The Social Sciences and the Humanities

use it don't lose it

POSITION PAPER FROM DEA





Content

PREFACE	3
1. KEY PROPOSALS	5
2. INTRODUCTION	7
3. THE POLICY CONTEXT	8
4. SSH UP UNTIL NOW IN THE FRAMEWORK PROGRAMME 7	11
5. STRENGTHEN SSH IN AN INTERDISCIPLINARY CONTEXT	15
6. SSH AS INNOVATION DRIVER	18
7. SUMMARY	22
APPENDIX	23

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— use it don't lose it

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Preface



With this paper DEA would like to contribute to the debate about how the Social Sciences and the Humanities (SSH) can contribute to solving future challenges for Europe and realising the Innovation Union. This position paper will propose an improved integration of the SSH in the European Commission's future framework for research and innovation (Horizon 2020).

The complexity of the Grand Societal Challenges demand alternative solutions and new ways to exploit our academic competences in the best and broadest way possible. We believe that these challenges must be solved with contributions from many sciences in an interdisciplinary way. This is not done by losing the Social Sciences and Humanities, but by using it.

Our work in improving the integration of SSH in a future framework for research is of Danish interest and our work is financially supported by The Danish Council for Strategic Research.

In 2012 Denmark will hold the Presidency of the Council of the European Union, where some of the major strategic decisions about Horizon 2020 will be discussed and determined. The intent of this position paper is to serve as input to the debate concerning the way the European Commission should support research in SSH.

Stina Vrang Elias, Managing Director at DEA

This paper will propose an improved integration of the Social Sciences and the Humanities (SSH) in the European Commission's (EC) future framework for research.

The recent debate about the SSH in the EC research programmes has focused on the possibility for the SSH to find its place in the Grand Societal Challenges and the Innovation Agenda. This paper will show how and why the SSH can play an important role in realising the Innovation Union and contributing to solve the Grand Societal Challenges.

1. Key proposals

We argue that there is a clear potential for strengthening the use of SSH research in the future European research programmes and that the knowledge produced in SSH indeed can contribute to both the Innovation Union and the Grand Societal Challenges.

- We strongly recommend that a distinct programme for SSH research to address the societal challenges that Europe and the world are facing will be set up and allocated increased funding compared to Framework Programme 7 (FP7)¹. We propose that the funding to the budget of a distinct SSH programme is increased significantly, so that the success rate in the area of SSH, which is around 9 percent as a minimum will be able to approach 22 percent that is the average success rate in FP7 in general.
- We support the idea that a future framework programme should be structured around the Grand Societal Challenges. We recommend a full integration of SSH research in the Grand Societal Challenges, meaning that SSH researchers will take part in the whole process, from problem formulation to project evaluation and project implementation.
- There is a large potential for the SSH to contribute to the realisation of the Innovation Union. We recommend establishing a focus shift in relation to the use of SSH research and knowledge in the European Research Area (ERA) from policy

developer to innovation driver, stressing the importance of business and innovation oriented SSH research. This does not mean that the SSH should no longer be used in policy development, but the SSH should also be used as innovation driver. The design of a new framework programme, in future research programmes and calls should make room for this role for SSH.

^{1.} As also argued by the report: "SSH experiences with FP7

⁻ a Commentary", NET4SOCIETY



RESEARCH WITHIN SSH HAS AN IMPORTANT ROLE TO PLAY IN PREVENTING FURTHER GLOBAL WARMING AND PREPARING THE EU IN CASE OF RADICAL CLIMATE CHANGES AND CATASTROPHES.



2. Introduction

The recent debate about the SSH in the European Commission's coming framework for research and innovation, Horizon 2020, focuses on the role of SSH in the Grand Societal Challenges and the Innovation Agenda. The Innovation Union and the Grand Societal Challenges will be the two major themes to form the future European Research Area (ERA).

We will discuss how and why the SSH can play an important role in realising the Innovation Union and contributing to solve the Grand Societal Challenges. The aim is to debate in depth the optimal integration of the SSH now and in the future in the European framework for research and innovation. This ambition is identical to the 2009 European Commission (EC) report on SSH.² The appendix presents selected examples of ways that the SSH can contribute in solving the Grand Societal Challenges.

Intent

We do believe that there are two important ways in which the EC should support research in SSH:

- SSH as innovation driver to realise the Innovation Union
- SSH as a fully integrated part in interdisciplinary projects on the Grand Societal Challenges so far defined to be:
 - Global warming
 - Energy, water and food supply
 - · Ageing society

- Public health
- Pandemics
- Inclusive, innovative and secure societies

This paper will argue that research in SSH is important for the EC in order to fully develop the Innovation Union. This paper will not promote specific areas under the SSH research. The research areas chosen serve merely as examples.

This paper will not argue against the visions of the Innovation Union to reinforce industry-driven priorities and applied science in the European framework for research. But this paper will show and argue that the industry will profit from demands for research and knowledge from SSH.

This paper will not argue against developing a future framework programme based on Grand Societal Challenges. This paper will show that research and knowledge from SSH is necessary in solving the Grand Societal Challenges.

^{2.} See "Emerging Trends in Socio-economic Sciences and Humanities in Europe", METRIS report, 2009, p. 134.

3. The policy context

The European Commission has launched its communication on Europe 2020 flagship initiative Innovation Union. The European Commission has strategically decided to appoint research and innovation as cornerstones in restoring the European Union after the financial crisis. This goes hand in hand with recommendations from the OECD stating that the knowledge society must base its future growth on innovation.³

The goal of the European Union is to increase spending on R&D from 1.8 percent to 3 percent of EU GDP and to attract 1 million researchers to the union, according to the Europe 2020 communication on Innovation Union.

At the moment Europe is behind in performance compared to US and Japan on important innovation indicators like both public and on private research investment and a large number of EU member states report brain drain to the US and Japan.

In November 2009, the European Commission, DG Research published the report "The Role of Community Research Policy in the Knowledge-Based Economy". The report identified ways to maximise the efficiency of Community research policy in the post-2010 period and launched the focus on "Grand Societal Challenges" – as a concentration of research effort to solve major societal problems.

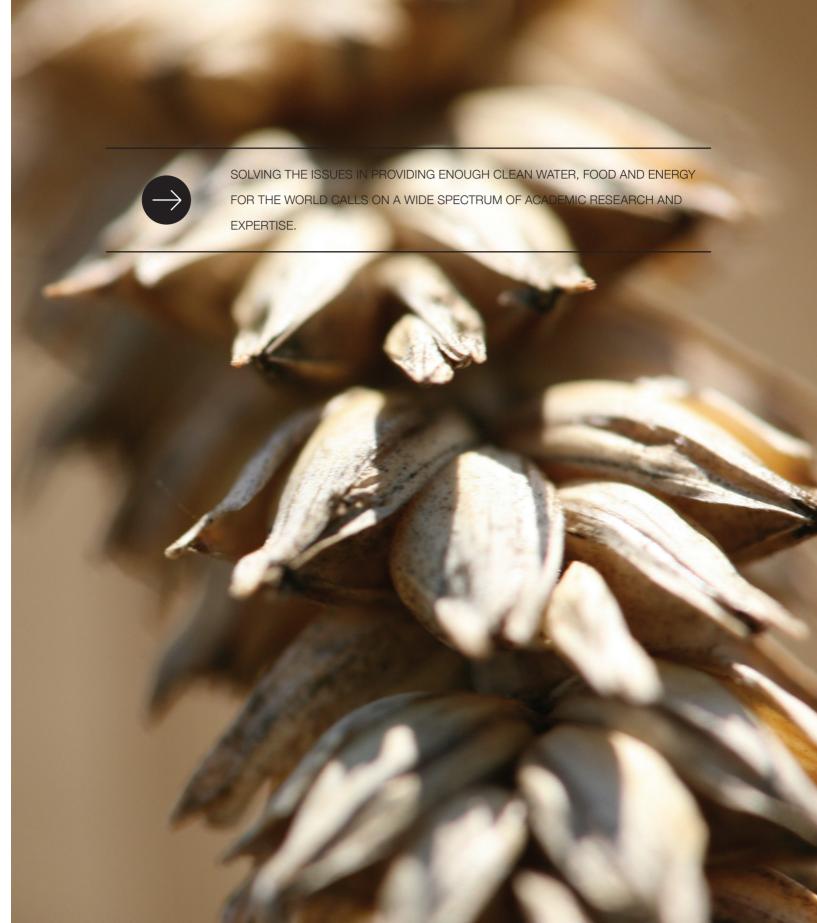
However, the Innovation Union and the Grand Societal Challenges have been launched with a strong bias

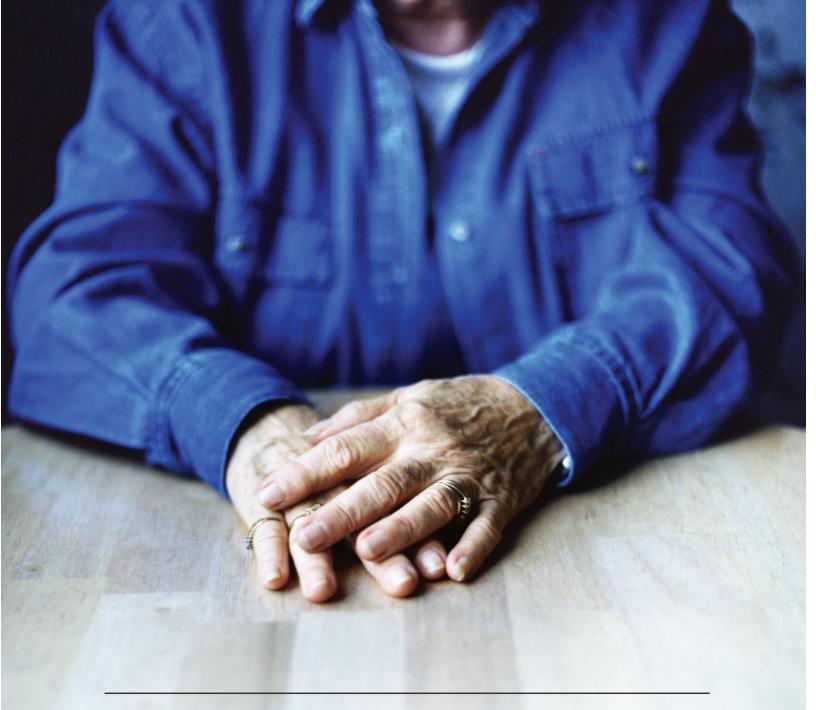
towards the technical and natural sciences. The SSH have not yet been included to exploit their full potential. The SSH disciplines are in the process of creating a space for themselves in the European framework programmes. So far they have mainly served as policy-making disciplines (the SSH thematic area in Cooperation) and as minor research parts under the other areas. So far the SSH research under the framework programmes have made decisive contributions to the solutions of urgent issues of government, sustainability, and culture for the 21st century.

In order to fully exploit the potential of SSH research in the future development of the ERA, this paper will give some recommendations to further changes.

^{3.} OECD, 2010

^{4.} The Metris report, 2009







THE GRAND CHALLENGE OF THE AGEING SOCIETY INVOLVES SEVERAL RESEARCH AREAS OF SSH. SSH RESEARCH CAN ACCELERATE INNOVATION AND INSPIRE TO THE CREATION OF NEW PRODUCTS AND SERVICES TARGETED AT THE AGING SOCIETY.

4. SSH up until now in the Framework Programme 7

SSH research was first introduced in FP4 in the context of "Targeted Socio-economic Research" (1994–1998), with a small budget of \$\square\$ 130 million. The budget for SSH research was increased in the following Framework Programmes. Under FP5 (1998–2002) the SSH area was funded under the key action "Improving the socio-economic knowledge base" (budget \$\square\$ 165 million).

SSH obtained programme status in FP6 (2002–2006). being the seventh of seven thematic priorities ("Citizens and Governance in a knowledge-based society") with a budget of 245 million. "SSH maintained its programme status in FP7, while for the first time explicitly addressing the humanities and encouraging their participation. The steep budget increase from the 6th to the 7th FP (=623 million) is not as spectacular as it may appear: FP6 lasted for a duration of four years, while FP7 covers seven years. Theme 8 "SSH" of FP7 is the world's largest research funding programme for the socio-economic sciences and the humanities while at the same time being the smallest of the 10 theme-oriented programmes within the specific programme Cooperation. SSH is still a "youngster" in comparison to the majority of Cooperation Themes such as "Health", "Food" or "ICT"".5 The budget of FP7 is shown on the next page.

SSH research is also integrated in the cross-cutting issues of other themes of the specific programme Cooperation. Moreover, SSH research is also funded in the specific programmes *Ideas*, *People and Capacities* (e.g. "Science in Society").

A survey conducted by Net4Society at the midterm stage of FP7 in 2010 describes that, more than 1,700 proposals have been submitted to Theme 8 "SSH" and 134 projects have been funded, associating over 1,500 institutions. A total of 14,702 partners have participated in proposal submission and 1,169 partners have been funded. The success rates in Theme 8 "SSH" is around 9 percent and thus considerably lower than the average success rate of around 22 percent in FP7 in general.⁶

"Low success rates and thus a substantial waste of research resources in applications that pass the evaluation threshold but cannot be funded due to budgetary restraints are considered areas of concern in the Interim Evaluation. These aspects are also main concerns in the specific field of SSH, as the results of this survey show."⁷

The low success rates and the overwhelming interest and participation from the SSH researchers in Theme 8 "SSH" seems to be an evidence based reason to allocate increased funding to the budget of SSH research in Horizon 2020.

The SSH as research for policy development

The Council Decision legitimising the 'key action' dedicated to supporting "socio-economic research" of FP5 points out the importance of specifically European socio-economic research to tackle challenges faced by the European society. The following quote from the Council Decision illustrates the viewpoint of EU decision makers:

TABLE 1: BUDGET FP7 8

Programme	Theme	Funding mio.
Cooperation		32.413
	Health	6.100
	Food, Agriculture and Fisheries, and Biotechnology	1.935
	ICT	9.050
	Nanotechnologies, Materials & new Production Technologies	3.475
	Energy	2.350
	Environment	1.890
	Transport	4.160
	SSH	623
	Space	1.430
	Security	1.400
Ideas	European Research Council	7.510
People	Marie Curie Actions	4.750
Capacities		4.097
	Research Infrastuctures	1.715
	Research for the benefit of SMEs	1.336
	Regions of Knowledge	126
	Research Potential	340
	Science in Society	330
	Coherent development of research policies	
	Activities of International Co-operation	180
Non-nuclear actions JRC		1.751
Total		50.521

"In a period of increasing challenges, such as unacceptable levels of unemployment, an ageing population, the globalisation of economies, an increase in inequalities, and a declining relative contribution to the world economy. European society will have to undergo changes towards achieving sustainable socio-economic development, the improvement of the quality of life of all its citizens, and to maintain and enhance Europe's competitive position in the world. Social sciences must therefore be in a position to respond to these challenges, overcome national boundaries, through reinforcing cooperation between them and enhancing their analytical capacity and thereby supporting policy-making. Furthermore, the process of European integration itself has given rise to a new object of study - European society - which is different from the sum of its components, although clearly dependent on them."9

The Council Decision is very clear and promotes social sciences as an important tool that will contribute with insights into and knowledge on topics that can help European policy makers reach the goals and solve the stated problems. This role of socio-economic research becomes even clearer in the task descriptions of the FP5 key action, e.g.:

"Research work will provide a sound knowledge base and contribute to the formulation and development of the relevant European policies."

This view on social sciences did not change in the following Framework Programmes, neither with regard to the European dimension, nor to SSH problemsolving potential and supportive characteristics. Due to the top-down approach, the definition of the key challenges and the main problems of society to be addressed by the research activities is closely connected to the policy aims laid down in the strategic

papers and documents, e.g. the Lisbon Strategy.

The policy context of the FP7 described in the work programme for Theme 8 "SSH", points out the importance of research for achieving the agenda of the Lisbon and Gothenburg Summits.

The challenges to be tackled are "... economic development and progress while at the same time achieving sustainability and improving cohesion; the need to bring about change while at the same time reinforcing core values and respecting diversity in its various manifestations; the need to reinforce the EU competitiveness while at the same time developing new types of international relations with our partners." ¹⁰

The socio-economic sciences and humanities theme is dedicated to supporting research and related activities, which can provide the basis for policy decisions. Research activities to be supported also have to improve insights and the understanding of developments and trends, as well as their driving factors. "This Priority should therefore help improve our knowledge in these fields, but also our policies."

In section 6 we will argue that SSH research also should be perceived as an innovation driver and not just as a policy developer.

11. ibid.

^{5. &}quot;SSH experiences with FP7 – a Commentary", Net4Society, March 2011, p. 16

^{6. &}quot;SSH experiences with FP7 – a Commentary", Net4Society, March 2011, p. 13

^{7.} ibid., p. 23

^{8.} Source: http://cordis.europa.eu/fp7/budget_en.html

^{9.} http://cordis.europa.eu/improving/socio-economic/5fpdec.htm, May, 2008

 $^{10.\} Work\ programme\ 2007-2008,\ FP7-Cooperation,\ Theme\ 8$ "Socio-economic Sciences and Humanities", European Commission C(2007)5765 of 29 November 2007, p. 4 .



CONCERNING THE CHALLENGE ON PUBLIC HEALTH IN THE EU IT IS IMPORTANT TO UNDERSTAND THAT RESEARCH WITHIN THE CLINICAL AND BIOLOGICAL SCIENCES ALONE CANNOT IMPROVE THE PUBLIC HEALTH MAXIMALLY.



5. Strengthen SSH in an interdisciplinary context

The authors of this paper support the idea that the European Commission's future framework for research should be structured around the Grand Societal Challenges. As mentioned earlier in the paper the Grand Societal Challenges for the EU have been suggested to be:

- Global warming
- Energy, water and food supply
- Ageing society
- Public health
- Pandemics
- Inclusive, innovative and secure societies

Because these challenges immediately seem to have a large focus on research within the natural, technical and health science, there is a concern that SSH will be limited to playing a minor and "add on" role in these challenges.

We believe that these problems can only be solved with contributions from many sciences and in a radical interdisciplinary set-up. The solutions must be found in collaborations between the different disciplines and sciences because they provide different perspectives and solutions to the same challenge.

The appendix presents selected examples on how the SSH can contribute to solving the Grand Societal Challenges. It is not possible to give an exhaustive overview of how and where SSH can contribute. What the appendix should make clear is that the different

methods used by the SSH areas can expose other sides of the Grand Societal Challenges that is blind to the natural and technological sciences. Different approaches have different blind spots and are only open to register some specific phenomena when interpreting a certain field. An anthropologist would for example not be able to register electric brain activity as a neuroscience researcher would be able to, and vice versa the neuroscience researcher wouldn't be able to register how certain cultural phenomena regarding the examined person is affecting him or her.

The appendix should be understood as pointing out that also within the Grand Societal Challenges, the SSH area can register some invaluable important phenomena that would never be exposed by other scientific approaches.

SSH and interdisciplinarity in the FP7

In a survey conducted by Net4Society a majority number of SSH researchers welcome interdisciplinary projects. A large scale conference in October 2009 also concluded that Europe by thinking across disciplines can better confront some of the complex realities of today's society. The EU 2020 Strategy demands for more interdisciplinarity and new solutions to tackle Grand Societal Challenges.

Interdisciplinary projects have already been launched by the FP7 and as mentioned earlier in this paper SSH knowledge and research are requested in several other thematic areas throughout the Cooperation part of the FP7. This either in a direct or indirect way:

- Directly addressing SSH: Covering areas in which SSH aspects are the main or an important aspect, or are addressed additionally to the main task and with a certain emphasis.
- Indirectly addressing SSH: Covering areas in which SSH aspects are addressed very indirectly or are simply included as an assumed precondition.

Today SSH research is not well integrated in FP7. SSH is mentioned in several of the FP7 thematic areas, but as a clear "add on". It is of utmost importance that SSH researchers are included in the formulation of all Grand Societal Challenges. The Net4Society survey states that 2 out of 3 respondents are unsatisfied with the integration of SSH aspects in other Cooperation themes.

A primary problem is that several of the work programmes under the FP7 thematic areas mention SSH in the beginning of the work programme and recommend SSH researcher participation. But in the formulation of the strategic research agenda, the SSH are not represented.

A consequence of SSH not being involved in the formulation of the research agendas and calls (only in the specific SSH programmes) is that in some EU-funded projects there seem to be a discrepancy between the knowledge demanded and the expert dealing with the problem in the project. In an analysis made by the EU-funded project PLATON+ there is a surprising finding. In the majority of projects, around 70 percent of the SSH researchers contributed information about behaviour. However, economists and lawyers are the dominant project participants.¹⁴

If the EC and the ERA want to take interdisciplinarity seriously – as SSH research in technology or natural science related projects – the EC needs to ensure that real interdisciplinary projects are being developed, that researchers from the SSH environment is represented in the formulation of the research questions, meaning that they are represented in advisory and expert groups, and that the evaluators understand the contribution of SSH to an interdisciplinary project. This will ensure joint research questions, methodology, and proceedings.

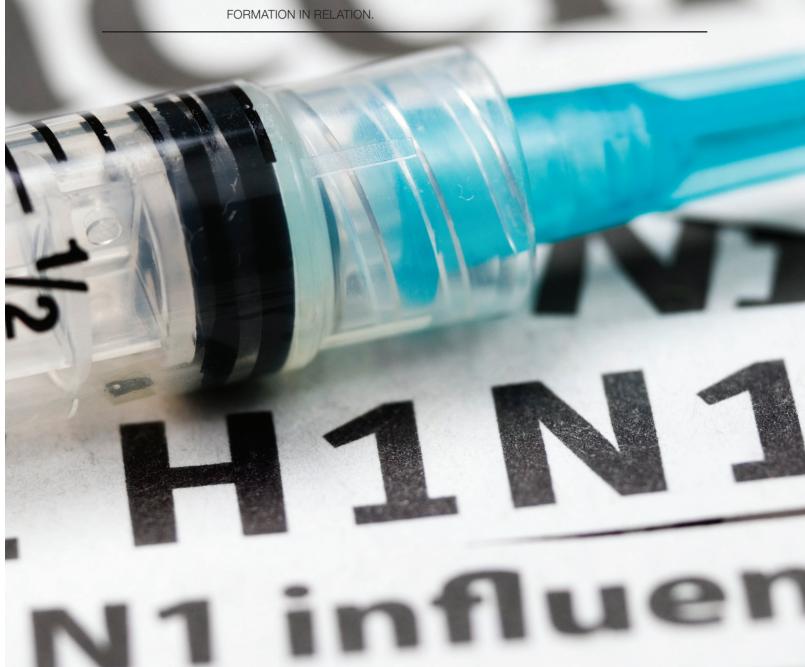
^{12. &}quot;SSH experiences with FP7 – a Commentary", Net4Society, March 2011

^{13. &}quot;Thinking across disciplines – Shaping our future welfare together", Conference held in Brussels October 2009, organisers: DEA, DI, EPC, PlatonPlus, 200 participants

^{14. &}quot;Mapping of the Socio-economic Sciences and Humanities research sub-areas within the 6th and 7th Framework Programmes", by the EU-funded project PlatonPlus, 2008



THE PROGRESS OF EPIDEMICS TRANSFORMING INTO ITS GLOBALISED VERSION, PANDEMICS, HAS A LOT TO DO WITH A NEW MODE OF SOCIALITY IN THE GLOBALIZED SOCIETY. WE NEED MORE KNOWLEDGE ABOUT THIS NEW SOCIAL FORMATION IN RELATION.



6. SSH as innovation driver

With the EU 2020 Innovation Union and the demand in the strategy for an inclusive and business-oriented research and innovation as well as strengthened knowledge transfer between business and academia we should secure that the development of SSH in a future framework for research follows a similar development – from policy oriented to innovation driver. This does not mean that the SSH should no longer be used in policy development, but the SSH should *also* be used as innovation driver.

In this section we will analyse how the SSH can contribute to the goal of the EU to become world leader in innovation. The Europe 2020 flagship initiative Innovation Union states that a broad concept of innovation – including innovation in services, improvements of processes and organisational change, business models, marketing, branding and design is necessary in order to achieve an Innovation Union. The SSH research areas can to a high degree contribute to this definition of innovation and thereby be used as an innovation driver in the union.

Policy context

A 2010 report from the Commission states that "... the development of social science capacity in the European Research Area (ERA) reflects the growing recognition of the contribution that social science can play to the challenges facing the European Union both on its own and in an inter-disciplinary, inter-sectoral context."

However, the report continues:

"It seems that very few private sector organisations are involved in funding SSH research in the majority of countries throughout Europe. The fact that there is very little information available on private sector and its link with SSH research also suggests that funding from this sector is limited. Based on input from policy makers during interviews and the survey and bearing in mind the evidently low levels of engagement between the private sector and SSH research, these findings suggest that the Commission agenda has had little impact on influencing private sector strategy in the area of SSH." 15

Looking at the topics funded under the SSH programmes in FP7 this does not come as a surprise. Not many private organisations can find relevant research calls under the SSH programmes. This does not mean that SSH knowledge and research have no value for private organisations; it means that the calls only reflect a corner of the SSH, namely the research for policy development.

The potential of the SSH is still not used to its full extend

SSH has a large potential as a contributor to the realisation of the Innovation Union. The European Union must support this contribution in the design of a new framework programme, in future framework for research and calls.

The potential of SSH is not used to its full extend by the European research programmes. Innovation needs new ways of thinking and SSH offers a sound and valuable contribution. Also expert groups have advised the European Commission to broaden their views on the use of SSH:

"The humanities should not be exclusively related to the arts, literature and culture; rather, the various humanities disciplines can provide content, critical and conceptual thinking, and self-reflection".¹⁶

An example of how to apply SSH research is an analysis of how private and public organisations need to change in order to cope with today's society as a consequence of globalisation. In this case the SSH research can be applied through activities such as:

- Mapping organic growth opportunities
- Finding the right cultural fit for acquisitions
- Developing new business concepts
- Organising and implementing innovation programmes internally
- Creating a fruitful process and environment for new ideas in the company etc.

There is a clear consensus on the innovation potential of an increased collaboration between SSH and public and private organisations.

Innovation is all about SSH

There are two main indications on how SSH can play a role in relation to an innovation agenda and in relation to the European business:

- The private sector employs more and more SSH candidates
- Research from SSH are demanded for an needed in the knowledge society

Firstly, more and more reports show that since the 1980s there has been an increasing demand for SSH knowledge in the private sector. The employment market for candidates from SSH has changed remarkably. Before most SSH candidates were employed in teaching and university research. But over the last decade more and more SSH candidates are employed in private companies.¹⁷

An example is a 2007 Danish survey on graduates from the Humanities, that shows that 55 percent of the employed graduates found jobs in the private sector (this includes private companies, NGOs and entrepreneurs). As a comparison the Danish private companies only employed 33 percent of the candidates in 2001.

The survey also shows that graduates from the Humanities in the private sector primarily were engaged with strategic communication, product development and innovation, marketing and advertising, IT, and sales. Graduates from the Humanities employed in the public sector are primarily employed in teaching, cultural communication and understanding.¹⁸

Secondly, the same report concludes that the development of a knowledge society in a globalised world SSH research has increasing importance. There is a need for new understandings of how companies relate to the world, user- and employee driven innovation, human resource management, better cultural understandings in a globalised world, just to mention a few examples. Whether we call this knowledge society, information society, experience economy or globalisation does not really matter. What matters is that there seems to be an increasing significance to the understanding of human and organisational behaviour, management, networking, flexibility, and human cooperation.

The need for research under SSH is further verified by the Danish Study When Social Science and Humanities research generates profit. In this study company managers in 100 companies were asked to define their future research needs. This resulted in seven broad research themes that all address SSH research areas:

- Quality and innovation
- Internet behaviour and communication
- The aging society
- Cultural and business understanding
- Risk and uncertainty
- Value, relevance and impact
- Dynamics of change

The research themes were pointed out to be of utmost importance for the companies to innovate and to work on a globalised market.

Knowledge and research in these areas create better framework conditions for enterprises to innovate and optimise because they will be better to work smarter. If this knowledge and research need is not taken seriously by the European Union in its development of the ERA, we could end up by losing the innovation potential of European companies.

^{15. &}quot;Evaluation of the impact of the Framework Programme on the formation of the ERA in Social Science and the Humanities", 2010 16. "Report of the Expert Group on Humanities – Positioning Humanities Research in the 7th Framework Programme", European Commission, 2007, p. 9

^{17. &}quot;Humaniora — erhvervslivets nye grundstof", Frølund, Hansen and Plauborg, 2009; "Humanistiske kandidater og arbejdsmarkedet — Rapport fra uafhængig arbejdsgruppe om de humanistiske universitetsuddannelser og fremtidens arbejdsmarked", The Danish Ministry for Science, Technology and Innovation, 2005; "Are there any

opportunities for humanities graduates to develop a career in oil and gas industry", Nugroho, 2004

^{18. &}quot;Humanistundersøgelse 2007 — Humanisternes veje fra uddannelse til job", Capacent Epinion, 2007

 [&]quot;Understanding Individual Behaviours in Organizations", Nadler, David A., J. Richard Hackman & Edward E. Lawler III; "When Social Science and Humanities research generates profit", DEA, 2007
 "When Social Science and Humanities research generates profit", DEA, 2007



THE HUMAN PERCEPTION OF BEHAVIOUR IS INDEED AN ANIMITERTWINED WITH QUESTION

DEMANDS MORE RESEARCH. SSH IS HIGHLY
SIVE, INNOVATIVE AND SECURE SOCIETIES.

7. Summary

This position paper has discussed how and why the SSH can play an important role in realizing the Innovation Union and contributing to solve the Grand Societal Challenges. By following the key proposals in part 1 the European Union will be better prepared to solve the Grand Societal Challenges and to release the Innovation Union. The complexity of the Grand Societal Challenges demand alternative solutions and new ways to exploit our academic competences in the best and broadest way possible. This is not done by losing the Social Sciences and Humanities, but by using it.

We believe that the Grand Societal Challenges can only be solved with contributions from many sciences and in a radical interdisciplinary set-up. The solutions must be found in collaborations between the different disciplines and sciences because they provide different perspectives and solutions to the same challenge.

The appendix emphasizes this point exactly. Selected examples of how the SSH can contribute to solving the Grand Societal Challenges is presented in the appendix and it points out, that the SSH can register some invaluable important phenomena that would never be exposed by other scientific approaches alone. We believe that the Grand Societal Challenges must be solved with contributions from many sciences in an interdisciplinary way.

Besides contributing to solve the Grand Societal Challenges the SSH can also to a much higher degree than today be used as innovation driver. Until now SSH knowledge has been used in the framework programmes as research for policy development through the development and analysis of specific socio-economic indicators, and work on trend analysis and the identification of emerging issues. We argue that the SSH should still be used in policy development but business and innovation oriented SSH research should also be utilized as innovation driver.

The Social Sciences and the Humanities – use it don't lose it.

Appendix

EXAMPLES OF THE IMPORTANCE OF SSH RESEARCH, IN SOLVING THE GRAND SOCIETAL CHALLENGES DEFINED BY THE EUROPEAN UNION

To highlight the importance of SSH research in the European Commission's coming framework for research we will now present selected examples. The examples will reflect a broad range of SSH contributions to the Grand Societal Challenges. Within each challenge we will present the SSH contributions; both in clarifying the magnitude of the future challenges, and by approaching the problems in different and broader perspectives.

First we would like to draw the attention to the more general concept of innovation. The demand for new services and products permeates all the grand challenges, and new knowledge about innovation is therefore needed.

"The very fact that so many people instinctively think technology is innovation is evidence that we need to crystallise a better understanding of what innovation is (and the benefits it can bring) and communicate this to the widest possible audience." 1

A report by DEA from 2007 surveyed the need for new research-based knowledge among one hundred fast-growing companies. The survey showed that especially within creativity and innovation there was a huge demand for new knowledge. The highest rated research topics were research within "Formalization of the creative processes".² Service innovation is on the top of the agenda in The European Union. A recently released report from the Expert Panel on Service Innovation in the EU points out that innovation no longer should be viewed as: "... purely technological, but rather how firms exploit new technologies, not only to develop new products and services, but also new channels to market, new business processes, new organisational structures, and new business models." ³

Within these areas of innovation SSH definitely has an important role to play. In relation to this Professor Ken Peattie from Cardiff University mentions that this new immaterial economy is strongly connected to SSH: "Sustainable competitive advantage is very rarely generated from technological excellence alone. Today, in markets which many people might assume to be dominated by technological issues, including cars, home computers and mobile phones, it is actually 'soft and subjective' factors like design, branding or customer service that are ultimately crucial in delivering and sustaining competitive advantage. These factors are very strongly rooted in the arts, humanities and social sciences." ⁴

According to a recently released report by McKinsey Global Institute, service innovation is one of the main drivers of our economies: "In developed economies, almost 90 percent of value-added growth comes

from services and only 10 percent from goods-producing industries." Therefore it is essential for the European economy to secure a competitive advantage and that funding for research within SSH will not be downsized.



GLOBAL WARMING

Research within SSH has an important role to play both in preventing further global warming and preparing the EU in case of radical climate changes and catastrophes.

Researchers in climate change agree about the huge need of knowledge from the SSH area in response to solving the challenge. Mike Hulme, Professor of Climate Change at the University of East Anglia and also the author of Why we disagree about Climate Change says: "Science is still a benchmark for environmental policy. But it's not scientific breakthroughs, but social science and humanities that will change people's behaviour." 6

Also the author of one of the most comprehensive books on the potential effects of climate change, economist Lord Nicholas Stern share the same stance by saying: "... the way we live in the next thirty years – how we invest, use energy, organize

transport and treat forests – will determine whether or not the huge risks climate change poses to the natural world, the economy and our everyday lives become a reality."⁷

Regarding prevention of a potential global warming, research within consumption in several aspects is needed. There is a need to chart the patterns of consumption and thereby create innovative solutions that can help us take a leap towards a new and more sustainable development of our consumption culture and reduce the emission of CO2. An example could be research in the huge amount of food thrown away in the households; research shows that an average family in Denmark throws away food for around €1,500 a year, which corresponds to approximately 20 percent of the yearly expenditure.⁸ This problem calls for knowledge within ethics, human behaviour, and other SSH-related disciplines.

Global Warming is indeed related to subjects regarding human behaviour, ethics, economy etc. New technologies and inventions can be applied, but without more knowledge about the population, their ethical and economic incentives in preventing global warming, it will be very hard to make serious changes in relation to our CO2 emission.



ENERGY, WATER, AND FOOD SUPPLY

Solving the issues in providing enough clean water, food and energy for the world calls on a wide spectrum of academic research and expertise.

On a MIT conference on the global water issue, it was concluded that a technocentric approach cannot solve the problems alone and that the world needs interdisciplinary collaborations among the humanities, social science, architecture and planning, science, management, and engineering disciplines.⁹

Within the development of new energy technologies, prominent researchers stress the importance of the contribution from the SSH area and how an interdisciplinary approach is necessary in solving the grand challenges. Ferdi Schüth, Professor and Director at the Max-Planck-Institut für Kohlenforschung (coalresearch) mentions the importance of collaboration with researchers from the SSH:

"Future energy technologies, not least fusion, might have to overcome similar resistance to that faced by the nuclear industry. In a hydrogen economy, for example, the fear of explosions might prevent widespread introduction. Indeed, current discussions about the risks of carbon dioxide capture and sequestration – technologies that could allow us to burn fossil fuels without the damaging emissions – indicate that even this technology might not be easily accepted.

Input from the social sciences and economics is therefore vital when planning our energy future. Innovations related to novel energy systems should diffuse into society, as they require understanding and acceptance. As energy infrastructures are becoming more integrated within Europe and the world, questions of international law are gaining importance."¹⁰



AGEING SOCIETY

The grand challenge of the ageing society involves several research areas of SSH. SSH can contribute within the modelling and financing of the future welfare-state in relation to the changing demographic landscape, the design of the future labour market and the elderly citizenship, i.e. what are the future obligations, rights and incentives of the seniors in the European societies. SSH research can accelerate innovation and inspire to the creation of new products and services targeted at the aging society.

The Metris report of 2010¹¹ emphasized the impor-

tance of new research in response to this demographic phenomenon. The report lists new and already ongoing research topics that will prepare us meeting the challenges of the ageing society:¹²

The relativisation of **retirement** beyond the notion of 'active' population. This includes social effects of tendencies towards anticipated retirement as a measure to implement economic and market restructuring, and the tendency to extend the length of the working life required to acquire pension rights. Other aspects include the phenomenon of "young retirees" that exploded with the dot.com economy and the stock market boom on which it was based. New research also addresses the disconnection between age and work.

Senior lifestyles: Emerging research under this heading addresses the tendency toward 'long youth' rather than old age, the increased role and place of seniors in social, political and cultural life, and the economic impact of seniors.

The need to rethink **welfare** will involve more comparative work on pension policies, studies on the individualisation of age-related risk, the rise of pension funds, the role of the stock market in providing retirement income, attempts at disassociating pension income from waged labour and on the role of socio-cultural factors in welfare.

Services and care will provide an important focus of research, as the development of senior centred health care and health services is a growing economic sector. Efforts may also be made to understand the underlying logic of the current re-privatisation of care (from the state to the family).

It is also worth noting that EU15 spends 7.6 percent of the GDP on health and 9.1 percent on old-age pensions alone.¹³ Therefore it is of great importance that research within the procedures and the organiation of this sector is done, especially in the light of the demographic development, which will lead to even larger expenses on this area for the European economies.



PUBLIC HEALTH

Concerning the challenge on public health in the EU it is important to understand that research within the clinical and biological sciences alone cannot improve the public health maximally. An efficient and effective health care system also depends on research in psychological, social and ethical subjects. Today, commonly it is: "... recognized that social and psychological factors make an important contribution to health behaviour and treatment outcome".¹⁴

As it's defined by the EU, these factors have an important role to play in preventing e.g. psychosocial and lifestyle related diseases: "The most important determinants of health are the underlying social and economic conditions and associated living and working conditions. These are being addressed through the EU's economic and social policies. Smoking, nutrition, physical activity, diet, alcohol as well as the ways in which people behave towards themselves and towards others are also key determinants of health." 15

Diseases like stress and depression are well researched. New research within this area is important if we want to create a healthy working environment and to a higher extent improve occupational health. In the EU27 (2005) stress was the next-most reported work related health problem; as much as 22 percent of the wage earners have been affected by stress. In 2002 the cost of work-related stress in the 15 old EU-member states was estimated at around 20 billion Euros.¹6 Research into these fields should be supported as reports show that returns on investment in good occupational safety and health is as high as 12:1 (€ 12 profit for every € 1 invested).¹7

Policy making within the health care sector and management of hospitals has always been a delicate matter and should include ethical issues as well as economic and medical judgement. The British Academy describes the issue this way: "Health policy-makers and managers often have to make

ethical decisions about the allocation of health care. As the population ages, questions relating to the ethical principles for the allocation of resources will become even more pressing. Ethical review and philosophical analysis is now seen as indispensable part of health care." 18

Future research in Public Health should therefore also consist of projects concerned on these ethical and philosophical issues in relation to the allocation of resources within the European countries' health care systems.



PANDEMICS

Douglas L. Weed, MD, PhD in Epidemiology, outlines the importance of humanities in research within epidemiology: "Within the humanistic disciplines lie an understanding of epidemiology's past and present and keys to its future. Potential benefits include the development of flexibility of perspective, creativity, nondogmatism, values, and critical thinking." ¹⁹

In this paragraph we will focus on the potential benefits of SSH in relation to epidemics and pandemics. But firstly, by taking a look at the WHO's definition of a pandemic, we will see how SSH indeed is intertwined with this grand challenge:

"A pandemic is a worldwide epidemic of a disease. An influenza pandemic may occur when a new influenza virus appears against which the human population has no immunity. With the increase in global transport, as well as urbanization and overcrowded conditions in some areas, epidemics due to a new influenza virus are likely to take hold around the world, and become a pandemic faster than before."

It is clear that the progress of epidemics transforming into its globalised version, pandemics, has a lot to do with a new mode of sociality in the globalised society. Therefore we need more knowledge about this new social formation in relation to identify how diseases are spread over borders and overseas. Epidemiologists must draw on studies of globalisation and knowledge within the social sciences, to understand the complexity of this new globalised society to a greater extent.

"I have a bunch of patients coming in here who are more worried about bird flu than they are about heart disease," said Dr. Marc Siegel, an Internist and Associate Professor of Medicine at the New York University School of Medicine. "The fear is out of proportion to the current risk."²⁰ In future cases of potential threatening pandemics as i.e. bird flu, we need more knowledge about the relation between mass media and the public and in relation to this the behavior of the masses in these situations. As Dr. Siegel above mentioned, the fear of bird flu during the last decade was out of proportion. In relation to the behavior of the masses, the bird flu hasn't yet become a public health problem, but on the contrary a question of mass hysteria and severe economic consequences.



INCLUSIVE, INNOVATIVE AND SECURE SOCIETIES

Improving security worldwide and in the European Union also demands more research within SSH. An interdisciplinary study from University of Cambridge is a good example on how SSH is highly intertwined with questions on inclusive, innovative and secure societies:

"In May 2002 the Centre for International Studies at the University of Cambridge launched the Programme for Security in International Society, to undertake a fundamental re-examination of the nature of instability and insecurity facing the global community in the wake of September 11. The Programme draws together scholars in fields such as political science, history, international relations, economics, theology, psychology, and law. The diversity of these fields reflects the complexity of a global society in which social, cultural and religious factors have become as important as political, commercial and military ones. The Programme's initial activities will include studies of suicide bombers; how informal, illegal transnational networks affect institutional systems; the religious and political tensions in Saudi Arabia, and the role of risk management in insecure economic and political environments."²¹

Another important aspect of security on a more local level is how we plan and construct urban areas. Both in relation to terrorism and crime in general, the design of shared collective facilities has a major impact. The human perception of our spatial surroundings and how it affects behaviour is indeed an area which demands more research.

"The proper design and effective use of the built environment can lead to a reduction in the fear and incidence of crime, and improvement of the quality of life." – CPTED (Crime Prevention Through Environmental Design), as defined by the National Crime Prevention Institute²².

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