Social Sciences and Humanities: essential fields for European research and in Horizon 2020

EXECUTIVE SUMMARY

Social Science and Humanities (SSH) research is of vital importance to the future of Europe[1]. SSH researchers study the human aspects of the world and they generate important new knowledge which has a deep and intrinsic value.

The disciplinary SSH agenda is increasingly complemented by an interdisciplinary agenda addressing societal challenges in Europe. These challenges include international conflicts, human rights, ethics, religious traditions of acute contemporary relevance, economic and educational inclusion, institutions and governance networks, social and environmental resilience, changing media, literacy, identities and cultural memories, linguistic diversity, creative industries, cultural heritage, life long education and learning, developmental disorders, psychopathologies, psychological disorders, addiction, and man-machine interactions. This understanding is as important as contributions from natural-scientific and technological disciplines to the creation, implementation and evaluation of effective public policies and innovative structures underpinning corporate performance.

Social Science and Humanities research is essential for all societal challenges identified by the European Commission in Horizon 2020. SSH researchers should be involved in the agenda setting process in relation to all societal challenges - not only the *Inclusive, Innovative and Secure Societies* challenge(s)[2] - meaning that SSH researchers will take part in the whole process, from problem formulation to project evaluation and project implementation. Given the importance of the *Inclusive, Innovative and Secure Societies* challenge(s), LERU wishes to see it (them) strengthened with an increased research budget.

Excellent research is one of the foundations on which the future of European societies should be based. LERU very much welcomes the first pillar of Horizon 2020, 'Excellence in the science base', which will strengthen the EU's excellence in research in the field of Social Sciences and Humanities. We expect frontier SSH research to be supported by the very successful European Research Council (ERC), by the Marie Curie actions and by priority research infrastructures.

It is extremely important that Marie Curie programmes remain available for the Social Sciences and Humanities.

Therefore, involvement of "research institutions, businesses, SMEs and other socio-economic actors" in Marie Curie programmes should be used in the widest possible sense, including all fields of future workplaces and public engagement: from industry to business, government, NGOs, charities and cultural institutions (e.g. museums).

Horizon 2020 should support cutting-edge research in ethics as it is necessary to identify, analyse and develop appropriate responses to the ethical challenges of contemporary societies over the entire range of research topics funded by the European Union.

Further funding for pan-European Social Science and Humanities research infrastructures is required if previous investments by European funders are to be exploited to their full potential. To ensure the highest quality information about European society is available to key decision makers, funding for Social Science research infrastructures must be maintained, while future funding for digital Humanities research infrastructures must be ensured if the full potential of Humanities research is to be reached.

National funding organisations should a play a distinct role in Europe by complementing SSH Horizon 2020 activities. In the field of the Social Sciences and Humanities the successful European Research Area - Joint Research Programme (HERA-JRP) and NORFACE should be continued and strengthened. Universities and national research councils should promote international cooperation in the fields of "small disciplines", especially in the Humanities.

The unwelcome regional disparities across Europe in research performance in the Social Sciences and Humanities should be addressed by distinct, complementary and synergistic actions of the Cohesion Policy funds.

Finally, a European Social Sciences and Humanities Platform should be established. Such a Platform, led by leading SSH researchers from research universities, can provide a useful framework for stakeholders, and should develop and update research priority agendas, taking care to consider and not duplicate the work of existing European Social Platforms. An SSH Platform should facilitate the dialogue between the European Commission, researchers of leading research universities, representatives of other institutions and national government representatives in order to create consensus and to improve alignment of investment efforts.

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1   We use the term SSH in this paper as a commonly used and accepted one in the context of FP7 and Horizon 2020. However, taking into consideration the difficulties in drawing exact boundaries between research areas and disciplines especially in dealing with societal challenges research, we wish to point out that, firstly, the Humanities do represent distinct challenges and that, secondly, in LERU (and elsewhere) the term Social and Behavioural Sciences (SBS) is used rather than Social Sciences. While both fields study processes of behaviour, they differ in the level of scientific analysis of various behavioural dimensions. Economics, political science and sociology, for example, are social science disciplines, while psychology and social neuroscience are behavioural sciences. See http://en.wikipedia.org/wiki/Behavioural_sciences

2   See paragraphs 45-46.

Introduction - what and why of this paper

1. On November 30, 2011, the European Commission published its proposal for the new European research funding programme for the period 2014-2020, Horizon 2020, estimated to be worth over €80 billion. The proposal was the result of a Europe-wide discussion which started with the publication of a Commission Green Paper (EC, 2011a). In the consultation process various parties stressed the importance of the Social Sciences and Humanities (SSH) for the EU's research and innovation agenda. In addition to the Advice Paper which LERU (2011) produced in response to the Green Paper and which singled out the essential role of SSH, LERU wrote a separate letter to the EC detailing the contributions of SSH. With the present Advice Paper, LERU wants to continue the dialogue on the significance of the Social Sciences and Humanities for the European research agenda.

2. LERU (2008) has argued before that the Social Sciences and Humanities have a vital role to play, as modern society depends on the whole range and interconnectedness of knowledge rather than on a restricted number of academic disciplines[3]. SSH research generates important new knowledge which has a deep and intrinsic value. In addition, the disciplinary SSH agenda is increasingly complemented by an interdisciplinary agenda addressing societal challenges in Europe. They include international conflicts, human rights, ethics, religious traditions of acute contemporary relevance, economic and educational inclusion, institutions and governance networks, social and environmental resilience, changing media, literacy, identities and cultural memories, linguistic diversity, creative industries, cultural heritage, life long education and learning, developmental disorders, psychopathologies, psychological disorders, addiction, and man-machine interactions. This understanding is as important as contributions from natural-scientific and technological disciplines to the creation, implementation and evaluation of effective public policies and innovative structures underpinning corporate performance.

3. Looking back at the position of the Social Sciences and Humanities in earlier Framework Programmes of the

European Commission, LERU recognises the crucial importance of the ERC and the Marie Curie actions for SSH research. Equally, we argue that Social Science and Humanities research is essential for all societal challenges identified by the European Commission in Horizon 2020. SSH researchers should be involved in the agenda setting process in relation to all societal challenges - not only the *Inclusive, innovative and Secure Societies* challenge - meaning that SSH researchers will take part in the whole process, from problem formulation to project evaluation and project implementation. We see the involvement of Social Science and Humanities research as particularly valuable in asking the right questions as well as using insights from the Social Sciences and Humanities for providing the right answers. We also note the importance of research infrastructures for SSH. LERU welcomes the establishment of the European Research Area and encourages national funding organisations to create more European common research funds, without losing interest in important and outstanding small scale and individual research.

4. LERU wishes to stress that research funding for the Social Sciences and Humanities through funds for tackling presently known and as of yet unknown societal challenges or through the ERC and other programmes is an investment in the future. In a fast changing world in which Europe will face many new societal challenges (embodied in the dynamics of collective identities, among other things), Social Science and Humanities research is of vital importance to enable European societies to think critically, to remain tolerant and to become more innovative and inclusive.

The Social Sciences and Humanities in FP7

5. The Social Sciences and Humanities have received a growing amount of funding from the European Commission, indicating the increasing acknowledgement of the importance of SSH research. Nonetheless, Social Science and Humanities research remains a relatively new domain in European funding schemes, with a proportionally small share of funds.

6. Social Science and Humanities research was first introduced in the 4th Framework Programme in the

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3   See footnote 1 for a remark on the definition of SSH.

context of "Targeted Socio-economic Research", with a relatively small budget of €130 million. In the 5th Framework Programme, SSH research was funded under the key action "Improving the socio-economic knowledge base" with a budget of €165 million. Social Science and Humanities research obtained programme status in the 6th Framework Programme, which ended in 2006. Around 2,000 universities and research organisations - as well as many SMEs and civil society organisations - took part in 146 collaborative projects, receiving European Union financing of €247 million.

7. The European Commission estimates that this investment in Social Science and Humanities research will have increased to €623 million by the end of the 7th Framework Programme (FP7) in 2013. Within this Framework Programme, an entire theme - Theme 8 of the Cooperation programme - was explicitly directed to the "Socio-Economic Sciences and the Humanities". Like FP7 in general, and the Cooperation programme in particular, Theme 8 was directly linked to the (revised) Lisbon Agenda, through which the Union seeks to address what it regards as Europe's current and future key challenges: growth, employment and competitiveness, social cohesion, and sustainability, quality of life, and global interdependence.

8. The share of Social Sciences and Humanities in EU funded research has been steadily increasing and LERU strongly recommends that this trend be continued. FP7's Theme 8 "Socio-economic Sciences and Humanities (SSH)" has been the world's largest research funding programme for the Social Sciences and the Humanities, but we should not forget it has been at the same time the smallest of the ten theme-oriented programmes within the Cooperation programme.

9. The ERA-NET scheme within FP7 has also supported the Humanities in the European Research Area - Joint Research Programme (HERA-JRP) and the Social Sciences in NORFACE, *New Opportunities for Research Funding Agency Co-operation in Europe - A Strategy for Social Sciences*, a strategic partnership of funding agencies from 13 countries in the area of social and behavioural sciences. NORFACE focuses on research-driven cooperation, which leads to two joint, transnational research programmes with a full common pot. The HERA-JRP partners have now launched joint calls for multilateral projects in three humanities research areas. By setting up the HERA-JRP, the 13 national funding partners pooled a limited amount of their funding into one common pot,

in an attempt to improve the efficiency and impact of public research funding. The HERA-JRP and NORFACE have been an excellent examples of a European research cooperation initiative with involvement of researchers and a simple and transparent organisational structure.

ERC and Marie Curie

10. Excellent research is one of the foundations on which the future of European societies should be based. LERU very much welcomes the first pillar of Horizon 2020, 'Excellence in the science base', which will strengthen the EU's excellence in research in the field of Social Sciences and Humanities. We expect frontier SSH research to be supported by the very successful European Research Council (ERC), by the Marie Curie actions and by priority research infrastructures.

11. To maximise the impact of research and innovation, the very best researchers must be given the opportunity to pursue their curiosity. Social Sciences and Humanities research has intrinsic value and importance for European society and should therefore be supported by the European Union. In this regard the ERC meets a need that has existed for a long time across Europe. LERU strongly supports the ERC and wishes to see it strengthened with a significant increase in its budget. It should be a high priority to extend the current dynamism in existing programmes to attract and retain top talent and to perform excellent basic research with the sole purpose of the advancement of research and innovation. In addition to its individual schemes, the ERC's Synergy Programme can help to stimulate cutting edge collaborative research within SSH and between the SSH and other disciplines.

12. In addition to ERC funding, it is extremely important that Marie Curie programmes remain available for the Social Sciences and Humanities. The Marie Curie programme is crucial to many universities because it is an important magnet for young people who aspire to a research career in Europe in and outside academia. Excellence in doctoral and post-doctoral training is a vital factor if the Social Sciences and Humanities in Europe are to maintain their leading role in the world.

13. The recipe for success of Marie Curie is to make individual grants at the post-doc level available early in the careers of young researchers who are selected

via a thorough European peer review process. The Marie Curie Initial Training for young researchers should be retained and strengthened. We welcome the diversification of the initial and doctoral training. However, it is especially important for the Social Sciences and Humanities that the involvement of "research institutions, businesses, SMEs and other socio-economic actors" in Marie Curie programmes should be used *in the widest possible sense*, including all fields of future workplaces and public engagement: from industry to business, government, NGOs, charities and cultural institutions (e.g. museums).

14. In sum, the ERC and the Marie Curie actions are very important pillars of the EU research programmes. Both have a proven track record for excellence and are very attractive to researchers from within and outside the EU. It is therefore necessary to fund them at a noticeably higher level than what has been put forward by the EC in its Horizon 2020 proposals of November 2011.

The role of Social Sciences and Humanities in the societal challenges

15. The societal challenges identified in the process to establish Horizon 2020 are by their very nature complex, and tackling them requires drawing on insights, approaches and perspectives from across the entire research base. A broad knowledge economy enables flexibility, creativity and variety of multi-disciplinary approaches to tackle these big issues, and Social Science and Humanities research is an essential perspective.

16. None of the societal challenges are entirely new - individuals, communities and societies have been adapting and changing in response to changing energy supplies, technologies, climate, health, resources and demographics for hundreds of years. These changes have, in turn, profound implications

for our economic and personal wellbeing at an inter-cultural level and impact on business, government and cultural interactions. Analysis of the past and understanding societies, beliefs and values can be a critical factor in understanding how we can respond effectively to these continuing challenges. SSH research enables us to have a greater understanding of change and adaptation as a process and imagining future scenarios.

17. Therefore, LERU encourages the full participation of Social Science and Humanities researchers in the agenda setting process in relation to *all* societal challenges, meaning that SSH researchers will take part in the whole process, from problem formulation to project evaluation and project implementation. Researchers or research consortia addressing the societal challenges should be selected on the basis of their excellence in research and through a process of open calls.

18. The next sections discuss the relevance of SSH research in each of the six societal challenges in the EC's Horizon 2020 proposal.

Societal challenge 1 - Health, demographic change and well-being

19. The concept of health has important cultural, social, behavioural and psychological dimensions, which are not mentioned in the Horizon 2020 proposal (EC, 2011b). Health also involves mental health defined by the WHO as a "state of complete physical, mental and social wellbeing, and not merely the absence of disease". Following this definition, mental health is related to the promotion of wellbeing, the prevention of mental disorders, and the treatment and rehabilitation of persons affected by mental disorders. Twenty-seven per cent of the EU population in the age range of 18-65 years are, or have been, affected by at least one mental disorder in the

RECOMMENDATIONS ON ERC AND MARIE CURIE:

- A strong commitment towards curiosity-driven research from the European Commission should lead to increased funding for the ERC and Marie Curie programmes.

- Marie Curie programmes should be implemented in the widest possible sense, including all fields of future workplaces and public engagement.

past year. Mental disorders account for almost one third of all disease burden, with depression alone being the largest component of Europe's total burden of all diseases. Cost-of-illness studies consistently indicate that the economic and social costs of mental disorders are enormous, considerably larger, for example, than the costs of diabetes or cancer. Approximately €255 billion a year can be attributed to a mental disorder in a strict sense. Most of the mental disorders are characterised by proportionally low direct, but exceedingly high indirect costs.

20. In a context of demographic change, the question of the sustainability of the welfare state is central in European economies. Moreover, the debt crisis has increased the strain in public budgets. Hence a deep analysis of the interaction between economics and demography is required. Special attention has to be paid to the extent to which the government intervention on forward (from parents to children) and backward (from adult children to parents) intergenerational transfers is balanced, and to the agent's behavioural reaction.

21. In 2009 the European Parliament passed a resolution calling for a coordinated response that is proactive, evidence-based and directed to the design and implementation of comprehensive, integrated, effective and cost-efficient mental health systems. Adopting an integrative and promotive approach to mental health, the full spectrum of not only biological, but also psychological, epidemiological, public health, social and economic aspects of mental health and wellbeing has to be covered. Social Sciences and Humanities can contribute greatly to research into causes and determinants of specific mental and neuro-behavioural disorders, as well as their prevention, treatment and rehabilitation. Such an approach will ensure that physical and mental health will be seen as an interactive whole and that mental health will not be isolated: mental health problems and their solutions will vary by age, gender, culture and socio-economic circumstances. Besides pharmacological interventions, psychological treatments are established for almost all mental disorders and mental health problems; they are also the preferred methods for increasing the general wellbeing of healthy people.

22. Health and wellbeing are embedded in medical research but there is growing appreciation of the need for more holistic approaches which focus on broader health and wellbeing issues and wider systems of social care beyond the provision of medical care. SSH research is of great importance to create forward looking and effective medical education and practice. The 'medical humanities' include an interdisciplinary field of humanities, social science and the arts, and provide insight into the human condition, suffering, personhood, our responsibility to each other as well as how social conditions and social institutions influence health and wellbeing and the effects of medical care. They also offer a historical perspective on medical practice. Attention to literature and the arts help to develop and nurture skills of observation, analysis, empathy, and self-reflection - skills that are essential for humane medical care[4].

23. The Social Sciences and Humanities can illuminate

Example 1: The Finnish Centre of Excellence in Interdisciplinary Music Research
at the University of Jyväskylä and the University of Helsinki hosts an international research team with expertise in psychology, musicology, biomedicine, and engineering. It conducted a large patient study about the rehabilitative effects of music in collaboration with the Helsinki University Central Hospital. In the study, 60 patients recovering from an acute brain infarction listened at least one hour a day to their own favourite music, or to self-selected audio books, or were not given any listening material. The results showed that compared to the audio-book and control groups, the music-listening group had better long-term cognitive and emotional recovery. Both music and audio book listening also evoked neuroplastic changes in sound processing as indicated by magnetoencephalography (MEG). The study has since been widely cited by top journals (e.g. Lancet, Brain, Proceedings of the National Academy of Sciences) and media (e.g. BBC, CBS, Times, Washington Post). More importantly, after this study, music listening has been taken up as a rehabilitative practice or topic of further research in neurology wards in many countries (e.g. Finland, UK, Netherlands, Australia), and many stroke survivors and their caregivers have been encouraged to incorporate music in the recovery process.

https://www.jyu.fi/hum/laitokset/musiikki/en/research/coe

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4   See http://www.kcl.ac.uk/research/groups/chh/research

the societal and cultural preconditions as well as implications of the advances in bioscience. These preconditions and implications include the economisation and juridification of human biology, e.g. with regard to organ and tissue trade; copyright and ownership of manufactured biological material; the acceptance or resistance of the general public of/towards new biomedical technologies, diagnostic tests and treatments; and the expectations and trust/mistrust of the public from/towards medical research. Another important aspect is how genetic and neurological factors are used to explain and predict human behaviour in various social and societal contexts, e.g. in marketing and in courtrooms. Equally important is the question of how cultural values and beliefs influence policies and legislation on medical research, e.g. in the recently contested EU ban on patents based on human stem-cell research. Furthermore, the Social Sciences and Humanities afford insights into attitudes towards ageing, a pressing issue given the rapidly growing elderly population in the EU. This issue raises questions about the need for and distribution of care, age discrimination, cultural expectations from authorities, informal social networks, the involvement of relatives in elderly care and conceptions regarding quality of life in the later stages of life.

24. Health and wellbeing is also an area where strong interdisciplinary collaborations are being formed, for example, between neuroscientists and academics in psychology, literature and music to understand both brain function and creative practice, or between sociologists and medics to understand the socio-economic factors which result in varying levels of access to key medicines. Recent advances in medical technology are changing the way we think about our bodies, espe-cially our brains. Art history helps to explain why we resist some of these changes and can live easily with others. Linguists, psychologists and neurologists working together use the brain's ability to handle rhythm and sound in language in order to help brain-damaged people recover their speech. A recent multi-disciplinary study showed that music can be beneficial for cognitive and emotional recovery after stroke.

25. Across the whole medical and health remit there are also important ethical and cultural issues related to end of life, treatment interventions, genetics, repro-duction and healthcare regulation. For example, SSH researchers teach healthcare staff and families how to interact so that they succeed in helping overweight children. Social Science research answers the question of whether old-age pensioners nowadays are healthier, richer and more active than previous generations of elderly people. They also address issues of lifestyles and their impact on health issues across lifecycles.

26. LERU considers it important to include these lines of research into the programme addressing the chal-lenge *Health, demographic change and wellbeing.*

Societal challenge 2 - Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bio-economy

27. LERU recommends the inclusion of Social Sciences and Humanities research in the programme address-ing the challenge of *Food security, sustainable agriculture*

Example 2: The Humanities and Medicine (HuMe) initiative at Lund University
aims at increasing interdisciplinary research collaboration between the medical faculty and the HT-faculties. An important component in this work is the expansion of the research infrastructure available for investiga-tors working at the interface between humanities and medical technology. Access to frontline research equip-ment is being made possible through collaboration with the Lund University Bioimaging Center (LBIC) which houses MR (Magnetic Resonance) scanners that can be used to make images of the human brain and body. The MR technique makes possible investigations of what areas of the brain are involved in the processing of dif-ferent kinds of words, texts, images or sound (speech, music) using the so-called functional Magnetic Resonance imaging (fMRI) technique. In order to be able to use MR scanners in their research, however, it is important for researchers in the humanities to acquire competence in the MR technique as well as in experi-mental methods and data analysis strategies used in conducting studies with the imaging equipment.

http://www.lu.se/o.o.i.s?id=21356&p=90

and forestry, marine and maritime and inland water research and the bio-economy. It is vital to understand the social challenges that are encountered in attempts to ensure food security. Technology-driven intensification of farming practices - for example, in aquaculture - is seen by some people as something which will destroy natural environments and produce unhealthy, sub-standard food sources. Governments can introduce policies that will help ensure food security, but they will struggle to gain acceptance from citizens and to be sustainable long-term, unless fears and beliefs around potential technological innovations are known and understood. Rural communities could be disrupted by new farming practices; SSH research will be vital to understand potential social changes and thus help ensure that any transformation of rural communities is positive. Social Science and Humanities research on international rural development will also help understand the linkages between developing countries' agricultural development and trade chains to Europe, and how the benefits of such linkages can be maximised across such linkages.

28. Research in environmental history is crucial to understand long-term developments related to climate change, agriculture and the maritime economy. In order to foster the empowerment of rural areas, one needs to understand rural histories and rural cultures. Agricultural history is an area where Humanities can contribute alternative perspectives on this important issue, understanding how our systems of production have emerged and evolved, adaptation of both producers and consumers, as well as impact on landscape.

29. Cultural aspects of food in European societies needs to be researched if one wants to understand consumer preferences, attitudes, needs, behaviour, and lifestyles. Food is not just about sustenance - it has important cultural significance that needs to be understood in order to develop successful future policies. The needs for the food and feed industry to cope with local and global changes can only be addressed when research into food cultures in the world is included into the total research programme. In addition to research on issues such as the role of religious beliefs and how values, aspirations, symbolism and rituals shape food consumption, there is a need to understand how food is represented in visual and other media and the role different media play in transmitting and framing values about food across generations. These values, representations and cultural patterns of consumption are also important in understanding the issue of food waste.

30. Discussions in food ethics can help to understand the underlying conflicts between the rights of different societal groups, value conflicts between sustainability, economic and aesthetic dimensions of agriculture that are important for responsible food and agriculture politics.

31. The discipline of ecocriticism contributes to the insight in the way in which citizens relate to their immediate rural environment. Thus, it plays a role in creating social support for necessary environmental changes (for example in the transition from a rural area to a nature park, or in the recreation of river landscapes to allow for regular inundations). It also addresses the relation between the contemporary creation of urban leisure spaces and "new nature," and the needs of a diverse, multicultural society. Ecocriticism offers a more complex reflection on the often philosophical foundations of the understanding of nature, as it has been developed in the arts and in literature. It shows the huge importance of narrative and images in the establishment of people's criteria for beautiful and healthy natural landscapes.

Example 3: "Asia and Europe in a Global Context: Shifting Asymmetries in Cultural Flows" at the Universität Heidelberg
is a research cluster specialising in health, environmental science and epistemologies. It combines expertise in Buddhist studies and intellectual history with specialist knowledge in symbolic logic and computing science to model dialogical forms of reasoning in South and East Asian languages, while negotiating between medicine, psychiatry and anthropology. Among other topics, this research cluster discusses stress and stress relief, medical systems, mind and body in European and Indian medicine, depression as a universal phenomenon, perspectives of ageing, and healthcare destinations.

http://www.asia-europe.uni-heidelberg.de/en/research/c-health-environment.html

Societal challenge 3 - Secure, clean and efficient energy

32. Social Science and Humanities research into secure, clean and efficient energy is required to provide policy makers with guidance about how different potential energy scenarios could impact on citizens and the economy. An understanding of how education, gender, age, wealth and community issues relate to behaviour change is necessary to ensure the adoption of cleaner, more efficient energy systems. Equally important in ensuring the adoption of new energy technologies is knowledge of the social implications of innovation. Research on understanding the socio-economic impacts of current innovations in renewable energy production around the world will contribute to Europe's competitiveness in this area.

Societal challenge 4 - Smart, green and integrated transport

33. LERU considers Social Science and Humanities research also important in programmes addressing the challenge of *Smart, green and integrated transport*. Only when future transport demands are reliably predicted and the current drivers of carbon consumption are truly understood and communicated can Europe create better ways of transport. Barriers to technological advances and the successful enforcement of pollution controls require research into behaviour, attitudes and law. Modern development as e-learning, e-business, social media, and social networks all have an effect on how transport infrastructures are used. A greater understanding of these developments is crucial. Changes to infrastructure will impact upon the labour market and the economy; the potential effects need to be anticipated.

34. Knowledge of historical transformations in transport technologies is crucial to better understand and predict the impact of new technologies on the differentiation of space, the creation of spatialised economic opportunities and the long-term consequences for physical and social environments.

35. Cities exist because production or consumption advantages arise from higher densities and spatially concentrated location. Economists have long studied the forces leading to agglomeration, focusing on the importance of transport costs. However, the advantages of agglomeration are limited. The external effects of urban transport- congestion and pollution- have to be taken into account. The imposition of congestion tolls, to approximate the marginal costs commuters impose on others, are one example of a policy that improves resource allocation, and that has to be analysed with the tools of economics.

36. Community-centred design, including sustainable urban design, considering mobility, gender and inclusion in the design of systems is an under-researched area. Creative approaches have significant potential to engage the public in the design and planning of places and communities and their implications for mobility.

37. Understanding changing cultures of mobility, aspirations for travel and tourism, particularly in the context of globalisation, and how they are affecting the demand for travel is a key area. The cultural implications of increased mobility, for example, for the development of diverse local communities, is another important research area.

Example 4: OPENspace - the research centre for inclusive access to outdoor environments –
was established in 2001 with the aim to bridge academia, policy and practice, underpinning exemplary professional and community place making with a rigorous evidence base. It has a track record for innovative research, grounded in a sound theoretical framework, and for establishing new methodologies and directions for the future. OPENspace demonstrates a particular sensitivity to the needs of end users, involving original, empirical research on the transactional nature of people's engagement with place. It has expertise in graphic, mapping and visual techniques, systematic and critical reviews of research literature, qualitative and quantitative user-led methodologies and empowering participants to contribute to the research agenda, as well its outcomes. Addressing the environmental design implications of research findings is a key priority and output includes a focus on practical guidance for planners, designers and managers.

http://www.openspace.eca.ac.uk/index.php

Societal challenge 5 - Climate action, resource efficiency and raw materials

38. LERU stresses that SSH research can make a central contribution to the cross-disciplinary challenges of environmental change through enhancing understanding of historical contexts and adaptation, cultural values and beliefs about the environment, impacts on our cultural heritage, ethics, aesthetics, language and discourse.

39. SSH research can also offer unique insights into how our environmental values are shaped and represented, on different scientific and lay understandings and narratives, and on the symbolism and emotions that are often associated with environmental debates. It can also help to develop creative ways to support enhanced engagement with diverse audiences and communities about environmental challenges.

40. Each strategy for a sustainable climate policy has to answer some fundamental challenges: how to resolve the conflicts between existing expectations concerning individual rights in a liberal society and the needs of sustainable politics? How to deal with problems of risk and uncertainty in the evaluation of various governance options? Why should people consider themselves motivated to opt for sustainable policies if they have far reaching consequences for their life style? Substantial SSH research into all these questions exists and should be harnessed in addressing this societal challenge.

41. Furthermore, Social Science and Humanities research is vital for exploring and explaining why the scientific evidence for climate change and the predictions about its future impact, are not, at present, producing any effective action at governmental level. Scientific arguments alone will not persuade the European public either to change its behaviour individually or to demand that governments legislate change for it. SSH research can look at the relationships between an individual's world view and socio-economic struc-tures in order to develop collective initiatives and recommendations for governments that could precipitate behaviour change. Humanities research, by using rhetoric and promoting collective initiatives in social networks, can help bring about an effective culture shift that could change behaviour.

42. The Social Sciences and Humanities have a crucial role to play when it comes to understanding the impact of representations in popular science, popular culture and news media about natural and man-made disasters and how they are framed in meaning-creating narratives. Such representations, from television documentaries to blockbuster movies, reach much wider audiences than scientific reports. They shape the general public's understanding of ecological threats and possible solutions, and they affect the public's sense of where responsibility for problems and solutions lies. In addition, they envelop these issues in affective values, such as hope and despair. SSH research shows how such representations may raise awareness of ecological issues, as well as of ways in which they may breed and disseminate misconceptions about those issues.

43. Europe today is home to, and thrives on, an extraordinarily diverse wealth of cultural heritage- from unique ancient architecture, cultural artefacts and outstanding landscapes to living practices, traditions and expressions- oral, written and digital. These attract millions of visits from within and outside Europe every year, playing a central role in European citizens' and residents' quality of life and sense of patrimony, and significantly contributing to economic and regional development. But cultural heritage is also under threat from contemporary global transformations, including climate change, mass tourism and urbanisation. In order to protect this fragile resource from continuous decay, coordinated and strategic research is crucial to underpin concerted actions. Research policies and initiatives need to be coordinated and expertise needs to be strategically pooled in order to best address local conditions and needs, thus safeguarding Europe's unique and evolving patrimony.

Example 5: "Heat and the City" - funded by the RCUK Energy and Communities programme –
shows that initiatives to reduce energy usage are most likely to occur at the community level. This demands a collaboration of engineers, scientists and social scientists and specialists in "the city".

http://www.heatandthecity.org.uk/

44. LERU stresses that for preserving and making the best use of European heritage a fundamentally cross-disciplinary research agenda is needed, ranging from research in the arts and humanities to scientific and technology research and with a strategically balanced approach covering research on tangible, intangible and digital heritage, and to focus equally on cultural landscapes, buildings, collections, associated practices and digital resources[5].

Societal challenge 6 - Inclusive, innovative and secure societies

45. LERU welcomes the inclusion of the challenge *Inclusive, innovative and secure societies* in Horizon 2020. It is possible - as the Presidency of the European Union has proposed - to make two separate challenges out of this challenge, one with the specific objective to foster a greater understanding of Europe and to support inclusive, and innovative and secure European societies in a context of unprecedented transformations and growing global interdependencies, the other with the aim to foster secure European societies. However, certain issues remain interrelated and research coordination between the possible separate challenges will be important.

46. Whether as one challenge (*Inclusive, innovative and secure societies*) or as two challenges (where one is possibly defined as *Europe in a changing world: Culture, iden-*

tity and social change and the other as *Secure societies: Protecting freedom and security of Europe and its citizens*), the programme(s) should support SSH research into several issues investigating the social transformations in European societies and the position of Europe as a global actor. Given the importance of these challenges LERU wishes to see them strengthened with an increase in their respective research budgets.

47. Understanding the roles of individuals, communities, institutions, states and cross-national collaboration over time is crucial for Europe's future. In an increasingly globalised and interconnected world, the need for diverse cultures to understand and communicate with each other is stronger than ever; mutual understanding of languages, values, beliefs, rights, identities, histories, narratives and images is essential to enabling inclusive societies and greater international collaboration. Greater understanding is needed as to how social trust, cohesion and solidarity across regional and national boundaries can be achieved in the face of cultural, social, economic and political change. Research is needed on how differences between citizens can lead to creativity and innovation, how differences and conflicts can be reconciled, how shared senses of purpose may emerge, and the kinds of institution, policies and practices that are needed to enable this. A focus on how linkages with the emerging economies can be promoted is an essential component for strengthening Europe's position in global and intercontinental development processes.

Example 6: GeNECA - Fair and sustainable development based on the capability approach –
is a collaborative research project involving different disciplines such as philosophy, ecological economics, environmental system sciences and social science. It aims at conceptualising the notoriously difficult notion of sustainable development on the basis of the capability approach developed by economist and philosopher Amartya Sen and philosopher Martha Nussbaum. The first sections of the project are largely theoretical. Philosophers and economists investigate the issues of inter- and intragenerational justice and the foundations of the capability approach in order to establish a firm theoretical basis for developing a plausible notion of sustainability. Resuming the spirit of the Brundtland commission, GeNECA puts the needs and capabilities of people all over the world, now and in the future into focus by building a notion of universal justice on it. This understanding of universal justice and sustainability is informed by the discussion of the social, economic and environmental development issues with the other researchers involved. In the course of the project these conceptual reflections have been used to develop a survey questionnaire. The questionnaire will be employed by the *Deutsche Institut für Wirtschaftsforschung* (DIW) in Berlin. The concept will also be used in a case study in Austria over the next year.

http://www.geneca.ufz.de/index.php?en=19797

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5   http://www.leru.org/files/general/LERU_Policy_Statement__The_UCL_Declaration.pdf

Innovative

48. Innovation requires skills and competences on a high level. Skills and competences are produced in many different contexts, varying from school systems and employment agencies to firms. It is of vital importance that education and training function adequately in the production of skills relevant for European economies, in terms of average skill level and its distribution, vocational education and training, and work-related training and life-long learning. A challenge is to devise education and training systems that combine a clear focus on innovation and economic growth on the one hand and on accessibility and cohesion on the other.

49. Innovation emerges from and has again to nest in social and cultural contexts. The challenges the Social Sciences and Humanities face are both to understand these cultural dynamics and codes, and to enhance a cultural awareness and resilience that provide people with the ability to 'live their culture' and to do so in terms of reciprocity, communality and equality. Humans are social and cultural beings, who need to have the tools with which they can critically assess and shape societies and cultures, individually and collectively.

50. Research on social innovation is needed to tackle not only top-down development of new and better forms of human organisation that enhance the efficiency of livelihood assets, but also bottom-up dynamics that individuals and collectives develop and which provide resiliency in times of crisis.

51. The digital revolution is transforming creativity economies globally. Given Europe's pedigree in this area an opportunity exists to enhance Europe's creative economy by maximising the move to the digital domain in ways that increase businesses efficiency by creating new business models, while understanding the impact on the creative practitioner, consumer and society as a whole. Development of creative content and cultural activities are key drivers both in digital innovation and the take up of new technologies. There is great potential to use technologies in new and innovative ways, for example to exploit Europe's uniquely rich and diverse historic and cultural heritage. The digital revolution is also providing societies new opportunities for internet-based social networks across international borders, bringing together social knowledge for greater social inclusion.

52. Innovation provides many opportunities and it also raises important legal, regulatory, ethical, cultural, historical and public responsibility issues that need to be explored. Issues of ownership, copyright, intellectual property and public access to information, as well as technical, design and 'creative content' are also central.

Inclusive

53. In order to build resilient and inclusive societies in Europe it is essential to develop a firm understanding of the history and workings of democratic practices and expectations, and of European integration.

Example 7: Robot Companions for Citizens (CA-RoboCom) – an EU-funded FET-Flagship Preparatory Coordination Action –
seeks to give rise to a new generation of socially capable robots and their deployment in society. This scientific and technological programme concentrates on the interdisciplinary research (including neuroscience, computer science, physics, ethics, social science, humanities and law) on the development and deployment of affordable, sustainable and dependable ICT-based machines for the benefit of society. In this multidisciplinary research, the Centre for Intellectual Property Law (CIER) of the Molengraaff Institute for Private Law, REBO-Faculty, Universiteit Utrecht, together with the Human Media Interaction Group of the Universiteit Twente, investigates the theme 'Human-Robot co-existence, ethics and law', which aims to achieve social acceptance of Robot Companions in the Hybrid Society of Humans and Robots. This research will integrate social and physical sciences and the humanities and may eventually lead to a new hybrid science of experimental human-robot sociology.

http://www.robotcompanions.eu and http://www.cier.nl/?page_id=2876

The concept of inclusive societies acknowledges the diversity in culture, regions and socio-economic settings as a European strength. We wish to emphasise that SSH research can and should support turning European diversity into a source of innovation and development.

54. Social Science and Humanities research will also address the evolution of key systems that provide underlying forms of social bonds, such as family, work, education and employment and that help combat poverty. It will take into account the importance of migration and demography in the future development of European policies. Apart from looking at the future, however, it is also crucial to realise that for centuries Europeans have been highly mobile and that this population dynamic has added greatly to its unique economic, social and cultural dynamic. Systematic research combining historical and social-scientific research is of utmost importance to understand under what conditions societies profit from migration, both within and from outside Europe. Combined interdisciplinary knowledge can help to single out societal and institutional processes that stimulate the inclusion of migrants and help to forge new shared identities.

55. Of equal vital importance to the building of inclusive societies in Europe is the challenge of multilingualism. Multilingualism is one of the consequences of increasing mobility and migration; at the same time, it is part of the European tradition and a central European value. Linguistic identities are important and sensitive issues, which, if not handled with expertise, create rifts between groups, develop into focal points of hostilities, and reduce the employa-

bility of individuals. Migration and mobility intensify language contact and linguistic diversity. We need research which addresses the causes and consequences of intense language contact, linguistic diversity and hybridity, and which contributes to solving ensuing social tensions.

56. Given the high degree of linguistic diversity in Europe, combined with its academic excellence in linguistics, Europe can take a leading role in developing solutions to the social challenges emanating from migration-based linguistic diversity and the growing need for automated language mediation; these are challenges shared with the whole world, and Europe can be a strong player in helping to provide solutions. Consequently, Europe needs to pursue research into language issues in key areas such as ensuring successful communication in multilingual encounters between groups and individuals, efficient and fast language learning, effective interpreting and translation services with their associated technology.

Reflective

57. LERU supports the inclusion in Horizon 2020 of research aimed at understanding Europe's intellectual basis: its history and the many European and non-European influences. Europe's cultural and historical diversity and its dynamics and opportunities should be the focus of further research. However, research into European countries' and regions' history, literature, art, philosophy and religions should primarily be supported by national funding organisations. Research supported by Horizon 2020 should have a clear European and transnational

Example 8: Bilingualism Matters (BM) - an information service on child bilingualism at the University of Edinburgh and elsewhere –
aims at bridging the gap between the public perception of bilingualism and the results of current research. Launched in 2008, BM builds on research showing that bilingualism brings benefits that go well beyond knowledge of two languages and last for the entire lifespan. On average, bilingual children have better awareness of language sounds, words, and structures; are better language learners and earlier readers; have enhanced attention and more mental flexibility; and develop earlier awareness that other people can have different perspectives from their own. Moreover, the speech delays that some bilingual children experience are temporary and do not affect development in either language. This research contradicts popular ideas that children will be confused by hearing two languages or that bilingualism is harmful for their mental development. It also reveals unexpected value in speaking a minority language in addition to English - bilingualism does not have to involve widely spoken languages in order to bring positive advantages.

http://www.bilingualism-matters.org.uk/

focus or should fund international cooperation by leading scholars into national or regional history, literature, art, philosophy and religions.

58. Furthermore, LERU stresses that Europe's distinct historical, political, social and cultural system is increasingly confronted with the impact of global changes. In order to further develop its external action in its neighbourhood and beyond and its role as a global actor, Europe has to improve its capacities for defining, prioritising, explaining, assessing and promoting its policy objectives with other world regions. In this regard, it also has to improve its capacities for anticipating and responding to the evolution and impacts of globalisation, and the new priorities and alliances being set by emerging countries.

59. In order to strengthen Europe's position in a changing world research on the mutual influence and ties between the world regions and the establishment of a view from outside on European cultures are needed. In particular the growing importance of Asia on the world scene asks for investments in the field of Asian studies. Social Sciences and Humanities can contribute to knowledge of the deeply interconnected histories of Asia and Europe. Building and enhancing competence in analysis of transcultural entanglements is a critical asset in the understanding of complex, global interactions the 21ˢᵗ century has to deal with.

60. Of equal importance is a greater understanding of the history, cultures and political-economic systems of other world regions themselves, as well as of the role and influence of transnational actors. LERU agrees with Commissioner Geoghegan-Quinn´s view that, "while of course we need to understand Europe, we also need to understand other cultures and societies as well so that we can improve our relationships and interactions with them. This can only be achieved with proper knowledge of their languages, history, values and cultural heritage - all these aspects are at the core of 'area studies' and they are ripe for further research"[6].

Secure

61. The European Union, its citizens and its international partners are confronted with a range of security threats like crime, terrorism and mass emergencies due to man-made or natural disasters. Europe is not immune from worldwide phenomena such as institutional disintegration, terrorism and (civil) war. The impact of these phenomena is further amplified by globalisation, vast migration flows, environmental crises and conflicts about new technologies and moral and religious pluralism. New normative frameworks are being developed to restrain and manage international and domestic conflicts through conflict resolution, peace building and social reconstruction; and to create stability, identifiable norms, public order and legitimacy. The expanding international and regional frameworks to protect and promote human rights and fundamental freedoms initiated by governments and NGOs play a significant role in preserving human dignity. Research on the development of effective legal regimes at local, national and transnational levels is critical as new threats to security emerge, but greater understanding is also needed concerning issues of human rights, ethics, justice and public acceptability which underlie them.

62. Within Europe, technology alone cannot create secure societies. A better understanding of the social and cultural dimensions of security, the historical causes of insecurity, the role of media and communication and the citizens' perceptions, are equally important elements in this objective. For a new security concern to gain support from competing political groups in society and be accepted by state bureaucracies, a sense of legitimacy is required which can only be established on the basis of an intimate understanding of the cultures, social positions and claims of the relevant groups in conflict. A particularly important element in the consequent creation of a secure society is the reaction of its citizens to the narrative of groups who question the basis of its existence. The Humanities provide the historical experience and skills to decode the content and performative power of these narratives and the way they are presented, which is central in successfully undermining threats and mobilising support for a counternarrative and security policies, and thus maintaining the political legitimacy of the state among the public.

63. The recent developments in combating the threats to security in Europe can be seen as a process of 'securitisation' which includes a set of concepts that

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6   Máire Geoghegan-Quinn, "The future of Social Sciences and Humanities in Horizon 2020", Speech at the British Academy London - 10 November 2011 http://europa.eu/rapid/pressReleasesAction.do?reference=SPEECH/11/741&format=HT

explain why, how and by whom a security threat is put on a national political agenda, is put into practice or is removed from discourse and policy again. Defining something as a threat to security is dependent on national conditions and has major implications for the amount of attention, political activity and resources committed to combating it and largely determine what is justified in combating these threats. The Social Sciences and Humanities can provide crucial insights into how threats to security emerge and disappear again, and how this influences people, societies and governments. It is necessary to avoid a pre-formed application of the notion of security, but trace back, historicise and unpack the different, interlocking and interweaving notions of security as they emerged in discourse, rule and praxis in various states.

64. Contextualising the development of legal and social frameworks, the creation of narratives and counter-narratives, the formation of identities and the securitisation process, helps us understand the behaviour of individuals and groups in society. Their reaction to threats and their ability to cope with them are however also determined by the measure of trust they have in their neighbours, financial institutions, trade unions, state bureaucracies, governments and international bodies such as the EU. The complexity of the modern world and the threats to stability, personal safety and social security create a general uneasiness in society. For LERU it is obvious that the Social Sciences and Humanities are eminently equipped to uncover the mechanisms which enhance the resilience of individuals, institutions, society and states and thereby provide a sense of security.

An ethics framework for research and innovation

65. Globalisation, new technologies (life sciences, in particular synthetic biology, neurosciences, nanotechnology, and information technology), climate change, demographic development, financial crisis and changing political institutions are challenging legal systems as well as our traditional morality. Facing these intellectual and political challenges it is important to emphasise that Horizon 2020 has a strong ambition to develop a research programme that is characterised by a high level of ethical sensitivity: A more adequate practical and political self-understanding of Europe in a changing globalised world needs to be developed. How are human dignity, freedom, equality and solidarity to be understood today?

66. LERU is convinced that to discharge this responsibility cutting-edge research in ethics is necessary. This research is able to identify, analyse and develop appropriate responses to the ethical challenges of contemporary societies over the entire range of research topics of Horizon 2020. The European research programmes have a great deal of experience with interdisciplinary research concerning many ethical questions. Research in the ethics of life sciences, nanotechnology or public health has been conducted over the last few decades both at a national level and with the support the European Commission. This ethical expertise now needs to be broadened to all areas of research and innovation.

67. Research and innovation raise questions about the legal regulation of new technologies (e.g. privacy

Example 9: The Centre for Security and Society at the Albert-Ludwigs-Universität Freiburg - a platform to pool security research activity –
was created in 2009 to press ahead with already existing successful collaboration between various institutes and disciplines. Currently, five faculties have members at the Centre: the Faculty of Law, the Faculty of Humanities, the Faculty of Philology, the Faculty of Economics and Behavioural Sciences, and the Faculty of Engineering. Each faculty appoints a member to the Centre's directorate. The concept of resilience is becoming more and more a central part of the security debate. Concepts originally developed in the technical sciences and ecology for the stabilisation of highly complex systems are being discussed as a possible basis for new security concepts. The starting point is the realisation that not the management of crises should stand at the centre, but rather the establishment of crisis-resistant structures at different levels of society and economic activity. It must be ensured, however, that new concepts do not compromise societies' openness and democratic ability. This field of tension is examined in a transdisciplinary debate.

http://www.sicherheitundgesellschaft.uni-freiburg.de/

with regard to digital technologies), safety and security, risk and uncertainty. Research into ethics and political philosophy is also needed to understand the nature of the current challenges and the possible academic, societal and political responses. Important questions include: How can the globalised economy be developed to ensure and promote basic values and human rights? How can resource expenditure be made sustainable to meet the challenges of climate change in a way that both respects the current generation and secures decent living prospects for future generations? Various political and technological developments are changing social relationships and the relationships between human beings, nature and animals. For an adequate understanding of these challenges, more systematic conceptualisations are necessary, such as a philosophical theory of democracy in a globalised world, an ethics of risk and uncertainty, an ethics of human rights and human dignity in a time of globalisation and climate change and an understanding of the human-animal relationship.

RECOMMENDATIONS ON SSH IN THE SOCIETAL CHALLENGES OF HORIZON 2020:

- Social Sciences and Humanities research is essential for all societal challenges in Horizon 2020, not just for the 6th (and probably 7th) challenge *Inclusive, innovative and secure societies*. Therefore the full participation of SSH researchers in the agenda setting process in relation to all societal challenges is necessary.

- Researchers or research consortia addressing the societal challenges should be selected on the basis of their excellence in research and through a process of open calls.

- If the challenge *Inclusive, innovative and secure societies* is split into two separate challenges, the European Commission should ensure close cooperation between the challenges.

- Given the importance of the *Inclusive, innovative and secure societies* challenge (whether organised as a single challenge or as two challenges possibly entitled *Europe in a changing world: Culture, identity and social change* and *Secure societies: Protecting freedom and security of Europe and its citizens*) LERU wishes to see this challenge (or these challenges) strengthened with an increased research budget.

- Horizon 2020 should support research aimed at unravelling the social and cultural contexts in which innovation can emerge.

- In order to build resilient and inclusive societies in Europe, Horizon 2020 should support research on the history and workings of democratic practices and expectations in Europe as well as a good understanding of the history and workings of European integration. Research funded by Horizon 2020 should also focus on the dynamics of diversity, taking into account issues of gender, migration and multilingualism.

- Research into European countries' and regions' history, literature, art, philosophy and religions should primarily be supported by national funding organisations. Research supported by Horizon 2020 should have a clear European and transnational focus or should fund international cooperation by leading scholars into national or regional history, literature, art, philosophy and religions.

- Horizon 2020 should support research aimed at understanding cultures and societies outside Europe so that we can improve our relationships and interactions with them. This can only be achieved with proper knowledge of their languages, history, values and cultural heritage.

- In order to foster secure European societies Horizon 2020 should support SSH research on issues such as the development of effective legal regimes at local, national and transnational levels, the social and cultural dimensions of security, the historical causes of insecurity, the role of media and communication and the citizens' perceptions. Horizon 2020 should avoid a pre-formed application of the notion of security, but trace back, historicise and unpack the different, interlocking and interweaving notions of security as they emerged in discourse, rule and praxis in various states.

- Horizon 2020 should support cutting-edge research in ethics as it is necessary to identify, analyse and develop appropriate responses to the ethical challenges of contemporary societies over the entire range of research topics funded by the European Union.

68. Contemporary developments are creating challenges for the existing regulatory frameworks, for the structure of political institutions and for public and political debate. But research on the ethics of research and innovation is not ultimately confined to technological opportunities and legal regulation alone. Current intellectual and political challenges require deeper ethical reflection in order to support a more adequate practical and political self-understanding as a Europe in a changing globalised world. Horizon 2020 can help to develop this ethical sensitivity and consequently make an important contribution to academic, political and public debates on a national, European and global level. Ethical reflection is indispensable for the development of a European identity, European values and a Europe that is better equipped to support democracy, human rights, human dignity, solidarity and peace in a changing world.

Research infrastructures

69. For LERU it is of vital importance for the Social Sciences and Humanities that Europe will develop and provide better access to data to increase knowledge, innovation and evidence-based policy making. European Research Infrastructure Consortia - commonly called "ERICs" - should be established, also in SSH. They will play a significant role in reinforcing cooperation between national and EU-level research and innovation policies. ERICs are, in the vision of the EU, a strategic instrument to develop the scientific integration of Europe and to strengthen its international outreach[7].

70. At the moment two important European research infrastructures in the Humanities are coming into existence as an ERIC: DARIAH (Digital Research Infrastructure for the Arts and Humanities) and CLARIN (Common Language Resources and

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Examples of European Research Infrastructures in SSH

DARIAH's mission is to enhance and support digitally-enabled research across the Humanities and Arts. DARIAH aims to develop and maintain an infrastructure in support of ICT-based research practices. DARIAH will enable researchers to ask new research questions and to pose old questions in new ways as well as to improve research opportunities and outcomes through linking distributed digital source materials across domains and disciplines. It will facilitate researchers to experiment and innovate in collaboration with other scholars in many different fields of the Humanities.

CLARIN is committed to establish an integrated and interoperable research infrastructure specifically of language resources and its technology. CLARIN is offering its services to the different communities of linguists to optimise their models and tools. All scholars using language material should benefit from this. These services will however also facilitate access to language resources and technology for Humanities scholars in a broad sense. The purpose of the infrastructure is to offer persistent services that are secure and provide easy access to language processing resources.

EHRI is a topic-oriented structure aiming to bring together a large number of all the various documents, photos and films which are related to the Holocaust, and take the research in this area further. To this end it will design and implement a "virtual research environment", offering online access to all the dispersed Holocaust resources and to a number of tools to work with them. EHRI sets out to transform the data available for Holocaust researchers around Europe and elsewhere into a cohesive body of digital resources.

ESSi has, since its launch in 2001, charted and explained the interaction between Europe's changing institutions and the attitudes, beliefs and behaviour patterns of its diverse populations. By bringing together partners from the UK, Germany, Belgium, Norway and Spain, ESSi is spreading good practice in social measurement across Europe. The high quality cross-cultural data provided by the project is a unique resource for researchers and decision-makers alike. ESSi builds on previous work funded by some 28 different funding bodies, thus ensuring continued value for previous investments.

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7   An ERIC is a specific legal form designed by the European Union to facilitate the joint establishment and operation of research infrastructures of European interest.

Technology Infrastructure). Linked to these emerging generic research infrastructures in the Humanities are topical or thematic research infrastructures, such as EHRI (European Holocaust Research Infrastructure) and for the Social Sciences ESSi (European Social Survey Infrastructure).

71. These infrastructures have in common that they build on technologies recently developed in computer science. These new technologies are transferable to Social Sciences and Humanities. Applying them in the SSH research infrastructures will undoubtedly lead to new, innovative and often interdisciplinary ways of research which were until now not possible in the analogue world.

72. SSH researchers have particular requirements for research infrastructures. Therefore, the considerable advances in research infrastructures that have been made in Science should be adapted to Social Sciences and Humanities in a creative way. The digital age is compelling SSH researchers to introduce "traditional" physical collections onto the digital plane by digitisation and/or to construct new collections of digital objects as subjects of research in the Humanities today. Making available our cultural heritage in digital form combined with sensitive interlinking of such resources will open a new frontier for Humanities research. In order to ensure the sustainability of SSH research infrastructures a number of key activities require support. These include long-term preservation, sharing of data, tools and services, active collection and development of new data and tools and applicable business models, enabling research infra-

structures to be sustained and further funded by either their founders or appropriate bodies. CLARIN and DARIAH, for example, will take care of all these aspects which are vital for research in the Humanities.

The European Research Area and national funding organisations

73. LERU welcomes the establishment of the European Research Area. Also for the Social Sciences and Humanities more European wide competitions for research funds should strengthen international cooperation and raise the overall quality of the research.

74. The successful European Research Area - Joint Research Programme for the Humanities (HERA-JRP) and the Social Sciences (NORFACE) should be continued. However, to be truly successful all funding organisations within the EU should join HERA and NORFACE, more research money should be put in the common pot and thematic research should be defined through a transparent process in which scholars can propose themes for research. National legislations should be modified to enable national funding organisations to truly join HERA and NORFACE.

75. HERA and NORFACE are encouraged not only to give substantial grants for international research projects, but also smaller grants for scholars to further develop international research proposals.

76. LERU recommends that national funding organisa-

RECOMMENDATIONS ON RESEARCH INFRASTRUCTURES:

· Further funding for pan-European Social Science and Humanities research infrastructures is required if previous investments by European funders are to be exploited to their full potential.

· To ensure the highest quality information about European society is available to key decision makers, funding for Social Science research infrastructures must be maintained.

· Future funding for digital Humanities research infrastructures must be ensured if the full potential of Humanities research is to be reached.

RECOMMENDATIONS ON NATIONAL FUNDING FOR SSH:

· National funding organisations should a play a distinct role in Europe by complementing SSH Horizon 2020 activities.

· In the field of the Social Sciences and Humanities the successful European Research Area - Joint Research Programme (HERA-JRP) and NORFACE should be continued and strengthened.

tions play a distinct role in Europe, not only by supporting HERA, NORFACE and other JRP's and JPI's, but also by complementing Horizon 2020. Especially within Humanities research there is not only the economy of scale, but also the economy of scope. Therefore national funding organisations should not only emulate programmes of Horizon 2020, but also ensure that researchers should get smaller grants for individual and small-scale research. These smaller grants for individual and small-scale research are extremely valuable. LERU does not foresee any future for the Humanities in which individual researchers do not produce major breakthroughs outside collective frameworks.

"Small Disciplines": the role for Europe

77. Both the Sciences and the Humanities have small, or peripheral research fields, which are at the fringes of the academic mainstream and are present at only a few universities. These fields can be called "small disciplines" or "minority subjects". The latter are defined by the HEFCE as "those subjects which are unlikely in the foreseeable future to be able to attract ratios of students to staff which can usually be sustained through formula-based funding. In practice [...] they may be identified as those subjects which both are isolated academically from other subjects and are able to enrol no more than 100 students throughout the UK. In many cases provision will be very much less than this, and at the extreme there might be only one or two students enrolled in total in a five-year period"[8].

78. The challenges faced by these small disciplines are many:
   - Budget cuts reduce the number of staff to such a level that these departments lack 'critical mass': they can no longer provide the range of subjects necessary for a strong position in the field and for innovation of the research agendas; they also gradually lose their claim to accreditation as they cannot provide a programme of high quality at masters' level;
   - Their facilities are no longer adequate to support larger research projects;
   - The case for the maintenance of important collec-

tions and extensive library facilities is constantly undermined by the small number of researchers who make use of such facilities;
   - Overheads become an ever greater burden on decreasing institutional budgets.

79. The consequence of these challenges is that several small disciplines are either in a state of rapid decline or even imminent 'death'. Others may face growing isolation or risk being reduced to teaching facilities or hidden under broader 'umbrella' subjects, thereby lacking visibility, identity and impact in academic discourse.

80. It is clear that Europe faces the challenge to strengthen these minority subjects. The disappearance of some of the minority disciplines is a loss to vital interests of the larger community of nations in Europe as it may lose touch with its cultural heritage in the form of collections and an on-going interest in the world outside. The loss will have a wider impact as European societies are grappling with the multilingual and multicultural nature of modern society and with the growing globalisation of the economy. Research and teaching of high quality in the cultures of European societies is nowadays increasingly important when identity is of great societal relevance. Also, many of the small academic fields deal with regions that are of political significance or economic potential, which gives an even more acute edge to the imminent decline of these fields.

81. Cross-border collaborative research can play a key role in providing solutions which cannot be solved within national borders alone. Research in small disciplines would benefit greatly from networking or aligning of national programmes at a European level. Coordination and dialogue across Member States should be supported as a means to address the needs of the scholars in these minority subjects.

82. International cooperation is the surest strategy for such endangered fields since it allows them to spread the risk, stay in tune with larger research efforts and gather 'strength' in numbers and optimize the access to and use of collections. Initialising international co-operation is best undertaken by the relevant stakeholders themselves seeking out opportunities for joint programmes, sharing of library col-

RECOMMENDATION ON "SMALL DISCIPLINES":
   - Universities and national research councils should promote international cooperation in the fields of "small disciplines", especially in the Humanities.

lections and other options for cooperation. Joint Programming for small disciplines should be defined through a transparent process and with the contribution of leading scholars. The European Commission should take on the role of "gatekeeper" by establishing efficient governance.

Closing the research divide in Europe

83. There are significant regional disparities across Europe in research performance in the Social Sciences and Humanities which need to be addressed. LERU wants to stress that these disparities should be addressed by distinct, complementary and synergistic actions supported by the Cohesion Policy funds.

84. LERU supports the idea that the development of a competitive research base for SSH in less developed EU Member States depends fundamentally on the ability to retain the best talents within a framework of structures, processes and opportunities that researchers are able to exploit to good effect. Cohesion Policy funds should therefore support the development of competitive comprehensive research universities in the less developed EU Member States, in which SSH researchers will have well-supported research opportunities, creative freedom and personal satisfaction. From its part, LERU is prepared to explore the possibility of linking emerging institutions and SSH centres of excellence in less developed Member States to SSH faculties and programmes at LERU universities.

Towards a European Social Sciences and Humanities Platform

85. LERU proposes the establishment of a European Social Sciences and Humanities Platform, following the model of the European Technology Platforms (ETPs), which are industry-led stakeholder fora charged with defining research priorities in a broad range of technological areas.

86. Several Social Platforms function within FP7 and define research agendas in distinct areas driven by societal concerns. However, no platform exists in which leading SSH researchers review the research agenda for all societal concerns in an integrated way and on a longer-term basis.

87. A European Social Sciences and Humanities Platform should provide a framework for stakeholders, be led by leading researchers from research universities in the field of Social Sciences and Humanities, and develop and update research priorities agendas, taking into account and not duplicating the work of existing Social Platforms. An SSH Platform should facilitate the dialogue between the European Commission, researchers of leading research universities, representatives of other institutions and national government representatives in order to create consensus and to improve alignment of investment efforts. This Platform should also provide valuable input to define European research funding schemes.

RECOMMENDATIONS ON REGIONAL DISPARITIES:
- The unwelcome regional disparities across Europe in research performance in the Social Sciences and Humanities should be addressed by distinct, complementary and synergistic actions of the Cohesion Policy funds.

RECOMMENDATION FOR A EUROPEAN SSH PLATFORM:
- A European Social Sciences and Humanities Platform should be established which should provide a framework for stakeholders, be led by leading researchers of research universities in the field of Social sciences and Humanities, and develop and update SSH research priorities agendas, taking into account and not duplicating the work of existing Social Platforms.

Summary

88. In order to cope with the societal challenges identified by the European Commission, it is necessary to include Social Science and Humanities research in the specific programmes implementing Horizon 2020. Again, the challenges Europe faces are fundamentally human in nature - understanding individual and collective human behaviour is therefore necessary. SSH researchers should be involved in all societal challenges. LERU recommends that Social Sciences and Humanities researchers will participate in the agenda setting of *all* societal challenges, taking part in the whole process, from problem formulation to project evaluation and implementation.

89. LERU welcomes the inclusion of the challenge *Inclusive, innovative and secure societies* in Horizon 2020, or the inclusion of two separate challenges focussing on the Social Sciences and Humanities (cf. paragraphs 45-46). However, given the importance of these challenges, LERU wishes to see them strengthened with an increase in research budgets, while topics like migration, multilingualism and area studies should be included in programmes.

90. To maximise the impact of research and innovation, also in the Social Sciences and Humanities, the very best researchers must be given the opportunity to pursue their curiosity. As crucially important pillars of Horizon 2020, the ERC and Marie Curie programmes should be more generously funded and sufficiently open for SSH researchers.

91. National research funding organisations should be encouraged to continue creating common funds for SSH. In the field of the Humanities, this common fund can be administrated through HERA, while in the field of Social Sciences NORFACE can play a similar role. However, to be truly successful all funding organisations within the EU will need to join HERA and NORFACE, more research money will have to be put in the common pot and at least a significant part of the common fund should be made available for managed, curiosity-driven research. The themes of research should be defined through a transparent process and with the contribution of leading scholars.

92. LERU recommends the establishment of European Research Infrastructure Consortia, also in the Social Sciences and Humanities. In order to be successful, the advances in research infrastructures that have been made in Science should be adapted to Social Sciences and Humanities in a creative way.

93. Universities and national research councils should promote international cooperation in the fields of 'small disciplines', especially in the Humanities. Joint Programming for small disciplines should be defined through a transparent process and with the contribution of leading scholars. The European Commission should take on the role of "gatekeeper" by establishing efficient governance.

94. To address the unwelcome regional disparities across Europe in research performance in the Social Sciences and Humanities, LERU wants to stress that these disparities should be the focus of distinct, complementary and synergistic actions of the Cohesion Policy funds.

95. LERU recommends the establishment of a European Social Sciences and Humanities Platform, which should provide a framework for stakeholders, led by leading SSH researchers at research universities, to develop and update agendas of SSH research priorities.

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About LERU

LERU was founded in 2002 as an association of research-intensive universities sharing the values of high-quality teaching in an environment of internationally competitive research. The League is committed to: education through an awareness of the frontiers of human understanding; the creation of new knowledge through basic research, which is the ultimate source of innovation in society; the promotion of research across a broad front, which creates a unique capacity to reconfigure activities in response to new opportunities and problems. The purpose of the League is to advocate these values, to influence policy in Europe and to develop best practice through mutual exchange of experience.

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