition
  - poster exhibition
- Move Together **events**:
  - video broadcasting (Euronews)
  - travelling of the physical exhibition in Wien, Rome, Malta, Budapest, Nice and Brussels
  - poster exhibitions during the EU Mobility Week in 10 cities across Europe
  - final "Move Together Day" conference (EESC, 7 December)

Looking ahead

Mainstreaming the pilot projects

↓

Tackling large, complex systems



Looking ahead

Adaptive co-management of natural resources and other societal "commons", engaging people and interest groups in new and imaginative roles

New FP7 projects

AWARE - How to achieve sustainable water ecosystems management connecting researchers, people and policy makers in Europe

Groups of citizens, scientists and policy makers engaged in participatory scenario building in 3 coastal areas and at EU level

PASSO – Participatory assessment of sustainable development indicators on good governance from the civil society perspective

Research institutions and CSO networks working together to better define and suggest implementation of good governance indicators in the framework of the EU Sustainable Development Strategy

For more information

www.isis-it.com

www.move-together-exhibition.net

mc7920@mclink.it

D/E/A

Potential and possibilities for the SSH in the European Framework Programmes for R&D

By Nanna Rosenfeldt,
DEA nr@dea.nu

D/E/A

The aim of the vision paper

- A better integration of SSH in the European Research Programmes
- A better use of the SSH knowledge
- A better possibility for SSH researchers to articulate what specific knowledge they have

D/E/A

Why do we think it is necessary?

SSH

Climate change

Food

Health

Security

D/E/A

What's 'the missing link?

D/E/A

Why do we think it works

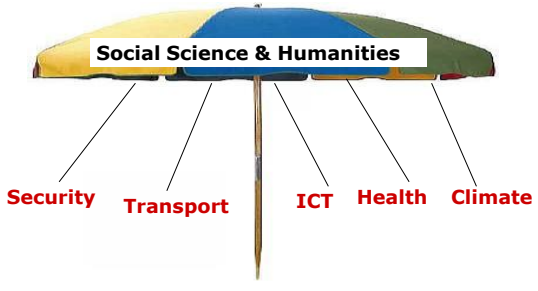
3 studies:
- When SSH generate profit
- Interdisciplinarity in research and education
- Growth through knowledge sharing

The triple helix models

TPs, research application from both SSH and other sciences

Human-centered Research Hub

D/E/A



The Future of the Social Sciences and Humanities
Final International Conference
22-23 October 2009
Brussels, Belgium

Session IIIc: Elements of Sustainable Development: Environmental & Social Issues

Social Indicators: Their Origin and Uses Between Social Control and Democratic Participation

Paolo PARRA SAIANI
Department of Sociology, Catholic University, Milan

Objectives of the presentation

- From Political Arithmetick to modern social reports
- The quantification of social phenomena
- The use of quantification
- The validity of official statistics
- The non-use of the quantification today

On the production-side: data or information?

- Three main questions:
  - Object (what?)
  - Method (how?)
  - Pragmatics (which uses?)

Some precursors

- Domesday Book, 1086
- John Graunt, *Natural and Political Observations Made upon the London Bills of Mortality*, 1622
- XIV and XV siècle French population was estimated:
  - between 112 millions…
  - …and 120 billions!

William Petty, Political Arithmetick

The Method I take to do this, is not yet very usual; for instead of using only comparative and superlative Words, and intellectual Arguments, I have taken the course (as a Specimen of the Political Arithmetick I have long aimed at) to express myself in terms of Number, Weight, or Measure; to use only Arguments of Sense, and to consider only such Causes, as have visible Foundations in Nature; leaving those that depend upon the mutable Minds, Opinions, Appetites and Passions of particular Men, to the Consideration of others"

(1690, vi-vii).

State secrets privilege?

"Le secret qui est l'âme des grandes affaires, est surtout nécessaire dans les finances. Plus les forces de l'Etat sont ignorées, plus elles sont respectables"

« Discours historique à Monseigneur le Dauphin sur le Gouvernement intérieur du Royaume », 1736

Among the consequences of French Revolution:

- Bureau de Statistique, 1801
- "statistics is nothing else than the knowledge of the science of facts [...], an indispensable science for a liberal state (Statistical Society of Paris, 1860)

- Charles Booth (1889-1891);
- Seebohm Rowntree (1901; 1917; 1941);
- Arthur Bowley (1915)
- the temperance movement (1830s)
- Massachusetts Bureau of Statistics of Labor, 1869
- Massachusetts Bureau of Statistics of Labor, 1873
- *From Recent Economic Changes in the United States to* Research Committee on Social Trends, 1929 (Hoover presidency's)

The Number, above all / 1833

"The Statistical Society will consider it to be the first and most essential rule of its conduct to exclude all opinions from its transactions and publications – to confine its attention rigorously to facts – and as far as may be found possible, to facts which can be stated numerically and arranged in tables"

British Association for the Advancement of Science (1833)

The Number, above all / 1817-18

Boston Society for the Moral and Religious Instruction of the Poor reported on the number of new pupils, the average attendance at the Sunday schools, and the scriptural verses, hymns, and catechisms the pauper children had committed to memory since the preceding February:

54.029 verses, 1.899 hymns, and 17.779 answers to catechisms.

(Annals, 1817 & 1818)

The Number, above all / 1933

"One month after issue, 180,000 copies of a government pamphlet on furniture, its selection and use, were distributed (1931) [...] Six hundred thousand objects are lent annually by the St. Louis Educational Museum alone [...] The sale of Navajo blankets is reported as above $1,500,000 in 1930 [...] The town of Ottawa, Kansas, with a high school population of 431 has an orchestra of 90 that has four times won the state contest"

Recent social trends, 1933

The Number, above all / 4

- *fallacy of the misplaced precision:* Marradi (1993, 52)
- *fallacy of misplaced concreteness*: Horn 1993, 18
- *specious accuracy*: Morgenstern 1950

Morgenstern (1950, 25)

"The classical case is, of course, that of the story in which a man, asked about the age of a river, states that it is 3.000.021 years old;
because 21 years ago its age was given as 3 million years"

The Number, above all / 80's

- The FAO reports that Chad's per capita food supply rose exactly six calories per day (0.3 percent) between 1977 and 1980, and that per capita food supplies in Afghanistan and Chad differed by exactly seven calories per day (or 0.4 percent) in 1980.
- For the periods in question, upward of 90 percent of the populace of both countries was probably rural and illiterate, and as much as half of the production of goods and services in both countries may have occurred in the non-monetized economy. (in Eberstadt 1995)

Doubts on official statistics…

"Official establishments of fact are know to be often defective even when applied to obvious material facts comprehensible to any conscientious observer and leaving no room for evaluation" Durkheim (1897/1951, 148).

- "official data will always be too 'official'" (Gross and Springer 1967, 15)

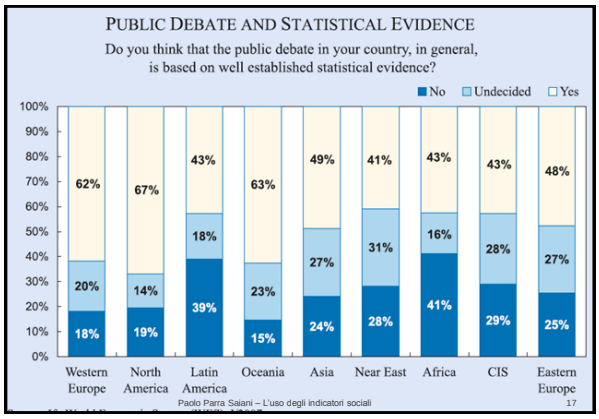
And when information is at our disposition, who knows them?

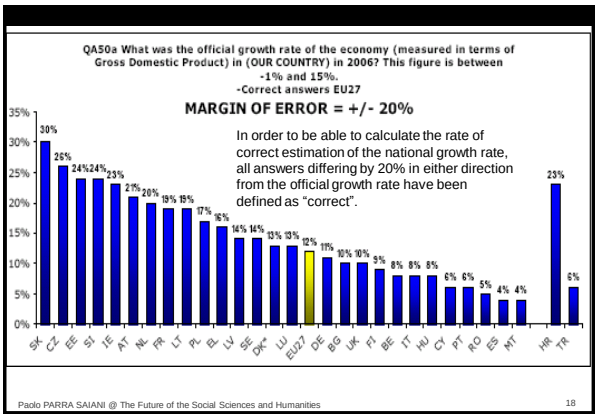
- 69% of Europeans think that it is necessary to know economic data
  - But 53% of Europeans are not able even to guess the GDP growth rate in their country. Only 8% know the right figure
- 45% of Europeans do not trust official statistics

when disseminating US economic data, Associated Press and United Press International typically do not mention specific source agencies in their releases.

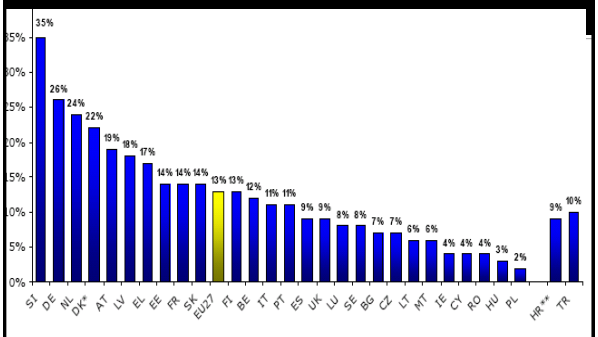
- 23% of Americans have never heard of official unemployment data or the source agency;
- 40% of Americans never heard of official GDP data or the source agency.

(Giovannini 2008, talking about a recent survey carried out on 28 countries)



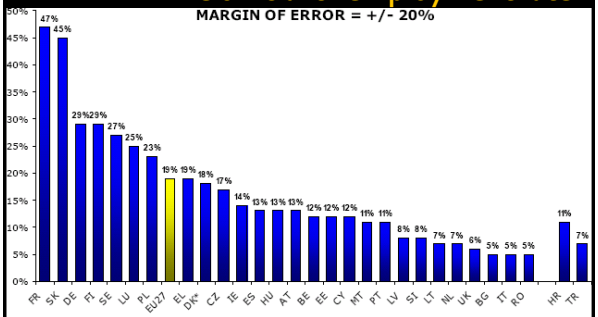


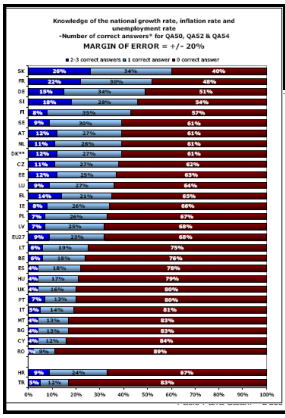
The official inflation rate



The official unemployment rate

MARGIN OF ERROR = +/- 20%





From secrets…

Qui qualcuno dirà: «Non farlo! Quanti guai tengon dietro alle buone intenzioni! Questo opuscolo capiterà in mano a qualche tiranno straniero; e lui, intendendo le meraviglie di Milano, si invaghirà della città al punto che studierà un modo, con l'astuzia e con l'inganno, per poterla sottomettere al proprio dominio» (Bonvesin da la Riva (1288, 55), writing on the Great Works of the City of Milan")

…to?

Food and Agriculture Organization of the United Nations

Office for National Statistics

Istat

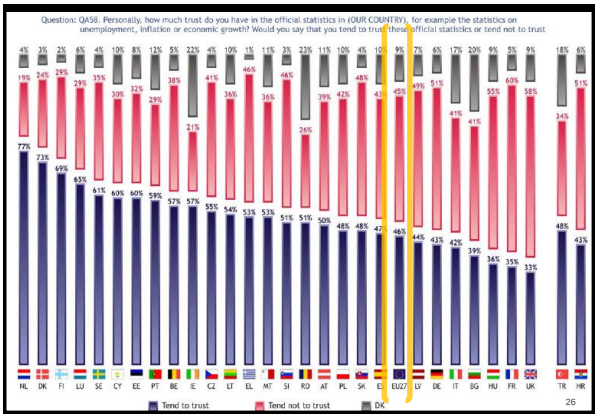
INSEE

Institut national de la statistique et des études économiques

A normal reaction?

A question in the Eurobarometer survey (2008)

- Personally, how much trust do you have in the official statistics in (OUR COUNTRY), for example the statistics on unemployment, inflation or economic growth? Would you say that you tend to trust these official statistics or tend not to trust them?



How important is to be well informed?	
Extremely Important	**8**
Very Important	**23**
Important	**45**
Somewhat important	14
Absolutely not important	4
Don't Know	4
Don't Answer	2
Total	100
(N)	>4000 Italian consumers, ISAE

Do you want to be more informed?	2007	2009
Yes	52.0	49.6
No	42.0	46.0
Don't know / Don't answer	6.0	4.4
Total	100	100
(N)	>4000 Italian consumers	
Source: ISAE		

At the end… "*Information* is not *knowledge*"

- information society?
- knowledge society?

Or just a

- Data society?
- "If men define situations as real, they are real in their consequences" (Thomas and Thomas 1928, 572)

Thank you!

Paolo PARRA SAIANI
paolo.parrasaiani@unicatt.it

The obstacles to the emergence of a European space of Social and Human Research

Gisele Sapiro (CNRS-Paris)
Johan Heilbron (CNRS-Univ.of Amsterdam)

ESSE

Pour un espace des sciences humaine et sociales en Europe

L Espace intellectuel en Europe, XIXe-XXIe (La Decouverte, 2009)

Factors of disintegration of European culture in the 19th Century

- Division of intellectual labor
- Nationalization of culture
- Colonialism

Factors of internationalization in the first half of the 20th Centry

- Role of the International Institute for intellectual cooperation of the League of nations
- Migration (voluntary or forced)
- Philantropic foundations

Obstacles to the emergence of an intellectual space in Europe

- Linguistic and cultural diversity
- Specialization
- National audience
- Autonomy
- Role of experts
- Hegemony of the US in the SSH

Indicators of international scientific cooperation

- Associations
- Journals
- Networks
- Collaborative research (co-authored papers)

Figure 1
Proportion of internationally co-authored articles in the social and human sciences in Europe, the US and the world (1980-2006)

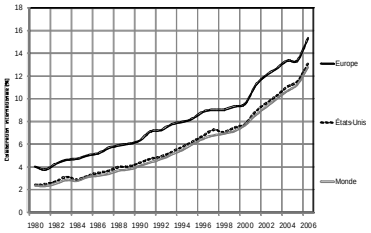


Figure 2
Proportion of articles by European scholars in the social and human sciences that are internationally co-authored, European and non-European (1980-2006)

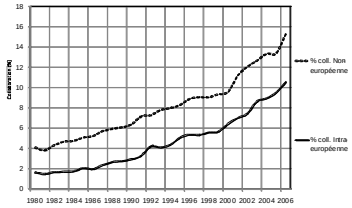


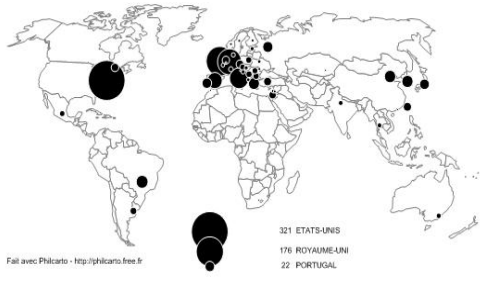
Table 1
Most important countries involved in the extra-european collaboration of European scholars in the social and human siences (1980-2006)

Pays	1980-93	1994-06
	%	%
États-Unis	66,3	60,0
Canada	12,7	11,5
Australie	6,9	8,7
Israël	2,2	2,8
Chine	0,6	2,7
Nouvelle-Zélande	1,2	2,3
Japon	1,8	2,3
Afrique du Sud	-	2,0
Brésil	1,2	1,5

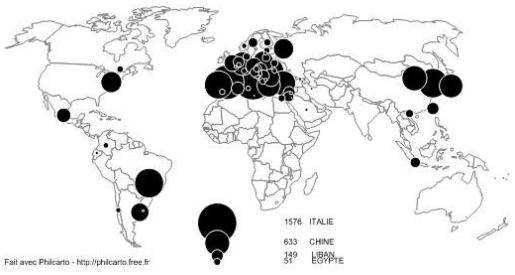
Table 2
Most important countries involved in intra-European collaboration of European scholars in the social and human sciences (1980-2006)

Pays	1980-1993		1994-2007	
	N	%	N	%
Royaume-Uni	1 880	36,53	9 233	40,24
Allemagne	964	18,73	4 719	20,57
France	924	17,95	3 224	14,05
Pays-Bas	759	14,75	4 388	19,12
Italie	564	10,96	2 640	11,51
Belgique	555	10,78	2 592	11,30
Suisse	396	7,69	1 951	8,50
Suède	384	7,46	1 915	8,35
Autriche	226	4,39	1 047	4,56
Norvège	220	4,27	1 130	4,93
Espagne	199	3,87	1 879	8,19
Danemark	188	3,65	1 108	4,83
Irlande	148	2,88	792	3,45
Pologne	137	2,66	407	1,77
Finlande	136	2,64	1 089	4,75
Grèce	118	2,29	733	3,19
Hongrie	101	1,96	432	1,88
Portugal	78	1,52	500	2,18

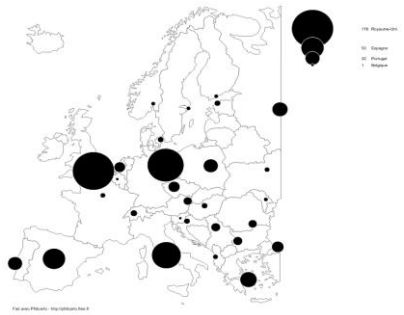
Map 1
Number of SSH books acquired by French publishers in the world (1997-2006)



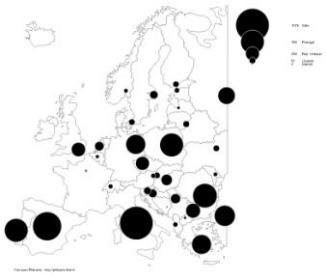
Map 2
Number of books sold by French publishers in the world (1997-2006)



Map 3
Number of SSH books acquired by French publishers in European countries (1997-2006)



Map 4
Number of books sold by French publishers in European countries (1997-2006)
(detail of Map 2)



Recommendations

- Translation policy
- Cross-disciplinary approach between the humanities and social sciences
- Denationalization of curricula
- Comparative research perspectives :why is European research more integrate in some areas and disciplines than in others?

Toward a Complex Vision of Creative Agents:
Revitalizing the Study of
Institutions and Economic Reform

Roger Schoenman
University of California, Santa Cruz
rschoenm@ucsc.edu

Utility and Waste in Social Science

- Coburn Amendment 2631 – "Prohibits the National Science Foundation from wasting federal research funding on political science projects. When Americans think of the National Science Foundation, they think of cross-cutting science, technology, engineering, and mathematics. Most would be surprised to hear that the agency spent $91.3 million over the last 10 years on political "science" and $325 million last year alone on social studies and economics.
- This amendment ensures more federal resources are directed towards supporting practical science by prohibiting the National Science Foundation (NSF) from spending research funds on political science projects.

Defining Utility of Science

- "The purpose of this amendment is not to restrict science, but rather to better focus scarce basic research dollars on the important scientific endeavors that can expand our knowledge of true science and yield breakthroughs and discoveries that can improve the human condition." –Tom Coburn, Republican Senator (OK)

Social Science = Waste

– *NSF Political Science Programs support research on:*
  - *bargaining processes;*
  - *campaigns and elections;*
  - *electoral choice and electoral systems;*
  - *citizen support in emerging and established democracies;*
  - *democratization, political change, and regime transitions;*
  - *domestic and international conflict;*
  - *international political economy;*
  - *party activism; and*
  - *political psychology and political tolerance."*

Human Rights Research

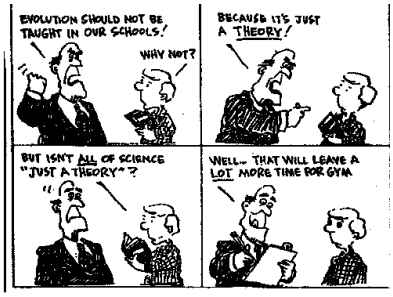
- The "Human Rights Data Project"
  - which concluded that the United States has been "increasingly willing to torture 'enemy combatants' and imprison suspected terrorists," leading to a worldwide increase in "human rights violations" as others followed-suit.
  - US stance on human rights→path that others follow

Social Science is Already Provided by the Market

- The largest award over the last 10 years under the political science program has been $5.4 million for the University of Michigan for the "American National Election Studies" grant. The grant is to "inform explanations of election outcomes."
- The University of Michigan may have some interesting theories about recent elections, but Americans who have an interest in electoral politics can turn to CNN, FOX News, MSNBC, the print media, and a seemingly endless number of political commentators on the internet who pour over this data and provide a myriad of viewpoints to answer the same questions. There is no shortage of data or analysis in this field that would require the government to provide funding for additional analysis.

Hard Science = Useful!

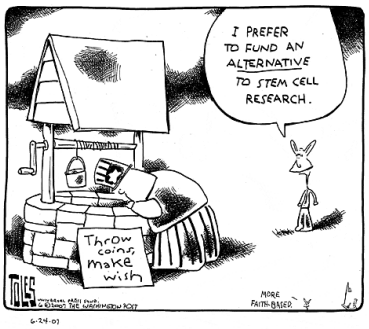
- **"This research, while interesting to some, stands in stark contrast to other NSF research that has yielded transformative results in a number of important areas, including:**
- NSF researchers developed new, promising solutions to use **robotics to help individuals with severe disabilities**;
- NSF-supported engineers **created a bone that blends into tendons**, which mimics the ability of natural bone, and provides better integration with the body and can handle weight more successfully;
- NSF-supported researchers used synthetic biology technology to **engineer the next generation of biofuels**;
- NSF-supported researchers **developed a powerful new microchip-sized fan** for use as a silent, ultra-thin, low-power and low maintenance cooling system for laptop computers and other electronic devices;"
- **Most of these advances came from basic scientific research that did not foresee the results.**

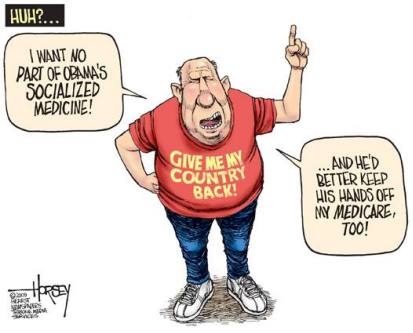


Reveals a failure to appreciate long-run value of learned societies

Implications

- **Even real implications will not satisfy**
- **Good ideas do not = public/policymaker support. Where is politics? Role of Ideas?**
  - **Cf. stem cells and health policy debate.**





Implications

- **It's dangerous to use direct instrumental criteria to assess the social sciences.**
  - **The line between ex ante "useful" and "wasteful" is fuzzy.**
  - **Bias toward short-run goals or "profits"**
  - **There is clearly a value to what would qualify as long run basic science studies of topics such as:**
    - ***decentralization,***
    - ***democracy***
    - ***or constitutions***
    - ***but even history of state-building in the 17th century***
    - ***even if their immediate payoff might not be obvious.***
- **Scientific knowledege is a public good and markets don't provide public goods→impossible to capture the returns (Nelson 2003)(Polanyi 1967 vs Bernal 1939).**

Re-framing Questions About the Short-Comings of Social Science

- 2nd set of issues about disconnect between policy makers/citizens and scientists.
- Assumption that this is because soc scientists are not generating useful results. But perhaps policy makers, potential consumers have unrealistic expectations from soc sci *as basic science?*
- Perhaps(!) these mechanisms generate usable insights.

More Basic Shortcomings

- Much social science fails in a more basic way than by this instrumental criteria → epistemological failure.
- A more basic level – we generate poor explanations – that's why social sciences have not had impact.
- Rational actor models and reductionist social science are largely to blame.

Puzzle of Postsocialist Studies

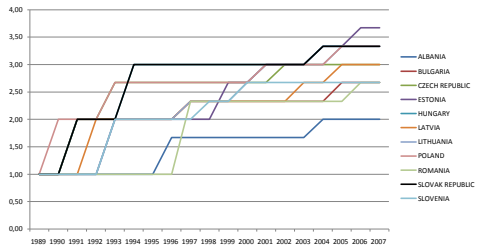
- P-S area is the perfect laboratory
  - Bet 11 and 28 countries
  - 3 common imperial pasts
  - Variation within these persists – Romania different from Bulgaria and FYRs. Hungary very different from Czech Rep.
- And yet, hegemonic theoretical discourse flattens these distinctions

Postsocialist Transtion

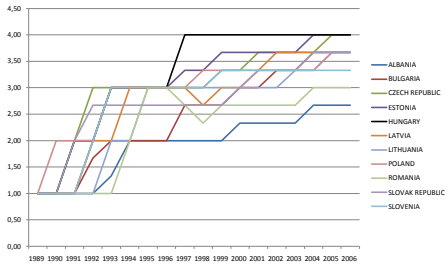
- Hegemonic discourse in postsocialism explains outcomes by pointing to policy choices
  - Policy centered approach (Ganev 2003) or institutional approach
- For ex: rise of neoliberals and neoliberal ideas → weak states: neoliberals dismantled states in the region as part of their reform program.
- Factually incorrect: in Hungary or Czech Republic, neoliberal program was not actually followed or strategically used to gain support of the West.
- Growth related to choice of neoliberal institutions
- All explanations make a linear connection between interests or idea, (which shape perception of interests) → outcomes.
- However, what is missing from this story is that interests were not clear ex-ante. They developed dynamically.
- Also, institutions did not arrive as a deus ex machina, they were the product of long political struggles in which interests were slowly shaped.
- Hubris of social engineering
- Risk of repeating Harvard escapades in Russia

Toward complex agents

- Institutional theory does not recognize variety among agents
  - Individuals are means to end and respond to incentives
- Evolutionary theory instead allows for the possibility of variety
- The transition was a time when everything was moving at once
  - Political institutions were changing as they were also being used to determine the shape of economic institutions.

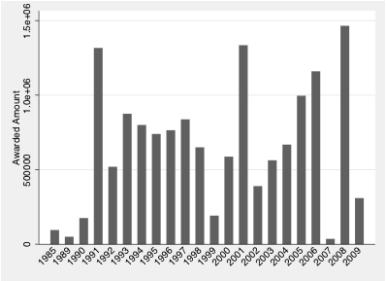


EBRD Transition Indicators on Competition Policy



EBRD Transition Indicators on Banking Reform

National Science Foundation Awards for Research on Postsocialism



Of $325mil in soc science, only c.1.4million on this topic

Deriving Basic Mechanisms

- In this sense, we should strive for utility while recognizing that it is a rare outcome.
- We have to generate knowledge about these non-linear mechanisms in the past with the hope that these might inform the present.
- But with the modesty that the translation of this knowledge is a long process.
- In this sense, research on institutions has missed the mark. Much of this research presents contradictory findings.
  - Institutions of a certain kind promote growth and also hinder it
  - Cultural institutions (Weber Cath and Prot) promote growth and also hinder it. Some argue that Cath and the development of the church helped trade develop.
- One possibility is that different stages of development require different institutions or there are complex non-linear processes that link institutions and outcomes.
- Avoid WB-type "Good Institutions Matter" agendas.
- Neoliberal reform agendas alienate the public and eventually policymakers by relying on vision of economic man that is simplistic, and not even "as-if" real (Friedman).

Discontinuous Research Agendas

- At the same time, puzzling lack of interest in these countries. Not clear what is driving agendas.
  - Now because China is engaged in Africa, funds are available to work on Africa. After Sept. 11th we suddenly realized that no one speaks Pastho or Uzbek.
  - Disarray in grant-making

Co-evolution of Agents and Systems

- In a complex social system, action cannot be a calculus based on observed and expected behavior of the other players because players can work together to create new possibilities (Miller and Page)(Schelling)(Axelrod and Cohen ; Casella and Rauch).

What Futures: Goal and Objectives

The goal - to shed light on future trends in Social Sciences and Humanities (SSH) fields.

The objectives:

- To identify future research trends of SSH
- To assess the future impact of SSH on policy, economy and society
- To develop scenarios regarding the futures of SSH and its impact on society
- To derive recommendations for research policy priorities in SSH

What Futures for the Social Sciences and Humanities?

Tal Soffer
ICTAF

Delphi Questionnaire

Part III: Future social issues in six main clusters:

- Economics and Employment
- Social change
- Environment and Sustainability
- Europe as a knowledge-based society
- Governance and citizenship
- Culture and Values

Questions that were asked: Likelihood, importance, the three most important research areas, likely impact of research, and level of collaboration.

Part IV: Respondents' own input

Delphi Survey

Web-based Delphi survey (2 rounds) was conducted :
The objective of the survey was to garner experts' opinions about both the structure of the social sciences and humanities (SSH) in 2025 (Part II of the survey), as well as the main social issues they expect society to be facing then (Part III of the survey).

Focus on

The Delphi questionnaire was comprised of four parts:

- Part I: Demographic questions
- Part II: Future general statements about SSH

This part included 12 general statements about potential futures in SSH research. For each statement the following questions were asked: Likelihood, importance and desirability

SSH-Delphi Survey Results

Gender				
Male		Female		
66.3% (n=487)		33.7% (n=248)		
Age				
20-29	30-39	40-49	50-59	>60
4% (n=32)	26% (n=195)	29% (n=215)	24% (n=180)	16% (n=116)
Organisation				
University		Non-University		
80% (n=583)		20% (n=145)		
Research area				
Natural or other sciences		Humanities		Social sciences
12% (n=77)		33% (n=210)		55% (n=350)
Country				
UK & Israel	Nordic countries & Netherlands	Central Europe and Belgium	France	Other
6% (n=41)	40% (n=273)	35% (n=238)	14% (n=97)	6% (n=38)

SSH-Delphi Survey Results

Participation:

- **845 participants**

(5200 email invitations sent, 16.3% response)
(first round: 666 respondents)

- 25 countries
- 93.4% from Europe

General Statements

Five most importance and likelihood

	Likelihood	*Importance*	*Desirability*
	(1=very low, 5=very high)		
Most SSH research is **conducted within the universities**	3.63	3.53	3.35
Researchers are required to have a wide range of **interdisciplinary skills**	3.55	3.95	4.00
A significant proportion of SSH research is carried out in **collaboration with other disciplines**	3.52	3.87	3.93
Most SSH research is **publicly funded**	3.35	3.70	3.50
SSH research is heavily dependent on **methodologies** that have been enabled by technological developments in other scientific disciplines	3.05	3.18	2.82

General Statements

Three main assumptions:

- Interdisciplinary research will become the norm in SSH
- Universities in general and SSH in particular will increasingly rely on non-governmental sources of funding
- SSH academics and private sector will be drawn much closer together and develop new models of cooperation

SSH- Futures Scenarios

- The purpose of building scenarios is to highlight the large scale forces that might push the future in different directions in which SSH might develop.
- The scenarios are based on the theoretical background of the project, as well as on the survey results.
- The the scenarios are constructed on the basis of the dimensions of "supply" and "demand".

  The "supply" side is represented by researchers and research organisations, which offer knowledge that runs along a continuum from single- to interdisciplinary research.

  From the "demand" side, SSH knowledge is sought out. This runs from "solely public funding", standing for mediocre demand for SSH knowledge, to "multiple sources of research funding", which indicates heightened demand for SSH knowledge".

  This enables us to create a matrix with two axes: **sources of funding** and **level of interdisciplinarity**

General Statements

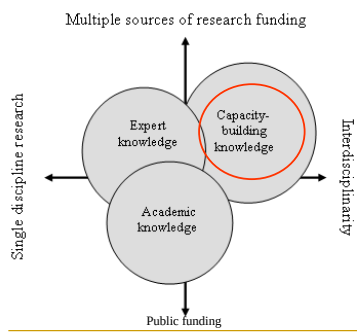
	Likelihood	*Importance*	*Desirability*
	(1=very low, 5=very high)		
Post-modernism has greatly modified the value system on which much Humanities research is based	2.82	2.95	2.37
SSH research has become an **integral part in the development of new technologies and products**	2.67	3.72	3.82
Research in various areas of the humanities has ceased to exist	2.62	3.41	1.70
Most SSH research is carried out in the framework of public/private partnerships	2.50	3.04	2.68
Most SSH research is conducted by the academy and industry in collaboration	2.31	3.02	2.56
Disciplinary boundaries have entirely collapsed	2.15	3.16	2.74
Funding of research for societal needs is equal to technological R&D funding	1.91	3.89	3.82

Three scenarios for the future of SSH:

Capacity-building knowledge:

- Much SSH research no longer takes place within the university, and no longer abides by traditional disciplinary divisions.
- Most of the research is interdisciplinary.
- SSH research is fully integrated into industry and technological development, and contributes to the development of new products. Researchers enjoy private funding in addition to their public sources of finance.
- SSH researchers are able to impact on decision making in whole new spheres, and have unprecedented access to funds.
- There is increased demand for research knowledge and knowledge based on intensely interdisciplinary research for problem-oriented research.
- There is a direct relation between the generation and the use of knowledge. Knowledge production of this type is by definition goal- and task-oriented and not organised according to specific disciplines.

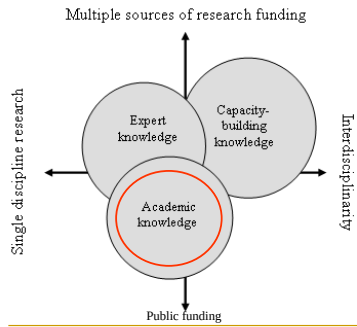
SSH- Futures Scenarios



Academic knowledge: "traditional academic research"

- Most SSH research is university-based and publicly funded.
- Research is less interdisciplinary than the previous scenario. When it is interdisciplinary, it tends to remain within the SSH.
- Research follows the traditional academic mode of production and is submitted to the traditional academic logic of verification

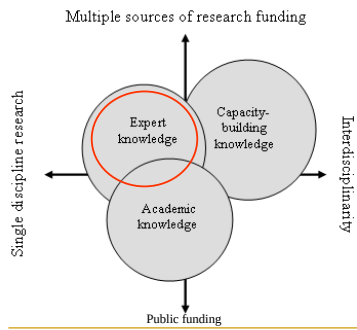
SSH- Futures Scenarios



Expert knowledge:

- Single-disciplinary research funded by multiple sources.
- Two research approaches are mixed: research following the traditional academic logic funded by the public, and a specific instrumental kind of "applied" research.
- Private funding may sometimes come from industry, where the contribution of SSH research is recognised as crucial to new product development. SSH researchers are thus integrated into product development processes, but each according to their own field of expertise.
- Knowledge is produced for the direct benefit of clients, and is verified or falsified by the practices that are based on it

SSH- Futures Scenarios



The future of SSH – Four clusters of respondents

- **Ivory tower (cf. academic knowledge):**
  - Today's status quo will endure into the future.
  - SSH will not have become much more interdisciplinary by 2025
  - SSH will not be funded at the same levels as technological R&D research and integrated into product development
  - Research will remain publically funded and will mostly be carried out in the universities.
- **Decline of SSH (cf. expert knowledge):**
  - Most SSH research will not be carried out with public funding and within the universities
  - Certain humanities disciplines will disappear
  - Low level of interdisciplinarity
  - Far-reaching changes in the structure of SSH in 2025, with the collapse of a number of disciplines within the humanities.

The future of SSH – Four clusters of respondents

- **Improved status (cf. capacity-building knowledge):**
  - SSH will receive higher funding than is currently the case today
  - SSH research will be an important input for new technology and product development.
  - No change in humanities research
- **Interdisciplinarity (cf. capacity-building knowledge):**
  - SSH becomes increasingly interdisciplinary
  - No change in humanities research
  - Researchers develop interdisciplinary skills and SSH research will be carried out in collaboration with other disciplines.
  - SSH is not going to enjoy improved status and increased funding in 2025.

The future structure of SSH - Recommendations

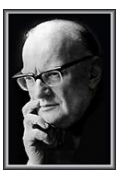
- To emphasize the acquisition of interdisciplinary skills during academics' graduate training, as well as at regular intervals in their academic careers
- To encourage researchers to conduct interdisciplinary research by means of special programs and funding
- To devote special attention to the humanities and invest efforts in sustaining its various disciplines
- To pay special attention to dedicated activities that would heighten the impact of the SSH research in political decision-making and that would enhance cooperation between industry and the academy

The future structure of SSH - Conclusions

- Two main driving forces were identified as impacting most powerfully on the structure of SSH:
  - **level of interdisciplinarity**
  - **source and amount of funding**
- It is likely that a high level of interdisciplinarity will be required, be that in terms of research methodologies, researchers' skills, collaboration with other academic disciplines, as well as with industry.

"For every expert there is an equal and opposite expert."

Sir Arthur C. Clarke



Thank you for your attention!

tsofer@eng.tau.ac.il

www.ictaf.tau.ac.il

Published, not public: The shaping of social sciences through research assessment

Tereza Stöckelová
Institute of Sociology, Academy of Sciences of the CR

research assessment principles

- declared motivation: to catch up with the quality of „Western“ R&D
- purely quantitative
- gradual reformulations since 2004
- directly translated into institutional funding since 2010 (in full effect since 2012)
- created and enacted without serious consultations with academic community and against recent criticism from several academic bodies

assessment criteria 2009

type of outcome		**disciplines in the national framework of excellence**	**other disciplines**
article in impact journal		10 to 350	
article in prestigious impact journal (*Nature*, *Science*, *Proc. Natl. Acad. Sci. USA*)		500	
article in reviewed journal	international database	12	8
	list of reviewed journals (national)	10	4
professional book	world language	40	40
	other languages		20
proceedings article		8	
patent	European of international patent (EPO,WIPO), patent USA or Japan	500	
	Czech or other national patent excluding USA and Japan that is used on the basis of valid licence contract	200	
	other patents	40	
verified technology, variety, breed		100	
utility model		40	
industrial model		40	
prototype, functional sample		40	
outcomes realized by the contractor		40	
applied methodology, specialized maps with expert content		40	
authorised software		40	
research report including secret information		50	

assessment criteria 2009

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Division of sociological labour (Micheal Burawoy)

audience / knowledge	academic	extra-academic
instrumental	professional	policy
reflexive	critical	public

Repercussions for SSH inscribed in the RA

- professional – orientation to IF publications (international, English) with implications for framing and problematique (Meriläinen et al. 2008)
- critical – valued if legitimized through international IF publications
- policy – valued in form of a „secrete report“ or „outcomes realized by the contractor“ which requires literal use of the outcome in legal or other official documents (only possible user is public administration); at the same time enacts a very technocratic concept of policy-making as implementation of expert reports
- public – total disregard (volontary, extra-professional activity?)

Research institutions and researchers' strategies - some ethnographic evidence

- mostly disapprove the RA criteria but comply and invent little tricks
  - e.g. producing „authorized SW“; selling any publication as a book; publishing in English even for Czech audience
- limiting publications aiming at public sphere (non-impact, non-reviewed journals)
- collaboration with NGOs perceived as increasingly difficult at institutions with aspiration for „excellence“
- researchers feeling „trapped“ in international consortia that publish edited volumes
- recent loud criticism from some institutions and researchers (but no radical reconsideration of the types of outcomes)

The Suicide of the Social Sciences

Carin Holmquist & Elisabeth Sundin
Stockholm School of Economics Linköping University

23 October 2009

Questions?

- General phenomenon?
- Does it matter?
- Should anything be done?
- And if – who should do what?

- The mission of the social scienties and humanities – the most important
- Stakeholders – the citizens, the tax-payers

Our background

- Sweden (Humboldt tradition and a Scandinavian welfare state)
- Business administration (with a german origin, now organizations, huge volume of students)

Major changes

- From open and public to closed and anonymous
- From empiric based studies of complex relations to single-point articles
- From many languages to one – English

Consequences

- Dependent phd-students not able to design a study of their own
- Research of decreasing societal relevans
- Lost legitimacy


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Excellence Centre
FILOSOFISKA FAKULTETEN
LINKÖPINGS UNIVERSITET

EMERGING PATTERNS OF DEPOLITICISATION AND ENGAGEMENT TO INFORM THE FUTURE OF STS RESEARCH: A CASE STUDY IN NANOTECHNOLOGIES

ICCR – Brussels, 22 Oct. 2009

Scientific and Public Involvement in Risk Allocations Laboratory
SpiraL

1

INTRODUCTION: RESEARCH HAS POLITICS

- Research projects ⇔ Political implications
- e.g. the concept of "Development" (WALLERSTEIN, 2006)
- Explore the political dynamics of "STS" (contested acronym) to detect patterns that inform their future

SpiraL

2

1. POLITICAL HISTORY OF STS (1/4)

- STS as a movement (CUTCLIFFE & MITCHAM 2001)
  - partly a response to political and environmental contestation ('60s, '70s)
- Fuel = assumption that "*science and technology are in society, and that they do not sit comfortably there*" (COZZENS, 2001) (the "Problem")
- Against determinism: demonstrate the *possibility* of social change (vs. overwhelming forces)

3

1. POLITICAL HISTORY OF STS (2/4)

- Ongoing research rooted in a "deconstructivist" tradition
- Critical perspectives and epistemology – Falsibility and paradigms
- Establishing the contingency of science and knowledge
  - E.g. scientific facts (LATOUR & WOOLGAR 1979)

4

1. POLITICAL HISTORY OF STS (3/4)

- From deconstruction to construction
- The SCOT approach (PINCH & BIJKER, 1987) and following theories (sociotechnical systems, ANT): highlighting the social processes behind technological development
  - This "*new approach has so disaggregated the question of technology as to deprive it of philosophical significance. It has become matter for specialized research*" (Feenberg 1999)
- Institutionalisation (step by step) of a field of research with its own specialisations, empirical methodologies

5

1. POLITICAL HISTORY OF STS (4/4)

- "It could have been otherwise"
- Unpacking the underlying social processes ⇔ interstices for interventions (room for policymakers, laypeople, etc.)
- Development of multiple qualitative methods aiming to involve stakeholders in the scientific and technological development
  - Question the ultimate goal of this
  - Question the actual outcomes

6

2. EMERGING PATTERNS (1/2)

- Implicit politics (underlying the analytical perspectives and epistemological standpoints)
- Actual political implications (opening the black boxes of the S&T development)
- Better and deeper understanding of the processes challenged this political ethos of STS – the Movement
- Conversion into a field = depoliticisation

2. EMERGING PATTERNS (2/2)

- Creation of capacities = emergence of new spaces to provide S&T development with insights
  - Participatory research designs: delphi, citizens panels, consensus conferences, focus groups, science shops, etc.
- Engaging the R&D process has an explicit political dimension
  - E.g. Public involvement in DMP relies on deliberative ethics (HABERMAS, 1984) => conceptions of democracy and social change
- Providing actual outcomes for social change = Engagement

3. CASE STUDY: NANOTECHNOLOGIES (1/5)

- From "Nanotechnology" to a "Plurality of nanotechnologies" (BARBEN & AL., 2008)
- Concerns the nanoscale and new properties of the matter, with expected breakthroughs
  - Medicine, energy, sustainability, etc.
- Ability to detect (1981) and manipulate (1989) atoms with the scanning tunneling microscope
- Multiple and deep uncertainties for the future

3. CASE STUDY: NANOTECHNOLOGIES (2/5)

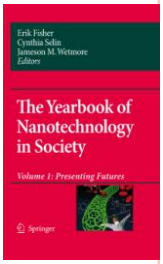
- Nanotechnology and policymaking
  - 1994: Al Gore's *Science for National Interest*
  - 2001: *National Nanotechnology Initiative* (from 300 millions $ to 1.6 billions for 2010)
  - EU's "*Nanosciences and Nanotechnologies: an Action Plan for Europe 2005-2009*" (about 3 billions of public funding)
- Massive public support for "the next industrial revolution"

3. CASE STUDY: NANOTECHNOLOGIES (3/5)

- Nanotechnology and STS
- Deeply intertwined history + highly controversial history of nanotechnologies
- Opportunity to follow the development of a particular scientific area from the scratch
- Growing awareness of the need to somehow integrate societal concerns to R&D processes
  - Fear of "nano-phobia-phobia" (RIP, 2006); avoid the GM pitfalls

3. CASE STUDY: NANOTECHNOLOGIES (4/5)

- Countless empirical studies, research projects and studies on nanotechnologies
- Commitment of policymakers:
  - About 5% of funding dedicated to Health, Environmental & Safety issues (HES)
  - Roughly 1-2% dedicated to Ethical, Legal and Soci(et)al impacts or aspects (ELSI or ELSA)
  - Rationale? Being part of the program
- Institutionalisation (as depoliticisation)
  - Towards "professional service role"? (RIP)



3. CASE STUDY: NANOTECHNOLOGIES (5/5)

- Increasing commitment from the STS community toward the integration of societal concerns (BARBEN & AL. 2008, MACNAGHTEN & AL. 2005)
- Pressures for actual changes within the development of nanotechnologies: goal-oriented
- Acknowledged need to go further than the ELSA side of the Human Genome Project (HGP): Integration in governance processes and issues
- Dynamics of increasing engagement of STS scholars

CONCLUSIONS

- Two dynamics at play in the STS community
  - Embodiment in the S&T processes and actual part of S&T development = loss of former critical perspectives
  - Increasing engagement and commitment to somehow provoke shifts in social order as for S&T issues
- Paradoxical dynamics
  - Need for reflexive awareness about the role of SSH
  - Need for analysing the tension of being "integrated" while willing to change things

THANK YOU!

fthoreau@ulg.ac.be

Scientific and Public Involvement in Risk Allocations Laboratory
SpiraL

FNRS

European innovation policy in a changing world

Future of social sciences and humanities 22-10-2009

Henriette van Eijl
European Commission,
DG Enterprise, Innovation policy development

ENTR-LMI@ec.europa.eu

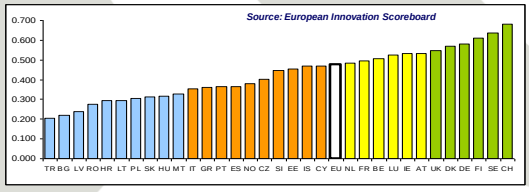
EC DG Enterprise main interests:

EU-level: macro, micro, SMEs, innovation, market sectors

- Annual reports: scoreboards, “Lisbon”
- Policy analysis and evaluation
- Markets and systems: actors, products, barriers

Service contracts and research grants

Innovation performances vary greatly



Innovation leaders: Switzerland, Sweden, Finland, Germany, Denmark, UK

Innovation followers: Austria, Ireland, Luxembourg, Belgium, France, Netherlands

Moderate innovators: Cyprus, Iceland, Estonia, Slovenia, Czech Republic, Norway, Spain, Portugal, Greece, Italy

Catching up countries: Malta, Hungary, Slovakia, Poland, Lithuania, Croatia, Romania, Latvia, Bulgaria, Turkey

EU innovation performance lags behind our main competitors:

Most European countries are still behind US and Japan in many other areas, e.g: tertiary education, no. of researchers, public private cooperation, international patenting.

While Europe’s businesses under-invest in innovation: behind USA and Japan in R&D and ICT investment; decreasing other innovation expenditures

Impact of economic downturn could magnify EU weaknesses

2008 European Innovation Scoreboard

Effects of the economic downturn on company innovation spending:

	2006-2008	2009 forecast
Increase	35	12
Decrease	9	28
Same	47	59
No innovative activities	6	6
Don't know	4	3

European Innobarometer 2009

What society do we live in 2025?

Our Europe in 2025:

- EU will import 70% of its energy needs
- Asia overtakes EU and USA in R&D
- 30% of EU population is over 65
- 20% of EU population is obese
- EU is no longer the first world exporter

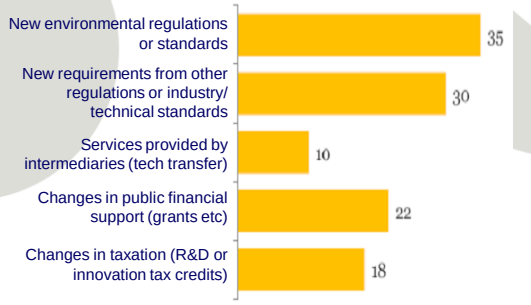
report "The World in 2025" published by DG Research

Where do companies see opportunities for innovation ?

1. **Increased demand for sustainable or energy-efficient products and services: 32%**
2. **New services and products for older consumers: 15%**
3. **Emerging export markets: 15%**
4. **Education, social- or health services: 12%**

Innobarometer 2009 study

What policies have had a positive effect on innovation in your company?



Innobarometer 2009 study

Policy response by Member States and at the European level

New trends in Member State innovation policies:

- **Increasing focus on:**
  - **Supporting innovation in SMEs**
  - **Innovation to address societal challenges, climate change and resource productivity**
- **Importance of Structural Funds for innovation policies in coherence countries**

2008 European Innovation Progress Report

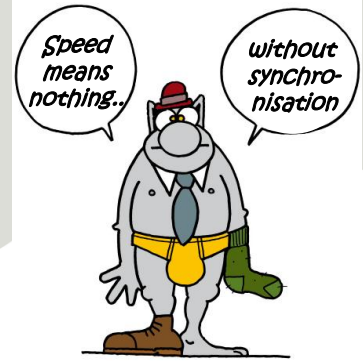
September 2009: Innovation package:

"Reviewing Community innovation policy in a changing world"

- **Assessing the achievements** of Community innovation policies
- **Identifying possible policy orientations** in the context of the economic crisis and changing nature of innovation

Key considerations for future EU innovation policy

- Link to EU political priorities and post 2010 **Lisbon agenda**
- Clear relationship with **Member State and regional** policies
- Focus on European added value and **impact**
- **Global** economic, environmental and social context:
  - How can innovation address **grand & societal** challenges?
  - How can the public sector innovate more?



European Commission
Enterprise and Industry

How can the social sciences and humanities support Europe's innovation capabilities?

European Commission
Enterprise and Industry

How can social sciences feed into innovation policy:

- Helping to define new policy actions, policy solutions and priorities in societal challenges
- Providing input for measurement and evaluation of policy actions

European Commission
Enterprise and Industry

Some caveats:

- Complex policy environment
- Implementation issues kill many great ideas *(unfortunately)*
- Aligning time lines

European Commission
Enterprise and Industry

How can you shape the future of European innovation?

- Tell us about your activities
- Respond to our consultation (till November 16): http://ec.europa.eu/enterprise/policies/innovation/policy/future-policy/consultation_en.htm
- Check out our blog: http://blogs.ec.europa.eu/innovationunlimited/

Because……

European Commission
Enterprise and Industry

profit

Contract No: CIT2-CT-2004-506245

Use and abuse of social sciences in the policy-making process. Lessons from the past, warnings for the future.

Wojciech Woźniak
Department of General Sociology
University of Łódź, Poland

Outline of the presentation:

1. Historical roots of the current debate
2. Risks for social science
3. American context
4. Polish context
5. European context
6. PROFIT project and its relevance for policy-making

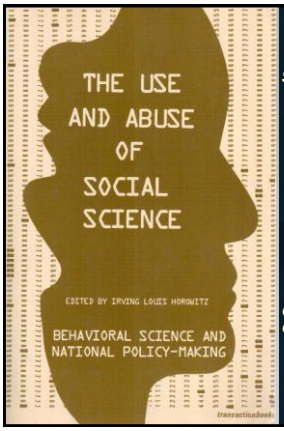
At Rutgers University (New Jersey, USA) in November 1969, a conference was held gathering a '*group of people who not only write about how social science and public policy relate to each other; but more important, how social scientists working in public policy agencies perceive that relationship'* (Horowitz 1971

Preface (in:) I. L. Horowitz (ed.) "The Use and Abuse of Social Sciences", transaction books: New Brunswick, New Jersey).

The book "The Use and Abuse of Social Sciences" containing essays written for the purpose of the above mentioned conference is an interesting reading also today. Plenty of things have changed since then, one of the striking examples being the language used for describing phenomena connected with racial issues.

Still, forty years later many themes and a lot of problems defined and diagnosed in this book seem to be to a large extent topical in the first decade of the 21st century, also in European reality. Especially ideas and threats pointed out by Herbert J. Gans referring to the social scientists' expertise which could be used or misused while designing social policy measures.

„The Use and Abuse of Social Sciences" provides great starting point for ex-post analysis of the state of the affairs in SSH and its interrelation with policy-making



SAMPLE CHAPTERS:

Social Science for Social Policy

Pitfalls and Politics in Commissioned Policy Research

The Misallocation of Intellectual Resources in Economics

Policy Scientists and Nuclear Weapons

Changing Priorities in Government Investment in Technology

Public Policy and Private Interest

IRVING LOUIS HOROVITZ:

Many social scientists are concerned, both in their own work and in their evaluation of what is done by others in the field, with the problem of preserving autonomy of social science while at the same time performing socially coonstructive and useful work in the connection with the public policy issues that confront the nation.

Preface (in:) I. L. Horowitz (ed.) "The Use and Abuse of Social Sciences", transaction books: New Brunswick, New Jersey).

IRVING LOUIS HOROVITZ:

It can be stated that the demand for policy-related activity on the part of social scientists will increase sharply over the next decades – regardless of differences in political party "styles". In a sense, then, we are at a turning point: The question in an age of social science affluence is not the ***scientific status*** *of the social sciences, but the* ***social and political uses*** *of these "soft" sciences.*

Preface (in:) I. L. Horowitz (ed.) "The Use and Abuse of Social Sciences", transaction books: New Brunswick, New Jersey).

Since the conference in 1969…

MISUSE OF THE SOCIAL SCIENCE

- by the policy-makers/politicians/ideologists
- by the media

Especially in the USA, and in the context of neoconservative and neoliberal ideas

MISUSE OF THE SOCIAL SCIENCE

- by the policy-makers/politicians/ideologists

Case of USA social policy:

- social scientists as allies of policy reformers within „independent" research institutes (Heritage Foundation, CATO Institute, Manhattan Institute, RAND Corporation)
- „blame the victim strategy" came into the light (and life)
- „scientific" accounts like „broken glass theory" lead to dramatic shift in the social policy planning
- new punitive penal policy – carceration of poverty
- growth into power of the prison industry – above 2 percent of population on probabtion or incarcerated
- social scientists paved the way for neoconservative and neoliberal reformism…
- …via influencing attitudes of the public and providing alibi for radical shift in social policy planning… which lead …
- … to enormous social costs paid by those at the bottom of the social ladder

Bad feelings of H.J. Gans and I. L. Horowitz came into life during next decades.
As IMMANUEL WALLERSTEIN puts it…

The early hopes of social scientists that they could be modern philosopher-kings proved totally vain, and social scientists settled into being the handmaidens of governmental reformism. When they did this openly, they called it <applied social science.> But for the most part they did this abashedly, asserting that their role was merely to do the research, and that it was up to the others – the political persons – to draw from this research the conclusions that seemed to derive from this research. In short, the neutrality of the scholar became the fig leaf of their shame in having eaten the apple of knowledge
(1997, American Journal of Sociology).

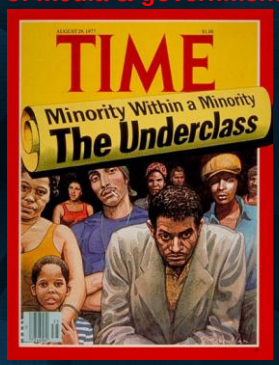
Monty Python's Eric Idle as archetype of sociologist in the age of infotainment.

Clever guy who describes, explains and entertains masses

Mediatization of academic discourse in the era of tabloidization of media lead to the tabloidization of academic discourse in media sphere

Media became an useful channel for shaping social attitudes of the public. Social scientists became useful because they provided politicians with „scientific" alibi for new measures in policy-making

Example of media & government alliance



29th of August, 1977

Highly normative and value-laden terms presented as objective and scientific descriptions could influence attitudes and beliefs of the public.

Cover story of the TIME magazine which as Herbert J. Gans i Zygmunt Bauman claim had serious impact on creation of the public image of the lowest strata of American society as alienated, defiant, dangerous minority. All together: teens playing truants, pimps and prostitutes, lone mothers, beggars, drug addicts constituted the amorphic, „ugly, dirty and bad" group. This flexible term became very useful tool for steering the fear and anger of social masses towards those who can become perfect scapegoats, blamed and punished for various social problems. The American Dreamers could easily believe in real threat for the social order and their own safety. The political consequences of these processes are well recognized by e.g. Thomas Frank and Loic Wacquant.

As H. J. Gans put it: THE WAR ON POVERTY has been replaced by THE WAR AGAINST THE POOR

State of affairs in Poland

MISUSE OF THE SOCIAL SCIENCE

- The role of intelligentsia/experts as „winners of transformation" in legitimizing neo-liberal vision of civilizational shift
- Uncritical support for the economic change
- Readiness to justify (but not to pay) its socio-economic costs (which were to pay by the „homo sovietici")
- *Homo sovieticus* (Polish version of underclass) became useful political label for those who deserved their fate as „victims of transformation" as „civilizationally incompetent" (hopeless, passive, demanding, primitively egalitarian,
- Economics becoming the only real social SCIENCE. Neoliberal economics becoming the only real economics
- Some terms becoming insults („socialist", „marxist", „egalitarist") some areas of academic inquiry becoming more justified than the others (sociology of poverty as „lamenting sociology", philosophy of social justice or class analysis as postcommunist sentimental backwardness)

State of affairs in the EU

SSH-FUTURES provided decent diagnosis, but there are general questions to ask:

What is the meaning of Lisbon strategy failure for SSH?

What are the effects of demand-driven knowledge production (FP4,5,6,7) for the SSH?

Is the threat of „ivory tower effect" still prevailing over the threat of social scientists becoming, as Wallerstein puts it, „handmaidens of governmental reformism"?

Should SSH just advise?

Or just supplement research in other areas (health, ecology, biotechnology)?

Should every scientific inquiry be practical?

Who should set up the research agenda and priorities?

Who should provide monitoring of the policy-making within the EU?

Should we disregard or at least think over the provocative statement of Zygmunt Bauman…

ZYGMUNT BAUMAN:

It was once known that politicians lie. Therefore people were seeking the truth from experts or scientists, thinkers, intellectuals. Today experts or scientists, thinkers, intellectuals lie as politicians do. Easily and without being punished for the lies.

Bauman Z. (2004) The age of lie. The society of the 21st century. How are we manipulated?, Interview with Jacek Żakowski, Polityka weekly, 11 December.

profit

Contract No: CIT2-CT-2004-506245

Policy Responses Overcoming Factors in the Intergenerational Transmission of Inequalities

Research project financed by 6th Framework Programme under the Priority 7: Citizens and governance in knowledge based society

The aim of the project, realized between 2004 and 2007 was to conduct multidisciplinary comparative study on intergenerational inheritance of social inequalities in eight European countries.

The outcomes were supposed to give the answer to the question about the most effective measures which can be used to improve social mobility.

WWW.PROFIT.UNI.LODZ.PL

Intergenerational transmission of social inequalities limits achievement of strategic political and social goals of the European Union:

- Sustainable development,
- Social and territorial cohesion,
- Growth in the living standard.

Inheriting social inequalities is a challenge for societies

Science should support decision-makers and people responsible for designing and implementing social policy in combating IIofI

Project participants:

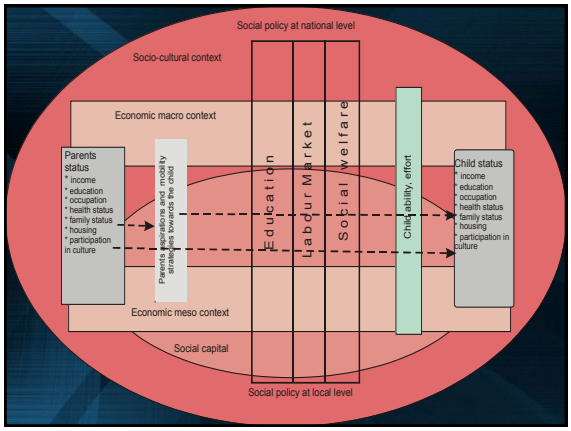
- University of Lodz, Poland ,coordinator
- REGLO, NGO, Bulgaria
- Justus Liebig University of Giessen, Germany
- University of Tartu, Estonia
- University of Turku, Finland
- University of Padova, Italy
- Vytautas Magnus University of Kaunas, Lithuania
- Loughborough University, United Kingdom

Policy-makers in PROFIT project:

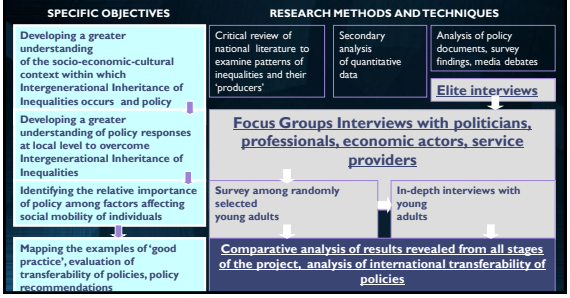
Twofold interrelations:

Politicians as respondents
Politicians as recipients of knowledge produced

Study referred to:
Role of ideas in social policy planning
Political struggle over the policy aims
Way of addressing social affairs in public sphere



Methodological scheme of PROFIT



General problems faced during the project realization:

Lack of willingness of politicians to take part in research process
Are they too busy or afraid of confronting their knowledge?

Lack of interest of politicians in knowledge produced
-Are social affairs disrespected or our recommendations will always be too costly in financial and political terms?

Lack of interest of mass-media in knowledge produced
Social affairs cannot make it to the headlines because public does not care or because interests of media owners are contradictory to those who could benefit from our diagnosis?

Lack of relevant statistical data at the local level (apart from UK)
Could the reliable diagnosis be not only the useful tool in the policy-making process, but a threat for some political careers?

THANK YOU FOR YOUR ATTENTION!!!

wwozniak@uni.lodz.pl

Project no: 028770

Project acronym: SSH-FUTURES

Project title: Social Sciences and Humanities for Europe

Instrument: Specific Targeted Research Project

Thematic Priority: 7 Citizens and Governance in a Knowledge-Based Society

Questionnaire: English Version

Start date of project: 1st May 2006 Duration: 36 Months

Interdisciplinary Centre for Comparative Research in the Social Sciences - ICCR

Schottenfeldgasse 69/1 1070 Wien

Entry

6x2: Please chose the organisation for the donation:

Please choose *only one* of the following:

- ☐ Amnesty International
- ☐ Red Cross/Red Crescent
- ☐ Médecins Sans Frontières

At the beginning we would like to ask you about your academic and social background.

*** 1x1: What is the highest academic qualification you hold?**

Please choose *only one* of the following:

- ☐ Bachelor level
- ☐ Master's level
- ☐ PhD level
- ☐ Other

*** 1*2: Your major area of training (B.A., MA, Ph.D.) is in?**

Please choose *all* that apply:

- ☐ *Agricultural Sciences*
- ☐ *Engineering and Technology*
- ☐ *Medical and Health Sciences*
- ☐ *Natural Sciences*
- ☐ Arts (arts, history of arts, performing arts, music)
- ☐ Cognitive Science
- ☐ Classical Studies
- ☐ Cultural Studies
- ☐ Economics, Business and Administrative Sciences
- ☐ Environmental Sciences
- ☐ Geography
- ☐ History and Archaeology
- ☐ Law
- ☐ Languages, Linguistic
- ☐ Literature
- ☐ Media and Communication Sciences
- ☐ Pedagogy and Education Research
- ☐ Philosophy
- ☐ Political Sciences (including International Relations)
- ☐ Psychology and Cognitive Sciences
- ☐ Social Anthropology
- ☐ Sociology (including Demography and Social Statistics)
- ☐ Theology, Religion
- ☐ Women's, Gender Studies
- ☐ Other Social sciences (interdisciplinary; other social sciences)
- ☐ Other Humanities (interdisciplinary; other humanities)
- ☐ Other

*** 1x0 Gender: What is your gender?**

Please choose *only one* of the following:

- ☐ Female
- ☐ Male

*** 1x4: Place of birth:**

*** 1x5: Your nationality**

*** 1x6: Where did you complete your highest academic degree?**

*** 1x7: Year of birth?**

e.g. 1976

Please write your answer here:

*** 1x8: When you were 14, were your parents employed, self-employed, at home or not working.**

Examples:
(1) salesperson, clerk, typist, senior clerical staff, bookkeeper, draughtsman
(2) researcher, manager, head of department, head of organisation/association, managing director, executive of large firm or organisation

Please choose the appropriate response for each item:

	Mother	Father
Self-employed with 1 or no employees	☐	☐
Self-employed with 2-9 employees	☐	☐
Self-employed with 10 or more employees	☐	☐
Farmer	☐	☐
Unskilled or skilled worker	☐	☐
Foreman, site foreman	☐	☐
Employee with simple duties or under loose supervision carrying out complex tasks. **see (1)**	☐	☐
Employee with responsible tasks, managerial responsibilities or decision-making power.**(2)**	☐	☐
Civil servants - simple or middle level administrative duties (assistants, police officer)	☐	☐
Civil servants - senior administrative and executive duties (judges, government, inspector)	☐	☐
Long-term unemployed	☐	☐
At home, looking after children or other persons	☐	☐
Permanently sick or disabled	☐	☐
Community or military service	☐	☐
She/He wasn't present when I was 14	☐	☐
Other	☐	☐
Don't know	☐	☐

*** 1x9: What was your parents' highest education level?**

Please choose the appropriate response for each item:

	Mother	Father
Completed or not completed primary, or first stage of basic education (around age 7-10)	☐	☐
Middle school or lower secondary level (around 10-14 or 15)	☐	☐

Secondary level (around 14 – 18)	☐	☐
First and second stage of tertiary (18+)	☐	☐
_____	☐	☐
She/He wasn't present when I was 14	☐	☐
Don't know	☐	☐

What is your motivation as a researcher? Which topics and methods do you prefer? Who has influence on the important decisions about your research activities? These topics will be covered by the next questions.

*** 2x1: Regarding your decision to become a researcher, to what extent do these aspects apply?**

Please choose the appropriate response for each item:

	Strongly disagree			Strongly agree	Don't know
I wanted to influence the development of society.	☐	☐	☐	☐	☐
I wanted to collaborate with interesting colleagues.	☐	☐	☐	☐	☐
I wanted to satisfy my curiosity.	☐	☐	☐	☐	☐
I wanted to earn a decent living.	☐	☐	☐	☐	☐
There was no special reason, rather by coincidence.	☐	☐	☐	☐	☐

*** 2x3: Regarding the motivation for your current research work and research projects, to what extent do these ascpects apply?**

Please consider the most important study you are currently working on.

Please choose the appropriate response for each item:

	Strongly disagree			Strongly agree	Don't know
Impact on societal development	☐	☐	☐	☐	☐
Collaboration and networking with interesting colleagues	☐	☐	☐	☐	☐
Satisfying my curiosity	☐	☐	☐	☐	☐
Academic standing	☐	☐	☐	☐	☐
Fund raising	☐	☐	☐	☐	☐
There is no special reason, rather by coincidence	☐	☐	☐	☐	☐

*** 2x4: Looking at your <u>own work</u>, how important is:**

Please choose the appropriate response for each item:

	Not at all important			Very important	Don't know/No opinion
Generic research, an intellectual activity based purely on curiosity and exclusively aiming to expand knowledge.	☐	☐	☐	☐	☐
Applied research, aiming at processing knowledge for implementation without necessarily addressing a specific actor/client.	☐	☐	☐	☐	☐
Consulting / advice for specific clients.	☐	☐	☐	☐	☐

Action research with specific social actors.	☐	☐	☐	☐	☐

*** 2x5: Regarding the work you would like to do, how important would these be?**

Please choose the appropriate response for each item:

	Not at all important			Very important	Don't know/No opinion
Generic research, an intellectual activity based purely on curiosity and exclusively aiming to expand knowledge.	☐	☐	☐	☐	☐
Applied research, aiming at processing knowledge for implementation without necessarily addressing a specific actor/client.	☐	☐	☐	☐	☐
Consulting / advice for specific clients.	☐	☐	☐	☐	☐
Action research with specific social actors.	☐	☐	☐	☐	☐

*** 2x6: How important are the following topics for your current research?**

Please choose the appropriate response for each item:

	Not at all important			Very important	Don't know/No opinion
Economic Aspects (e.g. Growth, Welfare State, Globalisation, Supply of Resources, Research & Innovation)	☐	☐	☐	☐	☐
Democracy & Participation (e.g. Gender Equality, Authorities & Social Movements, Social Partnership)	☐	☐	☐	☐	☐
Security (e.g. Terrorism, Crime, War & Peace)	☐	☐	☐	☐	☐
Value Aspect (e.g. Cultural Identity, Arts, Music, Literature, Personal Identity, National Identity, Multiculturalism & Integration, Trust)	☐	☐	☐	☐	☐
Social Aspects (e.g. Income Distribution, Care (for elderly, disabled, etc.), Marginal Groups, Minorities, Social Security, Unemployment, Education)	☐	☐	☐	☐	☐
Ecology (e.g. Global Change, Natural resources)	☐	☐	☐	☐	☐

*** 2x7: How important are the following topics for the research you would like to do?**

Please choose the appropriate response for each item:

	Not at all important			Very important	Don't know/No opinion
Economic Aspects (e.g. Growth, Welfare State, Globalisation, Supply of Resources, Research & Innovation)	☐	☐	☐	☐	☐
Democracy & Participation (e.g. Gender Equality, Authorities & Social Movements, Social Partnership)	☐	☐	☐	☐	☐
Security (e.g. Terrorism, Crime, War & Peace)	☐	☐	☐	☐	☐
Value Aspect (e.g. Cultural Identity, Arts, Music, Literature, Personal Identity, National Identity, Multiculturalism & Integration, Trust)	☐	☐	☐	☐	☐
Social Aspects (e.g. Income Distribution, Care (for elderly, disabled, etc.), Marginal Groups, Minorities, Social Security, Unemployment, Education)	☐	☐	☐	☐	☐
Ecology (e.g. Global Change, Natural resources)	☐	☐	☐	☐	☐

*** 2x10: Methodology is a crucial part of the research process. How important are the following methods in your actual research project(s)?**

Please choose the appropriate response for each item:

	Not at all important			Very important	Don't know/No opinion
Theoretical-Hermeneutics	☐	☐	☐	☐	☐
Deskwork, Archive, Documents, (historical) sources	☐	☐	☐	☐	☐
Model-Building (macro- and micro-level)	☐	☐	☐	☐	☐
Quantitative methodologies - Data creation	☐	☐	☐	☐	☐
- Secondary Analysis	☐	☐	☐	☐	☐
- Other quantitative methodologies	☐	☐	☐	☐	☐
Qualitative Methodologies - Interviews (narrative and semi-structured)	☐	☐	☐	☐	☐
- Discussions, Panel groups, etc	☐	☐	☐	☐	☐
- (Quasi-)Experimental	☐	☐	☐	☐	☐
- Observation	☐	☐	☐	☐	☐

- Other qualitative Methodologies	☐	☐	☐	☐	☐

*** 2x11: Methodology is a crucial part of the research process. How important are the following methods in <u>the research project(s) you would like to do?</u>**

<u>Please choose the appropriate response for each item:</u>

	Not at all important			Very important	Don't know/No opinion
Theoretical-Hermeneutics	☐	☐	☐	☐	☐
Deskwork, Archive, Documents, (historical) sources	☐	☐	☐	☐	☐
Model-Building (macro- and micro-level)	☐	☐	☐	☐	☐
Quantitative methodologies - Data creation	☐	☐	☐	☐	☐
- Secondary Analysis	☐	☐	☐	☐	☐
- Other	☐	☐	☐	☐	☐
Qualitative Methodologies - Interviews (narrative and semi-structured)	☐	☐	☐	☐	☐
- Discussions, Panel groups, etc.	☐	☐	☐	☐	☐
- (Quasi-)Experimental	☐	☐	☐	☐	☐
- Observation	☐	☐	☐	☐	☐
- Other	☐	☐	☐	☐	☐

*** 2x8: Looking at your research activities, how much influence do the following programs, institutions and actors have on <u>your research topics?</u>**

<u>Please choose the appropriate response for each item:</u>

	Very little or no influence			Very much influence	Don't know/No opinion
International and European funding institutions & programmes	☐	☐	☐	☐	☐
National & regional authorities	☐	☐	☐	☐	☐
National & regional research funding institutions & programmes	☐	☐	☐	☐	☐
Private corporations	☐	☐	☐	☐	☐
Scientific community	☐	☐	☐	☐	☐
Own institution/organisation	☐	☐	☐	☐	☐
My own research interest	☐	☐	☐	☐	☐

*** 2x12: Looking at your own research activities, how much influence do the following programs, institutions and actors have on <u>your main research method(s)?</u>**

<u>Please choose the appropriate response for each item:</u>

	Very little or no influence			Very much influence	Don't know/No opinion

International and European funding institutions & programmes	☐	☐	☐	☐	☐
National & regional authorities	☐	☐	☐	☐	☐
National & regional research funding institutions & programmes	☐	☐	☐	☐	☐
Private corporations	☐	☐	☐	☐	☐
Scientific community	☐	☐	☐	☐	☐
Own institution / organisation	☐	☐	☐	☐	☐
My own research interest	☐	☐	☐	☐	☐

We are interested **in your opinion** regarding the following topics.

*** 2x16: Research and gender, gender and research. Below we present some statements on Social Sciences/Humanities research and ask for your opinion.**

Please choose the appropriate response for each item:

	Totally disagree			Totally agree	Don't know/No opinion
Gender mainstreaming is **a fashionable**, but **destructive** trend in research.	☐	☐	☐	☐	☐
Intellectual activities aiming at overcoming the gender gap **cannot** claim to be scientific.	☐	☐	☐	☐	☐
General theories need **not** be gendered.	☐	☐	☐	☐	☐
With regard to career path, there is **no racial discrimination** in the social science and humanities' research communities.	☐	☐	☐	☐	☐
With regard to career path, there is **no gender discrimination** in the social science and humanities' research communities.	☐	☐	☐	☐	☐

*** 3x6: Using the following list, which disciplines or fields do your own research include?**

Please choose *all* that apply:

- ☐ *Agricultural Sciences*
- ☐ *Engineering and Technology*
- ☐ *Medical and Health Sciences*
- ☐ *Natural Sciences*
- ☐ Arts (arts, history of arts, performing arts, music)
- ☐ Cognitive Science
- ☐ Classical Studies
- ☐ Cultural Studies
- ☐ Economics, Business and Administrative Sciences
- ☐ Environmental Sciences

- ☐ Geography
- ☐ History and Archaeology
- ☐ Law
- ☐ Languages, Linguistic
- ☐ Literature
- ☐ Media and Communication Sciences
- ☐ Pedagogy and Education Research
- ☐ Philosophy
- ☐ Political Sciences (including International Relations)
- ☐ Psychology and Cognitive Sciences
- ☐ Social Anthropology
- ☐ Sociology (including Demography and Social Statistics)
- ☐ Theology, Religion
- ☐ Women's, Gender Studies
- ☐ Other Social sciences (interdisciplinary; other social sciences)
- ☐ Other Humanities (interdisciplinary; other humanities)
- ☐ Other

Please specify if and how often you are engaged the following activities.

*** 2x19: Do you attend a specific working group or research group?**

Please choose *only one* of the following:

- ☐ Yes, regularly, more than once a year
- ☐ Yes, at least once a year
- ☐ Yes, but rarely
- ☐ No
- ☐ Don't know

*** 2x17: Do you regularly contribute to newsletters of specific professional/scientific associations?**

Please choose *only one* of the following:

- ☐ Yes, regularly, more than once a year
- ☐ Yes, at least once a year
- ☐ Yes, but rarely
- ☐ No
- ☐ Don't know

*** 2x18: Do you attend regularly meetings of a specific scientific/professional association?**

Please choose *only one* of the following:

- ☐ Yes, regularly, more than once a year
- ☐ Yes, at least once a year
- ☐ Yes, but rarely
- ☐ No
- ☐ Don't know

*** 2x20: Are there journals that you prefer to submit your contributions to or do you prefer to rather vary your submissions according to specific topics?**

Please choose *only one* of the following:

- ☐ There are journals I prefer to submit my contributions to
- ☐ I prefer to vary my submissions
- ☐ Don't know

*** 2x21: When discussing your work do you benefit from a network of colleagues that share your interests and whom your approach regularly?**

Please choose *only one* of the following:

- ☐ Yes, regularly, more than once a year
- ☐ Yes, at least once a year
- ☐ Yes, but rarely
- ☐ No
- ☐ Don't know

*** 3x2: Please think of a typical person-month. How much time do you spend with these activities?**

Please choose the appropriate response for each item:

	None or almost none my time			Most of my time	Don't know/No opinion
Research	☐	☐	☐	☐	☐
Teaching or supervision of post-graduate students	☐	☐	☐	☐	☐
Administrative activities	☐	☐	☐	☐	☐
Management	☐	☐	☐	☐	☐
Organizing seminars/workshops	☐	☐	☐	☐	☐
Correspondence and meeting colleagues	☐	☐	☐	☐	☐
Writing grant proposals	☐	☐	☐	☐	☐

*** 3x3: Please think of a typical person-month. How much of your professional time as a researcher do you spend on services directed beyond the academic world, for example, consultancy, policy advice, or media commentary?**

Please choose *only one* of the following:

- ☐ None
- ☐ Less than 20%
- ☐ 21 – 50%
- ☐ more than 50%

[Only answer this question if you answered 'more than 50%' or '21 – 50%' or 'Less than 20%' to question '3x3 ']

*** 3x3x1: Regarding these services, how often have you been involved in the following activities in the last year?**

Please choose the appropriate response for each item:

	Never			Frequently	Don't know/No opinion
Interpretation and reflection on the state of affairs or what should be done (e.g. commentary through essays, books, media, reports or speeches on public events)	☐	☐	☐	☐	☐
Evaluation of policy programmes and actions e.g. by providing indicators and data collection	☐	☐	☐	☐	☐
Activism or advocacy (e.g. advice to civil society organizations, or assistance in campaigns)	☐	☐	☐	☐	☐

Mediation or facilitation (e.g. support in negotiations, or aid in conflict resolution)	☐	☐	☐	☐	☐
Review or certification of knowledge (e.g. policy reports on what is known about a particular issue)	☐	☐	☐	☐	☐

[Only answer this question if you answered '21 – 50%' or 'Less than 20%' or 'more than 50%' to question '3x3 ']

*** 3x4: For such activities, how important were these audiences?**

Please choose the appropriate response for each item:

	Not at all important			Very important	Don't know/No opinion
Government (EU, national or local)	☐	☐	☐	☐	☐
Public agencies	☐	☐	☐	☐	☐
Industry	☐	☐	☐	☐	☐
Civil society organizations	☐	☐	☐	☐	☐
Citizens	☐	☐	☐	☐	☐

Mobility, career and professional expectations as well as past professional interruptions will form the next part.

*** 3x7: Do you intend to find a better position in the field of (academic) research?**

Please choose *only one* of the following:

☐ Yes
☐ No

[Only answer this question if you answered 'No' to question '3x7 ']

3x7x1: Why not?

Please choose *only one* of the following:

☐ I am content with my current position
☐ I see no career opportunities
☐ Don’t know

*** 3x8: Are you currently considering leaving the research profession for a longer time or perhaps even permanently in the near future?**

Please choose *only one* of the following:

☐ Yes
☐ No

[Only answer this question if you answered 'Yes' to question '3x8 ']

3x8x1: For what reasons?

Please choose *all* that apply:

☐ Better or more interesting job opportunities outside research
☐ No interesting or no job opportunities inside research
☐ Family reasons (e.g. looking after children or other persons)
☐ Other personal reasons
☐ Don’t know

---

* **3x9: Do you expect any significant interruptions in your career in the foreseeable future?**

Please choose *only one* of the following:

- ☐ Yes
- ☐ No

[Only answer this question if you answered 'Yes' to question '3x9 ']

3x9x1: For what reasons?

Please choose *all* that apply:

- ☐ Better or more interesting job opportunities outside research
- ☐ No or no interesting job opportunities inside research
- ☐ Family reasons (e.g. looking after children or other persons)
- ☐ Other personal reasons
- ☐ Don't know

---

* **3x10: Has your research career ever been interrupted?**

Please choose *only one* of the following:

- ☐ Yes
- ☐ No

[Only answer this question if you answered 'Yes' to question '3x10 ']

3x10x1: For what reasons?

Please choose *all* that apply:

- ☐ Because of a better or more interesting job opportunity outside research
- ☐ Because of no or no interesting job opportunity inside research
- ☐ Family reasons (e.g. looking after children or other persons)
- ☐ Other personal reasons
- ☐ Don't know

3x11: In which country are you currently working?

---

* **3x12: Have you done any paid work in another country in the last 5 years?**

Please choose *only one* of the following:

- ☐ Yes
- ☐ No

[Only answer this question if you answered 'Yes' to question '3x12 ']

3x12x1: For how long?

Please choose *only one* of the following:

- ☐ Under 2 months
- ☐ between 2 and 6 months
- ☐ longer than 6 months

---

* **3x13: Do you plan to do any paid work in another country in the next 5 years?**

Please choose *only one* of the following:

- ☐ Yes
- ☐ No

Where are you working? How is the institute/organisation financed? Under which conditions do you work? Etc. These questions concerning your workplace will be covered by the next section.

4x1: Please indicate in which kind of organisation(s) you are employed:

Please choose *all* that apply:

- ☐ University
- ☐ Research division within government department (including federal government)
- ☐ Executive agency/Research Council/Research Council Institute
- ☐ Public research organisation / institution
- ☐ Private research organisation (commercial)
- ☐ Private research organisation (non-profit)
- ☐ Research division within an enterprise

4x2: If you are employed by more than one of the above, please indicate in which institution you spend most of your research time:

Please choose *only one* of the following:

- ☐ University
- ☐ Research division within government department (including federal government)
- ☐ Executive agency/Research Council/Research Council Institute
- ☐ Public research organisation / institution
- ☐ Private research organisation (commercial)
- ☐ Private research organisation (non-profit)
- ☐ Research division within a business

*** 4x3: How many people are employed at this organisation?**

Please choose *only one* of the following:

- ☐ Under 5
- ☐ 5 to 9
- ☐ 10 to 19
- ☐ 20 to 99
- ☐ 100 or more

*** 4x4: Is the organisation split into smaller units?**

Please choose *only one* of the following:

- ☐ Yes
- ☐ No

*** 4x5: When was the organisation established?**

Please choose *only one* of the following:

- ☐ 10 years ago or earlier
- ☐ 11 to 20 years ago
- ☐ 21 to 30 years ago
- ☐ 31 to 40 years ago
- ☐ more than 40 years ago

*** 4x6: How important are the following funding sources for your organisation's budget?**

Please choose the appropriate response for each item:

	Not at all important				Very important	Don't know/No opinion
Institutional (national and international) core funding	☐	☐	☐	☐	☐	☐

National competitive public research funding	☐	☐	☐	☐	☐
EU Framework Programme	☐	☐	☐	☐	☐
Private sponsoring or funding organisations	☐	☐	☐	☐	☐
Contract research/consultancy / services /Commercialisation of research (e.g. Royalties)	☐	☐	☐	☐	☐
Tuition fees / Donations	☐	☐	☐	☐	☐

*** 4x13: What is your type of employment?**

Please choose *only one* of the following:

- ☐ Permanent, full-time
- ☐ Permanent, part-time
- ☐ Fixed-term, full-time
- ☐ Fixed-term, part-time
- ☐ Commissioned work
- ☐ Occassional employment

*** 4*13*1: What position do you hold in this organistaion?**

Please choose *only one* of the following:

- ☐ Junior researcher
- ☐ Senior researcher
- ☐ Head of the unit/department
- ☐ Director/directress

*** 4x10: How much influence do evaluation procedures have on your work?**

Please choose the appropriate response for each item:

	Very little or no influence			Very much influence	Don't know/No opinion
Comments from colleagues	☐	☐	☐	☐	☐
Formal evaluation procedures within the department/unit/centre	☐	☐	☐	☐	☐
Evaluation procedures used to award competitive funding	☐	☐	☐	☐	☐
Peer review of output	☐	☐	☐	☐	☐
Evaluation by users of research results	☐	☐	☐	☐	☐

The work environment can influence the research activities in different ways. The next questions deal with these influences.

*** 4x17: When setting up the topics of your research priorities are you supported by: (e.g. by discussing various topics. etc.)**

Please choose the appropriate response for each item:

	Yes	No	Don't know/No opinion
Colleagues	☐	☐	☐
Head of the Unit	☐	☐	☐
Researcher or non-researcher outside my unit	☐	☐	☐

*** 4x18: When deciding about and establishing the method for you research priorities, are you supported by:**

Please choose the appropriate response for each item:

	Yes	No	Don't know/No opinion
Colleagues	☐	☐	☐
The Head of the Unit	☐	☐	☐
Researcher or non-researcher outside my unit	☐	☐	☐

[Only answer this question if you answered 'Junior researcher' or 'Senior researcher' to question '4*13*1 ']

*** 4x19: In case of disagreement on the research topics, do you have to keep to those topics determined by the head of the Unit, by the institutional research priorities are you able to determine your own agenda?**

Please choose the appropriate response for each item:

	Yes	No	Don't know/No opinion
Keep to those proposed by the Head of the Unit/Director(s)	☐	☐	☐
Determined by the institutional research priorities	☐	☐	☐
I can determine my own topics	☐	☐	☐

[Only answer this question if you answered 'Junior researcher' or 'Senior researcher' to question '4*13*1 ']

*** 4x20: In case of disagreement on the research method, do you have to keep to the methodology proposed by the head of the Unit, by the institutional research style, or are you able to determine your own approach?**

Please choose the appropriate response for each item:

	Yes	No	Don't know/No opinion
Keep to the methodology proposed by the Head of the Unit/Director(s)	☐	☐	☐
Determined by the institutional research style	☐	☐	☐
I can determine my own methodology	☐	☐	☐

The next questions deal with inter- and trans-disciplinarity. Is it generally supported, in your organisation and is it, in your opinion, an advantage?

*** 4x21: In recent years, interdisciplinarity, the common research activity involving different disciplines, is increasingly being refered to. In fact more often than not career achievements depends on single disciplinary activities.**
To what extent do you agree or disagree with the last statement?

Please choose *only one* of the following:

- ☐ Totally agree
- ☐ Agree
- ☐ Disagree
- ☐ Totally disagree
- ☐ Don't know/no opinion

*** 4x22: Is this statement true for your own organisation?**

Please choose *only one* of the following:

- ☐ True
- ☐ Rather true
- ☐ Rather not true
- ☐ Not true

☐ Don't know/no opinion

*** 4x23: Do you think that interdisciplinarity is an important advance for the social sciences and humanities?**

Please choose *only one* of the following:

☐ Yes
☐ No

*** 4x24: Do you expect that the importance of interdisciplinary research will increase in the next 5 years?**

Please choose *only one* of the following:

☐ Yes
☐ No
☐ Don't know/no opinion

[Only answer this question if you answered 'Yes' to question '4x24 ']

*** 4x24x1: In your experience between which disciplines:**

Please choose *only one* of the following:

☐ Within the different disciplines of social sciences and humanities?
☐ Generally between the social sciences, humanities and the natural sciences?
☐ Both
☐ Don't know/no opinion

Please assess some statements about trans-disciplinarity in general and in your organistaion.

*** 4x25: In the recent years, transdisciplinarity, the common research activity of academics and stakeholders, is increasingly being referred to. In fact more often than not career achievements depends on non trans-disciplinary activities.**
To what extent do you agree or disagree with the last statement?

Please choose *only one* of the following:

☐ Totally agree
☐ Agree
☐ Disagree
☐ Totally disagree
☐ Don't know/no opinion

*** 4x26: Is this true for your own organisation?**

Please choose *only one* of the following:

☐ True
☐ Rather true
☐ Rather not true
☐ Not true
☐ Don't know/no opinion

*** 4x27: Do you think that trans-disciplinarity is an important advance for the social sciences and humanities?**

Please choose *only one* of the following:

☐ Yes
☐ No
☐ Don't know/no opinion

*** 4x28: Do you expect that the importance of trans-disciplinary research will increase?**

Please choose *only one* of the following:

- ☐ Yes
- ☐ No
- ☐ Don't know/no opinion

[Only answer this question if you answered 'Yes' to question '4x28 ']

* **4x28x1: In your experience will this research include:**

Please choose *only one* of the following:

- ☐ Including civil society actors?
- ☐ Including public authorities?
- ☐ Including both?
- ☐ Don't know/no opinion

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* **4x29: Are you responsible for or do you have influence on recruitment in your organisation?**

Please choose *only one* of the following:

- ☐ Yes
- ☐ No

[Only answer this question if you answered 'Yes' to question '4x29 ']

* **4x29x1: When recruiting researchers for your organisation, how important is previous experience as listed below?**

Please choose the appropriate response for each item:

	Not at all important			Very important	Don't know/No opinion
Academic achievement	☐	☐	☐	☐	☐
Work experience in research	☐	☐	☐	☐	☐
Work experience outside research	☐	☐	☐	☐	☐
Experience abroad (with regard to either education or past employment)	☐	☐	☐	☐	☐
Experience with interdisciplinary research (with regard to either education or past employment)	☐	☐	☐	☐	☐

[Only answer this question if you answered 'Yes' to question '4x29 ']

* **4x29x2: When recruiting, what type of employment do you generally offer?**

Please choose *only one* of the following:

- ☐ Permanent, full-time
- ☐ Permanent, part-time
- ☐ Fixed-term, full-time
- ☐ Fixed-term, part-time
- ☐ Commissioned work
- ☐ Occasional employment

[Only answer this question if you answered 'Yes' to question '4x29 ']

* **4x29x3: How do you evaluate the performance of the research staff?**

Please choose *only one* of the following:

- ☐ Annually
- ☐ Every two year

☐ Less than every two years

[Only answer this question if you answered 'Yes' to question '4x29 ']

* **4x29x4: What criteria do you apply in your evaluation procedure?**

Please choose *all* that apply:

☐ Academic performance (research)
☐ Academic performance (teaching)
☐ Academic performance (publications)
☐ Fund raising
☐ Soft skills

[Only answer this question if you answered 'Yes' to question '4x29 ']

* **4x29x5: Is this evaluation procedure supported by a standardized evaluation scheme?**

Please choose *only one* of the following:

☐ Yes
☐ No

International cooperation and participation in European and international research projects shape the topics of the following section.

* **5x3: In the last 5 years have you participated in research projects funded by:**

Please choose *all* that apply:

☐ The EU Framework Programme
☐ Another European funding programme / agency / organisation
☐ Another international funding programme / agency / organisation
☐ A national funding programme / agency / organisation
☐ National funding programme / agency / organisation from abroad

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[Only answer this question if you answered 'Another European funding programme / agency / organisation' or 'The EU Framework Programme' to question '5x3 ']

* **5x4: How important were the following factors for your participation in a European research collaboration?**

Please choose the appropriate response for each item:

	Not at all important			Very important	Don't know/No opinion
Increased reputation	☐	☐	☐	☐	☐
Career advancement	☐	☐	☐	☐	☐
Opportunities to publish	☐	☐	☐	☐	☐
Additional funding	☐	☐	☐	☐	☐
Intellectual stimulation	☐	☐	☐	☐	☐
Own institutional policies encourage international collaboration	☐	☐	☐	☐	☐
Complementary skills and knowledge of partners	☐	☐	☐	☐	☐
Access to research equipment and material	☐	☐	☐	☐	☐
Direct pressure to take part	☐	☐	☐	☐	☐
Opportunities to travel	☐	☐	☐	☐	☐

[Only answer this question if you answered 'Another European funding programme / agency / organisation' or 'The EU Framework Programme' to question '5x3 ']

*** 5x5: Do you keep in touch with your partners from European projects after they have been completed?**

Please choose *only one* of the following:

- ☐ Always
- ☐ Frequently
- ☐ Rarely
- ☐ Never
- ☐ No project finished yet
- ☐ Don't know

[Only answer this question if you answered 'Another European funding programme / agency / organisation' or 'The EU Framework Programme' to question '5x3 ']

*** 5x6: Did you collaborate with some of the partners in another project/other projects subsequently?**

Please choose *only one* of the following:

- ☐ Yes
- ☐ No
- ☐ No project finished yet
- ☐ Don't know

Research gets supported and funded by different organisations on different levels. These set different priorities, use different evaluation criteria and procedures, and hence play different roles within the research landscape.

*** 5x7: In your opinion, what is the academic reputation of research supported by different funding sources in your scientific community?**

Please choose the appropriate response for each item:

	No scientific reputation at all			Very good reputation	Don't know/No opinion
Institutional core funding e.g. of universities and research organisations	☐	☐	☐	☐	☐
National competitive public research funding	☐	☐	☐	☐	☐
EU Framework Programme	☐	☐	☐	☐	☐
Regional competitive research funding	☐	☐	☐	☐	☐
Contract research/consultancy/services	☐	☐	☐	☐	☐

*** 5x8: How do you rate research supported by different funding sources?**

Please choose the appropriate response for each item:

	No scientific reputation at all			Very good reputation	Don't know/No opinion
Institutional core funding e.g. of universities and research organisations	☐	☐	☐	☐	☐
National competitive public research funding	☐	☐	☐	☐	☐

EU Framework Programme	☐	☐	☐	☐	☐
Regional competitive research funding	☐	☐	☐	☐	☐
Contract research/consultancy/services	☐	☐	☐	☐	☐