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**WHAT FUTURE FOR THE EUROPEAN SOCIAL SCIENCES AND HUMANITIES?<sup>1</sup>**

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## Introduction

This paper aims to contribute to the literature on sociology of the social sciences, or, in a broader context, to the sociology of knowledge in the tradition of Karl Mannheim. Nico Stehr has enlarged this concept by his notion of 'Knowledge Politics' (Stehr, 2004) and applied this to the knowledge of Social Sciences and the Humanities (Stehr, 2007). In what follows it will be argued that the future of Social Sciences and the Humanities depends on two inter-related dimensions: the development of the disciplinary state of the art and openness towards other disciplines, stakeholders and the society at large.

Social Sciences and the Humanities have an important mission in the formation of the Knowledge Economy and Society and evidence-based politics. However, the role and contribution of the social sciences have not yet been fully comprehended. There are discrepancies between the potential importance of social science knowledge and the comparatively low attention they receive from politics, other research communities and the public as a whole.

Social Sciences and, to a lesser extent, the Humanities have contributed to this phenomenon. The landscape is fragmented, as the social sciences are, to a certain extent, split according to national boundaries and disciplines, even sub-disciplines.

This leads to two major threats: to an over-emphasized claim to autonomy (the 'ivory tower' phenomenon), on the one hand, and a misunderstanding of what 'applied research' means for the Social Sciences and the Humanities ('consulting approach').

How can the Social Sciences and the Humanities better address the needs of society? This is the key question that will decide their future.

From the sociology of science perspective, this depends on three elements: an understanding of what society's needs are, what the Social Sciences and the Humanities have to offer and if knowledge-producing institutions can deliver the knowledge requested.

In complex societies it is evident that single disciplines cannot provide solutions for problems on their own (Hollingsworth & Müller, 2008). The collaboration between all types of knowledge producers is important and necessary. 'Useful' research combines knowledge from different disciplines. Hence, interdisciplinary research plays a key role in the acceptance of the new mode of knowledge production, which is expected better to address policy concerns and social demands (Nowotny, Scott & Gibbons, 2001; van Langenhove, 2007).

The value of the contributions of social science research to this new mode of knowledge production has to be accentuated to make the best use of this opportunity.

In what follows, these questions will first be elaborated in a theoretical perspective, then empirical findings will be viewed, based on two major empirical exercises, and finally conclusions will be drawn from these findings.

## Some theoretical considerations

### Old and new paradigms: overcoming the basic research vs. applied research dichotomy

A new paradigm seems to have entered the debate on the role of science and research, the inter-relation between science and society, or, as mentioned above: How can the Social Sciences and the Humanities better address the needs of society?

This question is far from being trivial. Societal needs are not easy to define, especially when it comes to 'intangibles' like the Social Sciences and the Humanities. It is, for instance, evident that life sciences and medical research fulfil social needs. Nobody would question the necessity of basic and generic research in the field. There are some normative debates about the direction of this research, but the principle of spending money on life science research is widely accepted.

Of course, these are relevant questions for the Social Sciences and Humanities as well: what about access to health, what about patient participation in the direction of medical research and the research on which sicknesses are prioritized? These questions are, however, by and large understood as normative questions to be decided on the political level. The need for scientific knowledge in this field is frequently neglected.

Another example: when it comes to generic research, the funding for the natural sciences needs hardly any justification. Debates might arise as to the amount of money to be spent on specific topics, and there might be less funding available for some research teams. However, there is a large consensus about funding generic research in the natural sciences.

A good example is the funding of large-scale research infrastructures like the fusion reactor. It is not at all clear whether this technology will ever become a source of energy production, let alone whether there will ever be a commercial use for the technology. However, large budgets are being allocated for decades to enable research on the issue. There is no comparable social science, or humanities programme that is nearly as long-term oriented as this technology development programme. Moreover, it is not very likely that such a significant budget will ever be devoted to the Social Sciences and the Humanities. This happens although the Social Sciences and Humanities are ultimately concerned with the efficiency and effectiveness of the distribution of power, status and income, the foundations of (modern) societies.

This example illustrates the discrepancies between the potential importance of social sciences and humanities knowledge and the comparatively low attention they receive from politics and the public at large. To name a few disciplines, philosophy, sociology, political science, and anthropology have a potential to respond to social needs' that goes beyond mere ideologies. The key for the future is to overcome the current 'mismatch' between the modes of scientific knowledge creation, the attitudes of the scientific knowledge providers and the perception of knowledge stakeholders.

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

In the late 1960s, Alvin Gouldner warned about the impending crisis of Western sociology (Gouldner, 1970). He did not focus on the issue of applied sciences, but rather on the decline of leading paradigms in the future of the social sciences. It could be argued that the decline of academic theories marked the rise of their 'applied cousin'.

'Applied Social Science' refers to knowledge production that is supposed to be 'useful'. The origin of the concept finds its roots in the epistemological comparison of the social sciences with the natural sciences. Whilst the latter have always been understood as being 'scientific', both in the generic and in the applied sense, social sciences have struggled for recognition in the scientific community from the very beginning. Unlike the Social Sciences (and the Humanities), 'applied' natural sciences offered 'products'. However, the increasing role of services has provided and continues to provide the opportunity to deliver services as 'products'. Here, the concept of 'Applied Social Sciences' comes in. 'Applied Social Sciences' are, as Van Langenhove argues, based on traditional 'scientism' (van Langenhove, 2007). It is in this sense that Nico Stehr defines traditional knowledge production as 'instrumental'. It may be produced in a closed environment like traditional universities, but finds its pathways and can be used by everybody according to the 'user's' needs.

There is, however, a broad range of activities that can be classified as 'applied'. A very fundamental problem here is definition: what do we consider as 'social sciences'? One of the most renowned studies in this respect is Paul Lazarsfeld's on the unemployed in Marienthal, a small industrial town in Austria (Jahoda, Lazarsfeld, Zeisel 1924; 1975). Paul Lazarsfeld was a unique theorist in scientific terms, as well as with regard to his work on the innovation of the institutional framework for social science knowledge production.

The forced emigration of European academics from Germany, Austria and other countries clearly benefited the USA. Lazarsfeld's influence on Lynd's, Robert K. Merton's and even D. Patrick Moynihan's work is evident. Moynihan was not only a renowned politician, serving both in Kennedy's and Johnson's administrations and later becoming a senator of New York, his native city, but a sociologist as well. He was a professor at Harvard University and later at Syracuse University, and regarded social scientists as being 'professionalized reformers'.

His work includes 'Beyond the Melting Pot' (with Nathan Glazer) and 'The Negro Family' (known as the 'Moynihan Report'), which were influential for the Civil Rights Movement in the Sixties. Both studies were carried out in a political context and as part of his political conviction. Lazarsfeld's influence may perhaps only be implicit. However, the relationship between Lynd's Middletown study and Moynihan's policy-oriented studies is obvious. Such an understanding of applied social sciences seems to characterize a particular approach toward 'applied social sciences' in the US. The economist John K. Galbraith's career, for example, is comparable to Moynihan's (Galbraith, 1981).

In Europe, such an understanding of 'applied social sciences' is not common, nor was it the case with Lazarsfeld. In its conventional understanding, the notion of 'applied social sciences' is associated with all types of empirical research. It has now been vaguely defined, but a clear disciplinary definition based on consensus within the academic community does not yet exist. Under the pressure of the new policy concept of 'New Public Management', applied social scientists are keen on carrying out (policy) consulting work that more often than not lacks a scientific background: methodological sections in publications normally serving to verify the results presented (the prime claim of scholarship), are diminishing in number. This criticism by the academic world is refuted by the 'applied community', which points to the

obsolescence of theoretical debates and the platonic model-building of traditional academia. The picture becomes even more complex once the humanities are included in this consideration.

It is evident that knowledge production is contingent not just on theoretical debates, but also on institutions generating the knowledge production. Historically speaking, Social Sciences and the Humanities became institutionalized within the universities. The prerequisite for institutionalization in the academic sphere is recognition that the specific mode of knowledge production is 'scientific'. We all know that Auguste Comte spoke of *physique sociale* to obtain the scientific 'blessings' of fellow academics. In this respect, Van Langenhove speaks of a 'imitation' of the natural sciences. By contrast, the social sciences have their roots in the 'pre-scientific past' as a more universal vision of societies necessary for political, economic and social integration. Thus, van Langenhove presents the social sciences as having an (official) history, with a long pre-scientific past.

The consequence of the institutionalization of the social sciences is the diversification of the disciplines. In the late 19<sup>th</sup> and early 20<sup>th</sup> centuries, the distinction between the disciplines was not yet clear cut. Max Weber could be considered a sociologist, political scientist, institutional economist and/or historian. Likewise, Karl Marx could be seen as a philosopher, social scientist, economist, historian, or as an intellectual in other disciplines. The process of institutionalization, however, has brought forth scientific communities and disciplines 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 relevant here as well: as some historical analyses show, unlike the natural scientists, 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'.

It is important here to understand why, in van Langenhove's terms, 'scientism' became so predominant in the social sciences: scientism was not merely the result of the social scientists' struggle for recognition of their work as a scientific discipline. It also seemed to enable social scientists to overcome specialization and national cleavages in their thinking. However, this approach diminishes the exclusive beauty of the social sciences: the knowledge production necessary for social transformations.

With respect to the institutions that can cope with innovative paradigms. In Social Sciences and Humanities differ from the traditional universities in their routines, evaluation systems and career schemes (Pohoryles & van der Meulen, 2002). Overcoming fragmentation would question the *raison d'être* of the traditional organization of scientific research within universities. This is the reason for the call for a new institutional approach that overcomes the shortcomings of conventional knowledge production and the current funding schemes. This necessity has already been articulated and there have been individual attempts to implement such an innovative form of research organization (Pohoryles 1993). The establishment of Lazarsfeld's *Wirtschaftspsychologische Forschungsstelle* was also a step in this direction and clearly provided the results Van Langenhove is now calling for, i.e. the development of new paradigms and new research methodologies.

There have always been social scientists and researchers in the humanities who have differed from the mainstream in their comprehensive outlook of societies and in their methodology. Karl Marx' scientific – and indeed his political oeuvre – aimed at bringing about fundamental changes in society and the economy. Adorno and Horkheimer's Critical Theory and even more so the work of Habermas are far from being mere

data crunching. In one of his early books, Habermas emphasized the difference between the natural science approach (guided by a practical interest in discovery – *Erkenntnisinteresse*), the humanities (guided by hermeneutical interests) and the social science approach (guided by interests in social emancipation). Karl Mannheim underlined the role of social scientists in creating social consensus on societal transformations (Mannheim, 1929) and in promoting democracy (Mannheim, 1950). In philosophy, hermeneutics became a legitimate approach in the 19<sup>th</sup> century. In history, Egon Friedell introduced the subjective analysis of history (Friedell, 1948).

Another approach was proposed by Jürgen Habermas. He sees the role of discourses, and thus of speech-acts, in societal consensus-building (Habermas 1981; 1984). Earlier, he developed his theory of “*herrschaftsfreien Diskurs*” (discourses in the absence of power) as a method of societal consensus-building that could ultimately lead to the construction of a just society. In his Theory of Communicative Action, Habermas reiterates this idea by distinguishing between different levels of discourses in the form of a hierarchy, the highest levels of which are normative and ethical discourses. Under ideal conditions, the result would be a just society based on the consensus of all its members. Habermas, however, does not see an active role for social scientists in this process; as a social scientist, he generates new knowledge, but from an ivory tower perspective.

The methodological proposal that follows from this idea is a new concept of the inter-relation between society and the individual. The idea that speech-acts have to be understood as the cornerstones of social science analysis is central: worldviews are expressed in the form of speech-acts and interaction reveals to the social scientist how to analyze the content of this conversation. Collective worldviews are inter-related with personal ones, the prior building the ‘story-line’, and the latter building the personality of the individual and the positioning within the framework of worldviews. Speech-acts contain iconic representations as much as the reconstruction of the world that provides collective worldviews. Such a perspective can produce an analytical framework for the social sciences.

Speech-acts are here, of course, not merely understood as mere conversations, and the methodological consequence is not a dogmatic fixation on discourse analysis. Speech-acts are seen as constituting the frame for individual as well as collective worldviews, hence the role for social sciences in the words of Van Langenhove: ‘generating new knowledge; forming attitudes and opinions; and initializing actions’.

From a pragmatist perspective, Henrik Kreutz published a collection of research results based on qualitative research (Kreutz, 1990). The title of his publication can be understood as a pivotal programme of a social science research concept based on Charles Peirce’s pragmatism: the collection is called ‘Pragmatist analyses of texts, pictures and events’, thus enlarging the concept beyond mere speech-acts. The collection contains some content analysis of texts, discourses and literature, as well as innovative research strategies. Wuggenig’s contribution, for instance, reports on the use of photography as a manifestation of the individual personalities formed by their social environment. Young workers were asked to photograph positively and negatively evaluated objects in their apartments (Wuggenig, 1990). The semi-projective technique of photo-inquiry method, combined with other qualitative methods, aims at rejuvenating the social sciences by including social actors and their actions. It might be worthwhile exploring the application of innovative participative methods in the field of research.

For mainstream social sciences, however, the critique remains valid, and is particularly true of the most recent developments in the social sciences. As mentioned before, research funding becomes a major issue under public management conditions. This has a significant impact on contents as well as on the methods

applied in the Social Sciences and Humanities. Interdisciplinary and transdisciplinary research are too often misunderstood as being simply multidisciplinary.

Conventional research under contemporary conditions is organized in industrial fashion: work packages, milestones and deliverables supersede academic contents, the outcome is often judged in quantitative (time, resource use and allocation, citation index etc.) rather than in qualitative terms. As a result, many approaches to interdisciplinary research involve simply putting together disciplinary 'work packages' and thus lack a comprehensive vision (Pohoryles, 2003). The end result is a reader, or individual or collective publications of specific elements of a project, involving the further fragmentation of knowledge. The alternative to this type of research structure is the individual production of books and publications. This approach is based on a lack of funding, which is mostly acquired by conventional research proposals, as described above, and thus inaccessible for those who work outside the mainstream. The results are far from satisfactory.

Competent social scientists are well trained in the General Theories developed by the pioneers of social sciences; however, times have changed and, subsequently, there is a need to re-read and re-think these theories. New reading and a reconstruction is needed 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*'. The idea here is to find 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.

## **The offer of the Social Sciences and the Humanities: concepts and contents**

This brings us back to the general topic of this paper: what, if at all, can social science knowledge contribute to societal developments? Or, in other words: what types of knowledge, and what contents do the social sciences and the humanities offer?

### **Concepts**

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. Knowledge production means 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).

Nico Stehr (2003) defines knowledge as the 'capacity to act', in the sense of Max Weber's social action. He insists on the difference between 'knowledge' and 'information'. Information is raw material and does not allow social actions *per se*, i.e. knowledge-based decisions. With respect to the Social Sciences and Humanities Stehr distinguishes between two concepts of knowledge: 'instrumental knowledge' and 'capacity building' (Stehr, 2007).

Stehr understands 'instrumental knowledge' as both academic knowledge production and its application by 'experts'.

*Traditional academic* research is characterized by the following elements:

- The approach is shaped by strongly disciplinary thinking.



- The research activities are initiated by the researcher her/himself, driven by curiosity and the outcome is oriented towards the scientific community.
- The only expected impact is the enhancement of knowledge and the disciplinary debate.
- Scientific quality is only assessed by the scientific community according to self-imposed evaluation criteria.
- The career path of the scholars is directly dependent on the outcome of such peer-reviewing processes.
- No direct pathway is foreseen for the knowledge produced. It might, however, be disseminated by mediators and modifiers. 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 the following elements:

- The main focus 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.

Nico Stehr defines 'capacity building' as a distinct concept of knowledge.

- Capacity building is related to specific societal needs that meet the interests of the scholars in the Social Sciences and Humanities.
- Insofar as scientific activities are concerned; the approach is problem-oriented, hence based on interdisciplinary and/or transdisciplinary thinking.
- 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 empirical question here is to see whether there are shifts identifiable both with respect to institutions and/or persons involved and to adequate appreciation procedures.

## Contents

The Social Sciences and the Humanities offer specific knowledge in a variety of fields, e.g.

- Knowledge on values and norms,
- knowledge on structures and institutions, and
- Knowledge on rules, procedures, and political actions.

### *With respect to norms and values*

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 work of Critical Theory is relevant to the criticism of instrumental knowledge as well. In academic terms, the debate was fought between the Neo-Marxist Critical Theory and the empiricist school of Albers and others (Adorno & al., 1969). The debate was further developed by Jürgen Habermas and Niklas Luhmann as a debate between emancipation-oriented sociology and system theory (Habermas & Luhmann, 1974). This debate was, however, confined to the German-language communities. Furthermore, there was no methodological consequence of a merely epistemological debate.

The idea that the Social Sciences and the Humanities have to reach out from the academic milieu is a new paradigm. It is clear that such a perspective 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).

### *With respect to structures and institution*

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.

### *Rules, procedures and political action*

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:

1. Enhancing knowledge among policy-makers and social actors in public debates;
2. Forming opinions and attitudes on the part of actors involved in policy-making and the debate; and
3. 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.

### **The interdisciplinarity issue**

As outlined above, the discussion on interdisciplinary and transdisciplinary research has a long tradition. However, over the last decade the discussion has become more pronounced (Wallerstein, 1996 and 2004, van Langenhove, 2007).

Wallerstein chooses a historical approach to explain the dilemma of disciplinary fragmentation. His main argument is 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).

For van Langenhove, strengthening interdisciplinary research is part of the necessary innovation process for the social sciences. He even goes further, opting for a participatory approach following the new science & society paradigm (van Langenhove, 2007).

The problem is that the mainstream in the Social Sciences and the Humanities is still fixed on disciplinary research and mere academic performance. Van Langenhove explains the persistence of old-fashioned academia with a surprisingly simple, yet convincing argument. Disciplines offer the possibility to control the reproduction of the Social Sciences and Humanities.

*'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).

This follows Wallerstein's assertion that disciplines 'largely control entry, award prestige, and govern career advancement in the scholarly hierarchy.' (Wallerstein, 1999, 47).

According to Wallerstein (2004), 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).

### **Relevance of the theoretical considerations for the empirical research**

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 empirical question concerns the awareness of the actors in this process. The future depends on the reaction of Social Science and Humanities actors and the shaping of the interaction process between knowledge producers and providers and stakeholders.

Two major issues are relevant here: the openness of knowledge producers to new paradigms and the role of internationalization. It is their main responsibility to ensure that social science research and the contribution of humanities play the role their potential deserves. The two studies this article is based on thus largely deal with researchers who collaborate in European research projects and who are committed to interdisciplinary research.

## **Empirical findings**

### **The European Social Sciences and Humanities communities facing the challenges of the future<sup>2</sup>**

This chapter reports on the results of a study on researchers in the Social Sciences and Humanities (SSH-FUTURES) across Europe, or those who collaborate in projects of the European Framework Programme for Research and Development. Beyond the European programmes, co-ordinators and project leaders from national research programmes were sampled in the countries from which research institutes participated in the study.<sup>3</sup>

The main objective of the SSH-FUTURES survey was to investigate the characteristics of contemporary Social Sciences and Humanities research communities – both with respect to their 'origins' and with respect to their 'present activities' and 'future plans'. The SSH project is a study about the future of the Social Sciences and Humanities in Europe. Finding out what these future(s) are must therefore take into account what the main actors within the SSH research community, i.e. the researchers themselves, think, value and anticipate.

### **Methodology**

The web-based survey was based on a complex sample of project co-ordinators in the CITIZENS' Priority 7 of the Sixth European Framework Programme as well as project co-ordinators in national programmes in the countries from which project partners came.<sup>4</sup>

The European projects were sampled from the list provided by the Community Research & Development Information Service CORDIS (<http://cordis.europa.eu/>). The national samples were drawn from a list provided by the project partners. The project co-ordinators selected were informed about the survey by e-mail.

5,343 researchers were sampled; the response rate was 32.3% with national variations between 25.4% (United Kingdom) and 38.5% (Sweden).

## Results of the Survey

The SSH-FUTURES project examines the prospects for 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 line with the theoretical assumptions mentioned above, the main hypothesis of the study states that the future of the Social Sciences and Humanities depends on the following factors:

- Research agendas that are formulated and implemented in an environment characterized by a shared set of assumptions about knowledge and its role for policy, economy and/or society;
- Research frameworks and institutions that are open enough to accept plurality and differentiation;
- Research organizations that understand the need for co-operative and inter-disciplinary research with regard to the composition of research teams and/or networks and with regard to appropriate methodologies;
- Researchers enjoying support from institutionalized mechanisms for formulating research demands and processing research results; and
- Appropriate dissemination strategies towards the wider scientific and policy communities as well as towards the public at large.

Research activities by individual researchers (and on aggregate) are determined by a combination of several factors, among which the most important are:

- the social and academic background of the researchers;
- the institutional and organizational framework of the research agenda setting and working conditions;
- the underlying institutional structure of the research landscape; and
- the opinions of the researchers on new and upcoming developments.

Based on these assumptions, the following issues are relevant:

- differences and communalities in the European research landscape;
- the institutional and organizational framework (working conditions for researchers, 'governance issues'); and
- the appreciation of interdisciplinary and transdisciplinary research by researchers.

## Differences and communalities: the peculiarities of the European Research Area

The idea of the European Research Area builds on a two-fold philosophy of competition: on the global level, European research is seen as being in competition with the USA and Asia and on the European level competition exists between national research systems and research organizations of different types.

An earlier study<sup>5</sup> reported on significant differences between the national research systems in Europe, despite some tendencies towards convergence. 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.

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.

With respect to the idea of 'entrepreneurial universities', it is noteworthy that in Sweden nearly half of the universities involved in Social Sciences and Humanities research are 'New Universities'. By contrast, in the UK four out of 5 institutions are traditional universities. Only in Austria do private ROs, mostly not-for-profit, play an important role: one out of six research institutions are of this type.

Table 1: Main SSH R&D employers by country

	Universities	Academies, Public ROs	Private ROs
United Kingdom (n=111)	100.0%	0.0%	0.0%
Israel (n=77)	98.7%	1.3%	0.0%
Sweden (n=353)	93.2%	5.7%	1.2%
Netherlands (n=359)	91.4%	7.0%	1.7%
Austria (n=214)	64.3%	18.8%	16.9%
Belgium (n=51)	74.5%	19.6%	5.9%
Germany (n=180)	78.0%	14.7%	7.3%
Poland (n=50)	90.0%	8.0%	2.0%
France (n=165)	49.4%	50.6%	0.0%
Other (n=70)	70.0%	15.7%	14.3%
Total (n=1630)	64.3%	13.6%	4.5%

Funding structures play a major role: the importance of competitive funding is increasing all over Europe. However, there are significant differences between the national research systems, between the different types of research organizations as well as between the perceptions of the importance of potential stakeholders.

*With respect to the countries under examination*, in France and Central Europe the importance of competitive funding and of third-party funding is lower than in the UK and in Sweden, and the Netherlands are significantly more attuned to the necessity and importance of multi-tier funding as compared with their colleagues in Central Europe.

Table 2: Funding sources for SSH research by country

	<b>Core funding</b>	<b>National competitive</b>	<b>EU FP</b>	<b>Private funding</b>	<b>Contract research</b>	<b>Fees / Donations</b>
	% of respondents indicating very important					
UK (n=98)	93.3%	75.7%	18.7%	22.1%	19.3%	69.5%
Israel (n=64)	85.7%	77.6%	25.9%	25.8%	15.3%	62.9%
Sweden (n=325)	74.0%	71.9%	8.4%	6.3%	4.1%	6.9%
Netherlands (n=328)	85.5%	63.3%	16.7%	2.8%	9.6%	21.2%
Germany (n=171)	77.0%	56.3%	15.4%	7.7%	9.5%	8.7%
Belgium (n=44)	87.2%	54.5%	22.0%	11.4%	28.3%	7.0%
Austria (n=201)	80.5%	47.3%	18.1%	9.1%	12.6%	10.1%
France (n=153)	83.4%	35.5%	10.0%	1.3%	15.9%	1.3%
Poland (n=46)	69.4%	23.4%	14.9%	0%	2.3%	28.3%
Total (n=1494)	80.9%	59.3%	15.7%	7.5%	10.7%	17.7%
* The totals do not correspond to sample totals due to missing cases.						

With respect to the type of research organization, there are, as might be expected, significant differences. The European framework programmes of universities are more active in the national environment and the European Framework programmes play a much lesser role in their funding than for research organizations. 'Younger Universities', those established over the past 30 years, do not differ significantly in this respect from traditional ones and hence do not look more 'entrepreneurial'. Private research institutions are the most active in European programmes.

Table 3: Funding sources for SSH research by organization

	<b>Core funding</b>	<b>National competitive</b>	<b>EU FP</b>	<b>Private funding</b>	<b>Contract research</b>	<b>Fees / Donations</b>
	% of respondents indicating very important					
Traditional Universities (n=821)	85.0%	61.6%	14.6%	8.6%	9.0%	23.6%
New Universities (n=399)	75.3%	60.9%	13.7%	5.9%	8.9%	17.0%
Public ROs (n=214)	82.8%	48.1%	17.5%	2.9%	14.2%	1.4%
Private ROs (n=73)	57.5%	60.3%	28.8%	16.4%	28.8%	4.1%
Total (n= 1507)	80.9%	59.5%	15.5%	7.5%	10.7%	17.8%

On the whole, four different types of research landscapes emerge, as confirmed by an earlier project:<sup>6</sup>

- The *Anglo-Saxon type* (in this case covering the UK and Israel) describes the research landscape which is dominated by universities, *albeit* very competitive in terms of funding and relying on a multi-tier financing system.
- The *Northern European system* (here Sweden and the Netherlands) is likewise dominated by universities. However, research is financed by a mixture of core funding and competitive project funding.

- The *Central European* system is more segmented, with universities and research organizations displaying distinct and different behaviour. 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.
- *France* features a completely different and unique system. The research structure is mostly based on public research institutions (partly directly belonging to specific ministries, '*ministères de tutelle*'). Of particular relevance for the Social Sciences and the Humanities is the CNRS that belongs to the Ministry of Education. The structure explains why half of the research in the field is done by public research institutes. Hence, universities and (public) research organizations largely depend on state funding.

This view is also confirmed when a look is taken at the importance of potential stakeholders, as perceived by researchers.

Overall, the most important stakeholders are governments and public agencies. This is particularly true of the Anglo-Saxon and French environments. Here, the interpretation of the 'science and society' relationship is of particular interest. Only in the Anglo-Saxon environment are civil society organizations or the general public considered important stakeholders. In this view, the least important stakeholder are industry and the business sector.

Table 4: Importance of different audiences by research landscape

	% of respondents indicating very important audience*				
	Government	Public agencies	Industry	Civil society organizations	Citizens
Anglo-Saxon (n=106)	35.2%	20.8%	3.8%	30.6%	29.9%
Northern European (n=449)	21.6%	13.2%	2.7%	10.1%	16.9%
Central Europe Universities (n=449)	20.8%	15.5%	1.5%	6.5%	13.8%
Central Europe ROs (n=112)	28.6%	27.7%	2.7%	8.9%	15.3%
France (n=115)	41.9%	25.7%	2.6%	8.5%	7.1%
Total	25.8%	17.5%	2.5%	11.0%	16.2%

\*Multiple responses encouraged.

## Institutional and organizational framework

### ***Working conditions***

The survey targeted project leaders and hence experienced researchers: 42% are heads of units or hold director positions and 43% are senior researchers. Only 15% are junior researchers. There are, however, significant gender differences. The overwhelming majority of the researchers holds a Ph.D. in the Social Sciences or the Humanities.



Table 5: Position in the organization by gender

	Position in organization		
	Junior	Senior	Head of unit
Women (n=596)	19.6%	41.9%	38.4%
Men (n=987)	11.8%	43.9%	44.4%
Total (n=1583)	14.7%	43.1%	42.1%

The majority of SSH researchers, 81%, work in universities. The proportion of researchers working in private research organizations is overall very low at 3%. The remaining 16% work in public research organizations, including academies.

One in five respondents has a non-permanent work contract; among women the proportion is 26%. The share of researchers working part-time is lower (13%), but again there are significant gender differences (17% part-time employment among female researchers as against 10% among their male colleagues). The gender difference is least important in the Anglo-Saxon research landscape and most significant in Central Europe.

Professionalization under contemporary competitive conditions and financial pressures on universities and research organisations together with 'multi-tasking' have become common patterns in research work. Apart from research and teaching, the administrative workload has become part of the everyday life of modern researchers.

One in four researchers across Europe can devote most of his/her time to research; however, for the majority, teaching and administration represent a major additional workload; one in four researchers even apportions his/her time equally between research, teaching and administration.

There are, of course, significant differences. In the Northern European environment and in Central European research organizations, a clear majority, one in three researchers, can concentrate work solely on research. The university teachers in Central Europe are the most active in research; in other environments the involvement of scholars mainly working as teachers is clearly lower.

Table 6: Focus on work areas by research landscape

	Activities of researchers according to research landscape					
	Anglo-Saxon (n=183)	N. European (n=682)	C. European universities (n=351)	C. European ROs (n=126)	France (n=155)	All (n=1497)
...mostly research	27.3%	33.1%	20.2%	34.9%	20.6%	28.3%
...mostly teaching	9.3%	11.3%	24.8%	4.8%	10.3%	13.6%
... research and teaching equally	18.0%	20.1%	16.0%	5.6%	11.6%	16.8%
...mostly administration	13.7%	16.1%	12.0%	42.1%	27.1%	18.2%
...everything equally	31.7%	19.4%	27.1%	12.7%	30.3%	23.2%

***Governance issues: agenda setting, evaluation and funding***

On the whole, the traditional academic view prevails among researchers: scientific autonomy is the dominant issue. Nearly all claim to set their research agendas on their own. Scientific communities are clearly ranked second. National research programmes come second in the Anglo-Saxon environment. International and European programmes are considered less important.

The higher the pressure of competition, the greater the importance of European funding: Anglo-Saxon researchers as well as researchers in the private sector rate the influence of European research programmes on their agendas clearly higher than others.

As will be shown below, this self-image seems to contradict the view on the evaluation criteria used for personal career development. But only one in three research institutions apply formal evaluation procedures.

Table 7: Influences on research agenda in different research landscapes

	% of respondents indicating very influential *						
	Int. & EU programmes	Authorities	National programmes	Industry and Business	Scientific community	Own Institution	Myself
Anglo-Saxon (n=184)	16.3%	11.0%	31.0%	1.6%	35.9%	14.1%	88.1%
Northern Europe (n=707)	6.5%	7.4%	23.9%	1.1%	53.8%	27.4%	84.9%
C. EU /Uni (n=358)	12.3%	10.9%	23.2%	3.9%	40.4%	27.0%	88.0%
C. EU / RO (n=132)	20.3%	15.0%	31.6%	4.5%	36.6%	46.6%	80.9%
France (n=165)	14.6%	12.8%	18.8%	3.0%	55.2%	34.5%	87.2%
All (n=1'545)	11.1%	9.9%	24.7%	2.3%	47.3%	28.1%	85.9%

\* Multiple responses encouraged.

The different weighting given to different funding organizations is probably influenced by the perception of the prestige of the funding obtained.

- To find out if different funding modes enjoy different scientific prestige, respondents were asked to assess the scientific reputation of projects funded by different sources.
- National research programmes enjoy the highest scientific prestige. 67% of all respondents associate quality with these programmes and thus consider themselves successful if they have attracted funding from national research councils or equivalents. EU research programmes are not as reputable, but have the second overall highest rating with 44%. Researchers working in the UK/Israel and in Central European research organizations are more likely to assign high prestige to these programmes (59% and 52% respectively).
- Contract research and consultancy is the least scientifically reputable of all types of research funding. Only 8% of respondents overall consider it leads to scientifically 'good-quality' research. Considering that this type of research is often the one entrusted with providing input to policy, this result says something about the position of the SSH research community vis-à-vis directly applied research.
- The highest scientific repute is associated with national research programmes as administered (mainly) by research councils or equivalent bodies. 67% of all respondents think that these programmes are prestigious. In comparison, only 44% of the respondents share the same opinion about EU research programmes, a ratio similar to that observed for institutional core funding (46%). Although less renowned than national research programmes, EU programmes are better than either regional research funding schemes (19%) or contract research in the form of consultancy. The latter enjoys the least prestige among SSH researchers: 29% think this type of research is not research, and only 8% think it is scientifically-qualified research.

Table 8: Reputation of different funding sources by research landscape

	Institutional core funding	National competitive research funding	EU Framework Programme
	% of respondents indicating the funding source as having a very good reputation		
Anglo-Saxon (n=140)	32.5%	80.0%	58.7%
Northern European (n=579)	48.1%	71.6%	37.8%
Central European Universities (n=310)	43.1%	65.0%	45.4%
Central European/RO (n=112)	48.7%	62.6%	52.3%
France (n=141)	48.3%	46.2%	46.0%
Total (n=1282)	46.7%	67.6%	44.1%

Researchers in competitive environments, the researchers in the Anglo-Saxon environment and in Central European research organizations to a larger extent ascribe EU research programmes an excellent reputation. The highest reputation is assigned to the national programmes, the lowest to core funding, with the exception of France, where the researchers rank all sources equally.

The increasing significance of competitive funding for Social Science and Humanities research can also be proven by the high rating of competitive funding in evaluation procedures. 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. Formal evaluation procedures, however, seem to be more important in public research organizations than in any other institution. One in three researchers in public research organizations is submitted to formal research procedures, as compared with just one fifth in the other groups.

Table 9: Role of evaluation in different research organizations

	% of respondents indicating 'very strong' influence (in %)				
	Traditional universities(n=897)	New universities (n=426)	Public ROs (n=221)	Private ROs (=70)	All (n=1614)
Formal evaluation	21.4%	19.0%	33.0%	18.6%	22.2%
Competitive funding	34.7%	30.6%	31.4%	29.0%	32.9%
Peer review of output	42.3%	40.4%	43.1%	26.9%	41.2%

The Anglo-Saxon model is the most competitive one, and this is apparently encouraged by evaluation procedures. Nearly half of the researchers from an Anglo-Saxon environment report that obtaining competitive funding is relevant for their evaluation. By contrast only one in five of their French colleagues say the same thing.

As regards formal evaluation procedures, however, only one in five Anglo-Saxon researchers is submitted to formal procedures as compared with French colleagues, with whom this is the case for one third of the researchers. This can be explained by the fact that the standard practice in France is individual evaluation, whereas in the Anglo-Saxon environment the organizations or departments are regularly assessed, but individuals only in specific cases (tenure, promotion).

Table 10: Role of evaluation by research landscape

	% of respondents indicating 'very strong' influence in % (of n)				
	Anglo-Saxon	Northern European	Central European	France	All
Formal evaluation (n=1528)	22.7% (n=185)	23.2% (n=693)	16.9% (n=486)	31.1% (n=164)	22%
Competitive funding (n=1498)	43.2% (n=183)	32.3% (n=672)	34% (n=483)	19.4% (n=160)	32.8%
Peer review of output (n=1498)	52% (n=179)	39.6% (n=682)	37.1% (n=475)	51.2% (n=162)	41.5%

Generally speaking, there seems to be a fairly high degree of satisfaction on the part of Social sciences and Humanities researchers with their work: only 12% of SSH researchers consider leaving the research profession. Another, possibly additional, reason might be the self-perception of the profession as a vocation.

Satisfaction with the profession does not necessarily translate into satisfaction with the current position: 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 tend to display a somewhat different attitude in this respect. They are less likely to look for a better position. However, one in four is considering quitting the research profession entirely. This might be related to their greater involvement in other fields of activities, as social actors or in the business environment. Private research organizations are more often confronted with stakeholders that finance their studies or whom they advise on their real needs.

Table 11: Organizational impact on career paths

	Looking for better position	Considering changing profession
Traditional university (n=913)	52.6%	10.7%
New university (n=436)	54.4%	9.6%
Public research organization (n=227)	51.5%	13.2%
Private research organization (n=73)	35.6%	27.4%
All (n=1658)	52.3%	11.5%

### Intradisciplinarity, interdisciplinarity, and transdisciplinarity

The traditional distinction between disciplinary and interdisciplinary research is usually related to the structural problems in the sector of higher education. The systems of higher education are for the most part organized along disciplinary boundaries and conventions. Countries differ in the way higher education is organized, but also in the way the disciplines are classified under broader categories and connected to faculties or departments. In the higher education sector, disciplines provide the mode of organizing training and specialization. How people are trained in their formative years can therefore be expected to affect their subsequent career choice as well as the research fields they go into. Disciplines are also a way of

organizing professional networks, including publication opportunities. Currently, however, research trends point towards greater interaction for the purpose of improving the ‘utilization’ of results. Task-oriented research requires the capacity of researchers to go beyond traditional disciplines or to organize research teams comprising all types of knowledge required to answer the task-specific questions. Of course, members of such teams must be able to interact in order to integrate knowledge and hence work in an interdisciplinary manner.

Interdisciplinarity, however, is itself an unclear term and its fuzziness has tended to increase with use. The term is used to refer to almost all types of knowledge combination, whether in terms of methodology or thematically. The diffusion of the term within the natural sciences (to describe so-called ‘convergence’ trends) is no less contested.

In the following, these categories will be differentiated:

- *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 case is the collaboration of ethics and/or social sciences with biology and/or nanotechnology.

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. With respect to the future of task-oriented research, even one in five researchers works on transdisciplinary research combinations.

Table 12: Disciplinary and other research orientations

% of respondents performing research in this manner	n=1658
Own discipline only	22.8%
Intra-disciplinary research	26.3%
Inter-disciplinary research	30.9%
Transdisciplinary research	20.0%

Table 13: Funding sources for SSH research organizations

	<b>Core funding</b>	<b>Competitive funding (national and EU)</b>	<b>Private funding*</b>
	% of respondents indicating very important		
Social Sciences (n=508)	77.1%	59.3%	27.8%
Humanities (n=255)	84.6%	53.3%	23.7%
Interdisciplinary (n=485)	87.9%	61.4%	24.3%
Transdisciplinary (n=318)	73.4%	67.9%	29.7%
Total (n=1658)	80.9%	60.7%	26.4%

\*Multiple responses encouraged, as researchers may be involved in different projects.

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.

Table 14: Influence of research landscape and organization on research

	Proportion performing this type of research (in %)			
	Own discipline only	Intra-disciplinary	Inter-disciplinary	Transdisciplinary
Anglo-Saxon (n=187)	17.1%	27.8%	35.3%	19.8%
Northern European (n=706)	20.7%	22.9%	31.4%	24.9%
Central European universities (n=361)	25.8%	28.5%	30.5%	15.2%
Central European ROs (n=133)	19.5%	29.3%	31.6%	19.5%
France (n=165)	33.0%	28.3%	29.7%	9.0%
All (n=1552)	23.0%	26.0%	31.3%	19.7%

As outlined earlier, one of the hypotheses of the project is that when it is a matter of professional career, university education greatly influences the future research undertaken. For those doing research, social sciences studies are more popular than studies in the humanities. There is, however, a significant difference between the different country groups: in Central Europe, the traditional humanities account for nearly half of the researchers. In the Northern European environment, the educational background of the researchers is more varied than in other country groups.

Table 15: Academic training according to research landscape

	Humanities	Social Sciences	Other	Combined studies
Anglo-Saxon (n=176)	39.8%	50.6%	1.1%	8.5%
Northern European (n=691)	30.5%	50.9%	6.4%	12.2%
Central European (n=483)	46.6%	42.9%	4.3%	6.2%
France (n=163)	35.6%	50.9%	3.7%	9.8%
Total (n=1513)	37.3%	48.3%	4.8%	9.6%

Among young researchers, humanities studies have become significantly less popular than social sciences, which might be related to labour-market considerations. Fewer young researchers in the Social Sciences and Humanities come from different disciplines. This can be explained by the beginning careers of academics that are making their first steps within the field of their academic training.

Table 16: Academic (disciplinary) background by age

	Humanities	Social Sciences	Other	Combined studies
35 years old or less (n=240)	27.1%	58.8%	2.9%	11.3%
36-50 (n=672)	40.2%	45.7%	4.5%	9.7%
51-65+ (n=688)	36.0%	49.0%	5.7%	9.3%
Total (n=1600)	36.4%	49.1%	4.8%	9.8%

Graduates of studies combining a number of disciplines are the most open for innovative forms of interdisciplinary and transdisciplinary research, relating to other disciplines as well as to social and economic actors. This proves that the most significant difference is caused by the educational background of researchers: preparation for task-oriented research has to start at the level of higher education. By contrast, the social scientists are the most disciplinary-oriented researchers under examination.



Table 17: Influence of academic background on current research

	Carrying out research in the following manner			
	Mono-disciplinary	Intra-disciplinary	Inter-disciplinary	Transdisciplinary
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%

Apparently, research structures are quite averse to opening up to interdisciplinary and transdisciplinary research. Nearly all the researchers consider these activities important for the advancement and the future of Social Sciences and Humanities research. However, career expectations seem to inhibit researchers from becoming involved in these sorts of activities, with the exception of research organizations outside traditional academic institutions. Nearly all researchers confirm that their career advancement is largely contingent on strictly disciplinary activities.

Table 18: 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	1560

The results show that in the research sector a major transformation is under way, albeit far from being completed. As has been seen, interdisciplinary and transdisciplinary research is going on despite the low impact it has on career advancement. This seems to be encouraged by the 'governance' of Social Sciences and Humanities, as external funding is increasingly dependent on task-oriented research programmes in the European Framework Programmes. Acquiring external funding increasingly implies being subject to evaluation schemes. In Central Europe, the role of private non-profit organizations is pivotal in this respect, whilst the traditional sector seems to be moving ahead more slowly.

Academic evaluation schemes as well as academic publications have to change in a major way to meet the needs of the modern Knowledge Society. There are still not enough interdisciplinary publications available, and publication in such works is ranked lower than publication in traditional disciplinary media.

Trans-disciplinary research – involving stakeholders in research – is viewed with even more caution. Nearly one in three of the researchers did not know what to answer to the question about the current status and future of trans-disciplinary research. But this was not due to lack of knowledge as to what trans-disciplinary research involves. Instead, the answers indicate that, unlike inter-disciplinarity, trans-disciplinarity does not represent a common and accepted research practice in the contemporary SSH research landscape. Among

the valid responses, however, trans-disciplinarity is seen as an important advance for the Social Sciences and Humanities by three out of four respondents.

## Working in an interdisciplinary environment<sup>7</sup>

Knowledge production is a costly activity. Hence, funding structures play a role in the choice of approach, methodology and the content of research studies. The European Union Framework Programmes (FP) have realized a funding strategy, boosting research and science on the European level. The Framework Programmes are a facilitator of the new appreciation of science and research, especially as regards interdisciplinary research.<sup>8</sup>

To shed some light on the new mode and role of SSH in interdisciplinary knowledge production, the Interdisciplinary Centre for Comparative Research in the Social Sciences (ICCR) conducted a survey among co-ordinators of projects funded by the Sixth Framework Programme in May/June 2008. Insights could be gained into how researchers from disciplines other than the Social Sciences and Humanities perceive their role and activity in interdisciplinary research projects.

So far, surprisingly, no statistical data exist on fundamental questions:

- To what extent have the Social Sciences and the Humanities so far been involved in projects under the European Framework Programme outside their specific programme, in European Commission terms 'priority'?
- What disciplines of the Social Sciences and the Humanities are most in demand?
- What are the main tasks for the Social Sciences and Humanities in interdisciplinary projects?
- What sort of expertise is expected of them?
- How has co-operation worked?
- What are the most popular ways of disseminating research results?
- Which institutions or communities are the most frequent users of these project findings?
- What interaction and dissemination activities are most common?

## Methodology

The web-based survey was based on a sample of 656 project co-ordinators from six out of eight priorities in the Sixth European Framework Programme.<sup>9</sup> The project lists provided by the Community Research & Development Information Service CORDIS (<http://cordis.europa.eu/>) and the websites of the respective priorities were used as bases for the sample. The project co-ordinators selected were informed about the survey by e-mail and the addresses came from the CORDIS website. More than 10% of the addresses were not valid anymore. Of the remaining sample, the response rate was 54.3%. This makes a total of 318 respondents.

As the sample was limited to project co-ordinators, more than three quarters of the respondents were male. The majority either work at a University (40%) or at a public research organization (23%). One third of the respondents have an educational background in the natural sciences and another third in engineering and technology development.

## Results of the Survey

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### Involvement of Social Sciences and Humanities researchers in interdisciplinary projects

As far as Social Sciences and/or Humanities are concerned, interdisciplinarity has gained in importance in the European Framework Programmes. Researchers in the Social Sciences and Humanities participate in about 40% of the projects. There are, however, significant differences between the specific research priorities of the sample.

In the *Scientific Support to Policy* (SSP) Programme, Priority 8 in European parlance,<sup>10</sup> the share of the Social Sciences and/or Humanities is much higher than in the other programmes. Whilst about two thirds of the projects in this priority involve this type of knowledge, their share is barely one third in the others. There are, however, no budget data that would enable specifications on the extent of this involvement

Table 19: ***Involvement of SSH researchers in projects outside the SSH priority according to type of EU funding programme (in %)***

SSH researchers involved?	Yes
FOOD/HEALTH/SUSTDEV. n=140	33.6%
IST/NEST n=107	32.7%
SUPPORT n=70	65.7%
Total n = 317	40.4%

*Economics, Political Sciences and Business Studies or Law* (34%) are the disciplines usually involved in interdisciplinary research. Sociology accounted for 27% of responses. The Humanities are less frequently involved (20%).

### **Type of knowledge contributed by SSH**

In the theoretical introduction to this paper, it was argued that the Social Sciences and Humanities can contribute knowledge on values and attitudes, on structures and institutions and/or on understanding rules and organizational processes.

In the majority of projects, around 70% of the researchers contributed information about behaviour and attitudes (Figure 1). Against the background of the researchers who were most involved in these collaborative projects, this is a surprising finding. In the Social Sciences and Humanities, economists and lawyers are the dominant protagonists in interdisciplinary projects. Their expertise is mostly seen in the organizational and procedural fields. As behaviour and attitudes are the form of knowledge requested by the other disciplines, one might expect a higher involvement of sociologists, psychologists, or, perhaps even philosophers.

The expectations of the other disciplines are salient to the future of the Social Sciences and Humanities. Hence, the respondents were also asked about the type of knowledge the Social Sciences and Humanities *should* provide to their projects.

The responses are inconclusive: the Social Sciences and the Humanities are expected to contribute more knowledge of all types to a significantly higher level than they already contribute to the projects. Interestingly, the most important gap between the current knowledge contributed to the projects and the expected one does not concern structures and institutions, but processes and procedures.

Table 20: *Type of knowledge contributed by Social Sciences and Humanities: The views of research co-ordinators*

	Knowledge ...	
	... contributed by SSH	... SSH should contribute
Knowledge on structures	50.6%	63.1%
Knowledge on processes	51.8%	71.4%
Knowledge on behaviour, attitudes and political action	69.9%	88.1%

*Note:* Multiple response questions. Only projects co-ordinated by non-SSH researchers are included.

Openness to interdisciplinary research does not imply openness towards specific audiences outside the scientific communities. When asked about the specific tasks of the Social Sciences and Humanities, the most prominent answer was the contribution to individual tasks within the projects, be it in the creation or expansion of *task-specific knowledge* (around three quarters of the respondents) or *advising the consortium on specific tasks* (less than half of the respondents).

Social sciences are seen as less relevant for *gaining new production processes and/or marketing activities*, despite the high proportion of scholars from the business studies' field. Even traditional fields of social sciences and humanities activities, such as *working with specific social actors*, are not among the most prominent ones when it comes to interdisciplinary research.<sup>11</sup>

Table 21: *What tasks are foreseen for the Social Sciences and Humanities (multiple responses)*

What was/is the main task or role of SSH in the project? (n=83)	
Innovating production/ marketing	14.5%
Task-specific consulting	42.2%
Work with social actors	14.5%

### Communication of the research results

There seems to be comparatively little interest in communicating the research activities and the results to the outside world. This stands in quite a contradiction to the some of the objectives the European Commission wants to achieve with the European Framework Programmes.

In the theoretical introduction, an analytical distinction was made between three types of knowledge: purely academic research, expert knowledge and capacity-building. In Stehr's view, academic knowledge production can be understood as 'instrumental knowledge' insofar as it finds its pathways by 'travelling' (Stehr, 2007). An overwhelming majority of researchers seem, however, not particularly pro-active in opening these pathways.

Three categories are relevant with respect to science communication:

- *Internal project activities* - e.g. separate seminars, websites, project-related publications. Dissemination and interaction activities conducted within the framework of the project.
- *Pro-active external activities* – e.g. through dissemination networks, by participating in third-party seminars, by publishing in third-party publications. These external activities rely on the initiative of the project consortium. They have to collect the necessary information on third-party activities, establish contacts and submit papers.
- *Externally induced activities* – e.g. requests for project-related information and for project deliverables. They are based on initiatives of potential users, interested persons and decision-makers not involved in the project. Researchers have to raise awareness of their activities among other research and non-research communities.

The results seem to suggest that there is a certain risk of consolidating epistemic micro-communities. Most consortia concentrate on internal activities, at least during the lifespan of European projects. And little suggests that dissemination to the outside world starts on completion of the contract. Anecdotic evidence shows that even the websites of projects disappear shortly after the completion of projects.<sup>12</sup> 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 consider internal communication very important. By contrast, this number decreases to about one third for activities outside the consortium.

Table 22: ***Types of interaction and dissemination activities***

Types of dissemination activities <sup>1)</sup>	Very important
Internal activities (n=312)	95.2%
Pro-active external activities (n=309)	36.9%
Externally induced activities (n=303)	32.7%

<sup>1)</sup> Multiple response question. Percentages refer to columns, e. g. 95% of all co-ordinators consider internal dissemination activities very important.

### Meeting the users' needs?

As can be expected from the absence of dissemination activities, researchers are not convinced about the usefulness of the project for specific potential user groups. Public authorities and the EC are perceived as being the main users of the project results and data produced. The researchers are of the opinion that their

findings are even less important for the industrial sector or for CSOs. The prevalent impression is that project results and recommendations could be better exploited.

The results are significantly better for projects involving the Social Sciences and Humanities. However, this is not the case for research that is considered to be useful for the industrial and commercial sectors.

As research for policy use is included in the sample, the picture changes significantly if one excludes these projects from the analysis. This is particularly true of the assessment of the usefulness of the research for the European Commission, where around 40% of the total sample see the Commission as the main user against a mere 30%, if the supportive policy projects are removed from the sample. By contrast, the research is seen as being more useful for industry in this case.

In general, the Social Sciences and the Humanities are typically involved in projects directed at the public authorities. This seems to be related to the contents of their specific knowledge. The Social Sciences and Humanities are understood as '*science de la morale*' (Durkheim) and their potential for organizational issues and policy analysis is underestimated. Apparently, political frameworks are understood outside the social science world as an independent variable outside research as such, and without any major influence on the direction and content of research as such.

Relevant for this argument is the fact that more than one in five respondents does not consider any of the potential users as relevant (if the policy support projects are not taken into consideration). However, the participation of social and humanities scholars is paramount: just one in ten projects with the participation of social scientists could not see potential users for the knowledge they produced. By contrast this assessment is held by one in five respondents for projects without the participation of social scientists.

Table 23:  
Main users of project outcomes by type of project

	SSH researchers are:			Without Specific Support Projects
	Involved	Not involved		
Considered as the main user of research output: <sup>1)</sup>	Yes		Total	Total
European Commission *	56.5% (124)	30.4% (168)	41.4% (292)	30.7% (225)
Government, public authorities*	53.3% (122)	37.8% (180)	44.0% (302)	39.7% (232)
NGOs, CSOs,*	29.8% (121)	12.5% (168)	19.7% (289)	20.1% (224)
Business/industrial sector*	31.1% (122)	44.7% (179)	39.2% (301)	45.1% (235)
Main user: none of these*	12.6% (127)	20.2% (183)	17.1% (310)	21.6% (241)

Notes:

\* Figures in brackets are the total number of respondents.

1) multiple response question. Percentages refer to columns, i.e. involvement of SSH researchers; e.g. 56.5% of all co-ordinators of projects with SSH involvement consider the European Commission the main user of their research output.

Projects that feature the participation of the Social Sciences and Humanities typically address more than one user group. Nearly half of these projects are addressed to more than one user as compared with one fourth of the other projects. Most of the latter are meant for one specific user group, mostly for the industrial and/or the business sector, or for national governments and administrations.

If one just looks at the projects already finalized, the results are quite different. Belief in the utility of the results is significantly higher. This seems to support Stehr's idea of travelling knowledge: among those

who have successfully achieved goals and objectives in research there is much high confidence in the usefulness of research results. Nearly all of the researchers of completed projects claim to have an overview of the use of research findings. It should be noted here that more than half of the projects were still ongoing at the time of the survey.

Although one can observe a much higher confidence in the actual use of research results, the inclusion of the Social Sciences and Humanities has a significant impact on the understanding of usefulness. The Social Sciences and Humanities are typically more often involved in projects whose results are used by the European Commission (86%), public authorities (84%) and NGOs or CSOs (78%). Research oriented towards the business and/or industrial sectors typically leads to a lower involvement of Social Science and Humanities.

*Table 24: Use of knowledge produced by different users*

	SSH researchers are:			SSP Excluded
	Involved	Not involved		
Knowledge used by ... <sup>1)</sup> :	Yes		Total	Total
European Commission	86%	78.3%	81.5%	80.9%
Government, public authorities	84%	75%	66.4%	77.7%
NGOs, CSOs	78%	58%	66.4%	67.0%
Business/industrial sectors	72%	84%	79%	86.2%
Total n = 119	n = 50	n = 69		n = 94

*Note: multiple response question. Percentages refer to columns; e.g. involvement of SSH researchers; e.g. knowledge produced by 86% of all projects with SSH involvement is used by the European Commission.*

How - in the view of project co-ordinators - do users use research results? The results seem to be logical: direct implementation of the research results and the recommendations only plays a role in research oriented towards the business and industry sectors. Project results and recommendations are used to a lesser extent by national public administrations, and even less so by the European Commission. Instead, the European Commission tends to refer to the projects in a more superficial way. Least is known about the use of knowledge by NGOS or the public at large.

*Table 25: Use of knowledge as perceived by researchers*

	In what way was the knowledge produced used by ...			
	...European Commission?	...Government, public authorities	...Business, and/or industry	...NGO and/or CSO
	(n=120)			
Used the project information	30.8%	37.5%	34.2%	27.5%
Referred to the project	38.3%	25.8%	10.8%	27.5%
Implemented project results/recommendations	12.5%	15.8%	34.2%	11.7%
Don't know	18.3%	20.8%	20.8%	33.3%

## Quality of the co-operation, experiences gained and the intention to co-operate in the future

Co-operation between SSH and non-SSH has worked well, leading to a commitment to include social sciences and humanities in future projects as well. Interdisciplinarity is apparently not a one-time issue, but a long-term approach.

Due to the limitation of an article we cannot go into details, but the data suggest that those who have collaborated with social sciences and humanities scholars initially had some difficulties in finding mutual understanding. Problems were, however, overcome in the course of the collaboration. Nearly all of the respondents rank the co-operation either as *very good* or *good*. During collaboration few communication problems occurred and mutual expectations were met.

The result is that nearly all of the co-ordinators who have experience in collaborating with the Social Sciences and Humanities state their interest in including them in the future as well. Moreover, there seems to be a tendency towards the increased use of social science and humanities knowledge: one in four co-ordinators who had not had joint research experience in the past intended to try it out in the future.

When it comes to reality, however, there is a *caveat*. More than one third of the co-ordinators who are running ongoing projects not including the Social Sciences and Humanities have had past experiences with interdisciplinary co-operation with social scientists.

Table 26: Plans for future interdisciplinary co-operation

Do you plan to work with Social Science and Humanities researchers in the next few years?		Yes	No
Already worked with SSH researchers	Yes (n = 153)	90.2%	9.8%
	No (n = 119)	24.4%	75.6%
Total	n = 272	61.4%	38.6%

## Summary and Conclusions

What are we to make of the above findings?

This paper starts out from concern about the future of the Social Sciences and Humanities. Since their early beginnings the social sciences have had to fight their way into the *canon* of recognized sciences. The story of the humanities is slightly different in that philosophy was accepted for a long time. However, the upsurge of the natural sciences has put the humanities on the defensive in modern times .

It was not before the 4<sup>th</sup> European Framework Programme for Research and Development that the Social Sciences and the Humanities entered the European agenda as a recognized field of research . Since then, whenever discussion starts about the next framework programme, the Social Sciences and Humanities have seemed to be in jeopardy.

**What are societies' needs, and what role falls to the Social Sciences and Humanities?**



The starting point of this paper is the suggestion to look at this issue not from a specific disciplinary point of view, but in the more general framework of the sociology of knowledge. Unlike pre-democratic societies, modern societies are characterized by an enormous increase in shared education: information is available and hence knowledge accessible. Democracy entitles society at large to participate in the stock of knowledge and society has claims on scientific communities.

To translate this into terms of meaning for the world of researchers, we have proposed concentrating on the following question: *'How can the Social Sciences and the Humanities best meet the needs of societies?'*

The question is by no means banal. We have to understand societies' needs, we have to see what the Social Sciences and Humanities have to offer, and we have to know under which conditions this knowledge can be provided by the Social Sciences and Humanities, or, to put it more precisely, by the researchers who are the keys to the successful interaction between science and society.

What are societies' needs? In very generic terms, in democratic political systems based on competitive market economies, societies require knowledge and its raw material, information. Knowledge is, in Nico Stehr's term, the capacity to act. The Social Sciences and Humanities should hence contribute to the Knowledge Society, the Knowledge-Based Economy and/or to evidence-based politics and policies.

What have the Social Sciences and Humanities to offer? In our view, and again in generic terms, concepts and contents. In terms of *concepts*, there are the traditional academic ones and the 'applied sister' of academic research. Academic knowledge travels and is transformed; applied research and consulting are based on these concepts. Yet another type of knowledge is the knowledge produced for capacity-building. This is where issues of transdisciplinarity come in.

In terms of *contents*, the Social Sciences and Humanities produce knowledge on values and norms, knowledge on structures and institutions and knowledge on rules, procedures and political actions.

Knowledge is produced by researchers who work in specific environments. This is why we looked at the institutional set-up, the institutions in which researchers work and the policy environment.

Coming back to societies' needs, we have to turn to the integration of knowledge, more specifically, to the way in which social sciences collaborate with other research disciplines. Societies do not 'need' specific disciplinary knowledge, but problem-oriented research combining contributions from various types of scientific knowledge ('interdisciplinarity'), or even contribution from all types of experts from outside the academic world ('transdisciplinarity'). When talking about the future of the Social Sciences and Humanities this is why the perception of the research communities outside the Social Sciences and Humanities is relevant.

### **How does Social Sciences and Humanities research work in Europe?**

The concept of the 'European Research Area' is a political one and intends to encourage more intensive collaboration between the European research communities. Actually, research collaboration had already started long before the concept was devised, but the European Framework Programmes have significantly contributed to increasing this collaboration. It has worked in two directions: the Framework Programmes have successfully fostered co-operation between researchers and research institutions throughout Europe, and between different disciplines.

The social sciences' and the humanities' communities in Europe evince communalities and diversities. The most important difference is the shaping of the research landscape in the respective Member States, based

on historical developments, and the state of reforms that are under way. Transformation will take some time to show an impact, and reforms are facing opposition and resistance.

National research systems may be characterized by two elements:

- the respective role of universities, public research organizations and academies and private research actors,
- the funding structure and other modes of governance and
- the degree of openness towards society, the economic actors and the political system.

Four different types of national research systems,<sup>13</sup> or landscapes, emerge with respect to the Social Sciences and Humanities:

- *The Anglo-Saxon model* that features a high degree of adaption of the universities to the needs of the modern task-oriented research process. In this model the universities dominate the research landscape, are successful in the national and international competitive research tenders and are used to dealing with various stakeholders outside academia. In terms of funding, they still enjoy a high share of core funding, but third-party financing and contract research are considered important as well.
- *The Northern European model* is likewise characterized by a high proportion of universities in research. In terms of funding, core funding is less important than in the Anglo-Saxon model.
- *In Central Europe*, quite a fragmented system can be observed. Universities and research organizations play different roles in the Social Sciences and Humanities. Research organizations are more oriented towards the competitive research 'market' and are in some respects closer to the Anglo-Saxon model than the universities. This is particularly true of the private non-profit organizations that emerged when the universities could not adapt to the new funding structures the same way as the Anglo-Saxon universities.
- *The French model* is a unique one, quite different from the others. It is based on a dual system between public research organizations and universities. Competitive national or international funding plays a minor role in their funding strategies.

It is, of course, not the objective of this paper to appraise what the best model might be. What the paper does, instead, is assess the impact of the different modes of governance on the social Sciences and Humanities.

### **Meeting societies' needs: disciplinarity, interdisciplinarity and transdisciplinarity**

Looking at the literature on the shift in knowledge production, one may get the impression that the traditional academic mode of knowledge production is old-fashioned and outdated and should be replaced by new forms of knowledge, e.g. interdisciplinary and transdisciplinary research. This is certainly wrong, as academic research has a potential for innovation in theory and methodology. Furthermore, as Kaufmann and Kasztler note, a lot of research labelled 'transdisciplinary' is in fact based on traditional disciplinary research work, the conclusions from which are subsequently discussed with stakeholders outside academia (Kaufmann & Kasztler, 2009, with references to Weingart, 1999 and Pregernig, 2006). The European Union has acknowledged the importance of scientific research by devising the European Research Council as a supplement to the traditional task-oriented Framework Programmes.<sup>14</sup>

Rather than replacing traditional modes of research, interdisciplinary and transdisciplinary research has supplemented the traditional modes of performing research, but it faces opposition and obstacles.

Interdisciplinary and transdisciplinary activities even more so, overcome 'disciplinary' boundaries. This explains at least partly the resistance of the traditional system that fears the weakening of its traditional standing and reputation in the knowledge creation process. The major challenge for the future is to find a new balance between the traditional system and the innovative approaches.

The cornerstones of European research are the 'research actors', i.e. research organizations and researchers. They are subjected to a variety of governance measures that influence their way of what and how research is done. Although there is a widespread claim that researchers set their research agendas according to their own interests, it becomes obvious that there are several factors that influence agenda setting.

The growing importance of competitive funding has changed the practice of research in the Social Sciences and Humanities – *albeit* the shift has happened faster in some research environments than in others. The Anglo-Saxon universities have been more responsive to the change by introducing formal evaluation and opening academia to various stakeholders, thus better managing the integration of higher education and research. By contrast, in Central European environments, new research organizations have been created to cater to new demands. In France, transdisciplinary research is not yet a relevant issue: less than 10% of researchers are committed to this type of activity, as against 20% in Central European research organizations as well as in Anglo-Saxon universities.

On the whole, the social science and humanities communities have reacted to the increasing demand for interdisciplinary research. There are, however, subjective and objective barriers. There are indications that interdisciplinary and transdisciplinary work does not contribute to career advancement: the evaluation criteria are far too traditional. Hence, the 'reputation' of outside funding sources is comparatively low, especially with regard to European and international funding. Doing work that directly feeds into policy (through consultancy or contract research, for instance) is widely thought of as being of 'lesser' quality. Gaining research grants – especially if they come from national research councils – is, however, considered an important criterion for scientific recognition.

The educational background of the researchers plays a role. Researchers who have chosen to study a combination of subjects rather than just one discipline are also more likely to engage in interdisciplinary and transdisciplinary research. Furthermore, researchers with a humanities background are more active in interdisciplinary research than their social science colleagues.

'Multi-tasking' has become a common pattern characterizing the work of modern researchers. Apart from research and teaching, the administrative workload has become part of the everyday life of modern researchers. Just one in four researchers throughout Europe can devote most of his/her time to research. For the majority, teaching and administration represent a significant additional burden; one in four researchers even shares his/her time equally between research, teaching and administration.

The majority of the researchers in the Social Sciences and Humanities do not want to change their profession, and a reason for this might be that the researchers understand work in the Social Sciences and the Humanities to be a vocation. There is, however, an interesting differing pattern between researchers at universities and researchers at research organizations. Researchers at universities want to stay in research, but would like to change their institutions for career reasons (or are, in some systems, forced to do so). Researchers at research organizations identify to a much higher degree with the institutions they are working in. If they intend to leave, they want to leave research in general. This might be related to their experiences with stakeholders outside the researchers' world.

### **Working in interdisciplinary environments**

Apart from the differences between the Social Sciences and Humanities, one finds quite a homogenous view on interdisciplinarity and transdisciplinarity – the practice thereof and the discourse about it. It is seen as important, widely practised, but not as what propels a professional career forward.

Without neglecting the importance of disciplinary work, the future of the Social Sciences and the Humanities is related to the ability of research institutions and research to reach out beyond their disciplines. An important share of research funding comes from interdisciplinary and transdisciplinary work. The European Framework Programmes are the most important examples of this type of funding.

As our research has shown, about 40% of the projects - apart from Priority 8 of the 6<sup>th</sup> European Framework Programme, which was devised as a specific programme for the Social Sciences and Humanities – had a contribution from the Social Sciences and the Humanities. Apart from problems at the outset of the project, collaboration with the Social Sciences and Humanities was quite appreciated by the project co-ordinators, even by those coming from other fields. The overwhelming majority of those who had collaborated with researchers in the Social Sciences and Humanities expressed the desire to continue to do so in the future. This appreciation is even greater when projects are directed at public authorities on the European, the national and/or the regional levels.

It is generally accepted that the Social Sciences and Humanities provide insights into issues not accessible to natural, medical or agricultural scientists and engineers. Knowledge on behaviour and attitudes is highest in demand. Knowledge on ethical aspects, changes in the labour market, gender and education are requested by co-ordinators as well, but there was a feeling that this has not yet fully been realized in research projects so far. There is a demand for knowledge on structures and procedures that will create opportunities for the Social Sciences and the Humanities in the future.

Another important strategy to increase the opportunities for the Social Sciences and Humanities is awareness-raising: co-ordinators who have not included social science expertise in their projects are not aware of the assets and thus remain unconvinced that the Social Sciences and Humanities can produce additional insights for their work. Projects not involving any social science expertise are mostly targeted at the business and industrial communities, whereas the business community is not seen as an important stakeholder for projects involving social sciences and/or humanities. As the business and industrial sectors face legal, political, ecological, and ethical issues, there is room for improvement here. The Social Sciences and Humanities have to enhance awareness as to their capacity to deal with structures and organizational practices.

Despite promising results, it is fair to state that the understanding of the role of the Social Sciences and Humanities does not always coincide with what researchers from these fields see as their strong points. The potential of social sciences is underestimated in the analysis of organizations, legal frameworks, economic instruments, etc.. The same is true of their potential to communicate with specific audiences, civil society actors and society at large.

### **What future for the Social Sciences and Humanities?**

The future of the Social Sciences and Humanities depends on their ability better to meet the needs of societies. However, it would be wrong to misunderstand this claim by neglecting the need for traditional academic research and to design strategies that promote 'applied research' at the expense of 'generic research'. This dichotomy is becoming more and more obsolete, as the Social Sciences and Humanities no longer claim to develop 'Grand Theories'. Theoretical and methodological work could be better understood as contributing to 'patchwork theories' (Pohoryles, 2007). Here, the idea is to find a way of integrating the

existing knowledge, which is often generated in an isolated way, into an overarching framework that helps us to understand society and to contribute to transforming it. Disciplinary research, interdisciplinary research and transdisciplinary work have to have their equitable share in the knowledge production process.

This paper proposes starting from a new typology: knowledge production is necessary in an 'instrumental way', in academia just as much as in (policy) consulting. In each of these fields, research is performed and applied in different forms: traditional academic work is more often than not done in a disciplinary fashion. As knowledge travels, consultancy adapts and translates this type of knowledge into one 'for use'. Furthermore, knowledge can be produced for capacity-building, and this is where the transdisciplinary issue comes in.

The challenge is to find an adequate balance between traditional and innovative forms of research. The balance can be reached by

- maintaining a high standard of disciplinary teaching at universities, whilst encouraging combined studies across disciplines;
- supporting the career paths of researchers by more flexible evaluation and research assessment tools that allow for adequately acknowledging innovative practices in research;
- overcoming the traditional ranking of publications and encouraging publication in interdisciplinary and transdisciplinary journals;
- increasing the importance of dissemination by traditional and innovative means;
- opening universities towards society and the economy by initiating exchange programmes allowing researchers to switch between different sectors without the risk of slowing down their individual career paths;
- defining a funding structure allowing for freedom of research as well as target research, possibly on a private-public partnership base;
- increasing interdisciplinary co-operation in universities, where the disciplinary borders are still too rigid.

Researchers have to play a role by:

- understanding the necessity of the different types of knowledge production and intensifying the disciplinary and interdisciplinary discourse;
- overcoming overspecialization and restrictive disciplinary borders;
- pro-actively disseminating the knowledge produced;
- creating awareness of the contents and methods of social science and humanities knowledge among communities outside academic circles.

There is a need for social sciences and humanities knowledge. This need has to be substantiated to safeguard the future. The scientific communities have to strive for 'excellence', but the understanding of 'excellence' must be enlarged beyond mere bibliographical factors. To reach society, the economy and the political system, good interaction is required between the different intellectual communities, an interaction that overcomes traditional feuds between schools and disciplines. There is a long way ahead, it may sometimes be arduous, but it is necessary and worthwhile undertaking.

## Bibliography

- Adorno, T. &. (1969). *Der Positivismusstreit in der deutschen Soziologie*. Neuwied: Luchterhand.
- Briggle, A. (2009). The US President's Council on Bioethics. (J. Luce, & L. Giorgi, Eds.) *Innovation - The European Journal of Social Science Research* , Vol. 22, No. 1, S. 35 - 53.
- Dienel, H.-L., Hammerlund, K., & Peterson, M. (2002). The Historical Context of Evolution of National Research Systems and International RTD Collaboration. (R. Pohoryles, & B. van der Meulen, Eds.) *Innovation - The European Journal of Social Science Research* , 4, 2002.
- 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* , S. 125 - 142.
- Friedell, E. (1948). *Kulturgeschichte der Neuzeit*. Hamburg: Beck.
- 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, No. 1, S. 7 - 35.
- Galbraith, J. (1981). *A Life in Our Time*. New York: Random House.
- Gibbons, M. (2000). *Mode 2 society and the emergence of context-sensitive science*. *Science and Public Policy*.
- Gibbons, M., Limoges, C., & Nowotny, H. (1994). *The New Production of Knowledge: The Dynamics of Science and Research in Contemporary Societies*. Sage Publications.
- Gouldner, A. *The Coming Crisis of Western Sociology*. New York: Basic Books.
- Habermas, J. (1973). *Legitimationsprobleme im Spätkapitalismus* ( also as: Legitimization Crisis, 1976, Heinemann Educational Books). Frankfurt/Main: Suhrkamp.
- Habermas, J. (1981; 1984). *The Theory of Communicative Action* ( Vol. I, Reason and the Rationalization of Society). Oxford: Blackwell Publishers.
- Habermas, J. (1987). *The Theory of Communicative Action* ( Vol 2: The Critique of Functionalist Reason). Oxford: Blackwell Publishers.
- Habermas, J., & Luhmann, N. (1974). *Theorie der Gesellschaft oder Sozialtechnologie. Was leistet die Systemforschung?* Frankfurt/Main: Suhrkamp.
- Hennen, L., & al., &. *Towards a Framework for Assessing the Impact of Technology Assessment* ( In: Bridges between Science, Society and Policy). (M. D. Ladikas, Eds.) Berlin: Springer Verlag.
- Hollingsworth, R., & Müller, K. H. (2008). Transforming socio-economics with a new epistemology. *Socio-Economic Review*, 6 , S. 395-426.
- INNOCULT. (2002). *Internationalisation of Research: Institutional Innovation, Culture and Agency in the Framework of Competition and Co-operation*.
- Jahoda, M., Lazarsfeld, P. M., & Zeisel, H. (1924; 1975). *Die Arbeitslosen von Marienthal* ( also as: Marienthal; the Sociography of an Unemployed Community, Chicago: Aldine (1971)). Frankfurt/Main: Suhrkamp.

- Karstenhofer, K. (2009). Debating the risks and ethics of emerging technosciences. (J. Luce, & L. Giorgi, Eds.) *Innovation - The European Journal of Social Science Research*, Vol. 22, No.1, S. 77 - 104.
- Kaufmann, A., & Kasztler, A. (April 2009). Differences in publication and dissemination practices between disciplinary and transdisciplinary science and the consequences for research evaluation. *Science and Public Policy*, 36 (3), S. 215 - 228.
- Kreutz, H. (1990). *Pragmatische Analyse von Texten, Bildern und Ereignissen (Analysis of texts, pictures and events in a pragmatic perspective)* (Angewandte Sozialforschung, Vol. XVI 1& 2). (H. Kreutz, Eds.) Opladen: Leske & Budrich.
- Kreutz, H. (1988). *Pragmatische Soziologie. Beiträge zur wissenschaftlichen Diagnose und praktischen Lösung gesellschaftlicher Gegenwartsprobleme (Pragmatic Sociology. Contributions to scientific diagnosis of and practical solutions for contemporary societies)*. Stuttgart: Enke.
- Leydesdorff, L., & Etzkowitz, H. (1998). The Triple Helix as a Model for Innovation Studies. *Science and Public Policy*, 25(3), S. 195-203.
- Luce, J., & Giorgi, L. (2009). Knowledge Politics and Converging Technologies. *Innovation - The European Journal of Social Science Research*, Vol 22, No. 1, S. 1 - 6.
- Mannheim, K. (1950). *Freedom, Power and Democratic Planning*. New York: Routledge & Keagan Paul.
- Mannheim, K. (1929). *Utopie und Ideologie* (also as: *Ideology and Utopia*, Routledge 1954). Frankfurt: Vittorio Klostermann.
- 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, No.1), S. 29 - 41.
- Nowotny, H., Scott, P., & Gibbons, M. (2001). *Rethinking Science: Knowledge and the Public*. Blackwell Publishers.
- PLATON+. (2006 - 2010). *The Role of Socio-Economic Science and the Humanities in European Funding Strategy*. Research project commissioned by European Commission in the Seventh European Framework Programme.
- Pohoryles, R. (1993). Between Society, Politics and the Market: the Structure and Future of Social Science Research. (G. Muskens, & R. Richter, Eds.) 3/1993, S. 195-210.
- Pohoryles, R. (2007). Do the Social Sciences need to be re-thought and, hence, be innovated? In L. van Langenhove, *Innovating the Social Sciences* (S. I - XXIX). Vienna: Passagen.
- Pohoryles, R. (September 2003). Vers une monopolisation et une renationalisation de la recherche européenne en sciences sociales? (J. Crowley, Eds.) *Revue internationale des sciences sociales*, 177, S. 519 - 528.
- Pohoryles, R., & Eckstein, W.-E. (1988). Bürgerbeteiligung als gesellschaftliche Innovation. *Innovation - The European Journal for Social Science Research*, 1 (1), 29 - 47.

Pohoryles, R., & van der Meulen, B. (2002). *Institutional Innovation and Europeanisation of Research* (Innovation: The European Journal of Social Science Research, Vol. 15 (2)). Cambridge: Francis&Taylor.

SSH-FUTURES. (2006 - 2009). *Social Sciences and Humanities for Europe*. Research project commissioned by the European Commission.

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

Stehr, N. (2004). *Knowledge Politics: Governing the Consequences of Science and Technology*. Cambridge: Paradigm.

van Langenhove, L. (2007). *Innovating the Social Sciences*. Vienna: Passagen.

Wallerstein, I. (1996). *Open the Social Sciences: Report of the Gulbenkian Commission on the Restructuring of the Social Sciences*, . Stanford: University Press.

Wallerstein, I. (2004). *The three meanings of 'discipline'* ( Re-inviting the Social Sciences). (OECD, Eds.) Paris: OECD.

Weingart, P. (1999). Neue Formen der Wissensproduktion: Fakt, Fiktion und Mode (New Forms of Knowledge Production: Facts, Fiction and Fashion). *TA-Datenbank-nachrichten* , 3 (4), S. 48 - 57.

Wuggenig, U. (1990). Die Photobefragung als projektives Verfahren (The photo-inquiry as projective method). (H. Kreutz, Eds.) *Angewandte Sozialforschung* , S. 109 – 130.

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<sup>2</sup> SSH-FUTURES project: Social Sciences and Humanities for Europe (ongoing).

<sup>3</sup> The Interdisciplinary Centre for Comparative Research in the Social Sciences, Austria (Co-ordinator); The International Social Science Council, France; Le Centre Interdisciplinaire pour la Recherche Comparative en Sciences Sociales, France; Karl-Mannheim-Chair for Cultural Studies, Zeppelin University Friedrichshafen, Germany ; GESIS, Germany; Foundation for European Scientific Co-operation, the venture of the Polish Academy of Sciences and Foundation for Polish Science; Department of Humanities, University of Gothenburg, Sweden; Interdisciplinary Center for Technological Analysis and Forecasting, University of Tel-Aviv, Israel; United Nations University, Comparative Regional Integration Studies, Bruges, Belgium; James Martin Institute for Science and Civilization, Said Business School, Oxford University, UK; Economic and Social Institute, Amsterdam, The Netherlands.

<sup>4</sup> The partners came from Austria, France, the Netherlands, the UK, Germany, Poland, and Israel.



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<sup>5</sup> INNOCULT project: Internationalization of Research: Institutional Innovation, Culture and Agency in the Framework of Competition and Co-operation.

<sup>6</sup> INNOCULT project: Internationalization of Research: Institutional Innovation, Culture and Agency in the Framework of Competition and Co-operation.

<sup>7</sup> PLATON+ project: The Role of Socio-Economic Science and the Humanities in European Funding Strategy (ongoing)

<sup>8</sup> See the analyses of the work programmes and the European research strategy conducted within the framework of the PLATON+ project: The Role of Socio-Economic Science and the Humanities in European Funding Strategy.

<sup>9</sup> Priority 1: Life Sciences, Genomics and Biotechnology for Health (HEALTH) (11 responses); Priority 2: Information Society Technologies (IST) (61 responses); Priority 5: Food Quality and Safety (FOOD) (90 responses); Priority 6: Sustainable Development, Global Change and Ecosystems (SUSTDEV) (40 responses); Priority 8: New and Emerging Science and Technologies (NEST) (46 responses); and Scientific Support to Policies (SSP) (70 responses)

<sup>10</sup> Priority 8 of FP6. This priority is not continued in the Seventh Framework Programme.

<sup>11</sup> Here, the sample is limited because it just comprises projects in which social scientists have participated, without counting those headed by social scientists.

<sup>12</sup> This information has been gained by sampling projects for the studies at hand and has recently been confirmed by yet another project. Using the Cordis database that contains the link to the project websites, it can frequently be seen that the website mentioned no longer exists.

<sup>13</sup> This paper merely deals with the Social Sciences and Humanities. The situation is quite different as far as the natural sciences and technology development are concerned.

<sup>14</sup> It has to be noted here that the late recognition of the importance of research funding by mere scientific criteria is not related to a lack of understanding by the European Commission, but to the history of European research funding. Up until recently, the Commission was only allowed to finance 'pre-competitive RTD' due to the subsidiarity principle, leaving merely scientific research funding to the Member States.