

2013-7

Recognising the Value of the Arts and Humanities in a Time of Austerity

Ellen Hazelkorn

Technological University Dublin, ellen.hazelkorn@tudublin.ie

Mairtin Ryan

Technological University Dublin

Andrew Gibson

Technological University Dublin

See next page for additional authors

Follow this and additional works at: <https://arrow.tudublin.ie/cserrep>



Part of the [Educational Assessment, Evaluation, and Research Commons](#)

Recommended Citation

Hazelkorn, E., Ryan, M., Gibson, A. & Ward, E. (2013) Recognising the Value of the Arts and Humanities in a Time of Austerity: Report. *HERA, 2013*.

This Report is brought to you for free and open access by the Centre for Social and Educational Research at ARROW@TU Dublin. It has been accepted for inclusion in Reports by an authorized administrator of ARROW@TU Dublin. For more information, please contact arrow.admin@tudublin.ie, aisling.coyne@tudublin.ie, vera.kilshaw@tudublin.ie.

Funder: HERA

Authors

Ellen Hazelkorn, Mairtin Ryan, Andrew Gibson, and Elaine Ward



HERAVALUE: MEASURING THE WIDER VALUE OF ARTS AND HUMANITIES RESEARCH

Recognising the Value of the Arts and Humanities in a Time of Austerity

HERAVALUE Ireland Report

Ellen Hazelkorn, Martin Ryan, Andrew Gibson and Elaine Ward
Higher Education Policy Research Unit (HEPRU)
Dublin Institute of Technology, Ireland

July 2013

CONTENTS

HERAVALUE: MEASURING THE WIDER VALUE OF ARTS AND HUMANITIES RESEARCH	1
1. Executive Summary	7
1.1 Overview	7
1.2 HERAVALUE Project	7
1.3 Main Findings.....	8
1.4 Recommendations	10
2. Introduction.....	12
2.1 Context: Understanding the value of research.....	12
2.2 Context: Understanding Irish policy dynamics	16
2.3 Overview of HERAVALUE Project.....	19
2.4 Conceptual Framework for the Irish National Report	21
3. Defining Arts and Humanities Research.....	23
3.1 Overview	23
3.2 What is arts and humanities research?	26
3.3 Digital Arts and Humanities	30
3.4 Conclusion.....	33
4. Irish Higher Education and Research Policy	36
4.1 Overview	36
4.2 Catching up with Europe.....	37
4.3 From Elite to Mass Higher Education.....	38
4.4 Knowledge Economy as Policy Driver	40
4.5 Responding to the Crisis	45
4.6 Arts and Humanities Research in Ireland.....	48
4.6.1 Arts, humanities and cultural research.....	48
4.6.2 Characteristics of arts and humanities research in Ireland	51
5. What Stakeholders Think about Arts and Humanities Research	61
5.1 Overview	61
5.2 What is Arts and Humanities Research?.....	61
5.2.1 What is Research?.....	62

5.2.2	What is Arts and Humanities Research?	62
5.2.3	How do the Arts and Humanities Compare to the Sciences?	64
5.3	Value, Contributions and Benefits of Arts and Humanities Research	67
5.3.1	The Benefit of Research for Teaching and the Learning of Students	67
5.3.2	The Benefit of Research for Training of Scholars and Formation of Creative Capital ..	68
5.3.3	The Benefit of Research for Human Expression and Cultural Identity	70
5.3.4	The Benefit of Research for (Long-Term) Developments in Society	71
5.3.5	The Importance of Communicating the Benefits of Research	73
5.4	Measuring the Quality of Arts and Humanities Research	76
5.4.1	Earning the Respect of Peers	77
5.4.2	Bibliometric Performance	78
5.4.3	Diversity of Research	80
5.4.4	Doctoral Training	83
6.	Assessing Arts and Humanities Research	85
6.1	Assessing university-based research	85
6.2	Valuing arts and humanities research	88
6.3	A way forward	91
7.	Conclusions	98
8.	Appendix A: Methodology	104
8.1	Overview	104
8.2	Overall Study Design and Methodology	105
8.3	Literature Review	105
8.4	Research/Stakeholder Forum	106
8.5	Structured Interviews	106
8.6	Secondary Data Analysis	107
9.	Appendix B: Selected Research Assessment Strategies with reference to Arts and Humanities Research	109
9.1	AUSTRALIA	109
9.2	CANADA	113
9.3	FINLAND	119

9.4	IRELAND	123
9.5	NETHERLANDS.....	128
9.6	NORWAY	134
9.7	SPAIN.....	137
9.8	UNITED KINGDOM	140
9.9	UNITED STATES	143
10.	Appendix C: Chronology of Irish Education and Research Policy.....	146
11.	Appendix D: Interview Protocol	157
11.1	INTERVIEW PROTOCOL – Academic/Researcher	157
11.2	INTERVIEW PROTOCOL - Civil Society	157
11.3	INTERVIEW PROTOCOL – Policy Makers	158
12.	Bibliography.....	160

Figures

Figure 1:	What are the Arts and Humanities Disciplines?	14
Figure 2	Clickstream visualization of journals, coloured according to discipline	15
Figure 3	Clickstream Visualization of Journals, coloured according to AHSS or STEM.....	16
Figure 4	Articulating Value in Arts and Humanities Research: A Conceptual Framework	21
Figure 5	International Comparison of GBAORD as a percentage of GDP/GNP, 2010.....	45
Figure 6	Total R&D Expenditure in the Irish Higher Education Sector as a % of GDP, 1995-2011	48
Figure 7	Structure of the SSH Research Sector in Ireland.....	51
Figure 8	(HERD) Expenditure on Humanities in Ireland - Current Prices: 2000-2010, (€m)	52
Figure 9	Ratio of A&H HERD to Overall HERD: 2000-2010	52
Figure 10	Type of research carried out by Field of Science, 2008	56
Figure 11	Ireland’s Share of World Humanities Papers: 1998-2007.....	57
Figure 12	Citation Impact of Ireland’s Humanities Papers: 1998-2007	57
Figure 13	Postgraduate Enrolments in the Arts and Humanities in the University Sector: 2005-12 ...	58
Figure 14	Postgraduate Enrolments in the Arts and Humanities in the IoT Sector: 2008-12.....	58
Figure 15	Postgraduate Graduates in the Arts and Humanities in the University Sector: 2005-12	59

Figure 16 Tip of the Iceberg? Research Outputs and Impacts.....	86
Figure 17 Primary and Secondary Impact of Academic Research	87
Figure 18 Framework of Research Assessment Methods.....	96
Figure 19 Diversity and Differences of Output Types for Non-traditional Research.....	111
Figure 20 CRC Evaluation Approach Overview: Phases, Processes, and Deliverables.....	114
Figure 21 Canada Logic Model of the CRC Program: Activities, Outcomes and Priorities.....	115
Figure 22 Overview of Data Collection and Analytical Methods for CRC	117
Figure 23 Time Spent on Research Activities by People in HE.....	124
Figure 24 Diagram of Indicators in the Humanities (NL)	129
Figure 25 List of Indicators.....	130
Figure 26 Outline of steps involved in Phase I of STAR METRICS participation.....	144

Boxes

Box 1 Policy Reviews/Reports on Irish Higher Education and Research, 2008-2012	17
Box 2 Key Creative Arts and Humanities Policy-influencing Documents.....	18
Box 3: Selected Documents on Digital Arts and Humanities, 2006-2012	31
Box 4 Sample of Irish Research Council Awards, 2011	50
Box 5 Selected Research Groups, Centres and Programmes in the Arts and Humanities, and Digital Arts and Humanities in Dublin Region	54

Tables

Table 1: Changes in the Production of Knowledge	24
Table 2 Sources of Research Funding by Field of Science (€ millions), 2008	53
Table 3 FTE Researchers by Occupation and Field in the Higher Education Sector, 2008	55
Table 4 Types of costs by new fields of science, 2008 (€ million).....	55
Table 5 Are We Measuring What Counts.....	88
Table 6 Summary of Research Assessment Methods	93
Table 7 Stakeholder Representation at Research Forum	106

Abbreviations

- Arts and Humanities Research (A&HR)
- Arts, Humanities and Social Sciences (AHSS)
- Higher Education Authority (HEA)
- Irish Research Council for the Humanities and Social Sciences (IRCHSS)
- Koninklijke Nederlandse Akademie van Wetenschappen/Royal Netherlands Academy of Arts and Sciences (KNAW)
- Programme for Research in Third-Level Institutions (PRTL)
- Report of the Research Prioritisation Group (RRPG)
- Research Prioritisation Exercise (RPE)
- Royal Irish Academy (RIA)
- Social Sciences and Humanities (SSH)
- UK Humanities Research Board (UK HRB)

1. Executive Summary¹

1.1 Overview

The economic crisis has recast many of the discussions taking place in Ireland today. This is especially true for academic research. While there had been growing interest in the assessment of the value, impact and benefit of research – in line with broader policy and public concerns about international comparability and accountability – the Crisis has focused these discussions more widely about the type of research being undertaken and the immediacy of the public benefit. This discussion is not limited to Ireland, but it has taken a particular shape in Ireland because of the depth and prolonged nature of the recession following the Global Financial Crisis of 2008, which represented a dramatic *volte-face* from the previous Celtic Tiger days.

There are several aspects to this discourse. The decisive shift to relocate research closer to economic activity, was realised through the 1) reallocation of the major research budget to the Department of Enterprise, Jobs and Innovation followed by the expansion of the role and budget for Science Foundation Ireland and away from the Department of Education and Skills and the Higher Education Authority; 2) National Prioritisation Exercise (NPE) which aligned research with industrial sectors rather than “grand challenges” or “themes”; 3) emphasis given to research relevance and more short-term outputs, impacts and benefits for the Irish economy; and 4) merger of the humanities and social science research council with the council for science, engineering and technology to create a single Irish Research Council. Arts and humanities, and social science, researchers have felt sidelined by these developments, although these events have also raised wider questions about the inter-relationship between research and higher education strategies – and how this necessary interplay is understood and valued within the social-cultural-economic eco-system.

1.2 HERAVALUE Project

It is against this backdrop that the HERAVALUE project (funded by the HERA programme, an ERA-NET network funded by the European Commission and 19 research councils responsible for arts and humanities research across Europe) was undertaken. Drawing on experiences in three countries (Ireland, Netherlands and Norway), HERAVALUE seeks to increase our understanding of the contribution that university-based arts and humanities research makes to society and the economy by exploring how it is defined, appreciated and accounted for by researchers, policymakers and civil society. It aims to explore assumptions held by these different stakeholder constituencies, and to compare and contrast their perceptions and considerations of creative values, creativity and innovation, and impact and benefit. Furthermore, it aims to identify appropriate practices and methodologies to assess and demonstrate quality and value beyond the academy. The key objective is to better understand what really matters rather than what is easily measured.

¹ I would like to thank Margaret Kelleher and Geoffrey Crossick for their helpful comments and suggestions, albeit all errors are mine.

While many of the issues identified above were not fully formed at the beginning of the project, over its duration, the project's necessity has become more obvious – and has been eagerly awaited. It has become clear that arts and humanities researchers, policy makers and funding agencies, and civil society more widely are, each in their own and different ways, looking for ways to recognise and value the important contribution of arts and humanities research within the new policy paradigm. Important discussions have taken place within and between the academy and the policy community, and an all-island Irish Humanities Alliance has been formed to “generate public awareness of the importance of humanities teaching and research in higher education and society at large, and to inform and shape public policy”.

The Irish national study gathered the views of a diverse range of people across multiple stakeholder groups – researchers, policy makers, and civil society. Both sectors of Irish higher education, universities and institutes of technology, were interviewed, in addition to representatives of both the private-sector and state agency policy-makers; members of civil society included community-based and national-level arts organisations and bodies, as well as the media. In total, the views of forty-one people were gathered during 2011 and 2012 for this study.

1.3 Main Findings

During the course of the research, the project traversed and uncovered a wide range of inter-related issues. There are ten main findings which emerge from the research.

- There is a wide acceptance amongst arts and humanities researchers that the new economic and policy environment in Ireland has placed/is placing an increasing obligation on all researchers to respond to questions about the value of research in general, and arts and humanities research in particular. In this context, researchers also accept the need to better demonstrate value through improved articulation of what research is being done and why, and how it contributes to both social and economic value. Indeed, many of the researchers acknowledge that they bear some blame for failing to communicate more widely and to interact with society's various publics.
- Arts and humanities researchers have traditionally sought to define their work in “exceptionalist” terms, which has tended to isolate them from each other and from other disciplines. Closer inspection reveals that arts and humanities research overlaps with the social sciences and with other practice-based disciplines, as the emergence of digital humanities research illustrates. While arts and humanities research has much to learn from other disciplines, other disciplines have and can benefit from the perspectives, methodologies and understandings that the arts and humanities bring to societal challenges;
- Increasing emphasis on innovation as critical for economic development and recovery has drawn (too) heavily upon a single techno-science model of research and innovation. This depends on an over-reliance on a linear model which sees research as producing results which are easily codified into IP and then translated into new products and services. This model underestimates the wider contribution and value of arts and humanities research which comes about in more dispersed and interactive ways through different transactions which create public benefit.
- The arts and humanities have been a cornerstone of Irish social, cultural and political history. Today, the arts and humanities are presented as one of the country's unique-selling points as

demonstrated by the use of culture to rebuild Ireland's national credibility internationally in the wake of the banking collapse of 2008. Despite this, arts and humanities research is considered only a marginal player in the country's strategy for social and economic recovery.

- Irish research has been highly dependent upon national government funding (both direct and indirect) through significant investment available, for the first time, between 2000-2008. The picture is similar for the humanities, with 82% of all research income being accounted for by government. Recent changes in policy direction, coupled with the reduction in overall funding, in both absolute and percentage GDP terms, has had a disproportionately greater impact on the arts and humanities than on the bio-sciences and technology-based disciplines. Accordingly, these changes pose very significant challenges for the sustainability of the many initiatives which have provided the basic infrastructure for the arts and humanities and for which the government has been the primary benefactor.
- Arts and humanities research is strongly described as "basic", with less than 15% characterised as either applied or experimental. The research model is primarily individual-driven and based, with researchers often working alone in archives or at home rather than as part of a team which is typical of scientific research. Career preparation remains focused on the academy and there is little evidence of collaborative work, especially with the major cultural organisations. Indeed, civic society groups remarked, during interview, that much of the research being conducted was not of immediate use or value to the organisations.
- There is a widespread acknowledgement, by policymakers and funding agencies and civil society, to support research across and in all disciplines, with no "scientific discipline" being excluded from the research funding programme. There is also a strong desire to embrace new approaches which more adequately reflect the diversity of disciplinary practices and their achievements. However, all parties to this discussion, including the researchers, struggle with identifying the appropriate methodology which balances disciplinary distinctiveness with cost and efficiency.
- Measuring the quantity and impact of research through peer-reviewed journal articles and citation impact factors is only the tip-of-the-iceberg – and misses the real story of valorisation or the way researchers demonstrate the significance or relevance of their research for economic, socio-cultural or technological purposes. In addition to books and book chapters, arts and humanities research outlets may include legal cases, maps, major art works or award-winning designs, policy documents and technical reports, television documentaries and radio programmes, exhibitions and cultural artefacts, and so on. Its impact can be felt through teaching (the number one purpose for university-based research), improvements to productivity and the quality of life, increased employment, informed public debate, policy change and social innovation, and so on.
- The arts and humanities have led to world-changing insights and discoveries, influencing the ideas and view of other artists and humanists but also scientists and technologists. They have played a critical role in shaping our understanding of contemporary Ireland and contributing to public discourse – demonstrated, inter alia, in the way in which Irish history, literature, music and theatre, the visual arts and culture permeate radio and television and other media, urban and rural life, etc. – and contribute to aspects of Irish life that we today take for granted. Over the centuries, Irish arts and humanities scholars have made an extensive contribution across economic, policy and civil society spheres – but have often left an untold legacy.

- It is not possible to predict where the next big idea comes from or how it will be applied in society or in the economy. Thus, the flaw lies, not in the value of the research being undertaken, but in our thinking of what matters and how it is measured.

1.4 Recommendations

- There has been a breakdown in many of the historical and societal sureties which have defined modern Ireland over recent decades. This environment provides unprecedented opportunities for arts and humanities researchers to actively engage, challenge assumptions and help shape the new public agenda. Through literature, music, philosophy, history, language, drama, art, dance, theatre, etc., arts and humanities researchers can offer a particular and unique insight and make a vital and valuable contribution to culture and identity, especially in these difficult times.
- Arts and humanities researchers must engage directly with (Ireland's) "grand challenges", and respond to the gauntlet laid down by the government. The shift towards application or context-driven research opens up a new fertile feedback loop between different disciplines, but especially between the arts and humanities and the wider society and economy;
- Arts and humanities researchers need to engage openly and positively with each other and with colleagues in cognate, complementary and diverse (scientific) disciplines. There should be much greater co-operation across disciplines, and especially between the arts and humanities and between them and the natural sciences. This requires a change in approach by the researchers themselves; less rooted in "exceptionalism" and more focused on collaboration and engagement within their institutions and professional bodies but especially, beyond the academy, with the wider society.
 - Collaborations should not simply be the easy and obvious ones with cultural organisations or the cultural industries – but should be more adventurous;
 - Arts and humanities researchers should be more willing to approach business as collaborators for (commercial) opportunities and for funding, and less "timid on the ideological/ethical grounds that have sometimes inhibited co-operation in the past" (Tinkler, 2008, p10) – not least because public funding is likely to continue to decline in the future.
- Adopting a more complex understanding of impact must begin at home – within the academy. While the academy has rightly complained about the narrowness of evaluation indicators, it is not an innocent victim. Many of the processes used for recruitment and promotion continue to promulgate traditional approaches – which benefit established researchers. At the same time, arts researchers (in particular) are often reluctant to engage in "writing-up" the intellectual and critical processes embedded in their practice for interrogation by peers – claiming the artefact or composition is itself research.
 - If researchers want to be recognised and valued, then they must participate in the process along the same terms as scientific disciplines;

- The debilitating almost internecine tension between the creative arts and humanities, which has led to the former being excluded from many important conversations about research, must end;
 - The academy and funding agencies must make space for research and novel impact-generating work undertaken by arts and humanities researchers.
- Research training must embrace a wider understanding of future career opportunities for graduates. This goes beyond attention to embracing new digital methodologies and tools, to recognising that the overwhelming majority of graduates will not work within the academy but within the private, public or “third sector” – adapting their research skills to the new environment and problems. This means that interdisciplinary studies, internship opportunities, improving qualitative and quantitative skills, in addition to communication and presentation skills are all vital.
- Arts and humanities researchers must themselves communicate more willingly and openly with external stakeholders – explaining and demonstrating the value and importance of their work to an often uncertain and critical public. This may include improving their lobbying skills and forming partnerships with other groups, but this should not be done in an apologetic or defensive manner.
- There is an urgent need to develop more appropriate methodologies and tools to record how the arts and humanities make an impact and deliver benefit to society and the economy. This requires adapting lessons learned from other jurisdictions, which have already begun to embrace an appreciation of impact within and beyond the academy, with demonstratable effect. This process may be more complex and time-consuming than reliance on quantitative metrics, but there is an expressed willingness by policymakers, funding agencies and civil society if arts and humanities researchers are prepared to meet halfway.

2. Introduction

2.1 Context: Understanding the value of research

The arts and humanities are generally acknowledged as being important for enhancing civil society and encouraging creativity, bringing both instrumental and intrinsic value at a societal and individual level; the former produces "measurable benefits, such as economic growth and student learning" which are of value to all society not just those involved in the arts, while they also "enrich people's lives" (McCarthy, 2004, xi). While fighting the "culture wars" has been difficult, especially during recessionary times, there has nonetheless been a baseline belief that the arts – through drama, paintings, music, dance, etc. – make a vital contribution to culture and identity, especially in these difficult times. Arts and humanities research – that which is conducted principally in higher education institutions – faces a different set of concerns.

The intrinsic value and contribution of research in the arts and humanities has been an enduring component of the academy since its earliest days (Bric, 1999, 7) While universities differ in the emphasis they place on different disciplines, arts and humanities research has continued to remain at the heart of the belief that society benefits from the pursuit of knowledge and the scholarship generated by universities. Much of the certainty which has been accepted within academic and disciplinary circles, and related professions, is under challenge since the concept of the "knowledge economy" has become the main policy paradigm across Europe, and around the world.

In this construct, knowledge increases legitimacy and value through its utility. While the arts and humanities laid the "groundwork for the oral and written demands" which was considered "no less utilitarian and no less socially applicable than disciplines such as law, theology or medicine" (Cobban, 1988, 161-162), the "knowledge economy" requires disciplines to *directly* contribute to new products and services. This relationship was affirmed in 1945 with the publication of *Science, The Endless Frontier* by Vannevar Bush, Director of the US Office of Scientific Research and Development under Franklin D. Roosevelt. It emphasised the primacy of fundamental scientific research for social and economic progress:

New products, new industries, and more jobs require continuous additions to knowledge of the laws of nature, and the application of that knowledge to practical purposes.... without scientific progress no amount of achievement in other directions can insure our health, prosperity, and security as a nation in the modern world.

This alignment underpinned the tremendous expansion of university-based research, and sealed the "social contract" between the taxpayer, structured governmental research financing, and the research community (Guston, 1992). Science would be privileged as long as there were expectations of usefulness. However, increased pressure for transparency and accountability has led to a requirement to demonstrate relevance, impact and benefit as a way of proving value-for-money and confidence to the investor (taxpayer).

Performance and productivity are usually measured by research income and bibliometrics, but nowadays such measurement also includes patents, licenses and start-up companies. While scientists may have their own grumbles with this methodology, it does favour the physical, life, and

medical sciences - which publish regularly in peer-reviewed journals on the basis of work conducted by large teams. It relies normally on a linear model of research and impact/benefit, and assumes that research produces intellectual property which can be translated into a new product or service which can then be commercialised and sold widely. The direct benefits are usually privately owned, while the indirect benefits, or spill-over effects, are beneficial to wider society because they contribute to economic growth and wellbeing. In today's world, the ability of university-based research to contribute to economic recovery is paramount in most policymakers' minds.

The emphasis has switched to looking for outcomes (the level of performance or achievement including the contribution research makes to the advancement of scientific-scholarly knowledge) and ultimately to requiring an impact and benefit (e.g. the contribution of research to outcomes for society, culture, the environment and/or the economy). This change marks a move away from seeing knowledge as the basis for human capital development to being an arm of economic policy – a policy shift which is being managed by government departments/ministries with responsibility for economic development, jobs, etc. rather than (higher) education. In this environment, all disciplines are being asked to demonstrate value – and especially to better articulate what they do and how their contributions have both social and economic value. Once research is seen to have value and impact beyond the academy, there are implications for the disciplines and choice of research projects: what is funded, how it is managed, how it is measured and by whom.

Some of the challenges facing the arts and humanities lie in the sheer breath of their disciplinary bases – from creative and performing arts to classics, history, literature, linguistics and jurisprudence. It is easier to understand or promote the significance or societal value of literary or artistic history, cultural or heritage studies, or Irish language studies - than an analysis of philosophic texts, historical or computational linguistics, or an analysis of artistic or compositional techniques. The former can more easily be "justified" in terms of their impact on the creative/cultural industries, tourism, foreign policy, and so on, while the latter are arguably more esoteric. Research practice reflects creative- or curiosity-inspired individual endeavour which does not lend itself to traditional research assessment methodologies; the latter ignore the breadth of research activity, outputs and outlets, and because the levels of research income are usually small, any evaluation creates on *vicious circle*. This is because the results of the research are not easily codified into intellectual property (IP) or translated into new products and services. This makes it harder to demonstrate how arts and humanities research – as well as the social sciences – flows into society and the economy. As a consequence there is an under-appreciation of the importance of arts and humanities research.

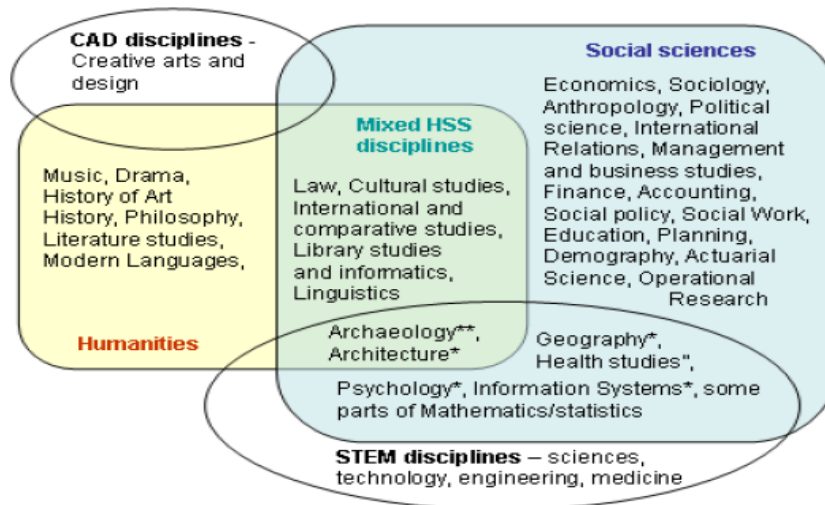
Measuring the quantity and impact of research through peer-reviewed journal articles and citation impact factors is only the tip-of-the-iceberg – and misses the real story of valorisation, that is: the way researchers demonstrate the significance or relevance of their research for economic, socio-cultural or technological purposes. Hence, in addition to books and book chapters, research outlets may include legal cases, maps, major art works or award-winning designs, policy documents and technical reports, television documentaries and radio programmes, exhibitions and cultural artefacts, and so on. Its impact can be felt through teaching (the number one purpose for university-based research), improvements to productivity and the quality of life, increased employment, informed public debate, policy change and social innovation, and so on.

To get around this, arts and humanities researchers have often sought refuge in "exceptionalism". Sometimes the arguments have spilled over into debilitating quarrels between the disciplines – most

commonly between scientists and non-scientists, but also between the humanities and creative arts. The research model continues to be individual-driven and based, with researchers often working alone in archives or at home rather than as part of a team which is typical of scientific research. Career preparation remains focused on the academy rather than learning from successful collaborations and engagement with the challenges of society. Creative arts researchers also tend to emphasise the uniqueness of practice-based methods and methodologies, and the research environment - which is both conceptual and physical.

However, closer inspection reveals that disciplines share more in common than not. Figure 1 shows the overlap between creative arts and design, with the humanities and the social sciences. The social, lab and engineering sciences are equally practice-based, drawing on field work or experimentation to test theoretical propositions. Overall, the flaw may lie in over-reliance on a linear research model – which underestimates the contribution of all disciplines, but especially the arts and humanities. The wider value of research comes through in myriad ways in which different transactions create a public benefit. In other words, rather than seeing a linear or single input-output model to calculate benefit, the effects are much more dispersed and interactive. Economists often use the concept of "equilibrium effect" to illustrate the total net effect created by the employment of workers, payment of suppliers who purchase other supplies, the employees who spend their income on goods and services, and so on. The main point is that research creates value by causing “ripples” that are played out throughout society. (Benneworth, 2012)

Figure 1: What are the Arts and Humanities Disciplines?²



Notes:

* Assumed 25 per cent in social sciences and 75 per cent in STEM disciplines grouping.

** Assumed 50 per cent in humanities and social sciences and 50 per cent in STEM disciplines.

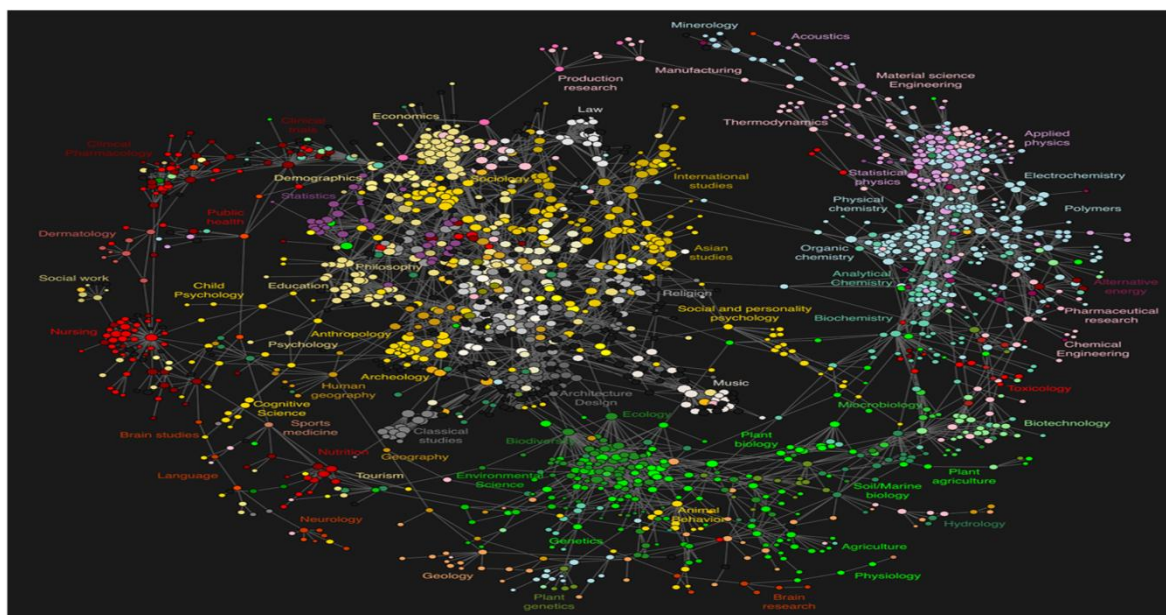
Source: Tinkler, J. (2008a) *Maximising the social, policy and economic impacts of the humanities and social sciences*. Report to British Academy from LSE Public Policy Group, London. p16

² Title of diagram adapted from original, “What are the Humanities and Social Sciences disciplines?”

Further evidence is presented in research conducted at the Los Alamos labs (Bollen et al., 2009). These researchers modelled nearly 1 billion scholarly user interactions from the web portals of the most significant academic publishers, aggregators and institutional consortia over the preceding two years, and visually represented this data using a clickstream model. A clickstream is a means of recording the parts of the screen a user clicks on while using a piece of software, webpage, etc., and this in turn can allow aggregation of these activities to create a dataset which lends itself to analysis and visualisation.

Figure 2 represents the ripples of interactions between disciplines, with various clustering effects in evidence. They note that their "map represents the structure of scholarly activity from an observational perspective, not from a prescriptive or motivational one" (Bollen et al., 2009). It shows journals which are coloured according to discipline (red being medicine, green being biology, physics being pink, etc.), and so groupings of these disciplines are somewhat inevitable, given that interactions by scholars and researchers in the biological sciences are going to take place within the journals dedicated specifically to such topics. Thus we see a cluster of green dots to the bottom and right of the diagram. Similar clusters are in evidence elsewhere, most obviously in the centre where the disciplines we regard as humanities and social sciences (HSS) are depicted.

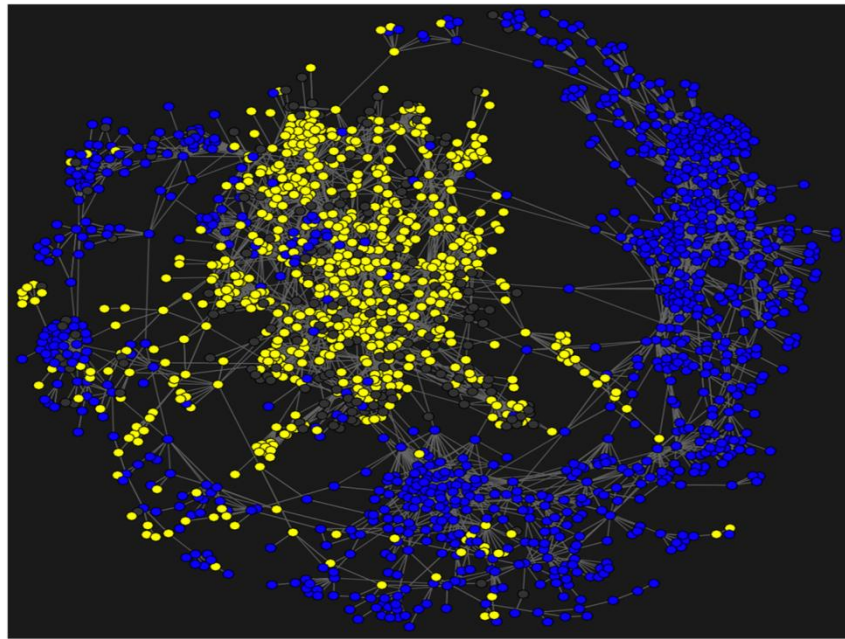
Figure 2 Clickstream visualization of journals, coloured according to discipline



Source: Bollen et al., 2009

Given the similarity of concerns, and cross-pollination of research efforts (sociology will interact with philosophy, economics, history, and so on, just as each of these will interact with other disciplines), this is not surprising. What is perhaps most surprising is the picture that emerges when there is delineation between STEM and HSS (see Figure 3).

Figure 3 Clickstream Visualization of Journals, coloured according to AHSS or STEM



Source: Bollen et al., 2009

Hence, what we see is not simply clusters of humanities and STEM journals, but more interestingly, there are interactions between the two. We observe that medical and biological sciences have interactions with the HSS disciplines. Bollen et al. conclude that these maps "correct the underrepresentation of the social sciences and humanities that is commonly found in citation data." The resulting map illustrates the extent to which humanities research serves a purpose in the wider knowledge economy not just in terms of knowledge creation within its own fields but also in its interactions with fields which have hitherto been regarded as beyond its purview.

2.2 Context: Understanding Irish policy dynamics

The on-going global economic crisis (GEC) has transformed the policy dynamics in Irish society since the economic collapse of 2008. Several major reviews with implications for the higher education and research system in Ireland have been conducted (see Box 1). Today, there is greater government steerage of the system with a strong emphasis on performance and competitiveness. The public and policy community is much less tolerant of self-declaration; instead, there are repeated calls for demonstrated and verifiable return-on-investment and value-for-money through enhanced accountability and transparency. Quality assurance is increasingly government-driven rather than institution-led.

Box 1 Policy Reviews/Reports on Irish Higher Education and Research, 2008-2012

- *Building Ireland's Smart Economy* (Department of the Taoiseach, 2008)
- *Report of Special Group on Public Service Numbers and Expenditure Programmes* (Department of Finance, 2009)
- *Policy Options for New Student Contributions in Higher Education* (Department of Education and Science, 2009)
- *Irish Universities: Resource Management and Performance* (Comptroller and Auditor General, 2010)
- *National Strategy for Higher Education to 2030* (HEA, 2011)
- *Towards a Future Higher Education Landscape* (HEA, 2012)
- *Report of the Research Prioritisation Steering Group* (Forfás, 2012)
- *Proposed Reconfiguration of the Irish System of Higher Education*. International Panel Report (HEA, 2012)
- *A Study of Future Demand for Higher Education in Ireland* (ESRI, 2012)
- *Institutional Responses to the Landscape Document and Achieving the Objectives of the National Strategy for Higher Education: A Gap Analysis* (HEA/IRC, 2012)
- *Report on Dialogue on Research Funding in Ireland* (Royal Irish Academy, 2012)

Not surprisingly, given the severity and longevity of the crisis in Ireland, there is an exaggerated emphasis on the relevance and translational capacity of research: often expressed in terms of a linear and instrumentalist focus on science and technology, and short-term job creation and innovation. The *Report of the Innovation Taskforce* (Ireland, Department of the Taoiseach, 2010, 3) noted "knowledge is the currency of the innovation economy and the education system is pivotal in making innovation happen." This view was reinforced by the *Report of the Research Prioritisation Steering Group* (Forfás, 2012) which urged government to "set a new over-riding national objective to accelerate the delivery of specific economic outcomes from our investment in research." To ensure this outcome, it has recommended that all research "applications should be screened based on demonstrated relevance to the priority areas, clarity of deliverables and, where appropriate, end-user engagement" and only then, "reviewed against the criteria of excellence and originality based on established peer review processes". (Forfás, 2012, 14) Science Foundation Ireland, which is the lead research funding agency in Ireland, argues that this is not a debate between the merits of basic vs. applied research, but rather a realisation that "[w]ithout knowledge application, nobody benefits. Without new knowledge generation, there is no application" (Love, 2012).

Responding to these changes, the Royal Irish Academy (RIA), with the Irish Research Council for the Humanities and Social Sciences (IRCHSS), convened a major meeting in 2009 of humanities and social science scholars to discuss better ways of indicating value. The President of the RIA, Nicholas Canny, warned that the dominant "science-inspired system of bibliometrics [might be] inappropriate for

measuring research achievement in humanities disciplines". (Ireland, RIA, 2009, 3) The resulting report, *Developing Key Performance Indicators for the Humanities and Social Sciences* evaluated the current state of development with respect to key performance indicators, and outlined a series of recommendations. Publication of the report subsequently led to a Higher Education Authority (HEA) review: *Playing to Our Strengths: The Role of the Arts, Humanities and Social Sciences and Implications for Public Policy* (see Box 2).

Box 2 Key Creative Arts and Humanities Policy-influencing Documents

- *A Case for a Research Council for The Humanities and the Social Sciences* (HEA, 1999)
- *Developing Key Performance Indicators for the Humanities and Social Sciences* (RIA, 2009)
- *Good Practice in the Quality Assurance of Arts Research Degree Programmes by Practice* (HETAC, 2010)
- *Playing to Our Strengths: The Role of the Arts, Humanities and Social Sciences and Implications for Public Policy* (RIA, 2011)
- *Creative Arts and Media Provision in the Dublin Region – An Overview* (HEA, 2012)
- *Assessment of the Economic Impact of the Arts in Ireland* (Indecon, 2012)

In the meantime, Irish creative arts researchers were taking similar action, albeit their task has been complicated by the fact that creative arts research is a new and emerging field of investigation, in Ireland as elsewhere. Also, the arts have largely been absent from discussions amongst humanities scholars because of some misunderstanding about the role of organisations promoting and supporting arts practice (e.g. the Arts Council, Aosdána); the former believed (wrongly) that the latter supported academic research whereas their support is primarily for performance.

Postgraduate research in the arts is falling into a hole as there is no one on the humanities research council with a focus on the arts and the organisations funding the arts such as the Arts Council do not fund research (HEA, 2013b, 38).

Some rigour was provided by the Bologna Process with its emphasis on learning competences and outcomes, and the subsequent necessity to set out guidelines for PhD research in the creative arts in Ireland, in the context of similar guidelines being established for other disciplines (Ireland, HEA 1999, 5). Thus, it was widely acknowledged that:

compared to traditional academic research in the humanities and sciences, practice-based research in the arts may differ in: its methods; its research environment (conceptual and physical); its context; its engagement with the world of practice; and in how new knowledge and understanding are presented and evaluated. (Ireland, HETAC 2010, 7)

The (re)action by Irish creative arts researchers reflects similar developments in the UK and Australia. They raised concerns that "vested attention to pragmatic and instrumentalised approaches to research may not be suiting the best interests of those in the creative field of making, performing, inventing" (Grierson and Brearley, 2009, 4).

These endeavours to articulate the value of arts and humanities research – beyond the academy – have been successful in only the broadest sense. Since the 1990s, and in tune with developments internationally, there has been on-going public and policy recognition that the arts and humanities are important for Ireland Inc. – especially because of the strong role that culture plays within the national psyche. Research funding increased in line with the availability of funding throughout the noughties (see section 4.6.2 below). However, the disciplines are usually portrayed narrowly, in terms of their contribution to the creative/cultural industries (Hazelkorn and Murphy, 2002) or as an analytic tool to better understand science and technology – and not having a deeper contribution to economic development and innovation. The Global Irish Economic Forum (2009) identified Irish creativity and culture as a critical component of economic recovery; it also inspired the reinvigoration of Culture Ireland (Culture Ireland, 2013), and the appointment of a Cultural Ambassador in the US as part of the Imagine Ireland initiative (Imagine Ireland, 2013). The arts and humanities are also seen as helping "the development of critical and inquiring minds, creativity and intellectual nimbleness" (Hennessy, 2011).

The new policy environment is especially challenging for the arts and humanities, albeit all disciplines are feeling the chill.

It is challenging to show that research funding in the arts has resulted in economic and social return. As a result, very little research funding (from the national education or the arts budget) goes into creative arts activity or practice-based research in the arts, though arguably, there is good small-scale support for arts production for individual artists. The research potential apparent from collaborations between cultural and educational institutions appears to be largely untapped as a research resource (HEA, 2013b, 4).

The *Report of the Research Prioritisation Steering Group* appeared to ignore arts and humanities research, along with the social sciences, as having any significant contribution to make to economic development or recovery in Ireland (Forfás, 2012, 9) except as an intellectual support for science and technology (HEA, 2013b, 4). There have been some efforts to mollify this interpretation, pointing out that all disciplines have a role to play in Irish social and economic development, but will be difficult unless the underpinning concepts are altered. At the same time, the new policy context forces arts and humanities researchers to reformulate their work and research practices in way which can (better) demonstrate the value or importance to a wider, and increasingly more sceptical and critical public.

2.3 Overview of HERAVALUE Project

The HERAVALUE project aims to increase our understanding of the contribution that university-based arts and humanities research makes to society and the economy. Because the quality and value of research is relative or relational (Netherlands, Royal Netherlands Academy of Arts and Sciences, 2011, 10) the HERAVALUE project aims to explore how arts and humanities research is defined, appreciated and accounted for by multiple stakeholders: researchers, policymakers and civil society. It aims to explore assumptions held by the different constituencies, and to compare and contrast their perceptions and considerations of creative values, creativity and innovation, and impact and benefit. Furthermore, it aims to identify appropriate practices and methodologies to

assess and demonstrate quality and value beyond the academy. The key objective is to better understand what really matters rather than what is easily measured.

HERAVALUE holds significance for Irish arts and humanities researchers, who are heavily reliant on public funding. This places an increasing obligation on them to have thoughtful and comprehensive responses to the growing range of questions being asked about research in general, and arts and humanities research in particular. Many of the questions emanate from policy makers and research agencies, which have responsibility for research policy and strategy, funding and assessment – and are answerable to the public/taxpayer. But, civil society is also asking questions; as national funding becomes more and more constrained in many countries, policy and funding trade-offs become more apparent and contentious.

HERAVALUE holds significance for policy makers and funding agencies, who recognise the important contribution of the arts and humanities but who also struggle with finding a meaningful way to hold the researchers accountable. There is a tendency to distinguish between the value of the disciplines – as literature, language, philosophy, music, arts practice, etc. – and the value of arts and humanities research. The former, as it contributes to human capital development and civil society, is easier to understand than the way in which it contributes to economic development and innovation, and now recovery.

Thus, HERAVALUE seeks to increase our understanding of the value of arts and humanities research by learning how multiple stakeholders view and articulate their understanding of its significance, and then by making implicit values more explicit by drawing them together and articulating a common understanding. It has five main objectives:-

- To develop a conceptual framework explaining how a range of societal stakeholders concerned with innovation actively construct the value placed upon A&HR;
- To systematically uncover the implicit valuations made by key decision-makers underpinning the widespread failure to agree a common approach to valuing A&HR;
- To map key stakeholder groups' interactions within wider innovation and political systems which frame how A&HR's value is socially constructed;
- To reflect upon alternative methodologies for valuing A&HR, transcending directly quantifiable outputs and economic impacts, reflecting these implicit valuations;
- To disseminate HERAVALUE's findings to contribute to designing better policies, instruments and indicators for A&HR valorisation, better contributing to debates concerning A&HR's wider value in the context of a global economic downturn.

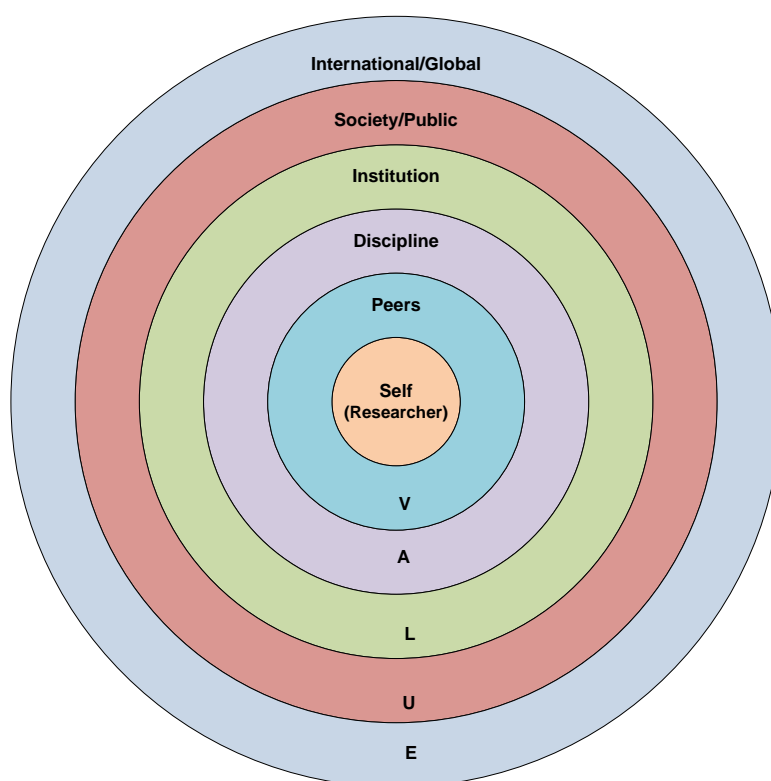
The project is a three-country study involving the Centre for Higher Education Policy Studies (CHEPS), University of Twente, Netherlands; the Higher Education Policy Research Unit (HEPRU), Dublin Institute of Technology, Ireland; and the Nordic Institute for Studies in Innovation, Research and Education (NIFU), Norway. The principle investigators are Dr Paul Benneworth (Project Leader), Netherlands; Professor Ellen Hazelkorn, Ireland; and Professor Magnus Gulbrandsen, Norway. Project research was coordinated in Ireland by Dr Elaine Ward, Dr Martin Ryan and Andrew Gibson, and supported in Norway by Dr Markus Bugge and Siri Anastad. Each country-based research team studied the three stakeholder groups: researchers, policy-makers and members of civil society, in their own country. Cross-national comparisons were then conducted.

2.4 Conceptual Framework for the Irish National Report

Despite agreement that arts and humanities research contributes to society, the arts and humanities often struggle to accurately define its value or significance beyond statements about strengthening democratic strength, happiness and well-being, self-expression and cultural identity. Attempts to enumerate and capture that value in anything more than the broadest terms have fallen short, with the result that whilst the physical, biological and social sciences can demonstrate substantial societal added-value, arts and humanities research is often portrayed as unsubstantial, or worse, a poor return on public investment (Benneworth et al, 2009, 2). HERAVALUE aims to more fully understand the value that society places on arts and humanities research and to propose ways in which that value can be better demonstrated, communicated and measured.

Value is the overarching unit of analysis used to express relevance or significance. Valorisation is the process by which arts and humanities research, in this case, is understood and expressed by and for multiple stakeholders. A contributing difficulty is arguably the way in which different stakeholders have implicit understandings related to the value of arts and humanities research. Accordingly, HERAVALUE seeks to expose and interrogate different stakeholder understandings and perceptions of arts and humanities research and to identify points of convergence and divergence in addition to placing these perspectives within the broader national context. Essentially, the study explores the concept of public understanding of research through the lens of multiple publics. Value is examined through the lens of researchers, policymakers and civil society – whose relationship to the "artefacts" of arts and humanities research differ considerably. Figure 4 attempts to capture this complexity.

Figure 4 Articulating Value in Arts and Humanities Research: A Conceptual Framework



For the individual researcher, value has a very personal meaning. S/he is motivated out of curiosity to conduct research which is meaningful and rewarding to her/himself; the origin of the research question is framed primarily from self-interest rather than being use-inspired. Peers within the school/department (or the wider discipline) will undoubtedly similar terms of reference albeit s/he may voice critical views on the quality of the research conducted and its contribution to creating new knowledge. The host university or research organisation may assess the value of the research in terms of whether the work is aligned with institutional priorities and/or whether the quality of the work brings reputational benefit or value to the institution.

Society may judge or assess the work more critically, applying a simple "so what" logic – asking how the research contributes to broader societal, cultural and/or economic goals. Thus, arts and humanities research – as other disciplines – is more and more being considered within the context of the larger, national research and policy system. Hence, the question of value is relational. This can be illustrated by the tension between national and international relevance. For example, nationally-relevant research – such as that concerning cultural or linguistic matters – may be highly significant for the region when published in national journals or reports but is less significant for an international audience or when using bibliometrics. Conversely, publicly-funded arts and humanities research may be difficult to justify in terms of its contribution to economic recovery or aiding a nation's global competitiveness. Questions may be asked in terms of social/cultural or economic measurements. National and global meaning may converge, but the way the question is posed and answered may have different meanings to different publics.

The conceptual framework articulates these multiple perspectives, voices, and debates. Specifically, it distinguishes between the way in which value is conceived, understood, communicated and measured by the individual researcher (self), the peer group most aligned with the work of the individual researcher and the broader discipline(s), the institution (and higher education in general), and ultimately society. A distinction must be made between individual and public value as well as between as local, national and global impact and significance.

3. Defining Arts and Humanities Research

3.1 Overview

The basic definition of research is taken from the original OECD Frascati Manual (1963, 1st ed): it says research “comprises creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society and the use of this stock of knowledge to devise new applications”. As with many definitions, there are further questions. Does this definition hold across all circumstances? Is there a difference between research in science, technology, engineering and maths (STEM) and research in the arts and humanities? Understanding what research is can be complicated by the culture and context of academia, for in the world of higher education the meaning of research and the understanding of what constitutes research can often vary by discipline.

Yet, knowledge does not remain static. As Hazelkorn (2009, 8) points out, the “progression from simple to complex knowledge has, over decades, been reflected in the emergence of new disciplines, methodologies and ways of thinking transforming knowledge economics and the way in which knowledge is actually created”. Gibbons and his colleagues (1994) used the terms “Mode 1” and “Mode 2” to differentiate between traditional and socially-useful knowledge generation. Mode 1 refers to what is popularly understood as research which is academic, centred on an investigator, and discipline-focused, whereas Mode 2 knowledge is socially-engaged, problem-focussed, and interdisciplinary. It is research conducted and knowledge generated outside the confines of the academy, in active engagement with the non-academic community, with consideration given to the context of the problem which is being investigated. Hazelkorn (2012a) extended the concept, defining Mode 3 as research focused on solving complex problems via bi-lateral, inter-regional and global networks, not bound by borders or discipline. Over time, knowledge production has become democratised with “reflective knowledge” co-produced with and responsive to wider society, with an emphasis on impact and benefit. While Mode 1 achieves accountability solely via peer review, Mode 2 achieves accountability via a mix of peer and social accountability and Mode 3 via social and public accountability. The gradation in accountability regimes tracks the transition from elite to mass to universal higher education (see Table 1).

Table 1: Changes in the Production of Knowledge

	Elite	Mass	Universal
Attitudes to access	<i>Privilege</i> of birth or talent or both	<i>Right</i> for those with certain qualifications	<i>Obligation</i> for the middle and upper classes
Functions of higher education	Shaping mind and character of ruling class; preparation for elite roles	Transmission of skills; preparation for broader range of technical elite roles	Adaptation of "whole population" to rapid social and technological change
Research and knowledge transfer	Pursuit of understanding of fundamental principles focused around "pure disciplines" and arising from curiosity, with no (direct or immediate) commercial benefits. Conducted by a limited number of research actors in a secluded/semi-secluded environment. Achieves accountability via peer-review process. MODE 1.	Pursuit of understanding of principles in order to solve <i>practical problems</i> of the modern world, rather than to acquire knowledge for knowledge's sake. Broad range of research actors across breadth of disciplines/fields of inquiry. Achieves accountability via mix of peer review and social accountability. MODE 2.	Research is focused on solving complex problems via bi-lateral, inter-regional and global networks, not bound by borders or discipline. Knowledge production is democratised with research actors extending/involving "beyond the academy". Emphasis is on "reflexive knowledge", co-produced with and responsive to wider society, with an emphasis on impact and benefit. Achieves accountability via social and public accountability. MODE 3.

Source: Adapted from Hazelkorn, 2012

The physicist John Ziman makes a similar distinction with respect to science, technology, engineering and mathematics (STEM) disciplines, explicitly distinguishing between academic science and post-academic science. (Ziman, 2002) In his model, the post-academic (or Mode 2) form of knowledge is research that reflects the increasing emphasis given to knowledge as an ecology, involving not just the researchers and the institutions driving such investigation but also implicating the wider community and stakeholders. Both the disciplinary differences, and the overall purposes of and for research, drive where and how it is conducted, as well as its overall perceived value. And that value may have higher or lower levels of value depending on who is producing and using the research. The US Office of Research Integrity, Department of Health and Human Services, defines research as "systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalise-able knowledge" (HHS, 2013).

Diamond (1999) argues that it is more purposeful to identify common characteristics of what is deemed scholarly work or research than to limit it to one definition. He identifies six characteristics which he contends most disciplines agree define scholarship: (i) requires a high level of discipline-related experience (ii) breaks new ground or is innovative (iii) can be replicated (iv) can be documented (v) can be peer reviewed, and (vi) has high significance and impact. These

characteristics can be useful in helping us more fully understand and define arts and humanities research, but the final characteristic, “significance and impact”, requires more elaboration. Research in STEM fields is often centred on knowledge creation, of that discovery which makes the contribution to a theory or topic which our lay definition sets out.

There is also the matter of knowledge connection, which is being given increasing attention with the push towards open access to publications in journals and databases and the rise of “open science” or “Science 2.0”. Maximilian Schich writes:

We find complex network structure wherever we look in the arts and humanities, including bibliographies, museum inventories and research databases. Every conceivable link relation in these datasets forms a complex network in a larger “network of networks” between objects, people, places, times, events and concepts. (2010, 212)

This push for knowledge connections is manifest in databases such as the “arXiv” archive for electronic preprints of articles which has become the standard repository for many disciplines such as mathematics and theoretical physics, but by no means should it be restricted to the sciences. Indeed this process of knowledge connection may be something for which the arts and humanities are particularly suited, given that there is a continual feedback between different fields in the arts and humanities. Within the arts, dance, visual arts, digital media, and music all interact in contemporary dance. For the humanities, history and philosophy are important tools and resources for those working with literature, etc. There is also, of course, a crossover between the arts and humanities themselves.

Another way to consider knowledge connections is through the problematisation of research questions as “grand challenges”, e.g. climate change, human health and healthy living, food and water security or sustainable cities. Due to their scale and complexity, major social and economic problems transcend borders and disciplines, necessitating new methodological and organizational frameworks. They require collaborative solutions and inter-locking innovation systems, underpinned by interdisciplinary research teams working inter-institutionally and globally.

Interdisciplinary thinking is rapidly becoming an integral feature of research as a result of four powerful “drivers”: the inherent complexity of nature and society, the desire to explore problems and questions that are not confined to a single discipline, the need to solve societal problems, and the power of new technologies. (CFIR, 2004)

Such considerations provide new opportunities for processes of reciprocity and feedback between different disciplines with and within the arts and humanities. The focus of research is broader than the strictures of any educational setting. Research is about innovative thinking and practice, about making and testing assumptions, performing, proposing, speculating, asking questions and paving the way for new propositions to be made next time. It is about the illumination of new knowledge around an identifiable theme and question, engaging with the known in new ways, constructing, proposing and testing assumptions, with an implicit recognition of the process of analyzing systematically to make new discoveries and add to the stock of knowledge in the creative economies of our times (Grierson and Brearley, 2009, 5-6).

3.2 What is arts and humanities research?

Arts and humanities research “contribute to a constantly growing body of knowledge on human experience, agency, identity and expression, as constructed through language, literature, artefacts and performance.” (Bakhshi, Schneider, and Walker, 2008, 1) They cover a wide range of disciplines including music, philosophy, archaeology and literature. In addition, arts and humanities research can benefit from the other disciplines in terms of identified and accepted modes of inquiry (Hazelkorn, 2004) and subsequent assessment indicators. According to the UK Arts and Humanities Research Council report *Evaluation and Benchmarking of Humanities Research in Europe*, “research is a continuum” (2008, 9) and there is no fundamental difference in the nature of the research enterprise in STEM disciplines on the one hand and the humanities on the other. Rather, these disciplines represent a continuum of research endeavour, along which methods and resource requirements vary in ways that do not map easily onto the current subject divisions. The demand for research inputs ranges along the spectrum from a resource-intensive discipline like chemistry or archaeology, to non-resource-intensive disciplines such as mathematics or philosophy.

Another question that dominates such discussions is the distinction between creative/professional practice and research, or the work of artists and practitioners and that of art critics, art historians, musicologists, etc. In this context, the former produce a collection of artefacts (e.g. paintings, sculpture, music composition, performances, etc.) often for exhibition and/or commercial purposes while the latter produces traditional academic texts. Architectural drawings fit within the former category as an example of professional practice. Commentary about an artefact, e.g. about an exhibition or concert, is a form of peer review or evidence of peer esteem – a vital measure of impact but should not be confused with evidence of research output.

There are, however, differences in disciplinary practice. Arts and humanities scholars tend to identify their research in terms of their methodology, research methods and modes of inquiry as distinct from those of other fields. (ELIA, 2011) Grierson and Brearley (2009, 5) argue that to “name methodologies appropriate to creative arts projects is to establish a way of claiming alternatives to the more orthodox social sciences or scientific research paradigms.” Chenail (2008, 9) notes “we accept the number and prosaic wording more easily than the poetic discourse, dance, or performance”. Hazelkorn (2004, 145), in her research of arts schools, says academics “are asking if arts research should follow the traditional research paradigm or if there is a specific art paradigm”. She posits two approaches which have different emphases:

the former focusing on the way images, performances or artefacts, including design, are employed to help generate new knowledge, hypotheses, and understandings while the latter focusing on the outcome of the activity that is art and design, music-making or composition, dramatic performance, filmmaking, photography, journalism, etc. – albeit both are coming within the “research” rubric.

Arts researchers are addressing these questions when they lay claim to methodologies to meet the goals and objectives of creative arts research. Some of these methodologies include: embodied practice, narrative and heuristic enquiry, grounded and action research, performativity and phenomenology, ethnography and autoethnography, hermeneutics, constructivism and participatory enquiry, reflectivity and reflexivity, propositional practice, critical and discourse analysis, archaeology and genealogy, poststructuralism, deconstruction and indigenous deep listening (Grierson and Brearley, 2009).

So, in addressing Hazelkorn's question, one must take into consideration the differentiation scholars themselves make between research method and research methodology (Grierson and Brearley, 2009). Research method is the functional aspect which includes organizing the materials and media, files and data, timelines and timetables, the division of the chapters, mechanics of performance or exhibition practice, the techniques and arrangement of material; the doing rather than the asking what, why and how we do. On the other hand methodology is the "how", the organising system through which researchers make use and sense of data and ideas, engage critically with theories and literature, reflect on material practices and actions, ask questions and seek answers to weave research in a cohesive and systematic way (Grierson and Brearley, 2009, 5).

Grierson and Brearley (2009) also address the politics of research and methodology and how research choices are not neutral choices but grounded in epistemological values and ontological experiences of one's world. They suggest that methodology is not only the way in which research is organised and presented, but it is the underlying contextual framework and research approach that guides the types of questions one asks and how one sets about answering them. For Grierson and Brearley (2009), ways of knowing (epistemologies) are multiple and varied as is the landscape of creative arts research and therefore the approaches researchers take to generating new knowledge. This research is ultimately about "the illumination of new knowledge around an identifiable theme and question, engaging with the known in new ways, constructing, proposing and testing assumptions, with an implicit recognition of the process of analysing systematically to make new discoveries and add to the stock of knowledge in the creative economies of our times" (Grierson and Brearley, 5-6).

In *The Academic Portfolio*, Seldin and Miller (2009) present sample portfolios from a number of disciplines. Here one sees precisely how arts and humanities academics define and present their research and scholarship. Reginald Workman, New School University Jazz and Contemporary Music Department, presents evidence of his research and creative scholarship. He prefaces this section of his portfolio by saying:

research in the area of improvised African American music is unique. A large portion of the tradition is oral and relates to aesthetic values of the society. Daily there are new methodologies being created that lend to the futuristic quality of African American music commonly known and jazz. Since it is expected that our students will graduate with a thorough knowledge of theory and harmony in the traditional sense, I continually explore techniques of the older masters as well as contemporary scholars.

He outlines the following examples of his creative scholarship:

- Sound Spectrum Workshops: Created and implemented Sound Spectrum Workshop, a series of workshops aimed at providing greater understanding for novices;
- Sculptured Sounds Music Festival;
- Trio III: music, touring and marketing: The group consist of me, my fellow NS faculty member...The group has been touring, collectively composing new music for touring and recording;
- Educational workshops I am invited to conduct, particularly The Coltrane Workshop.

Because Workman viewed his creative scholarship as outside the traditional realm he also submitted a list of proposed research and creative scholarship as “examples of my scholarly projects in progress”. (Seldin and Miller, 2009, 206) These included i) Presently archiving, preserving, and transferring to digital historic air checks from WBAI radio programs from the 1970s to 1980s, which I hosted; ii) Archiving music and personal music related documents; iii) Composing music for various projects: Trio III (developing and composing for a CD project schedule); and iv) Developing music for a string quartet project.

A similar example is provide by Robert Kirkbride, Parsons School of Design, when he presented evidence of his successful teaching, research and service for his tenure review. In his statement about his scholarship he began with a heading “Nature of Research” (Seldin and Miller, 2009, 319) indicating the need to clarify or frame his work/research in scholarly terms. His research statement continued,

My scholarship reflects and recharges pursuits in the classroom and my design practice and has been central to an enjoyable and sustainable mode of living as a designer-scholar. To this end, I have been interested in the mutual influences of learning and design, and the role of the physical environment on the formation of memory and identity. This approach began in earnest from my master’s thesis in architecture (*A Curiosity Shop*, 1990), and spans my experience in curating and designing exhibitions, architectural design, furniture, and products, as well as in teaching, scholarly publication, lectures, workshops and my first book. A particular point of concern is to help students recognise that they are a part of history and that a critical awareness of history offers invaluable perspectives on contemporary issues, revealing opportunities for design and political engagement. An example of my views on the political dimensions of design and scholarship is expressed in the video *Thinking and Making*, from the design charrette I conducted... (Seldin and Miller, 2009, 320)

Kirkbride (Seldin and Miller, 2009, 322) also included articles and a book in his portfolio, emphasising that his one book and five articles were invited, peer-reviewed or juried. The list also included lectures and conference presentations, stating that “over the past four years I have averaged five public presentation each year, by conference presentation and responses (twelve), formal lectures at universities (six), panels moderated (four), and lectures translated (one).”

In this long extract about her research on foreign languages and literature, Sheri Spaine Long (Seldin and Miller, 2009, 172-173) outlined her approach to scholarship:

Like my teaching, the underpinning of my scholarship is inquiry into both Spanish language and literature in a cultural context. From a traditional foreign language disciplinary perspective, some colleagues look at my scholarship and exclaim that there is a dual focus because part of my research centers on literature and the other portion addresses language pedagogy and study abroad. However, as a global professor, I believe that foreign language teaching as well as research can be integrative. Within the critical tradition, theories such as Iser’s reading process and the world as social text for cultural studies inform my language and literary scholarship in a holistic manner...I see myself as a “bridge scholar” who embraces multiple literacies. I believe that this validates what may appear to be so-called dual

nature of my research. All of my research is focused on developing cross-cultural literacies through literature, language pedagogy and study abroad. My research takes different forms and has different audiences and I have delivered a variety of papers around the world. Currently my research has three focal points:

1. Madrid in literature: the development of a volume, tentatively titled *Metro-Textual Madrid* (1978—present).
2. Introductory and intermediate instruction material for Spanish: publication and development of textbooks and related pedagogical publications
3. Study abroad: experience abroad and student attitudes toward continued language study

Long unpacks each of these three areas as literary research, pedagogical research and study abroad scholarship and research. Her interest in Madrid goes back to her graduate studies and is developed throughout her career in conference papers and publications. A progression of events including directing an honours class in Madrid, grant funding to conduct research on-site in Madrid, and co-directing an international academic conference in Madrid led to her book project on contemporary Madrid. For her pedagogical research she counts her six co-authored text books and selected articles on teaching. Of her study-abroad scholarship and research Long states that the “development of language and cultural competencies in the context of international education movement is of growing interest” to her. (Seldin and Miller, 2009, 175) She began to reflect more on study abroad and language learning when she was invited to contribute to a radio script “Why Study Abroad?” The show was widely aired and had a significant influence on her prompting her to ask “harder inquiry-based questions about the relationship between language and learning and study abroad”. This led her to develop a survey to study “the attitudes of undergraduate students enrolled in the study of language abroad and their attitude toward continued language study on returning to their home campuses”.

These examples illustrate the diverse methodologies, outcomes and outlets employed by arts and humanities researchers. Acceptance of practice-led research has encouraged wider understanding of integrating practice/art-making with theoretical exploration to lead to new understandings and meanings. However, there is an important distinction between creative practice and arts-based research and scholarship, which the UK Arts and Humanities Research Council say needs to be clear. The former involves the production of arts-based artefacts, often for commercial purposes, but without any attempt to engage academically with the issues. The guidelines of the Irish Higher Education and Training Awards Council (HETAC) also attempt to define this distinction:

Practice-based research in the arts is research which is centrally predicated on realising actual practice within the arts, but which, nevertheless, is consistent with the existence of a discipline-independent and generalised conception of research which comprehends practice-based research in the arts.

Biggs (2007, 189) also warns that to “have a research outcome consisting solely of visual artefacts without any additional texts” is not sufficient because the process of producing the artefact evokes experiences which are “subjective and non-transferable” – which is contrary to research. In other words, research requires “not just a novel artefact that has not existed before, but new knowledge

that has not existed before” and that the knowledge contributes to the field and “not just to the personal development of the artists.”

3.3 Digital Arts and Humanities

However “scientific” or statistical or technical these new research methods might seem – however systematizing, totalizing, and gradgrindian – they are driven by the desire to understand the human record, and perhaps even more, to understand our understanding of it. That it should take a machine to do that is only a superficial paradox: the machine itself is simply an instrument of procedural epistemology, and its only function, at least in humanities research, is to offer us methods for imagining what we don’t know, as well as what we do (Unsworth, 2005).

Linking arts and humanities research to new digital and computational tools and methods is opening up new and exciting opportunities and possibilities for arts and humanities research and researchers, such as text-mining, image and network analysis, archival studies, linguistic investigation, etc. National and international research projects, centres, and journals dedicated to digital arts and humanities have sprung up, attracting researchers and investment; provides a select list of some key Irish and European policy documents.

Researchers and policymakers have also begun to recognise new opportunities to link the arts and humanities with computing and electronics as a means to generating new industries and employment – effectively to move towards use-inspired research.

When it comes to this area, Ireland has made a very significant investment in the infrastructure. We’re doing a lot of the work in ... partnership with industry, including IBM and Google. What’s interesting to me is research is going on in companies such as IBM that see the humanities – which are our central reach – as the next technical frontier (Ohlmeyer, Quoted in Fearn, 2010).

This is engendering a redefinition of arts and humanities research not just in the language of measurable outputs, socio-economic value or impact but in terms new fields of inquiry. In terms of the infrastructure associated with digital arts and humanities, this is increasingly becoming an important way of integrating arts and humanities research undertaken in Irish HEIs and cultural institutions with that taking place in similar fields, but in different countries.

Box 3: Selected Documents on Digital Arts and Humanities, 2006-2012

- *A Companion to Digital Humanities* (Blackwell, 2004)
- *Best Practice in Archiving Qualitative Data* (IQDA, 2011)
- *DARIAH Case Study of Ireland* (DARIAH, 2009)
- *Digital Archiving in Ireland* (DRI, 2012)
- *Digital Arts and Humanities – Scholarly Reflections* (UCC, 2012)
- *Our Cultural Commonwealth: The report of the American Council of Learned Societies Commission on Cyberinfrastructure for the Humanities and Social Sciences* (ACLS, 2006)
- *Research Infrastructure in Ireland – Building For Tomorrow* (HEA/Forfás, 2006)
- *Strategy in Digitisation and Long-term Preservation of Irish Research Output* (HEAnet, 2008)
- *Research Infrastructures in the Digital Humanities* (ESF, 2011)

That this is a vibrant and growing field is indicated by the number of journals dedicated to peer reviewed papers related to digital humanities (e.g. *Digital Creativity*, *Journal of Digital Humanities*, *Digital Humanities Quarterly*, etc.), or journals focused on the application of such methods to the humanities (such as *Literary and Linguistic Computing* or *Digital Medievalist*); this is in addition to papers published in other journals. In recent years, new research institutes and centres have been established with a particular focus on the digital humanities. Examples include the Institute for Advanced Technology in the Humanities (IATH) at the University of Virginia, Stanford Literary Lab at Stanford University, the Centre for Digital Humanities at University College London, and the Department of Digital Humanities (DDH) at King’s College London.

In Ireland, the Digital Humanities Observatory (DHO) is described as “an all-island digital humanities collaboratory working with Humanities Serving Irish Society (HSIS), national, European, and international partners to further e-scholarship” (DHO, 2013). Ireland is also a participating member of the EU-funded CENDARI project (Collaborative European Digital Archive Infrastructure), which will facilitate “wide visibility across the collections of physically dispersed archives of Europe with cutting edge tools for the interrogation of that data, such as multilingual searches, custom visualisations, shared research and collaboration spaces and personalised virtual environments” (Cendari, 2013). The Digital Arts and Humanities (DAH) structured PhD programme brings together seven institutions (National University of Ireland Galway, National University of Ireland Maynooth, Royal Irish Academy, Trinity College Dublin, University College Cork, Queen’s University Belfast and University of Ulster) in what is described as “the world’s largest-ever programme to train a new generation of research students in the application of new media and computer technologies in the arts and humanities” (DAH PhD, 2013). In international terms the funding is quite significant (€6.8m) and is one of the first nationally-funded PhD programme in this field. It has been developed with consideration for the question of the value of arts and humanities research so that the skills learned by researchers are applicable beyond academia.

The Digital Repository of Ireland (DRI), also funded through the PRTL initiative of the HEA, marks another significant piece of the arts/humanities infrastructure. DRI received initial funding of €5.2m, co-funded under the European Regional Development Fund (ERDF), for 2011-2015; the consortium includes the original partners (Royal Irish Academy, National University of Ireland Maynooth, Trinity

College Dublin, Dublin Institute of Technology, National University of Ireland Galway, and National College of Art and Design) plus a networks of network of academic, cultural, social, and industry partners. Originally, established as the National Audio Visual Repository (NAVR), DRI is responsible for building a national digital repository for the humanities and social sciences (<http://dri.ie/>).

Digital techniques are used by researchers, librarians and archivists for preservation and dissemination, and the implementation of digital techniques and technologies to research questions in the arts and humanities. The work of Mac Carron and Kenna provides an example of how digital techniques and technologies, applied to literary works, can open-up a new field of inquiry. In their analysis of how closely the personages are depicted in *Beowulf*, *The Iliad*, and *The Táin*, they replicate and animate a real social network.

Of the three narratives, an Anglo-Saxon and a Greek text are mostly believed by antiquarians to be partly historically based while the third, an Irish epic, is often considered to be fictional. Here we use network analysis in an attempt to discriminate real from imaginary social networks and place mythological narratives on the spectrum between them. This suggests that the perceived artificiality of the Irish narrative can be traced back to anomalous features associated with six characters. (Mac Carron and Kenna, 2012, 1)

This work is of interest to those concerned with social networks, but also to philology, archaeology, and linguistics. By investigating these poetic works, they have maintained the importance of continued support for research in the humanities, but also expanded the notion of what humanities research is or can be. In his 2005 Lyman Award Lecture, John M. Unsworth suggests such techniques “offer better ways of accomplishing research goals that we have long pursued.”

For Irish examples, one can consult the DHO’s interactive database of Irish digital humanities projects (DRAPier, 2013). Many of the projects listed are databases, or digital editions, or other such resources which can be understood as better ways of accomplishing research goals. This database breaks down the research being undertaken in this area according to discipline (such as archaeology, art and design, literature and language, philosophy, etc.), temporal term (prehistoric, ancient/classical, modern, etc.), geographical region, institution, funding etc. Further to this is a breakdown by content type, data format, metadata format, methods and techniques, as well as tags in keywords. This is telling, because it shows how in the digital arts and humanities even the mode of access to the materials examined and the projects undertaken must bear in mind the distinctly different nature of this subject field. An awareness of this can potentially be a boon to researchers wishing to apply to their own subject or field what has been successfully attempted elsewhere, and so they can search this database according to the methods they may wish to utilize to see how they have been used by other researchers.

Two other examples of digital cultural resources which involve Irish partners are *Cultura* (Cultivating Understanding and Research through Adaptivity) which has a base in Trinity College Dublin, and *DECIPHER*, a three year €4.3 million project supported by the European Commission and involving Dublin Institute of Technology, the Royal Irish Academy, and National Gallery of Ireland among others. One of the more exciting developments in the Irish Arts and Humanities research landscape of late is the Digital Repository of Ireland (DRI) research consortium, which is part funded via PRTL Cycle 5, and is supported by a variety of academic, cultural, social, and industry partners. The DRI is developing an interactive national digital repository for all kinds of data held by Irish institutions. By

providing a trusted access point to contemporary, historical, social, and cultural data for use by the public and scholars, the DRI is leading the discussion on national policy for standards and best practice to digital preservation and access. As part of this, in 2012 the DRI launched the report *Digital Archiving in Ireland* at their “Realising the Opportunities in Digital Humanities”, presenting findings regarding the state of digital archiving across 40 institutions in Ireland. The findings will also contribute to the development of the full version of the repository that the DRI has already brought to the prototype stage, which is intended to link together and preserve the rich data held by Irish institutions, providing a central internet access point and interactive multimedia tools.

The Royal Irish Academy report, *The Appropriateness of Key Performance Indicators to Research in Arts and Humanities Disciplines: Ireland’s Contribution to the European Debate* (RIA, 2011) emphasizes the importance of digital arts and humanities, referring to emergence of digitised-editing, e-publishing, digital media, digital humanities, etc. as new fields of inquiry. The European Strategy Forum on Research Infrastructures (ESFRI) in its *Strategy Report and Roadmap Update 2010* proposes a EU commitment to funding digital research infrastructure for the arts and humanities to complement the digital infrastructure being developed on a national level. These developments raise the question as to whether the digital humanities is i) new disciplines or fields of study (e.g. digital humanities or digital linguistics) through cross-disciplinary work similar to the way biotechnology opens up new paths of inquiry and interpretation; ii) a new (research) methodology (e.g. digitising archival material/technique); and iii) an infrastructure/application of technology to the humanities (e.g. leading to the creation of new products and services through visualisation of heritage)? In reality these developments are probably a nexus of all three concerns. In addition, the digital humanities may, through its ability to link the arts and humanities with technology and thereby contribute to and underpin the expansion of the creative and cultural industries, be a means by which the arts and humanities can better demonstrate societal value. This may be a controversial conclusion, with some researchers seeing this as a positive development and others viewing it as undermining the integrity of arts and humanities research itself.

3.4 Conclusion

While differences in research practice and methodologies between disciplines or research fields lead to different forms of expression and outlet, the “essential characteristic of research is that it leads to publicly verifiable outcomes which are open to authentication and scrutiny by experts”; tests should be replicable and available for query. Essentially, there are four key elements. First, research must define a series of questions to be addressed or problems to be explored. It must define its objectives in terms of answering those questions or reporting on the results of the research project. Second, it must specify the context in which the questions are addressed or problems explored: why these particular questions or problems, what other research is being/has been conducted in this area, and what particular contribution this particular project will make to the advancement of human knowledge. Third, it must identify the research methods for addressing and answering the research questions (Biggs, 2007).

Because research activity is now so closely bound up with resource allocation, differences between disciplines have escalated, at times, to a battleground. There are often efforts to argue that differences create the basis or case for “exceptionalism”, whereby the concept of research has a different meaning for the arts and humanities. For example, practice-led (alternatively: practice-

based, studio-based or studio-led) research is often identified as specific to the creative arts and media, including music, architecture, dance, etc. However, the bio- and engineering sciences also engage in practice and experimentation at the lab bench and through prototyping.

Misunderstanding may also arise in the next step in the process; arts scholars in particular are often reluctant to engage in “writing-up” the intellectual and critical processes embedded in their practice for interrogation by peers – claiming that the artefact or composition is itself research. This leads to the perception that the work lacks academic rigour or that it is not research. Both may be true, but likewise both may be untrue. Finally, there may be a tendency to confuse “research” with its many diverse “outputs” and “outlets”. Journal articles are the primary publication channel for almost all disciplines accounting for 100% of the output, but this differs across research disciplines. In some fields books (monographs/books) play a major role, while book chapters, conference proceedings, or artefacts have a higher status in other fields. The main point is that research contributes to the stock of human knowledge, gives meaning to isolated facts, applies knowledge through problem-solving, or transforms and extends our understanding/knowledge (Boyer, 1990; AUBR, 2010, p26).

However, there is much to be learned/shared by researchers of all disciplines, including in research methods and the organisation of research – a path the (hard) sciences have already travelled since Vannevar Bush launched *Science, The Endless Frontier* in 1945. Arguably “the disciplinary boundaries [are becoming] more fluid” (Bric, 1999, 16) and co- and inter-dependent as complex social, economic and global challenges require the benefits brought by different perspectives. For example, in its submission to the (UK) National Committee of Inquiry into Higher Education (1996-7), the Humanities Research Board (HRB) noted

The convergence of computing and telecommunications technologies is transforming the nature of communications throughout every domain of public and private life. This evolution of communications and information technologies has brought the developed world to the early stages of a revolution that will inevitably transform the economic and social basis of society itself ... The humanities have a substantial contribution to make in the development of automated information systems mediated by language, especially by spoken language used across telecommunications systems, through computational linguistics and speech technology (Bric, 1999, 17).

Ultimately, differences may come down to insufficient understanding between and across the disciplines, by the researchers themselves about the work being undertaken by colleagues or how to demonstrate the value of their work, and/or by policymakers and others who also have a narrow or traditional understanding of value and contribution. The gap between scientific research being of economic benefit and arts and humanities research being of social or cultural value is too narrowly presented as oppositional positions. This was the view of John Laver, president of the UK HRB in 1994:

People who graduate in science are often employed for what they know. This is seldom the case in the arts. People are more often employed for the process: the trained quality of the mind. The ability to argue from evidence is what employers value ... People have to learn how to learn, and learn how to think. In the humanities, there is still an argument for knowledge for its own sake. (Laver, 1994)

There is therefore an onus on researchers, and especially arts and humanities researchers, to “better communicate the skills that qualifications in these fields offered and that they needed to articulate those concerns to a much wider audience than heretofore” (Hennessy, 2011).

These issues will be explored further in Chapter 5.

4. Irish Higher Education and Research Policy

4.1 Overview

At the start of the 20th century, 3,200 students were enrolled at six universities³ on the island of Ireland (Coolahan, 1981), demonstrating a strong connection between social status and university attendance. From 1908, legislation allowed for local authorities to provide scholarships to university; however, this did little to address the social imbalance in the composition of students attending Irish universities in the early decades of independence (Coolahan, 1981) until the establishment of regional technical colleges (now Institutes of Technology) in the 1970s. Today, Irish higher education is generally described as a binary system albeit it is more complex and varied than the term usually suggests (Skilbeck 2003). At present there are 39 higher education institutions in receipt of over €1bn annually in core grant and grant in lieu of fees, serving around 170,000 students (HEA, 2013a). These higher education providers offer a wide range of education programmes and conduct research with varying levels of specialisation. Today, over 55% of second level students go on to higher education, up from 44% a decade ago; the Government has set a target of 72% by 2020. This growth, underpinned by a strong societal appreciation of the benefits of educational attainment for personal and societal advantage, has helped transform public sentiment and underwritten the "public contract" in favour of significant expansion in national funding.

The transformation in higher education and university-based research in Ireland is similar to that experienced in other countries and mirrors the massive social and economic changes occurring over the last century. Today, higher education is no longer the privilege of an elite but an expectation of the majority, and is considered an essential component of the economic infrastructure of the state. This reflects the consensus that higher education is essential for economic growth, national competitiveness and civil society. As globalisation drives a single market in education, as it does in most goods and services, the more higher education is considered a beacon for mobile investment and talent. This is especially true for university-based research, which is seen as playing a vital role in economic recovery during the long-running adjustment period following the 2008 global financial crisis.

This section provides an overview of the transformation in Irish higher education and research policy, concluding with a focus on arts and humanities research. A timeline of key events and policy documents is included in Appendix 1. There are five main sections: 3.2 looks at the policy changes which underpinned the transformation of Ireland from an agricultural to a post-industrial economy; 3.3 surveys the transition from elite to mass higher education; 3.4 reviews changes leading to the

³ The six universities were: University of Dublin (Trinity College Dublin), Queen's University in Belfast, Queen's University in Cork, Queen's University in Galway, Catholic University of Ireland (based in Dublin) and the Royal University of Ireland (based at Maynooth). The *1908 Universities Act* brought into being the National University of Ireland (NUI) with three constituent University Colleges: Dublin, Galway and Cork. Maynooth became a constituent college of the NUI in 1910.

adoption of a knowledge economy policy; 3.5 outlines the response of Irish higher education to the Crisis; and 3.6 reviews the current status of funding for arts and humanities research in Ireland.

4.2 Catching up with Europe

Over the decades since independence in 1922, Ireland experienced many of the challenges associated with being a peripheral late-developing society: scant indigenous manufacturing, under-exploitation of national resources, small-scale and inefficient agriculture, weak infrastructure, persistent unemployment and excessively high levels of emigration (Hazelkorn, 1992). In the absence of an entrepreneurial bourgeoisie supporting key infrastructural and industrial projects, the Irish state played a pivotal role in providing the "roots of industrial upgrading in a complex of public investment, social institutions and a network of political and economic supports" (Ó Riain, 2004). It filled the vacuum, promoting, regulating, deregulating and, arguably, re-regulating sections of the economy as opportunities arose; by 1979, there were twenty-five state-sponsored organisations responsible for stimulating Irish enterprise.

Beginning with electricity in 1929, economic growth was heavily engineered by the state, which was also the major provider of electric, gas and turf power, rail, air, sea and road communications, telecommunications, broadcasting, sugar production, fisheries, etc. Arts and cultural policy had a similar history. Aside from Ireland's renowned contribution to world literature, the visual arts, music, architecture, publishing and design have remained, until very recently, limited enterprises, on the "outer rim of Europe, outside most of the great movements ... follow[ing] its own rules, or rather lack of them..." (Fallon, 1998, 237). The state also played a formidable role in cultivating, preserving and promoting a "way of life", viewing the arts with a mixture of suspicion, caution and paternalism; throughout the 1930s and 1940s, the Land Commission sought to implement the constitution's vision of a country populated by small family farms. (Hazelkorn, 2001)

By the late 1940s, it was evident that the accompanying economic policy of protectionism, underpinned by a combination of nationalist rhetoric and economic realism, had failed to kick-start an indigenous capitalist economy and a new strategy was necessary (Bew and Patterson, 1982). The Industrial Development Authority (IDA) was formed in 1949. Its establishment marked a volte face in Irish economic policy towards alignment with world markets and the encouragement of foreign direct investment (FDI).⁴ This was followed in 1958 by the White Paper on Economic Development which laid the basis for the First Programme for Economic Expansion, 1959, was followed swiftly by the Second Programme in 1963 with even more ambitious targets. Significantly, it was based on the liberalisation of trade and incentives for FDI, particularly capital-intensive export-oriented production. The second programme focused on expenditures for education, with a doubling of expenditures planned. While the doubling of expenditures for education was discontinued in 1967, the IDA has remained a major component of economic policymaking.

⁴ The Anglo-Irish Free Trade Agreement of 1965 was a manifestation of this new direction in economic policy. This agreement removed trade barriers between Ireland and the United Kingdom.

The policies outlined above signified the beginning of a strategy which would see Ireland joining the European Economic Community in 1973, becoming one of the strongest advocates for the European project, and then embracing the discourse and policy of the knowledge economy in the 1990s. Within two decades, Ireland was rapidly transformed from a traditional agricultural society with a class structure based on family property to an urban society increasingly based on hi-tech and internationally traded services with a class structure based on skill and educational opportunity. Effectively leap-frogging the industrial revolution, Ireland today is strongly dependent upon foreign direct investment (FDI), especially in pharmaceuticals, medical devices and software, and the services sector.

Membership of the European Union, with its policy leadership and funding, has played an enormous role in aiding Ireland's emergence from its economic difficulties over the decades. Its increasing influence on Irish domestic policy has become evident in the intervening years across many fields, including women's rights, labour law, family/children legislation, the environment etc. Arguably, few of the changes introduced would have occurred at all or with the relative speed they did without such influence (NESC, 2010). This influence is equally apparent with respect to higher education and research.

4.3 From Elite to Mass Higher Education

Ireland's economic development was strongly predicated upon policy attention and financial support given to education and the formation of "human capital", which explains the emphasis on widening access and participation. A critical component was the link between the introduction of free secondary education in the mid-1960s and economic growth, which, in turn drove demand for higher education. Investment in Education (1965) was initiated in co-operation with the Organisation for Economic Co-operation and Development (OECD), and was the first major policy document published on education. According to FitzGerald (1965), the report:

not alone makes a major contribution to the evolution of educational policy in Ireland; it also represents a break-through to a new level of economic and statistical sophistication in the preparation of the groundwork for public policy decision.

Scathing in its criticism of the Irish education system, it reported that "over half of Irish children left school at or before the age of thirteen, a finding that generated newspaper headlines and that presaged the introduction of free second-level education and free access to special transport networks for all second-level school pupils in 1967" (Barry, 2005). Most notably, it led to the introduction of free secondary education from 1967 onwards; this was widely known as the Donogh O'Malley Reform, after the Minister for Education at the time. Also of note, the compulsory school-leaving age was raised to 15 years in 1972. These changes revolutionised Irish education, with implications for progression to, demand for and participation at higher education over subsequent decades.

As a consequence, the *Report of the Commission on Higher Education*, in 1967, recognised that there would be growing demand for third-level places in Ireland, which should be met by establishing a parallel set of institutions to be known as the regional technical colleges. According to the *Report of the Steering Committee on Technical Education* (1967):

the main long-term function of the Colleges (RTCs) will be to educate for trade and industry over a broad spectrum of occupations ranging from craft to professional level, notably in engineering and science, but also in commercial, linguistic and other specialities. They will however be more immediately concerned with providing courses aimed at filling gaps in the industrial manpower structure, particularly in the technician area (Clancy, 1993).

As a result, a network of nine regional technical colleges (RTC) was established to provide courses in technical and commercial subjects. Five colleges were established around the country in 1970, and a further four between 1971 and 1977 (Barry, 2005; Daly, 1981). In addition, third-level vocational education was provided through five older Dublin colleges during (and before) the 1960s; these colleges were amalgamated in the 1970s to form the Dublin Institute of Technology (White, 2001). Notably, research was not indicated as a fundamental function until new legislation in the 1990s (Hazelkorn and Moynihan, 2010).

The *White Paper on Educational Development* (1980) gave further expression to the technological sector, linking its formation to manpower requirements in those sectors identified in government policies. While capital projects in the universities had been deferred or delayed, a major proportion of the capital provision throughout the 1980s was committed to expansion in the technological sector (O’Buachalla, 1984). This approach was supported by the first Clancy report (1980) which reported that 50% of new entrants to higher education were enrolled in the technological sector.

The Higher Education Authority (HEA) was formed in 1968, as a "buffer agency" between the Department of Education and the institutions. It was initially responsible for implementing government policy on university re-organisation and the binary system. Established on a statutory basis in 1971, it has responsibility for advising the government on higher education, keeping demand for higher education under review, and planning the location and form of new institutions and facilities (O’Buachalla, 1984). Its establishment may also have been spurred on by an unpopular proposal to merge UCD and Trinity College Dublin (TCD) made the previous year by O’Malley, the abovementioned Minister for Education.⁵

Over the following years, other system-wide developments laid the foundation for the modern Irish higher education. The scholarship system was abolished, and replaced by a system of means-tested university grants in 1969.⁶ In 1976, the Central Applications Office (CAO) was set up to streamline and co-ordinate student applications for university places and remove any suspicion of favouritism or elitism affecting student choice (Coolahan, 1981). In 1979, the National Council for Educational Awards, was established on an interim basis in 1972, was given statutory authority with powers to encourage, facilitate, promote, coordinate and develop technical, industrial, scientific, technological and commercial education; and education in art and design was provided outside the universities. In 1968, lay students were admitted to NUI Maynooth (NUIM); prior to this, it had largely been a centre

⁵ Interestingly, UCD and TCD formed an Innovation Alliance in recent years, in 2009. Also, the issue of merger-proposals has recently come to the fore again in Irish higher education, in the wake of the HEA Landscape Documents (2012).

⁶ This is the maintenance grant system for higher education that is in existence today.

for ecclesial training. In 1970, the national institute for higher education (NIHE) was established in Limerick followed by one in Dublin in 1980; both obtained university designation during the 1980s. With the statutory incorporation of DIT in 1992 and conferral of full degree-granting powers in 1998,⁷ the landscape of Irish higher education was effectively confirmed – until changes associated with the National Strategy for Higher Education were proposed in 2011.

Widening access has remained a high policy priority over the decades – but policy implementation has always been tempered by financial challenges. In the early 1980s, Barlow reviewed the equity and efficiency of systems of higher education finance; published *Financing of Third Level Education in Ireland* (1981), it proposed the introduction of student loans that would be repayable through the income tax system. Ironically, the report had a substantial international impact, particularly in Australia and later in the UK, though it had a limited influence on Irish policy. In 1993, the Advisory Committee on Third-Level Student Support, returned to the issue; it was asked to assess the fairness of maintenance grants awarded for attendance at higher education. The report proposed that family assets, including businesses and (controversially) large farms, should be taken into account when eligibility for maintenance grants is being calculated. Failure to adequately tackle this anomaly controversially enabled children of farmers and other self-employed to more easily avail of financial support than children of public or private sector workers; as a consequence, in 1997, the government abolished higher education tuition fees, popularly referred to as the "free fees policy". This meant that the approximately €2,500 per annum paid by each student was replaced by a state-funded grant-in-lieu to each institution (OECD, 2004).⁸ At the same time, the first Access programmes were introduced to encourage and support attendance by students from non-traditional or non-typical backgrounds (1996); this was followed in 1999 by additional funding for access and retention.

4.4 Knowledge Economy as Policy Driver

Despite individual developments, higher education and university-based research remained, with minor exceptions, largely disconnected from each other and from other policy considerations until the 1990s. There was some attempt to align education and skills training through the Manpower Consultative Committee (MCC) established in 1978. Concerned with a looming disparity between its demand projections and electronics graduate outflows, the MCC convinced the government to fund

⁷ Under the Dublin Institute of Technology Act, 1992, a statutory basis for the organisation was provided.

⁸ The decision made educational and political sense at the time but has remained controversial especially in the funding climate of 2012. The OECD (2004) recommended the reintroduction of student fees. The National Strategy on Higher Education (2012) proposed reform of the current funding model in favour of greater student cost-sharing was an obvious recommendation but the Report avoids making any recommendation (DES, 2011, p.121). The abolition of tuition fees had made sense in the 1990s as a means of expanding participation and access but policy objectives to globally position Ireland Inc. and increase participation rates to over 70% by 2020 simply exposed the weaknesses of a financial model heavily reliant on the exchequer. The Report estimates that the €1.3bn current annual funding for higher education "would need to rise to €1.8 billion by 2020, and to €2.25 billion by 2030 just to maintain current levels of resource per-student" (DES, 2011, p.111).

a massive expansion in educational capacity in those areas. As a result, the output of engineering graduates increased by 40% between 1978 and 1983, while the output from computer science increased tenfold over the same short period (Barry, 2006). In 1980, the Telesis Report, commissioned to investigate underlying causes for economic weakness, recommended a combination of increased promotion of indigenous Irish-owned enterprise, particularly larger indigenous enterprise, alongside FDI. Critically, Telesis recommended enhanced attention should be paid to R&D and innovation (Fitzpatrick Associates, 2006).

The first major policy document on research was published in 1966. Entitled *Science and Irish Economic Development*, or the *Report of the Research and Technology Survey Team*, it was commissioned by the Minister for Industry and Commerce in November 1963 (in association with the OECD). Arising from a study by Patrick Lynch who had conducted the research leading to *Investment in Education* (1965), the report looked at the requirements of the Irish economy in relation to scientific research, development and technology. As a result, the National Science Council (NSC) was established in 1967.⁹ Ironically, at just the time Ireland was about to join the European Economic Community (EEC), the NSC published *Science, Technology and Industry in Ireland*, which was critical of Irish reliance on inward investment.¹⁰ Ten years later, in 1978, the NSC was replaced by the National Board for Science and Technology (NBST) as the dedicated agency for promoting and funding R&D and innovation.

The European dimension to Irish education and research policy began in 1973 when Ireland joined the EEC – albeit the EEC’s own policy history reveals that higher education was a key component of policymaking in the early days of the European Coal and Steel Community; and the decision to establish the European University in Florence in 1955 (Corbett, 2003, 2006). The initial impact was on education with the establishment, in 1975, of the European Social Fund (ESF) which facilitated the employment and geographical and professional mobility of young people below 25 years of age. The Irish Department of Education used the programme to provide training for young people in mid-level technician skills in the newly established RTCs (Barry, 2005). The scheme’s introduction was gradual and low-key, and entailed an element of subterfuge on the part of the Irish authorities since EU regulations, at the time, permitted funding of training only and not education. Nonetheless, by 1979, 2,000 students had obtained such assistance; by 1982, numbers had grown by a further 50%, and by 1986 almost 90% of all new entrants to full-time courses at the RTCs, equivalent to about 20% of entrants to third-level education, were in receipt of ESF grants (Barry, 2005). This had a transformative impact not just on the institutions but also on the qualification level of Irish graduates. A similar impact was felt via the introduction of the EU Framework Programme for Research and Technological Development, the first of which was introduced in 1984. It provided dedicated access to research funding hitherto absent in Ireland. Two years after its launch, the European Single Act was introduced. This was the first major step towards the introduction of the Structural Funds to Ireland. Finally, the European Initiative, STRIDE (Science and Technology for Regional Innovation and Development) was introduced in 1990 to improve the research, technology

⁹ Lynch later set up the Science Policy Research Unit at University College Dublin (UCD) in 1970, in conjunction with colleagues from the Science Faculty.

¹⁰ This coincided with Ireland’s entry to the European Economic Community in 1973.

and innovation capacities of the regions whose development was lagging behind other European countries (Fitzpatrick Associates, 2006).

In the early 1990s, the benefits of the information society began to dominate policy discourse across Europe (Bangemann, 1994) and force a new direction. Labour shortages in Ireland brought about by rapid economic growth and international competitiveness were already causing concern.

Whereas the Culliton Report (1992) regarded higher education as a source of skilled technical labour, after 1995 reports from the government's educational and industrial development arms stressed the importance of higher education to economic growth (Harpur, 2010, 77).

With the establishment of the Information Society Commission in 1995, a triangular strategy began to emerge: 1) provision of technological infrastructure, 2) alterations to the financial and regulatory/legislative environment, including fiscal policy, security and intellectual property rights, and 3) provision of content innovation and development. Implementation can be categorized as follows: 1) activities to be made attractive to private interests, either directly or via a policy of "managed privatization" if currently in the public sphere; 2) activities to be retained within the public sphere; 3) activities to be carried out by non-Irish multi-nationals where no Irish capability/capacity is identified. With access to EU funds, policy emphasis shifted away from dependency on the public sector towards liberalization, privatisation and diversification. There was universal endorsement of strategic targeting and marketing of Ireland as an "information gateway", an English-speaking beachhead between the USA and Europe.

As the Information Society takes shape, Ireland has a unique window of opportunity.
... Ireland can carve out for itself a strong and sustainable position as a location of competitive advantage for information-based services . . . (Information Society, 1996).

A raft of decisions followed, seeking to carve out an Irish niche in the digital age were made, including the decision to target the electronics and later the software industry as having strategic importance for Ireland (Murphy, 2011).

Forfas was established in 1994 as Ireland's policy advisory board for enterprise, trade, science, technology and innovation. Under its auspices, the Advisory Science Council for Science, Technology and Innovation (ICSTI) published several reports including the *Report of the Science, Technology and Innovation Advisory Committee* (STIAC) (1995), the *White Paper from the Science, Technology and Innovation Advisory Committee* (1996), and the *Technology Foresight Report* (1999). Coupled with the report of the Expert Group on Future Skills Needs, these reports firmly tied Ireland's future to strategic investment in research, science and technology as essential "to underpin Ireland's development as a knowledge society" (ICSTI, 1999, 5).

In the lead up to the Lisbon Strategy "to make the Union the most competitive and dynamic knowledge-based economy in the world by 2010" (Fitzpatrick, 2006), European policy moved decidedly from embracing the information society to the knowledge economy. According to Harpur (2010, 78), the phrase "knowledge society" became part of "official parlance" thereafter. This placed greater prominence on the production of new knowledge and knowledge management as core to economic growth. Irish policy followed suit; the *National Development Plan* (NDP, 2006, 17) pledged to enhance enterprise development, and "improve economic performance, competitiveness...generate new enterprise 'winners' from the indigenous sector [and] attract high

added value foreign direct investment". This placed education and university-based research at the centre of policymaking in a dramatic new way.

The introduction of the Programme for Research in Third Level Institutions (PRTLII) in 1998 marks a historic point for several reasons. First, it was the beginning of concerted government funding for research. Compared with peers elsewhere, Irish higher education has lagged considerably behind. Ireland was one of the:

worst supporters of HERD of all OECD countries. A consequence of Ireland's low GERD [total R&D expenditure] and HERD [total HE R&D expenditure] as a percentage of GDP, which is itself low, is that the absolute expenditure on R&D in Ireland is much lower than in the other countries listed (Harpur, 2010, 66)

Second, it anticipated subsequent investment that would be based, as in other countries, on a reciprocal [author's emphasis] commitment from both government and the universities/higher education to "redefining and reshaping the knowledge base of Irish society" (Lindsay, 1996, p2). Third, PRTLII under the direction of the HEA, affirmed the important link between higher education and university-based research in contrast to Department of Enterprise and Employment which wanted a stronger link between research and the economy through the creation of independent research institutes. Two new research councils were also established under the auspices of the HEA in 2000/01, the Irish Research Council for Science, Engineering and Technology (IRCSET) and the Irish Research Council for Humanities and Social Sciences (IRCHSS); initially they had an annual budget of around €24 million and €10 million, respectively (Dagg, 2006).

The success of the research councils is attributable to the tremendous growth in higher education capacity and capability – and arguably Ireland's position in the various global rankings. First round results (2004) included capital investment in new research buildings plus 34 new academic appointments and 1,500 new postdoctoral or postgraduate research appointments (Dagg, 2006). The introduction of the research councils coincided with the roll-out of the FP5. In contrast, Science Foundation Ireland (SFI) was set up in 2001 under the remit of the Department of Enterprise and Employment. Modelled on similar initiatives around the world, most notably the US National Science Foundation, its responsibility was to build world-class research capability in Ireland, by targeting niche areas of ICT and biotechnology; and later energy. SFI primarily supports research teams as opposed to postgraduates and postdoctoral fellows in contrast to the research councils.

The 2004 OECD *Review of Higher Education in Ireland* provided the catalyst for further significant change. While some of its recommendations regarding the higher education system were largely ignored, it drew attention to the immaturity of the research system with weak links to commercialisation and internationalisation. The objective should be to ensure that by 2013, Ireland would be:

internationally renowned for the excellence of its research and be at the forefront in generating and using new knowledge for economic and social progress, within an innovation driven culture. (Forfás, 2004, 2).

The OECD report was quickly followed by various reports and commitments to enhance funding: each of which placed higher education and the knowledge economy at the centre of national policy, most notably: *Building Ireland's Knowledge Economy - Action Plan to Promote Investment in R&D to 2010* (2004), and the *National Development Plan 2007-2013: Transforming Ireland – A Better Quality*

of Life for All. Emphasis was placed on building world-class research through increasing the number of research teams led by internationally competitive principal investigators; upgrading existing infrastructure and developing new facilities to support research; enhancing postgraduate skills through a graduate schools mechanism; developing sustainable career paths for researchers including mobility opportunities; and doubling the number of PhD graduates by 2013. Other actions included the creation of the Office of the Chief Scientific Adviser (2004), and the Strategic Innovation Fund (SIF) which provided multi-annual funding for new ways of working collaboratively across and in higher education (HEA Website).

By 2004, policy attention was turning more decisively towards entrepreneurship and commercialisation of research. This had always been a public responsibility and a remit of the Institutes of Technology, but now it became a key focus of all university-based research. The 2004 Finance Act introduced the first R&D tax credit as way of stimulating private investment. The *Strategy for Science, Technology and Innovation* (SSTI) was launched in 2006, marking a decade of purposive policy attention and investment in scientific research. The *Technology Transfer Strengthening Initiative* was introduced by the Department of Enterprise, Trade and Employment (DETE). In the wake of this initiative, fifty-five new spin-out companies emerged from State-funded research in Ireland; over 1,300 inventions were disclosed, more than 470 new patents were filed and close to 220 deals were signed between companies and researchers to license new technologies (DETE, 2010).

From 1997 onwards, almost €3bn was invested in university-based research and infrastructure to ensure that by 2013, Ireland would be "internationally renowned for the excellence of its research, and ... at the forefront in generating and using new knowledge for economic and social progress, within an innovation driven culture" (Forfás, 2004). The "Celtic Tiger" years, 1998-2008, were broadly good for higher education with spending rising year-on-year until 2009. Headline investments include: €317m *Education Technology Investment Fund* (1997); €1.4bn to Science Foundation Ireland (2000); €865m *Programme for Research in Third Level Institutions* (PRTLII) (1998); and €510m for the *Strategic Innovation Fund* to support innovation and collaboration, improving teaching and learning, supporting institutional reform, and promoting access, lifelong learning and graduate education.

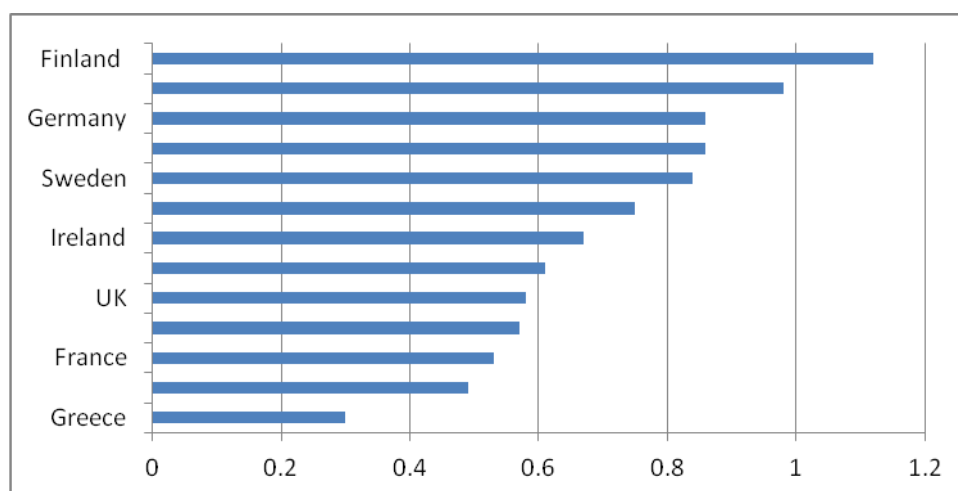
Prior to 2000, Ireland had no national research policy, investment strategy or noteworthy international reputation in scientific research. Nonetheless, by 2009, Ireland ranked 8th on the impact of research publications within a group of 20 comparator countries. Research output has expanded in line with investment; *Sciencemeter* showed Ireland on the "Top Countries in All Fields" list for the first time, at 19th place in the world in 2008, having moved up from 36th in the world in 2003. Research activity, productivity and visibility have increased in line with research funding, with research impact growing significantly to overtake Australia and Finland. According to a recent report, while "the total research capacity remains small", Ireland's "share of world citations is greater than its share of world papers", ranking 18th on volume but 8th on citation impact (Evidence, 2009). More details on this are provided in section 4.6.2.

The transformation of Irish higher education was visible almost everywhere. Universities and IoT campuses expanded in all dimensions; a massive building programme led to new student, sport and cultural facilities, specialised teaching spaces, and most notably research institutes with internationally competitive laboratories. Other observable signs included the establishment of the

National Qualification Authority of Ireland (2001) and other sector-specific quality assurance agencies. In addition, the HEA, initially and primarily a funding agency for the universities, adopted a broader mandate for education and research for all HEIs, and became an advocate and driver of change and "modernisation". In 2007, the HEA published a report on research infrastructure in Ireland.

Yet, even during this "golden age", Ireland was not investing sufficiently. While Figure 5 shows government expenditure on R&D at 0.67 percent of GNP to be greater than the EU 27 average of 0.61 percent (in 2010), Ireland was coming from far behind and this level of spending was still less than the recommended Lisbon targets of 3% GDP (public and private) on higher education. Furthermore, Exchequer funding in Ireland accounted for 85% of higher education funding, compared with an OECD average of 73%. Ireland's failure to meet the Lisbon target of 3% GDP for R&D by 2010 was related to the incapacity of the private sector to meet its 2% GDP quota (Gannon, 2010).

Figure 5 International Comparison of GBAORD as a percentage of GDP/GNP, 2010



Source: Forfás Annual Report 2011

4.5 Responding to the Crisis

These changed circumstances are reflected in several major policy initiatives briefly described below: *Building Ireland's Smart Economy* (2008), *Special Group on Public Service Numbers and Expenditure Programmes* (2009); *Report of the Innovation Taskforce* (2010); *Strategic Review of Irish Higher Education* (2011); and *Report of the Research Prioritisation Exercise Steering Group* (2012).

In December 2008, the Taoiseach launched *Building Ireland's Smart Economy*. It aimed to position Ireland as a knowledge-intensive economy with a "thriving enterprise sector, high-quality employment, secure energy supplies, an attractive environment, and first-class infrastructure." It strongly endorsed heavy investment in R&D to "incentivise multinational companies to locate more R&D capacity in Ireland, and ensure the commercialisation and retaining of ideas that flow from that investment" (GoI, 2008).

The Ireland of the future will be a smart, high-value, export-led economy. It will have some of the world's leading research intensive multinationals, a number of which will be Irish-owned (Cowan, 2009, Quoted in RITF, 2010, 7).

As part of its vision, it promoted reform and restructuring of higher education, with "new organisational mergers and alliances that can advance performance through more effective concentration of expertise and investment".

The Innovation Taskforce reinforced the vision of the smart-state strategy. Its report, launched in 2010, promoted the central idea for Ireland to focus on being a "clever copycat" rather than developing its own R&D capacity; that is, Ireland should just do the "D" in R&D (Innovation Task Force, 2010, p15). This approach was motivated by the scale of Irish investment and the evidence that absorption of foreign knowledge (or absorptive capacity) is an important factor for economic growth.

The Department of Finance established the *Special Group on Public Service Numbers and Expenditure Programmes*, which became known colloquially both as the McCarthy Report after its chairperson and as an Bord Snip Nua. Based on a similar process conducted during the 1980s, its remit was to examine expenditure across all government departments and agencies with the objective of cutting €3bn. Published in July 2009, it recommended reductions of over €5.3bn and 17,000+ jobs across all government departments and agencies, with proposed savings €10.2m from higher education, incl. capital costs. The report queried major capital projects, proposed institutional restructuring, and questioned spending on research, the link between science and technology research and innovation and the emphasis on training PhDs. It proposed amalgamating all research funding into a single agency under the remit of SFI and reducing funding for the Strategic Innovation Fund and student grants. Finally, it criticised academic and non-academic contracts, and proposed halting the campus development plans for the Dublin Institute of Technology.

In 2011, the *National Strategy for Higher Education to 2030* was published. It made wide-ranging recommendations about, inter alia, life-long learning, equality between full and part-time study modes, and internationalisation. All HEIs would be subjected to greater oversight through a strategic dialogue process and institutional contracts, while the twin objectives of rationalisation and institutional diversity would create new Technological Universities by merging larger IoTs. There was firm focus on "overall system requirements" but no vision of its future shape. It also contained a suggestion to introduce a graduate tax or an income contingent loan system - as possible alternatives to the free fees scheme. This report was followed by an implementation plan entitled *Towards a Future Higher Education Landscape* (2012) which described guiding principles and objectives for a "co-ordinated system of higher education" with an emphasis on mission distinctiveness. Given the financial and competitive pressures, no single institution is expected to cover all disciplines or research fields. The future system will be characterised by differentiation based on qualification levels, discipline specialisation, programme orientation, regional engagement, student profile, mode of provision, and research intensity and specialisation. Collaboration, alliances and mergers are actively encouraged to reduce duplication, ensure better efficiency and value-for-money, and higher quality.

A Research Prioritisation Exercise (RPE), undertaken by the Department of Enterprise, Jobs and Innovation during 2010-2011, was tasked with defining a strategic framework for research funding and activity. While Science Foundation Ireland had targeted ICT, bio-technology and energy, other

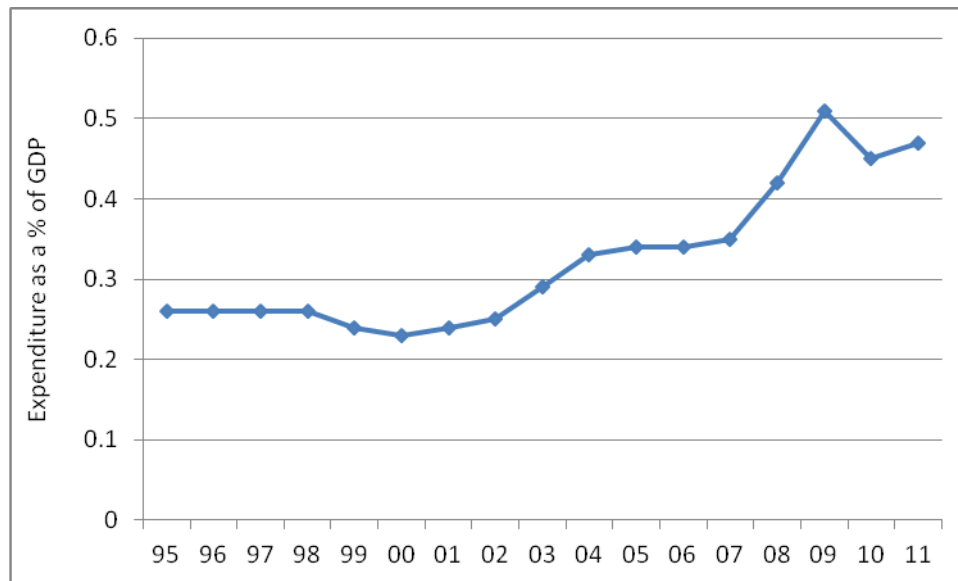
agencies encouraged a bottom-up approach. After an extensive process, fourteen priority areas plus six platform sciences and technology were selected. Each field was reviewed against four high-level criteria: association with large global markets in which Irish-based enterprise does/can realistically compete; public investment in R&D is necessary and can complement private sector research; Ireland has objectively measured strengths; and the field represents a national or global challenge to which Ireland should respond. The arts, humanities and social sciences received limited recognition except in terms of "research for knowledge" or "research for policy". Subsequent statements have indicated that all disciplines/research fields are eligible for funding as long as they are aligned with the priority areas, can show relevance and meet the criteria of excellence (Ahlstrom, 2013a).

While there is some tension between the different reports, they have set a new more strategic direction for higher education and research – which also reflects the new economic reality. At the same time the emphasis is on consolidating capacity and strategic alignment. Because higher education is seen as key to sustainable economic recovery, there is a move towards greater government steerage of both the HE and research system with an emphasis on performance of the system as-a-whole. This includes having a strong role in the shaping of institutional mission, or at least ensuring institutions' missions are sufficiently differentiated and their performance monitored. A inter-government departmental committee oversees and steers research funding, and the HEA has been given authority to observe departmental actions which might affect higher education to ensure coherence and co-ordination. Quality assurance is likely to be increasingly government-driven rather than institutional-led through the creation of a single Qualifications and Quality Ireland (QQI) in 2012. Inevitably given limitations on the state's capacity to fund mass public higher education at a time of accelerating global competitiveness, greater cost-sharing and reliance on the for-profit sector may provide relief. In 2011, after large annual increases, the registration fee was abolished and replaced with a student contribution. For the academic year 2012/2013, this fee will stand at €2,250, with plans to raise it to €3,000 by 2015 (HEA, 2011).

In keeping with the strategy of rebuilding the economy, from one which had become overly dependent on construction and finance, to one underpinned by research, overall research funding has remained relatively stable despite an initial decline in 2009 (Figure 6). The key differences lie in the (re)orientation of research, and the more directive involvement in government in shaping research priorities and funding criteria. The RPE marks the end of laissez-faire research activity which sought to build a broad base of expertise in favour of strong endorsement for a "more top-down, targeted approach" with an emphasis on research which links directly to societal and economic needs. Emphasis in the (immediate) future will be on research relevance with a focus on short-term job creation and innovation which is likely to have implications for research and institutional structures, educational programmes and academic careers. This represents a significant shift from higher education as human capital development underpinning civil society to being an arm of economic policy. Accordingly, in 2009, the Enterprise Ireland/SFI Commercialisation Fund was introduced to accelerate the realisation of national economic benefits through active commercialisation of research outputs, and the new SFI legislation gives the agency a commanding role in research funding. This follows the merger of the two research councils in 2012 to form the Irish Research Council, and the reallocation of PRTL funding from the Department of Education and Skills to the Department of Enterprise, Jobs and Innovation. Some of these developments will positively encourage quality specialisation rather than sheer comprehensiveness, but they could

equally affect the breadth and balance across disciplinary provision. There are likely to be particular implications for the arts and humanities (the subject of this study).

Figure 6 Total R&D Expenditure in the Irish Higher Education Sector as a % of GDP, 1995-2011



Source: Eurostat

4.6 Arts and Humanities Research in Ireland

4.6.1 Arts, humanities and cultural research

Ireland has a singular reputation for being engaged with the arts and humanities. This is true not just in terms of the production of cultural outputs, but also in terms of their consumption.

Ireland's international profile owes much to the creative arts. Prior to the great expansion of the Irish economy in the late 1990s, the rich cultural output of Irish writers, musicians and painters was arguably the single biggest factor in building a consciousness of the country overseas (HEA, 2008, 19).

Ferriter echoes similar sentiments when discussing his dual role as an academic historian and popular historian working to disseminate research and debates in his field to a wider audience:

The simple fact is that there is a huge interest in history amongst the wider public in Ireland. So I do get people coming up to me in the street or in pubs and shops to comment on programmes or on history. The alternative is to simply write history for an elite audience. That is not what I see my role as (Quoted in IRCHSS, 2010, 60).

One of the many reasons for this popular engagement with culture is that national identity has been seen in political terms and bound up with fostering a sense of "Irishness", or indeed creating it from scratch. W. B. Yeats, one of Ireland's most famous cultural exports, is a prime example of this, as a central figure in what has become known as the "Irish Literary Revival" – a movement in the early 20th Century which sought to define a sense of Ireland distinct from its membership of the United Kingdom. As a poet, playwright, and founder of the Abbey Theatre but also a Senator in the new

Irish Free State, Yeats exemplifies how the political dove-tails with the artistic and literary to such a degree that it could be said that Ireland and its accumulated cultural achievements have become synonymous.

As a result, school curricula for the new state were designed with the arts and humanities strongly in mind; Irish language, Irish music, Irish dance, Irish literature and poetry, and Irish history occupied a central role, integral to defining the new Irish state to itself, as much as to the outside world. In the report *National Programme of Primary Instruction* (1922), issued by the National Programme Conference (composed of representatives from various governmental bodies, teaching unions, and other organizations), the importance of studying history in primary schools was emphasized accordingly: “One of the chief aims of the teaching of history should be to develop the best traits of the national character and to inculcate national pride and self-respect. This will not be attained by the cramming of dates and details but rather by showing that the Irish Race has fulfilled a great mission in the advancement of civilisation and that, on the whole, the Irish nation has amply justified its existence” (NPC, 1922). This was to be part of a radical overhaul of the primary school curriculum where the arts and humanities were given a central role (via Irish history, Irish language, culture, music, etc.) as a means to emphasize the distinctiveness of Irish culture. This was in line with the political activist Padraig Pearse’s wish that Ireland should be “not free merely, but Gaelic as well” (Pearse, 1916, 135). Consequently, there was an attempt to redress an imbalance which had marginalized the importance of Irish history, language, and culture in general. This emphasis on cultural revival was given less emphasis in subsequent curricula.

In higher education, 1940 saw the establishment of the Dublin Institute for Advanced Studies via the Institute for Advanced Studies Act, introduced by the then Taoiseach, Éamon de Valera. It was modelled on the Collège de France (Ó Buachalla, 1988, 110) and the Institute for Advanced Studies in Princeton, composed of a School of Celtic Studies and a School of Theoretical Physics, with a School of Cosmic Studies later established in 1947. As an example of equal importance being given to science and humanities fields, the Institute is somewhat unique in the Irish Higher Education environment. De Valera, who graduated in mathematics and was a mathematics teacher before embarking on a political career, was of the view that the Irish language was of great importance to the nation, and so related advanced research was to be encouraged and supported alongside that taking place in science. The Institute was intended to be research-focussed through its constituent schools, with an aim of pursuing fundamental research and training post-doctoral students in advanced methods of original research, and to be financed out of state funds. The renowned theoretical physicist Erwin Schrödinger was appointed as the Institute’s first director, which brought international attention to the new entity.

In this context, it is not surprising that humanities scholars have chosen and dominated culture-specific fields. This classicist orientation is reflected for example in the humanities projects funded by IRCHSS (see Box 4; IRC, 2011;).

Box 4 Sample of Irish Research Council Awards, 2011

- The Place of Violence in Medieval Ireland: Osteological Evidence for Interpersonal Trauma in Irish Medieval Assemblages
- The Sea in Early Medieval Hiberno-Latin and Latinate Literature: Cosmological Problem and Imaginative Resource
- Arson in Medieval Ireland: An Analysis of the Sources (with particular focus on Bretha Forloisctheo, the medieval Irish law tract concerned with arson)
- Place-names and archaeology of Early Ecclesiastical settlement in Cork and “The Decies”
- Living with the Dead in Early Medieval Ireland
- Translating Cambrensis: the Late Medieval History of Giraldus’s English Conquest of Ireland

This orientation has found both a hallowed and contested space within Irish research funding, with its increasingly technocratic approach. The popular understanding of the role played by humanities – not to mention the arts – in Ireland has not always found sufficient support within the academy which has also often been plagued by misunderstandings about what constitutes arts or humanities research, and by an elitism as to who was the more appropriate researcher or HEI/organisation. In past decades, the expectation was that though a student may pursue their undergraduate studies in Ireland, opportunities beyond this level would have to be found elsewhere. Professor Declan Kiberd, former Chair of Anglo-Irish Literature and Drama at UCD discusses this:

I studied Irish and English in Trinity College. When I finished there in 1973, I wanted to do postgraduate work and I was told by everyone that I needed to go to Oxford or Cambridge. It was accepted that you had to get out of Ireland for quality postgraduate studies. All serious postgraduate work was being done abroad. The lecturers in Irish universities were seriously overworked teaching undergraduates. They did not have the time to engage with research projects (Quoted in IRCHSS, 2010, 7).

This left Irish higher education and research in a curious position, with a disconnect between the popular notion of Ireland as a haven for the arts, the humanities, and culture, and the reality at advanced levels of study and research. Beyond this, within the academy there was another manner in which the arts and humanities were isolated. In terms of interactions between the arts and humanities and the sciences, there is still a divide. In its proposals, HEA stated that a research council’s mission should “encourage a greater degree of co-operation between the HSS and the natural sciences” (Bric, 1999, 59), amongst many other aims. It can be said that a greater degree of co-operation must and can be demanded today.

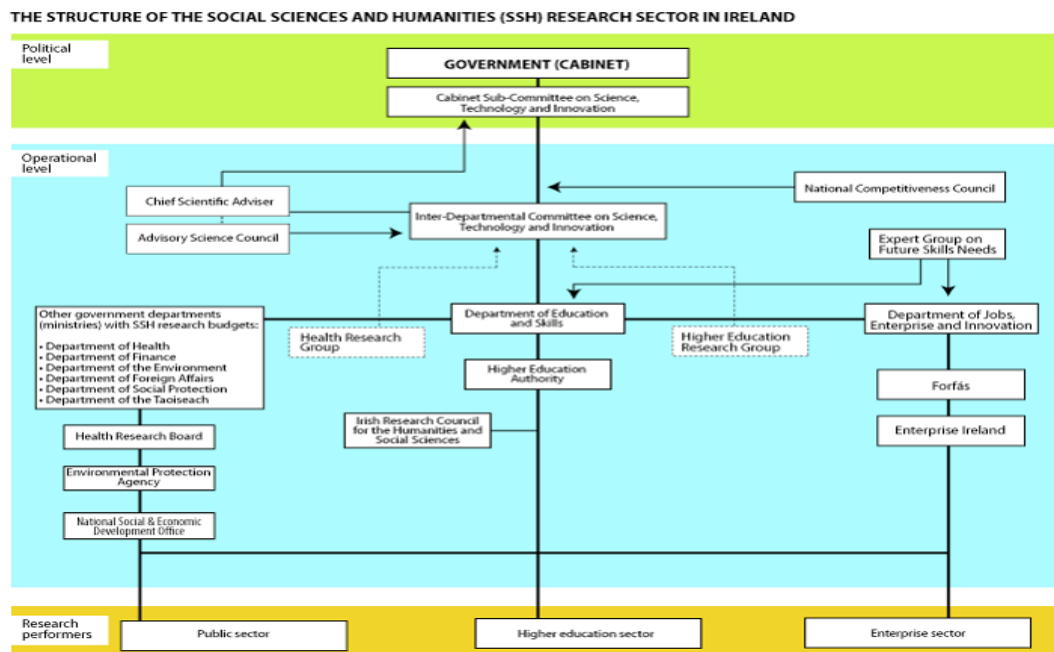
The shift towards application or context-driven research opens up fertile feedback loops between research in the arts and humanities, and the cultural services industries. There had been little evidence of genuinely cross-disciplinary work until the emergence of the digital humanities, and its various cognate activities. This will challenge arts and humanities research which is predominantly classified as “basic” (see discussion below), but it also opens up new opportunities. As the *Playing to Our Strengths* notes, “as a small country, it is likely that we will be unable to engage with the entire

EU agenda so we need to identify our own research strengths and focus our energies and resources.” (HEA, 2010, 5)

4.6.2 Characteristics of arts and humanities research in Ireland

Figure 7 provides an overview of the higher education system in Ireland with a special focus on the arts, humanities and social sciences (AHSS). A number of policy advisory organisations are found in the operational level and include Forfás (the policy and advisory body for enterprise and science), the Chief Scientific Adviser, the Advisory Council for Science, Technology and Innovation, the Expert Group on Future Skills Needs and the Competitiveness Council. A number of government departments and agencies under their aegis both fund and perform SSH research. The HEA has an important role in providing the underpinning infrastructure for research, e.g. research training and facilities, but has had a declining role with respect to research policy. The Irish Research Council for the Humanities and Social Sciences has since been incorporated into the Irish Research Council (which also includes the former Irish Research Council for Science, Technology and Innovation). The Irish Research Council facilitates a variety of schemes that support research at various levels: individual scholars, engineers, technologists and scientists, project-based research, new ideas, “seed” projects, innovative interdisciplinary initiatives, etc.

Figure 7 Structure of the SSH Research Sector in Ireland

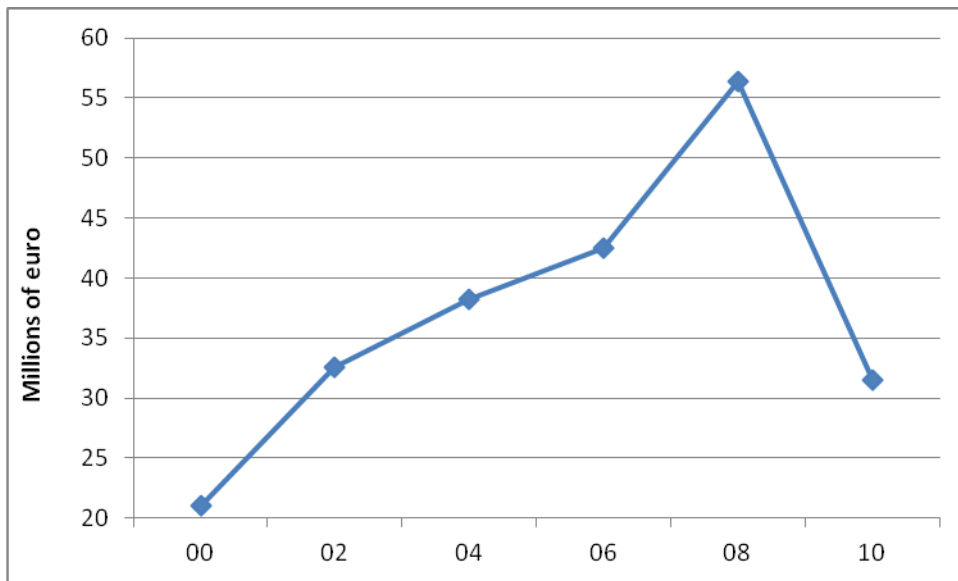


Source: Metris Report (2011)

Figure 8 shows the decrease in higher education expenditure on R&D (HERD) for humanities since 2008. This represents a significant decline since the onset of the Global Economic Crisis. Overall research funding increased significantly over the last decade; but is now back at the same level as 2002. As a function of overall HERD, spending on humanities grew in the immediate years following

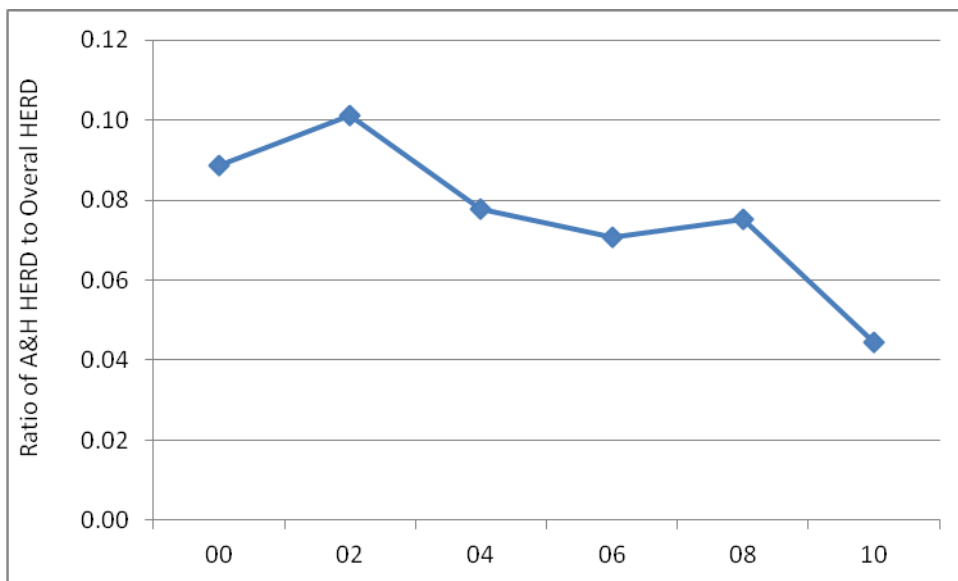
2000 but subsequently fell back again; and fell dramatically since 2008 to a level of 4%. This spending has averaged 7.7% over the last 10 years (see Figure 9).

Figure 8 (HERD) Expenditure on Humanities in Ireland - Current Prices: 2000-2010, (€m)



Source: Forfás HERD Surveys: 2000-2010

Figure 9 Ratio of A&H HERD to Overall HERD: 2000-2010



Source: Forfás HERD Surveys: 2000-2010

Table 2 shows that total government funding, (both direct and indirect) accounted for 83% of all research income in the higher education sector in 2008. Irish and foreign businesses, EU public funding and contributions from private individuals and philanthropists make up the remaining 17% of funding. For humanities, the picture is very similar, with 82% of all research income being accounted for by government (direct and indirect funding).

Table 2 Sources of Research Funding by Field of Science (€ millions), 2008

Field	Direct Sources of Funding			Indirect Govt. Funding ¹¹	Total	% of Total
	Direct Govt. Funding	EU	Industry			
Natural Sciences	155.1	13.8	21.8	50.3	240.9	32
Engineering & Technology	93.9	11.8	11.3	26.3	143.3	19
Medical and Health Sciences	74.4	3.9	16.8	46.4	141.6	19
Agricultural Sciences	12.7	1.1	0.8	8.3	22.9	3
Social Sciences	54	14.6	19	57	144.6	19
Humanities	15.1	0.9	9.5	30.9	56.4	8
Total	405.2	46.1	79.2	219.3	749.7	100

Source: Forfás HERD Surveys: 2000-2008

The majority of IRCHSS funding is provided to individual researchers (Forfás, 2010). IRCHSS Funding increased year-on-year between 2000 and 2009, from €1.6m to €14.4m (Metris, 2011); it was €12.5m in 2008, and 14.4m in 2009 but fell to €11.7m in 2010 (Forfás, 2011). R&D spending more than doubled for the humanities between 2000 and 2006, with the languages and literature sub-category accounting for over 60% of all funding. History and archaeology is the next largest area at 18%, while philosophy, the arts and other humanities make up the remaining 22% (Forfás, 2008).

PRTLTI has been an important source of funds, especially for large scale inter-institutional social sciences and humanities (SSH) research projects (HEA, 2008; Duncan et al, 2010; Metris, 2011). There have been five cycles of the PRTLTI with the latter cycles in particular providing significant funding for the arts and humanities: €29m in Cycle 4 for the *Humanities Serving Irish Society* (HSIS) project comprising eight HEIs. This represented eight percent of overall PRTLTI funding for Cycle 4. Also in Cycle 4 of PRTLTI, the Graduate School of Creative Arts and Media was established (in the information and communication technologies section) with funding of €2.2m. In Cycle 5 of PRTLTI, €28.6m was spent on the arts and humanities, including *Arts Humanities Social Sciences Research Building* (€16.6m), *the Digital Arts and Humanities Structured PhD programme* (€6.8m) and the *National Audio Visual Repository* (€5.2m). This represented 14 percent of overall PRTLTI funding for Cycle 5.

Overall, the PRTLTI-funded expansion has led to the establishment of a wide range of research centres and programmes as illustrated in Box 5.

¹¹ Indirect government funding comes mainly through the proportion of the Higher Education Authority's (HEA) block grant dedicated to R&D.

Box 5 Selected Research Groups, Centres and Programmes in the Arts and Humanities, and Digital Arts and Humanities in Dublin Region¹²

- An Foras Feasa (NUIM)
- Arts Technology Research Lab (ATRL) (TCD)
- Centre for Composition and Practice (TCD)
- Centre for Digital Video Processing (DCU)
- Contemporary Practices in Art and Design Group (NCAD)
- Digital Arts and Humanities Programme (NUIM, NUIG, TCD, QUB, RIA, UCC, UU)
- Digital Humanities Observatory (DHO) (RIA)
- Digital Media Centre (DIT)
- Digital Repository Ireland (RIA, NUIM, TCD, DIT, NUIG, NCAD)
- Graduate School of Creative Arts and Media (GradCAM) (DIT, IADT, NCAD)
- Graphics Vision and Visualisation Group (GV2) (TCD)
- Humanities Institute of Ireland (HII) (UCD)
- Humanities Institute at Maynooth (An Foras Feasa) (NUIM)
- James Joyce Research Centre (UCD)
- Modern Irish Design History and Material Culture Group (NCAD)
- National Academy of Dramatic Art (The Lir) (TCD)
- National Digital Research Centre (NDRC) (DIT, DCU, IADT, NCAD, TCD, UCD)
- National Archive of Irish Composers (National Library of Ireland, DIT, Heritage Music Productions Ltd.)
- Oscar Wilde Centre for Irish Writing (TCD)
- The Irish Art Research Centre (TRIARC) (TCD)
- Trinity Long Room Hub (TCD)

Expansion in research funding as a result of the significant national funding through PRTL I is reflected in the increased number of researchers between 2004 and 2008¹³. Table 3 Table 4 confirm the general picture of differences between disciplines; while the actual number of humanities

¹² This is intended as a selection of research centres, groups and programmes – and not a definitive or comprehensive list.

¹³ Available data is relatively old at this stage, although its Figures 7 and 8 above provide the first post-Crisis picture of changes in the funding landscape.

researchers is much smaller than other disciplines, pay costs comprise 85% of the humanities research total costs compared with engineering and technology or the natural sciences where pay represents less than 60%. Only 2% is spent on capital, compared with 20% and 18% respectively for engineering and technology or the natural sciences; this dichotomy is further reflected in the small number of research support staff required. Given the profile of individual researchers or small teams (see Figure 10), almost 90% of humanities research is classified as “basic”, compared with other fields of study; no data was available for the creative arts – probably because it is often subsumed under the humanities banner but also reflecting that this is a new and emerging field in Ireland. Agricultural sciences compares similarly albeit the reasons are different and they raise different questions. Since IRCHSS was established, it has supported over 1,473 individual PhD Scholars and 335 Postdoctoral Fellows. While the arts and humanities educational programmes are provided by most HEIs in the state, the overwhelming majority (90%) of SSH research is conducted by researchers in the seven universities (Metris, 2011).

Table 3 FTE Researchers by Occupation and Field in the Higher Education Sector, 2008

Field	Researchers	Support Staff	Total Personnel
Natural Sciences	1941	226	2167
Engineering and Technology	1213	165	1378
Medical and Health Sciences	1173	222	1395
Agricultural Sciences	167	38	205
Social Sciences	1058	261	1319
Humanities	622	55	677
Total - 2008	6174	967	7141
Total - 2006	4689	892	5581
Total - 2004	4152	689	4841

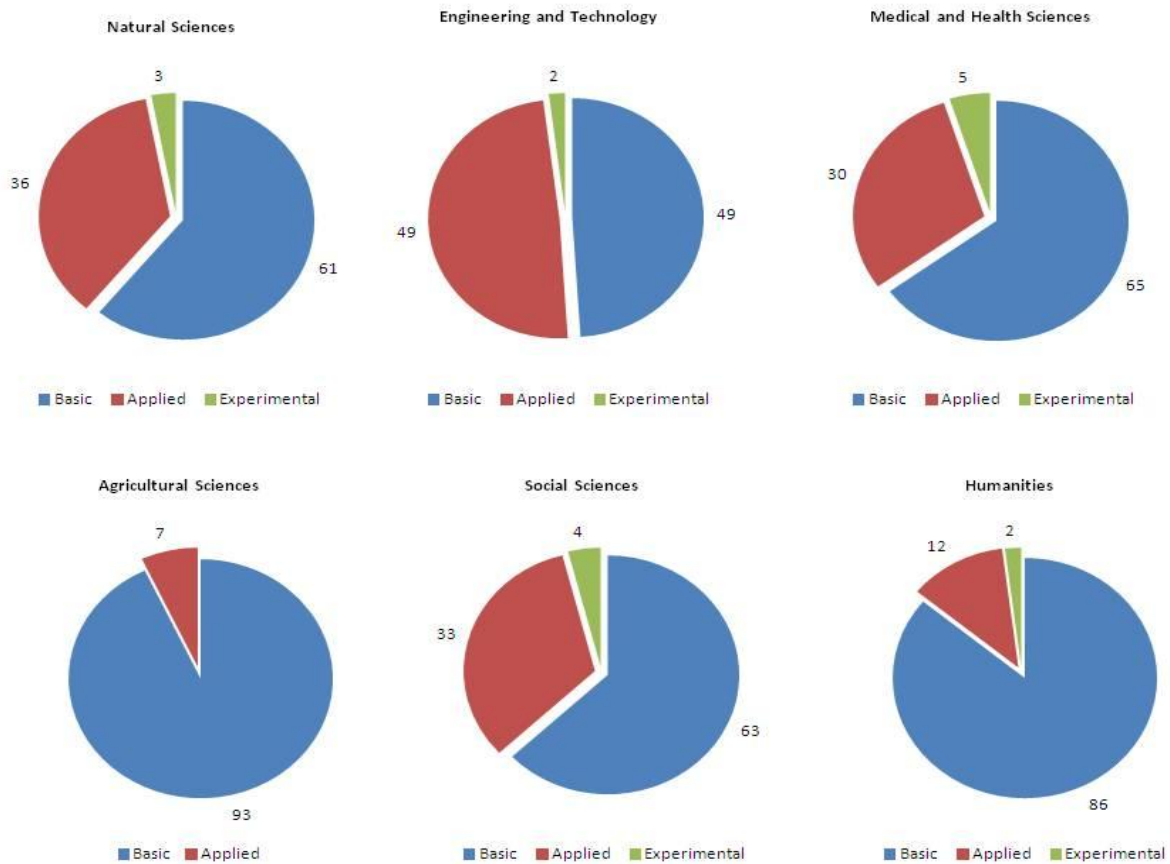
Source: Forfás HERD Survey 2008

Table 4 Types of costs by new fields of science, 2008 (€ million)

Field	Pay Costs	% of Total	Non-pay Costs	% of Total	Capital Costs	% of Total	Total
Natural Sciences	145	59%	56	23%	43	18%	244
Engineering & Technology	83	57%	33	23%	29	20%	145
Medical and Health Sciences	92	60%	39	25%	22	15%	153
Agricultural Sciences	14	61%	9	38%	0	1%	23
Social Sciences	92	68%	32	23%	12	9%	136
Humanities	42	85%	5	11%	2	4%	49
Total	468	63%	174	23%	108	14%	750

Source: Forfás HERD Survey 2008

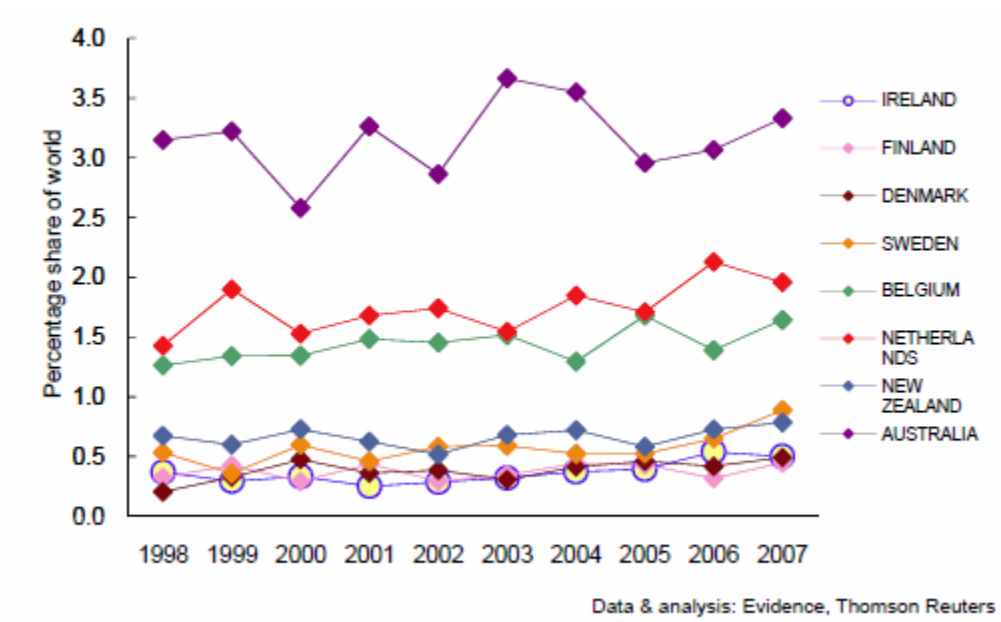
Figure 10 Type of research carried out by Field of Science, 2008



Source: Forfás HERD Survey 2008

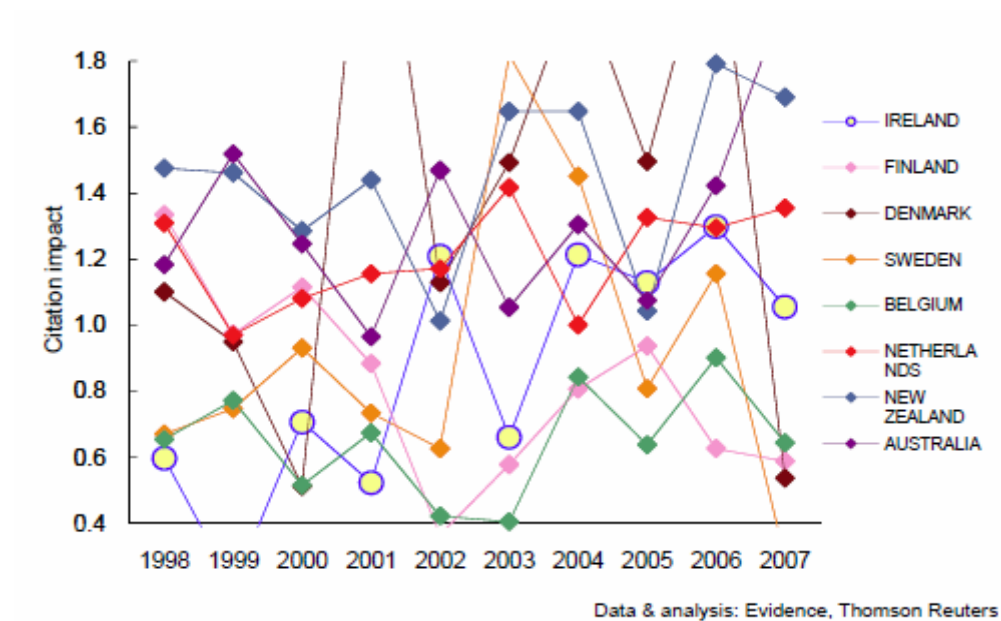
The improving environment for research is also reflected in research output. Figure 11 shows that Ireland appears to be performing well in terms of volume of humanities papers, but the absolute number of papers published (34 in 1998; 48 in 2007) remains small and so trends must be interpreted with care. In addition, Ireland's high ranking within the comparator group should be seen in the light of countries with relatively large research capacity (e.g. India, Brazil) which publish virtually no humanities research. Ireland's share of the world's humanities papers was 0.38% over the five year period 2002-06, and shows a gradual rise to 0.50% by 2007 (Forfás, 2009b).

Figure 11 Ireland's Share of World Humanities Papers: 1998-2007



Source: Forfás 2009b

Figure 12 Citation Impact of Ireland's Humanities Papers: 1998-2007



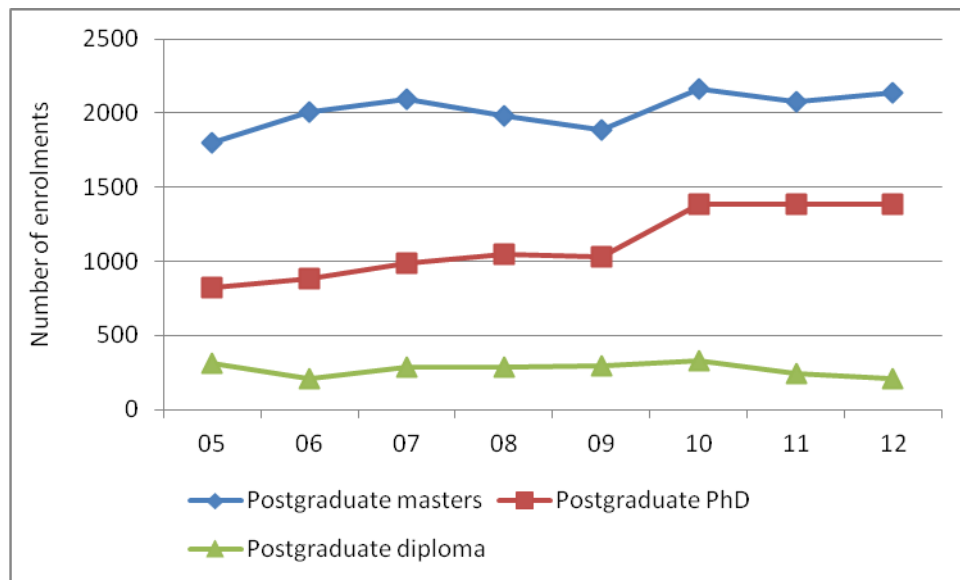
Source: Forfás 2009b

Figure 12 shows that Ireland's humanities research produced in 2007 was less cited than that published between 2002 and 2006. Despite this, Ireland has maintained its ranking within the comparator group (10th position), and improved its position – up to 4th. However, these data need to be interpreted cautiously, and the total volume of Irish humanities research is very low (average 36 papers per year). Notably, figure 11 shows that Irish performance is characterised by an overall

positive trend, from well below world average during 1998 – 2001, to generally at or above world average from 2002 onwards (Forfás, 2009b).

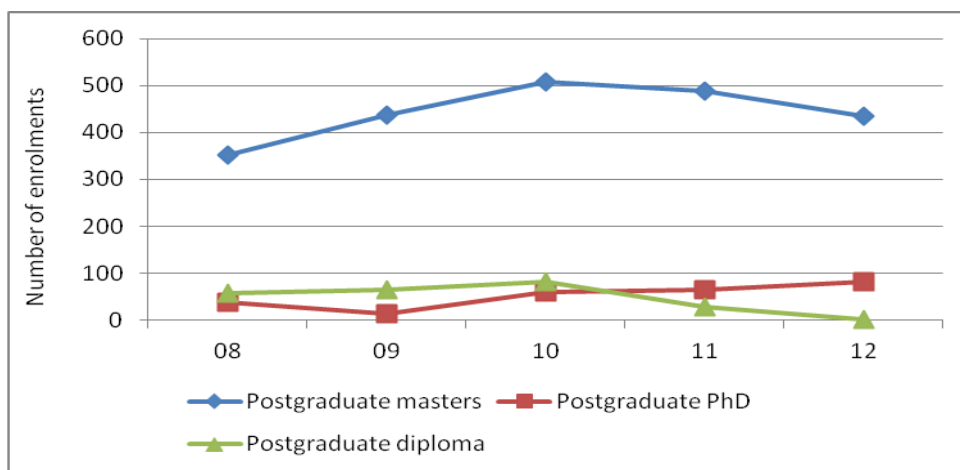
Figures 13 and 14 show the growing level of postgraduate enrolments in Arts and Humanities in recent years, for both the university and institute of technology sectors. There is a mild dip in Masters enrolments in universities in 2009, but the trend subsequently recovers. PhD enrolments increase after 2009, for both the university and institute of technology sectors.

Figure 13 Postgraduate Enrolments in the Arts and Humanities in the University Sector: 2005-12



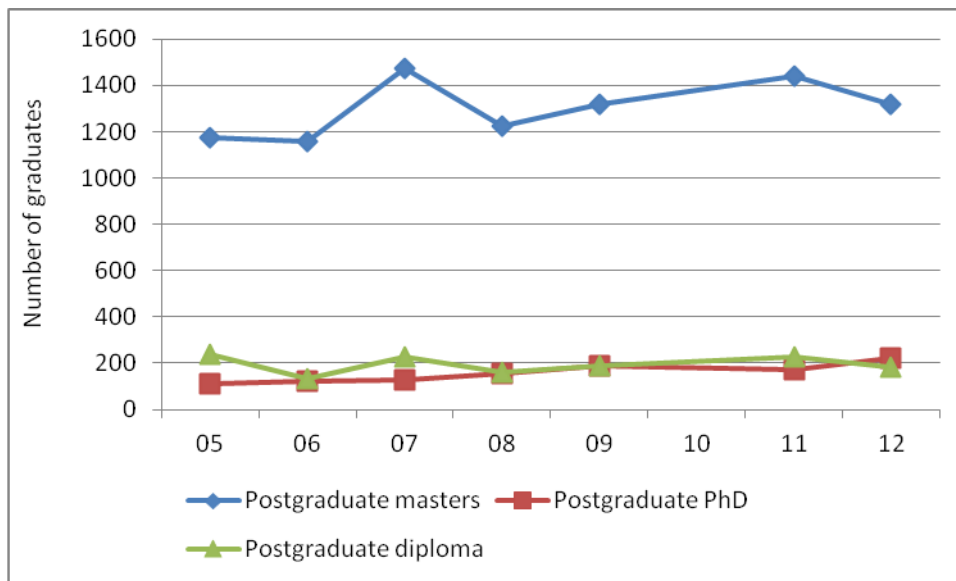
Source: HEA Website

Figure 14 Postgraduate Enrolments in the Arts and Humanities in the IoT Sector: 2008-12



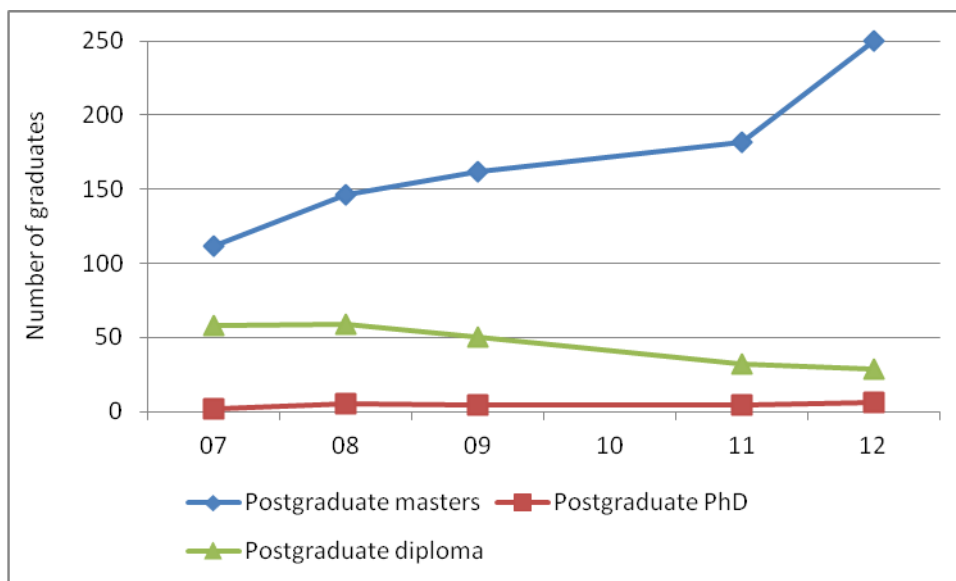
Source: HEA Website

Figure 15 Postgraduate Graduates in the Arts and Humanities in the University Sector: 2005-12



Source: HEA Website

Figure 15: Postgraduate Graduates in the Arts and Humanities in the IoT Sector: 2007-12



Source: HEA Website

Figures 15 and 16 show the number of postgraduate graduates in Arts and Humanities over recent years, for both the university and institute of technology sectors. There is a mild dip in Masters graduations in universities in 2008, but the trends subsequently recovers, before dipping again somewhat in 2012.

All told, secondary data sources show that expenditure on arts and humanities research increased between 2000 and 2008, averaging eight per cent of total spend during the period. 82% of this expenditure is accounted for by government funding. Humanities research is most often classified as being basic, and it uses lower numbers of researchers compared to other disciplines. Because it is not dependent on large capital funding, research income also tends to be quite small. There is also little evidence of collaborative work, especially with the major cultural organisations (HEA, 2013b, 5,

30). Furthermore, pay-costs account for a greater degree of overall costs in the humanities, given the relatively lower amount of funding that is required for capital investment. The citation impact of Ireland's scholarly output in the humanities is generally at or above the world average from 2002 onwards. PhD enrolments in the arts and humanities increase after 2009, for both the university and institute of technology sectors.

5. What Stakeholders Think about Arts and Humanities Research

5.1 Overview

Whether from the perspective of the academy, the policy community or civil society, everyone believes strongly in the value of the arts and humanities to and for Ireland and Ireland Inc.; their belief in the significance of the arts and humanities, its historic and cultural legacy and the understanding that it brings about/to contemporary society, is strongly underpinned by a deep sense of Irish history and cultural identity. It is not always clear that a distinction is made between the arts and humanities as broad disciplines contributing to civil society or specifically to arts and humanities research. However, there is a shared sense that the future role and position of arts and humanities research is at risk in a research policy environment which is increasingly driven by economic parameters of accountability and relevance.

This chapter provides an overview of the breadth of opinions and concerns expressed by different stakeholders in response to some key issues. The results are noticeable for the significant degree of unanimity across the different groups, albeit there are also variations in emphasis given to aspects of research and especially about how the value, impact and benefit is understood and demonstrated. Responses are assembled under the following headings.

- What is Arts and Humanities Research;
- Contributions/Benefits of Research;
- Understanding Quality of Research.

5.2 What is Arts and Humanities Research?

To undertake research is to provide to create new knowledge or understandings and to encourage/facilitate reflection or critical thinking, often in order to provide needed evidence or substantiation for policy. The way in which research is defined reflects their orientation; thus, some stakeholders define research by the process (critical reflection, analysis, writing/composing) while others refer to the outputs (article, book, piece of art or musical composition). These distinctions are most apparent between the creative arts and humanities scholars; for the former, research is often characterised by performance, practice or the production of an artefact. Arts research may be described as practice-based or practice-led approach; it is essentially "practice as research" which uses the production of an artefact or a performance to inform or demonstrate ideas or theories. People working within the cultural field usually understand research in more practical terms; it is about finding out information, "going, seeing, listening, watching, reading" – being aware of what is happening in the arts in order to apply it directly to everyday requirements or cultural events.

In contrast, humanities scholars usually rely on more traditional academic terminology: to produce new knowledge or understandings. Nonetheless, research involves a "writing-up" process, whether in form of a paper, book or dissertation which analyses what has been done, as A1 (a senior arts scholar) says: "the difference between writing a first symphony and getting a PhD is the ability to

analyse what've you've done". Simply producing the work is not sufficient; it is important "to go that extra mile in terms of analysing".

Arts and humanities researchers generally pursue their activity as individuals in contrast to team-based/lab-based research common to science and technology. These nuances were addressed primarily by the academics and the civil society stakeholders, although some of the distinctions and tensions between the arts/humanities and engineering/sciences may be somewhat artificial. Nonetheless, all groups recognise the need to accommodate these differences in any evaluation process.

5.2.1 What is Research?

C3 (a locally-based community stakeholder) offers the following: "To create an evidence base. To stimulate thought about the ideas you're thinking about. To find out more..."

A2 (a senior science scholar) says:

"I'd have a very broad definition of research. Research can be fairly short, projects which you can look at, and I think the definitions, applied research, scholarship, it's also a contribution to scholarship if somebody writes and documents, and writes a paper; they mightn't necessarily have funding. So my definition is very, very broad. It's somebody who's there, who's documenting, who's writing up; they could be writing up a paper, making a presentation. But you also have the other side in terms of the output. And somebody produces say a painting or a sculpture, and there's a methodology to doing that; and even how is that documented. And how the whole process evolves; and the whole reflective practice."

A6 (a senior arts academic) says:

"To me a researcher is a researcher is a researcher. What is the question, the process, the problem that you are addressing? And in the computing field you produce a program; in the music field you have a score. If you're a writer, a book; if you're a microbiologist, you may be disproving a theory. So what's different? We don't, as a society, sometimes see those similarities."

P6 (a policy-maker in a state organisation) says: "I think research asks the "why" question, and it's driven by curiosity, imagination, and often putting the impossible together."

5.2.2 What is Arts and Humanities Research?

C6 (a community stakeholder in a national organisation) says:

"I would define the humanities as those areas of study where the principle aim is to understand people... that includes how they interact with one another in sociology, how they interpret the past in history, how they communicate with one another through languages."

A1 (a senior arts scholar) discusses the role of performance in arts research:

"There's no mechanism within the university at the moment to value... performance. Even though we've tried to define what an equivalent research output would be – if it is performative – which would be something like a professional theatre production... It was only the dissertation that was assessable because university protocol would not allow us to examine the practice. So I'm hoping to

over the next few years to get the protocol passed by academic council for practice to be assessed. Because it is assessed at undergraduate level, but in terms of research it's not assessed. It's not fair."

A1 (a senior arts scholar) also says:

"I'm very keen that the theorising would be valued as much as the practice itself. In the UK there is variance. I would never go beyond 50/50; I'm thinking more 60/40 on the research and the practice. The whole idea is that the theatre becomes a laboratory, and you test out a theory. It's very scientific: where you have a hypothesis, you test it out and you write up the result."

Finally, A1 (a senior arts scholar), draws a parallel between "science practice" and arts practice:

"At my university we don't have a system whereby we can examine arts practice, which is silly really because all the sciences do it – science practice is examinable. In terms of qualitative assessment of ourselves as scholars there are internal debates – we are creating a rationale for what constitutes research and performance – where performance at a professional level is included... For someone who produces a piece of theatre and documents it... that is the equivalent of a journal article."

A8 (a locally based civil society stakeholder) offers a definition of music research:

"Research tended to be very much musicology-based; and what we've witnessed is an opening out (if you like) of arts-practice forms in music. This encompasses much more than musicology; there's a whole area of: composition, creative work, performance, even the development of new technologies and their application in music (and) music education. So I think there is a movement in Ireland at the moment towards further development of that, but I think we've quite a way to go."

A8 (a locally based civil society stakeholder) also discusses the difference between musicology-based research and practice-based research:

"I suppose the musicology is the very traditional, humanities-based type of basic research; whereas when it comes to composition and performance, you're talking about creative practice, arts, performance practice; and you're looking at it; (it's) reflective practice."

A6 (a senior arts academic) says:

"Talking to staff in my own department... trying to convince them that actually what they're doing is research and they very often think well I'm just going, I'm giving a guitar recital, I'm giving a piano recital, I'm not, hmm, you'd say well there is a research element in that. Your preparation for it, your concept of the recital, your construction of the programme. What you're trying to convey in the recital has a research path and that's a view which a lot of musicians would have never even thought of. So that's a, you know, a new debate I suppose that's going on and how to assess a performance as research because there's obviously always parallels in art and design and other areas."

A4 (a senior science scholar) says:

"Research is the creation of new knowledge in any area. Some of that would be reviewing what's out there and developing new insight. To me that's what research is. Now in some of the disciplines there's a performance element to it. You know the traditional generation of knowledge might be

producing a book, or a paper. Some of our disciplines in music and drama would have a performance element to them."

P2 (a policy-maker in a state agency) says: "...people and projects looking at the way we live, and how we live, and how that impacts on others around us and our society. And equally, we're concerned with thought for the sake of itself; about things that make up the human condition I suppose."

5.2.3 How do the Arts and Humanities Compare to the Sciences?

C6 (a community stakeholder in a national organisation) states that his organisation brings together the humanities with the natural sciences; and says that: "to some extent I think the distinction is a little bit artificial; it's actually beginning to blur, which I think is a very welcome development."

C6 (a community stakeholder in a national organisation) also says:

"One thing that is a problem is that Humanities research has not enjoyed parity of esteem with scientific research. I think that is changing and changing for the better. But a couple of years ago, if you talked to the deans of research, they were exclusively focused on growing the natural sciences; and they didn't care about the Humanities. The joke of course is that the high ranking of some of the Irish universities in the world-listings is almost entirely due to their performance in the arts; not the sciences. It is the case where the world rankings may have actually had a beneficial effect. Through this university administrators realise that the humanities are actually a valuable resource."

C6 (a community stakeholder in a national organisation) also says:

"Some of it of course is down to external factors – it's funding. The reasons VPs became obsessed with the natural sciences is because that's where the money was. A welcome development is that we are beginning to see more funding across the divide or focused for the humanities. The level of humanities funding coming through PRTL I has notably increased. The European Research Council I think is a great step forward, as it funds all areas of research, including the humanities. So we are getting to a situation where there is parity of esteem. Of course, that doesn't mean that we need equal levels of funding; research in the natural sciences can be much more expensive. At least now humanities are being recognized as valuable components of the educational and research system."

Finally, C6 (a community stakeholder in a national organisation) says:

"The value of the humanities to the natural sciences is worth mentioning, and also the interesting growth of research areas that cross the boundary – like digital humanities. A fascinating woman in the US started off as an anthropologist but ended up as a professor of computer science. Her name is Cherry Pancake. ... There's also a professor of computer science in Santa Barbara who began as a composer of music. She does computer graphics with sound as an added dimension. It's sonification of data. It's an interesting example of somebody migrating from the humanities to the hard sciences."

A8 (a locally based civil society stakeholder) says: "If you look at all the opportunities for science; there's relatively little in humanities: in terms of research funding. And sometimes a very little goes a long way: just to get a project off the ground."

A6 (a senior arts academic) discusses how the arts can struggle to succeed in conventional funding schemes:

"The rigidity of rules and regulations of those schemes and funding of those schemes is quite problematic and that is something which sort of holds music back and its perhaps one of the most frustrating things that I have to deal with when I've really good ideas, sometimes even ones that aren't going to cost very much money, because they don't fit into a pre selected model. It's very difficult to make them work."

A2 (a senior science scholar) says:

"We all seem to have great debates about how similar arts and science can be... because what the creative arts people probably didn't realise is that a scientist you kept doing an experiment over and over, and fine-tuning it until you got the result. And [in] ...the diaries of the artists... you can see the experimentation happening: how do you answer a question or how do you query a method or a process? ...there was a sudden realisation that "we could actually learn a lot from each other". Because scientists... when I did my PhD, which was in the mid-late Eighties, we never really did that reflective... and what I found was that the whole reflective practice that was coming through the creative arts was very much adding to the area of science."

A6 (a senior arts academic) suggests that there is more interdisciplinary collaboration in the arts and humanities:

"You can't force the collaboration but it's often that introduction: getting them to talk and chat about their work. It's the journal-clubs; it's people show-casing and having a research day within their own institute. Because they often find that there are other people working on projects that they're not aware of. I don't know what happens nationally: different groups getting together to talk about their research. I don't hear about those meetings, I've never been emailed, I'll hear about it in science and technology. But I don't hear about in the arts and humanities unless it's a very specific area."

A6 (a senior arts academic) also says:

"I get annoyed sometimes when I'm at heads of development meetings and we're looking at research strategy... and everyone is focusing on science and technology, but mine would say: what about the arts and humanities? And you'll find that it's not being mentioned. And I don't think it's being done deliberately. I think it's because a lot of the people at that level came from a science and technology background. "Oh we don't understand the arts and humanities, we don't know enough about them, you tell us". And that's what I found in the 13 institutes of technology, because they're very much science and technology-focused."

Finally, A6 (a senior arts academic) says: "Some of the researchers in arts and humanities; I would like to see some of those involved in science and technology projects. Because they ask questions we wouldn't ask as scientists. And I think there's a role; I think every project should have that debate and that whole reflective debate."

A3 (a senior humanities scholar) says:

"It's still the case that a lot of research in arts and humanities is not in groups; it doesn't involve research teams or whatever. And there's some kinds of projects which could be of that nature: say editing, and working on various schemes where such projects might emerge. In general, academics in the arts and humanities tend to work on their individual projects, because writing books and essays is the primary mode of research. It is much more individual and solitary, and that kind of runs against the criteria for research projects. So that's one aspect of research that always frustrates people within arts; that there's not enough awareness of how research happens in the arts and humanities. And then there's also the idea that the library is the laboratory, and that libraries are under-funded."

P1 (a policy-maker in the private sector) says:

"The other point I'd make about this is that there is a distinction between the humanities on the one side, and arts on the other. That's actually quite an artificial and relatively modern description. If you look at poets and philosophers and historians, they actually were stimulated and were aware of advances in biology and physics and astronomy: to drive their own re-evaluation of man and his relationship with the world. And they've also made important contributions to the sciences in their own right. The distinction is relatively new (probably from halfway through the nineteenth century and artificial. And because of that, major opportunities are being missed."

A4 (a senior science scholar) emphasises that there should not be an exclusive focus on interdisciplinarity:

"There a group of people who think this isn't for me: I'm a lone scholar and I sit in my office and I think and I write my own work. And that type of research is to be valued. It creates an enormous outcome as well. I don't think we should ever move towards everybody having to be part of a large team. There are genuinely valuable areas of scholarship where the individual scholar can make an enormous contribution. And by setting up processes to encourage interdisciplinarity you don't want to devalue that."

P6 (a policy-maker in a state organisation) says:

"There's always the ongoing issue of acceptance and recognition of the fact that humanities and social science scholars are largely solitary: in terms of the production of their work. So the issue of publications; the sciences, typically, have large teams, their names are on innumerable publications; and the tradition is such that there is always due accreditation of the supervisor by the supervisee: on the resultant publications. That doesn't happen in the humanities and social sciences. And so when you get to counting, and promotion-boards etc., there is a marked difference sometimes in terms of the numbers of authors of a paper; they tend to be sole-authored very often: the humanities and social sciences. But also just the volume of them, because if someone is supervising a number of PhDs, and they are all including them in the papers that they are presenting; that has an impact in terms of the numbers game, if you like."

P7 (a policy-maker in a state organisation) talks about the new Irish Research Council:

"Yeah, that is true and I think it something we should be trying to move away from any sort of traditional or artificial boundary in terms of where we see disciplines located and there is a

statement in fact in having a separate arts and humanities council that this is almost the 'special needs' project – this is an area that needs protection. Whereas there is a statement of confidence in saying that no we are part of a broader research council because our activity is actually stands shoulder to shoulder with any other activity within the system."

5.3 Value, Contributions and Benefits of Arts and Humanities Research

In recent years, there has been increasing government and public interest in and concern about the societal and economic contribution made by publicly-funded research. Traditionally value has been expressed in academic terms being the impact and influence on the academy and to increasing the sum of human knowledge by generating new ideas and making discoveries. Research is undertaken in academic institutions because of its impact on human capital, via teaching and learning, and training of scholars. It helps build the intellectual integrity of the academic discipline and the formation of creative capital, which is especially important for the creative arts. This includes the training of scholars but the potential over-supply of Ph.D. graduates must be explicitly addressed.

Today, the concept of value extends beyond the academy. The difficulty of valorising arts and humanities research becomes most apparent when considered at the societal level. The arts and humanities are widely seen as underpinning human expression and cultural identity but there is recognition also for their contribution to/for (long-term) developments in society. Researchers make a distinction between contributing to "society" as distinct from the "economy"; the role of the public intellectual is identified as an important contribution made by arts and humanities researchers. While most stakeholders, including policymakers, acknowledge that many of these benefits can take a long time to emerge, others are more wary. Some within civil society said the work being produced was of little value, and there is disconnect between higher education and the real/working life of the arts in particular.

Because of difficulties tracking and demonstrating value, especially over time, there is a strong view that researchers must proactively get involved in better communication about the contribution of arts and humanities research. This is equally necessary if public for research is to be maintained, especially amidst some concern about an over-supply in the numbers of Ph.D. graduates.

5.3.1 The Benefit of Research for Teaching and the Learning of Students

A3 (a senior humanities scholar) puts forward a strong argument that research improves teaching:

"Certainly the beneficiaries are students in the first instance because I think there's a difference between someone who's actively researching in the field in which they teach (or a cognate one) – it could spill over; anyone who's an active researcher is likely to be a very good teacher."

A4 (a senior science scholar) also makes a strong argument that research improves teaching within academia, including the humanities in particular:

"The debate around... where research and teaching align with one another is a critical one, and I think it's one where the humanities can play an enormous role... I think your very best researcher should be in teaching the first-year students. My observation would be that the researchers in the Humanities would probably bring their research more into their teaching. You'd find them sparking a

debate among a final-year group in an area of relevance to their research... So that debate around... where teaching and research fit together; that's a space where the Humanities can take a leading role."

A8 (a locally based civil society stakeholder) emphasised the importance of teaching being current and up-to-date: "The benefits are keeping it alive, keeping the discipline active, keeping it cutting edge... The whole teaching aspect has to be underpinned by research; otherwise..."

A4 (a senior science scholar) says: "people in the university should be absolutely engaged in teaching and research;...researchers in the Humanities would probably bring their research more into their teaching...so that's a space where the humanities can take a lead."

P8 (a public-sector policy-maker) stated:

"That has to involve both teaching and research in the area of arts and humanities and I think that ...for me...teaching and research things go hand-in-hand. That [way] we have a credible in the offering in the teaching area. We'll have students who either come to Ireland or stay in Ireland for an education in this area if there's a good cadre of people teaching them and that links to the research thing."

5.3.2 The Benefit of Research for Training of Scholars and Formation of Creative Capital

P1 (a policy-maker in the private sector) hones in on the idea of creative capital:

"I don't know if you've come across the work of Florida, or Charles Landry? They've kind of created newer conceptual models of economic development, based largely on the importance of high skills, and talent and creativity, to the development of urban societies and different types of economic conglomerations. And they talk about the pre-conditions for the creative cities; they've looked across the world – they've got this argument that countries no longer compete, cities do. Dublin was one place they mentioned, but also places like Houston in Texas or Vancouver in Canada. Where creative individuals come together and think openly and flexibly and resourcefully; and take intellectual risks. And this feeds into the rise of a creative class as it were."

C6 (a community stakeholder in a national organisation) has a similar outlook:

"There is a growing consensus among economists is to have cities where interesting things are happening, and that is as much (about) having the creative arts as ... science. Arts have done a good job convincing government that they are key to the turnaround. You can't abandon arts in a time of crisis. Just as much as investing in research and development in the physical sciences."

However, P7 (a policy-maker in a state agency) discusses the perceived problem of an over-supply in Ph.D. graduates:

"It's easy to question whether a doubling of PhD output is actually... appropriate... the economy has changed... since that objective was set, there are issues around industry absorption of PhDs, there's no question about that. I think there was always a view that 'build it and they will come'... that if you are producing PhDs in sufficient numbers that employers will begin to understand the value of

PhD recruits to their enterprise and that in itself will create and sustain demand. There is no question that if you are looking at PhDs... in terms of the traditional academic formation... we are overproducing..."

A7 (a junior humanities scholar) says:

"For most folks doing a PhD in the arts and humanities, job prospects are quite dim...I think taking four to 5 years out of your life – including earning potential – is such a huge commitment. You have to go into it with open eyes, but at the same time I think you need to be really flexible about what you could do with a PhD..."

...At one stage they told us to double the number of PhDs at the university but it was a completely arbitrary goal. Where are these people going to go? Imagining a society where a fourth-level degree has value is not the same as being a society where it has value. So I think we have to think really carefully about why students are undertaking PhD work...you need a back-up plan...other than going into academia...but it is still a challenge".

P2 (a policy-maker in a state agency) also discusses the problem of an over-supply in Ph.D. graduates:

"In our discussions of the scheme this year, we've discussed the fact that perhaps we're producing too many PhDs at the moment. And that's there a bit of a blockage at the postdoc level. And that maybe the Council needs to re-orient its money more towards creating postdocs. And then you change that again in 2 or 3 years. So we do think about those things."

Despite these concerns, P7 (the aforementioned policy-maker in the state agency) suggests how an oversupply of PhD graduates could be resolved:

"Opportunities for... early stage researchers ... may well lead on to careers in research and academia but more than likely is going to lead to careers in lots of different fronts across society and across enterprise... It is about ensuring that as an education system we provide the avenues and opportunities for people to come through at that level in the numbers required for the research system but for a wider innovation system that's going to rely on and require people of advanced skills."

However, it is an issue of how to not only grow – but also sustain - the discipline when there is a limited amount of resources to support post-graduated research and on top of this there is not anywhere for the graduates to go afterward – in terms of employment. How will such a situation sustain research?

P6 (a policy-maker in a state organisation) says:

"You know PhD graduates would have seen their future as being almost entirely within the academic world, but the picture is changing. So people are saying alternative routes; and there are probably routes which give faster and better economic return to the individual than becoming a member of the Academy..."

I think much of the structured PhD education has already tackled most of those issues. You know, development of generic skills. It's only a starting-point, but moving away from just being an

apprentice with one mentor where your experience of being a PhD student was entirely defined by your PhD supervisor. That has been generalised somewhat. So most students now would take modules in softer generic skills; and I think that helps. I think making sure people engage in the outside world; particularly if they're in a discipline where there's potential for them to engage; you're having contact with external agency. It's hugely beneficial."

5.3.3 The Benefit of Research for Human Expression and Cultural Identity

C3 (a locally-based community stakeholder) talks about the need for human expression, and how research in arts and humanities can contribute to fulfilling that need:

"Just re-connecting people to themselves essentially. It's that notion that we've had all this wonderful economic stuff, and it's great. I'm not a socialist; I like free enterprise and I think it should be encouraged. However, people are more important basically. Then how they connect and share things with each other, how they support each other is one of the main areas that the arts and humanities sits in. It's all about how we express ourselves, how we connect with other people, how we play, how we are more effective as citizens."

Davidson and Golderg (2004) state: "A world without the humanities would be one in which science and technology knew no point of social reference, had lost their cultural compass and moral scope. It would be a world narrowly limited and limitlessly narrow."

A2 (a senior science scholar) argues how arts and humanities research can contribute to human expression:

"If somebody produces a score in music, or a new technique in film-making or animation, there's the whole social humanity value. It makes you who you are and what your society is. Somebody used the word the all-rounded society, that has an interest in who they are, where they came from, what they're doing; and is not merely functioning as a human-being."

A2 (a senior science scholar) also discusses the need for work-life balance and self-awareness:

"So I think one of the key things is looking at the impacts of science and technological developments on society. I also think we need to look at the whole area of what I would call work/life balance, and who we are as individuals. And just the whole awareness of a person; I know I'm being very fundamental in this. As individuals, what are our values as human beings; and the impact of... like if you didn't have music in your life, if you didn't have literature, if you didn't have books to read, what impact would that have on society and those opportunities?"

A7 (a junior Humanities scholar) talks about benefit of arts and humanities research for establishing cultural identity:

"I think there's a great deal to be said for intellectual growth and development. How do you conceive of culture? What is Irish identity? How is it manifested in our culture? These are the sort of meta-issues that don't get attention; that don't get funded. And so at the university we really have the luxury of being able to step back and look at these cultural phenomenon, with more time and introspection, and more ability to connect disparate fields of thought. So to me, that meta-level is really where the value lies."

According to the AHRC (2010), "arts and humanities research... allows us to grow our body of knowledge on all aspects of human experience, agency, identity and expression, as constructed through language, literature, artefacts and performance. As such, it is a driving-force of what can be called the UK's culture ecosystem, that is to say, the distinctive system of interlocking elements of (a) the UK's extremely rich store of cultural heritage, traditions and practices; (b) huge popular engagement with that culture; (c) popular reflection on that culture, and (d) professional reflection on it by arts and humanities researchers."

C4 (a science journalist for a national newspaper) says: "Why are we spending money doing these things? It brings us to a new understanding of some aspect of our life."

P3 (a policy-maker with experience in both the private-sector and at a state agency) says that arts and humanities research is about:

"generating new knowledge for the practical purpose of... policy-makers, scientists, the general public... to come up with an informed view or to be able to see the challenges in the changing world in which we're living. But also to create the material... to debate the relevance of such issues in society."

A6 (a senior arts academic) says:

"What would happen if we didn't have an arts and humanities culture-drive in society? Where would we get our value-system from? The whole intellectual debate, the questioning, the values, documenting our past... we can to a certain extent create our own future by learning from the past."

5.3.4 The Benefit of Research for (Long-Term) Developments in Society

C6 (a community stakeholder in a national organisation) emphasises the importance of research for society, as opposed to the economy:

"All the talk about a smart economy is misplaced, really what we need is a smart society. If we had a smart society then we would automatically have a smart economy. But if we don't have a smart society we will never get a smart economy. If civic society is critical and able to ask the hard questions, then we'd be a long way away from the trouble we are in."

A1 (a senior arts academic) argues that there is too much attention given to potential benefits to the economy, as opposed to society:

"Why do we talk about the economy, exclusively? I believe in a smart society... economies are never smart. The impact of art in our society is intangible. Economists look at figures; what they don't assess is collective benefits to a nation or to a society."

A2 (a senior science scholar) illustrates the importance of arts and humanities research by describing how it has been absent in Singapore:

"I know for example in Singapore, with their higher education system, most of their universities are in science and technology. They've now started to build a dedicated university in the area of the

creative arts. Because what they didn't have was that debate, everything was purely science and technology, and the impact that was having on their own society."

A8 (a locally-based community stakeholder) emphasises that benefits of arts and humanities research for society can take a long time to materialise:

"It's not an immediate payoff; it's not an immediate impact. But in terms of the long-term value for society, that's where I think that it's more important; and would be appreciated in the long-term... Then you look at the sociological aspects of it; a lot of it can only be assessed over a longer period of time."

P3 (a policy-maker with experience in both the private-sector and at a state agency) also takes a long-term view on the benefit of research:

"The political pressure comes back to: what is the economic impact? Can you quantify it? ..And if you're using a tool in the short-term to measure a long-term investment, then of course the tool is wrong, and you'll get the wrong outcome... So short-term economic impact is not the tool for measuring. Measurement about value from research in the arts and humanities is more about community, and the debate, and policy-making."

P4 (a policy-maker in a state agency) also talks about using the right timeframe:

"We were set up to establish genuine world-class ability in certain areas of science and engineering; and with the ultimate aim of actually turning knowledge into inventions and products; but I guess in anything like this you need what I call "stage appropriate metrics". Because we're in a 20-30 year project here; you don't do it in 2 or 3 years."

C6 (an officer from a national academic organisation) also suggests that it may take a long time to see the true value of research:

"There is no one single measure that is the gold standard. Then again, there is the case where people do work that is good but isn't recognised at the time that is done. It could be a hundred years later in some cases that people appreciate how important it was. And that affects the sciences just as much as the humanities."

Finally, on a related note, C7 (an officer from a national academic organisation), suggests that funding-agencies can be risk-averse:

"The funding agencies are being driven to demand evidence that their investment is going to the right places – so the funding agencies want to be seen that they are backing winners. The downside is that a small select group tend to get the funding. The universities have become obsessed with ranking in these world lists. It's very dangerous - it is a very simplistic measure of a very complex issue."

5.3.5 The Importance of Communicating the Benefits of Research

A7 (a junior Humanities scholar) says:

"It's partly the Humanities' fault in a way I think, because they haven't just wished to engage... we are going to have to find ways to understand and speak that languages of a little bit better... once we're in that position I think we can change the system to a certain extent from within".

P9 (a policy-maker in a state organisation) says:

"To me it's a huge marketing issue that needs to be done by the arts and humanities people. And I think just for so long they have been on the back foot and its sort of responsive to them to issue about the relevance as opposed to coming out and saying this is our statement – 'this is our relevance' – but rather than saying yes we have to try and grapple about the relevance...to the economy...that collectively that somebody comes out and says no actually this is where we're relevant...we're relevant in these areas and really come up with metrics around the transfer of knowledge, whether it be to education, whether it be to policy but at least you know this is where our relevance is...it's a marketing thing that sort of has to be done and I think for too long humanities researchers and arts researchers haven't really collectively come together and it's hard when you're, even as a policy maker, you're dealing with pockets of people, there's no collective-think...as to how we sell ourselves, so then when it comes to something like a prioritization exercise or like the exercise done on the value of arts and humanities, you're still dealing with pockets of individuals rather than a collective."

C2 (a locally-based civil society stakeholder) also talks about the need for better communication:

"I think it's really interesting that you are gathering this from people in practice. I'd be really interested to hear what the academics and researchers have to say, because I think the perceived attitude is that 'cos it is'. And I think given the economic pressures, that's not good enough anymore...We should be better at talking about these things and why they're important. And if they don't know, they need to find out, very quickly, and start telling people."

C7 (an officer from a national academic organisation) says:

"It's a nebulous term but I rather like the idea that academics have a duty to engage with civic society. Part of our problem in Ireland is that we have never had a serious group of public intellectuals, with a few notable exceptions... We need more people like that, to be honest. Part of the tragedy in the Irish case was that the political system didn't value public contributions and actually played them down."

A1 (a senior arts scholar) says:

"I think the Science Gallery is a great model: where science and art come together. More of this needs to happen across schools and disciplines, especially in time of economic crisis where we are always watching our backs. Our engagement with society is not measured and not encouraged in measurement."

A8 (a locally based civil society stakeholder) says:

"I think it is important to have national bodies that can propose policies. [Non-national bodies] might be better under one umbrella. I think there may be diverging interests; the Society for Musicology maybe wasn't promoting traditional music enough... there needs to be a more vocal and demonstrated communication coming from arts and humanities research in Ireland."

A8 (a locally based civil society stakeholder) also says:

"I'd be really interested to hear what the academics and researchers have to say, because I think the perceived attitude is that "cos it is". And I think given the economic pressures, that's not good enough anymore... We should be better at talking about these things, and why they're important. And if they don't know, they need to find out very quickly, and start telling people."

A4 (a senior science scholar) says: "...we should see more arts and humanities researchers talking on television. There's been such a government push towards science and technology and research, and how that leads to economic return, the other side of it just seems to have been pushed out of the way...the IRCHSS document did a very good job but a once-off document doesn't have enough impact; this needs to be a constant refrain. "

A6 (a senior arts academic) says:

"You'll find sciences will get the information in the papers, and the media will pick it up. So we can blame ourselves for not communicating what we do, and we can also blame the media... One of the things that we're trying to push is that people will actually write up a case-study of the project that they've done, in a format for the public. And use that to showcase and document within our own institutional review documents. It's very hard to get that unless you've somebody dedicated chasing this information. I set up on our website a profile of each researcher. Now I can make a call twice a year to people to update it. Some people will do that; others won't."

A6 (a senior arts academic) also says:

"There are some incredible projects taking place... ye have a huge number of PhDs coming out of DIT... but would the public be aware of some of that work? Because at the end of the day, it's the public there that's going to drive some of the funding – if you look at it from a political point of view. If people are getting upset because there's a lack of funding; or if there's a public drive that will have a certain weight. You'll hear it about science and technology, (their) push for funding: that really only started in the 80s... It was the mid-80s... There wasn't any funding. We would have left the country. And we kept driving that agenda. The same thing needs to happen now in the arts and humanities. As a group they're not as vocal; the only group that I'm aware of is GRADCAM. But at a political level who's doing the lobbying? Who actually lobbies on behalf of the arts and humanities? We've no national policy. You've so many different organisations involved but where's the joined-up thinking?

...If you go back to where the sciences were in the 80's, is that where the arts and humanities... it was just all in pockets so people didn't know about it... and then people came together as a group; it was young researchers and young post-docs who'd come back from the States and said: "If you want (us) to stay in the country and build a science and technology infrastructure, you're going to have to start listening in terms of funding."

Finally, A6 (a senior arts academic) says:

"You almost have to put it on the agenda; otherwise it falls off... if you look at the creative arts and humanities, I don't know what the goals are. Have goals been set? It could be me from lack of information. Govt. isn't going to put money into things if they don't see some sort of goal or output or value. But where is the overall strategy coming from? And I think that's probably what's needed."

P1 (a policy-maker in the private sector) says:

"It's inevitable, in straitened times especially, that the state will be looking for some return on investment. And I think it is the responsibility of the arts and humanities community, within the academies, to actually provide that, as best as it can. It can't look down its nose and say: sorry, we don't go for this instrumentalist view of the wonderful activity that we're involved in. I think they've got to engage with it."

P6 (a policy-maker in a state organisation) says:

"There's been such a government push towards science and technology and research and how that leads to economic return, the other side of it just seems to have been pushed out of the way I think. I thought the IRCHSS document did a very good job but a once-off document doesn't have enough impact; this needs to be a constant refrain. And it musn't come across as the arts and humanities researchers fighting back and trying to put down the scientists; that doesn't help. It's got to be more of: this is the value of having strength in research in the arts and humanities..."

I think it's very important not to be seen to be setting one group against the other. Because that is not an effective way to move forward. I think if the humanities is saying we're more important than the sciences you've already lost the debate. I think what's needed here is repeated exposure of research in the arts and humanities; how that contributes; repeated visibility in multiple fora. And I wouldn't position it all as 'we've been left out, or we've been victimised'. I think that's very negative...

I suppose the critical thing I would say is to make sure that arts and humanities researchers recognise that first of all they're an important part of the research landscape. Secondly that they state their role over and over again, in multiple fora; but not state it in a way of feeling like victims. If you behave like a victim, you become a victim. And I think that is something that needs to be watched very very carefully."

P7 (a policy-maker in a state organisation) says:

"We need people to be thinking in terms of how their research impacts. And even if it's not a simple indicator, but the many ways it impacts, and how you can communicate that... There probably hasn't been the pressure on the humanities and social sciences community in the past, to explain themselves or to justify themselves. Or there's probably been either a reticence or a resistance to actually explaining, because you do get this defensive view that this is an end in itself; this has an intrinsic value in its own right, and if people don't understand that, well then tough. That whole communication challenge is a big one."

P8 (a policy-maker in a state organisation) says:

"And I think it's the right kind of, I think, I presume the intention was to do the thing about, well here's the impact we've had but in truth I don't think they, I think they focused more on the glossy than telling, drawing out the actual impact, hmm, that would be my impression there, you know."

P8 (a policy-maker in a state organisation) also says:

"There's no pearls of wisdom here I'm afraid but... there's two ways of approaching it I suppose... and you'll see both going on. You see a group of people who just bemoan the fact that the government doesn't appreciate this research or the government is forcing us into a set of priorities, you know, is prioritising its budgets... some people kind of just give out about it and want to go back to a former time when there wasn't the same pressure there... you've got over folk who are approaching it more constructively."

5.4 Measuring the Quality of Arts and Humanities Research

Quality and excellence have become key drivers of higher education and research and research training, but defining quality is more problematic. Traditionally, the academy has defined quality through earning the respect of academic peers. Accordingly, the peer-review process is considered the corner-stone of academic quality assurance by both academics and policy-makers, albeit one policy-maker said it was *only* one component in understanding research quality. In turn, bibliometric and citation indicators are measure quality by computing productivity levels (number of outputs/publications, income/awards, etc.) and the impact of scientific prestige (or contribution to knowledge in line with the adage "standing on the shoulders of giants"). Yet, all stakeholder groups also expressed wariness about the range of indicators conventionally used, and acknowledged the need to identify processes and metrics that can better reflect and evaluate (the diversity of) arts and humanities research, including performance and practice. The emphasis on international quality can present challenges for research which is nationally-focused.

Hence, various interviewees spoke of the need to redress the disproportionate emphasis on bibliometric practices, and to recognise the diversity of research practices, outputs and outlets; for some, "art is research" in much the same way that "there are genuinely valuable areas of scholarship where the individual scholar can make an enormous contribution" (A4, a senior science scholar). More work needs to be done developing qualitative indicators which look at the benefit to society, to individuals, and the indirect benefit to the economy – these are much harder to measure but ultimately important. Consideration should be given to using case studies, "because they allow a narrative", to help show impact and influence (C2, a locally-based community stakeholder). This may be the way to track the way in which the research is "taken up and becomes government policy, and influences, in some way, interventions by the state" (P2, a policy-maker in a state agency), especially if a "person was being brought back over and over again on repeated committees to do advisory work"(A4, a senior science scholar).

But the researchers need to do a much "better PR job" on showing and explaining the value and importance of their work to justify public support: "institutions and researchers...need to articulate better what they are doing and why it's important" (C2, a locally-based community stakeholder); it's not longer "good enough" to assume self-importance. While criticism is often directed at

policymakers or research agencies for adopting a simplistic approach, interviewees had mixed opinions. HEIs and academics were seen as equally culpable for upholding traditional values and failing to value the "performative" work of the arts and humanities with one interviewee suggesting that this was putting programmes and research at risk.

5.4.1 Earning the Respect of Peers

C6 (an officer from a national academic organisation) says:

"Ultimately what matters, as an academic, is the opinion of your peers. That's the only thing that really matters. The problem is that measuring the opinion of your peers is extremely difficult, and then there is a temptation to use proxies."

P7 (a policy-maker in a state agency) emphasises the importance of the peer-review process:

"The indicators bit is always hard, but ultimately good quality research is good quality research because it has been peer reviewed and people recognise it and acknowledge it as good quality research. And that has to be the major test of excellence. Does it pass peer review test? Is it publishable? People can be cynical enough about publications or citations or whatever else as a measure of quality but it is a good proxy of the quality of what's happening. It's a good measure of the quality of what is happening."

A4 (a senior science scholar) talks about the importance of international peer-review, but also notes that some research has a national context:

"I think what constituted good research is where peer esteem judges it as good or quality research. Now there are two aspects to that; one is where research is seen in an international context: as being the very very best, published in the top areas, and reviewed in the best area. It's harder for some research which has a national context, but I think what you still need there is that international researchers would deem it to be of international quality, even though it has a national focus. It still needs to be seen by international peers as being the very best in its own field."

One solution in this regard could be for national journals to recruit editorial staff from international countries? Furthermore, one could make the point that reviewers may be recruited from another country anyway.

A3 (a senior humanities scholar) talks about the importance of peer-review with respect to online publishing. He also emphasises the importance of reviewers' input in the peer-review process:

"I think the current anxiety is about how research will move online; that the results of the research will be online rather than in published form. And there's quite a number of online journals that don't use a peer-review system, so it's a method for fast publication. So it's kind of a disjunction between quality and the fact that there are new technologies available and new ways of getting technologies out there. Certainly, retaining a peer-reviewed system I think is essential. I just know from editing journals and so on that it is an important benchmark of quality... It's really valuable as an editor when an article is vetted by a reader who is the expert in the field. And also that they don't just okay it; that they make a palpable input, so that the article can be revised. It's not just pushed through the system."

A3 (a senior humanities scholar) also says:

"I guess it's always through the peer-review system; the anonymous fashion in which academics mentor each other. You would always encourage someone to proceed with a project; but to adapt it and change it, and revise it; to improve it to ensure that it achieves what it should. And, thereafter, academic reviewing. Also, the live exchanges from conferences would also be a kind of quality control. You do know who has exciting work through hearing excellent papers at conferences. And then I guess generally the system of academic promotion."

P4 (a policy-maker in a state agency) talks about the need for high-level publishing, but also wider impact:

"You need to publish; and not just publishing, but publishing at a very prestigious level. It's those kind of publications that say this is real top-quality stuff, and the knowledge will be really sought after, and so will the people who have made it. So there are two outputs: people and actual knowledge. Now that isn't enough anymore; we're moving on in our evolution here; you've got to be able to do that – and as I mentioned earlier: we train people in our teams who are not only doing that, but only a slice of them will be retained within the university; the majority should actually move on, and get high-quality jobs: creating products, services or policies. These are the outputs that are necessary to... if you go back to why we were established, it's all about trying to go up the value chain. It might be in terms of charging a higher price for a product; or producing a surgical intervention, or a policy intervention that elicits really good effects."

A7 (a junior humanities scholar) describes how a small research community can mean it is difficult to earn the respect of peers:

"It's a tough thing because in my home discipline of art-history that definition is very clear-cut...within arts-management it's a lot trickier. There's not much of a research community here in Ireland. So we don't yet have that system of peer review in place."

This may be true for seminars and national conferences (if they take place) but would be ameliorated by feedback from international journals.

5.4.2 Bibliometric Performance

P5 (a policy-maker in a state agency) recommends the cautious use of bibliometrics:

"I believe... that the issue of bibliometrics is a thorny one. Clearly they shouldn't be used in isolation... The reality is that for policy-makers, the pressure you come under to actually generate something that is an indicator, something quantifiable, is huge, and increasing all the time... We took the view that we would include them, but I put in all the caveats; referenced various things showing the deficiencies; all that kind of thing."

C6 (an officer from a national academic organisation) urges caution in the use of bibliometrics:

"Instead of assessing the quality of a candidate you just get a secretary to count the citations. It's so easily... manipulated. On the other hand, if someone has a lot of publications and is widely cited then they are esteemed. And that is what you are trying to measure. So there is no denying it has applicability. The same way being invited to give talks is a measure of esteem; well, I go back to the

key performance indicators. There are ways of estimating how important somebody's work is considered to be, but none of them are precise and they vary from discipline to discipline. You have to be very careful to use them appropriately. If you really want the ultimate answer, it's what history thinks of you. But we can't wait that long (Laughs)."

P1 (a policy-maker in the private sector) talks about the need to use metrics in the right way, and for arts and humanities researchers to engage with their use:

"...we think metrics are extraordinarily important. But I think we have to be much more sophisticated about them, and what ones we choose. And it's inevitable, in straitened times especially, that the state will be looking for some return on investment. And I think it is the responsibility of the arts and humanities community, within the academies, to actually provide that, as best as it can. It can't look down its nose and say: sorry, we don't go for this instrumentalist view of the wonderful activity that we're involved in."

A5 (a senior science scholar) cautions about quality being compromised by quantity. She also highlights that there is now an appreciation that there are different metrics for the arts.

"Peer-review is the best way that we have of dealing with that. But it's not perfect. There should be a concern about people rushing to publish quantity rather than quality. And slicing and dicing research to optimise the number of papers. So there can be a very incrementalist approach to producing research. I think good scholarship should involve both new findings, and synthesis. And I think that synthesis is not rewarded by the current system, in most instances. I think there is more of an appreciation now that there are different metrics for the arts; and the role of the book; and how the book is seen."

C6 (an officer from a national academic organisation) also suggests that university rankings have been a helpful metric-based system for the Humanities, to some extent:

"One thing that is a problem is that Humanities research has not enjoyed parity of esteem with scientific research. I think that is changing and changing for the better. But a couple of years ago, if you talked to the deans of research, they were exclusively focused on growing the natural sciences; and they didn't care about the Humanities. The joke of course is that the high ranking of some of the Irish universities in the world-listings is almost entirely due to their performance in the arts; not the sciences. It is the case where the world rankings may have actually had a beneficial effect. Through this university administrators realise that the Humanities are actually a valuable resource."

A4 (a senior science scholar) says:

"We tried as much as we could to make sure that the metrics accommodate all areas. And going into the next research assessment exercise, I met with the researchers at school; and I said give us the feedback on how this is best evaluated, and how it is best measured."

P8 (a public-sector policy-maker) says:

"Because these things are, it's so difficult to put numbers on some of these things but you can kind of tell, articulate a story around how a piece of research impacted... you'd probably go into a lot of cul-de-sacs if you adopt a completely quantitative approach to this. I don't know if that was ever, is

the plan, but if you try and measure everything in the way that you measure papers and conference proceedings and all those standard indicators..."

"There's so many different formats of output. There's the traditional humanities output – monograph, conference presentation, journal article, edited collection of essay....But in addition to that – and this is something in Ireland that we haven't come to terms with – what do we determine as an output what is performative and how do we evaluate that scientifically as opposed to critically/subjectives? There's no mechanism within the university at the moment to value that.. " (A1, a senior arts scholar).

"I don't see enough students and academic researchers at performances. And I think if you're researching and studying performance and you're not at performance, you're doing something wrong....They are more interested in text and existing research, and using that as their core materials" (C2, a locally-based community stakeholder).

5.4.3 Diversity of Research

P3 (a policy-maker with experience in both the private-sector and at a state agency) emphasises the diversity in the range of arts and humanities research: "There are so many threads in it, we're talking about researching the whole area of social, cultural, political, ethical, you name it, environmental, generating new knowledge for the practical purpose of... policy-makers, scientists, the general public..."

A1 (a senior arts scholar) describes how research assessment in the UK did not cover arts performance when it was started:

"I got out of the UK system just as the Thatcher government had told HEFCE (as it is now) to start measuring research output. That caused a huge problem for practitioners in theatre departments because the original protocol for measurement did not include practice. They do now."

A1 (a senior arts scholar) also states how currently there is no national assessment of arts performance in Ireland:

"Here (in Ireland) there is no national body to assess research outputs – we have our own internal one... and we're determined as being research-active or not research-active. And that triggers internal funding. I'm glad to see that performance as an output is internally valued."

A1 (a senior arts scholar) also states that arts performance is hard to examine in an academic setting but that it is possible:

"At my university we don't have a system whereby we can examine arts practice, which is silly really because all the sciences do it – science practice is examinable. In terms of qualitative assessment of ourselves as scholars there are internal debates - we are creating a rationale for what constitutes research and performance – where performance at a professional level is included... For someone who produces a piece of theatre and documents it... that is the equivalent of a journal article... The outgoing provost has been pushing it, and our current dean. He said to me once, if a young Beethoven walked into your class with a first symphony would you not give him a PhD? Well

probably not, because we'd ask him to write about it too. The difference between writing a first symphony and getting a PhD is the ability to analyse what you've done. You need both."

Finally, A1 (a senior arts scholar) suggests that funding for performance and research about performance should be linked:

"There is a disconnect between funding of the art and funding of the research into the art. And I think the two sides need to be brought together. It is typical of the way public funding has been compartmentalised... So you are either doing it or researching what other people are doing, and what I'm trying to do is to bring the two of them together so that all art is research."

C6 (an officer from a national academic organisation) emphasises the importance of considering differences across disciplines:

"We make it as rigorous as we can but you cannot make it completely objective. You always have the problem that you're comparing apples with pears – even in the sciences. The standards that are applied in mathematics are very different to the standards that are applied in biology."

P2 (a policy-maker in a state agency) talks about the potential for practice-based PhDs:

"There's a bit of a debate at the moment, which is this idea of the professional PhD. And that's being talked about across Europe as well. I think it will come into our space a little bit, practice based PhDs where the output is a piece of artwork. A PhD is a contribution to knowledge but it could equally be a piece of art or a piece of work or a project delivered on an industry. So this idea of the professional or industrial PhD. And there's a really big debate on what constitutes research. Is it really research or is it just your job? It's certainly happening at the European level..."

A6 (a senior arts academic) says:

"There are indicators but music doesn't seem to fit neatly (in) to... which is a very serious ongoing problem... There are debates around how performance is assessed as research but that's a relatively new concept. I find myself talking to staff in my own department and trying to convince them that what they're doing is research."

A4 (a senior science scholar) talks about the importance of arts performance in understanding the diversity of research in arts and humanities:

"Research is the creation of new knowledge in any area. Some of that would be reviewing what's out there and developing new insight. To me that's what research is. Now in some of the disciplines there's a performance element to it. You know the traditional generation of knowledge might be producing a book, or a paper. Some of our disciplines in music and drama would have a performance element to them; and I'm very aware that the researchers in that space feel that their work isn't (of) value."

A7 (a junior humanities scholar) talks about the emergence of arts performance in arts and humanities research in Ireland:

"What we've witnessed is an opening out if you like, of arts-practice forms in music. This encompasses much more than musicology; there's a whole area of composition, creative work,

performance, even the development of new technologies and their application in music and music education. So, I think there is a movement in Ireland at the moment towards further development of that, but I think we've quite a long way to go...I suppose the musicology is the very traditional, humanities-based type of basic research, whereas when it comes to composition and performance, you're talking about creative practice, arts, performance practice and you're looking at...reflective practice. And a lot has been done in America and in England, but not some much in Ireland."

A7 (the junior humanities scholar) also discusses what constitutes research in the arts:

"My PhD was actually in music theory and composition and the PhD was based on a critical analysis of that; it was a combination of the two... It's very much about having hands-on practical experience in the discipline and working with the more theoretical approach and marrying the two, if you can!...it just needs a lot of guidance and direction."

P7 (a senior policy-maker in a state organisation) talks about the need for a single research council despite the diversity of disciplines within arts and humanities:

"We should be trying to move away from any sort of traditional or artificial boundaries in terms of where we see disciplines located and there is a statement in fact in having a separate arts and humanities council that is almost the 'special needs' project – "this is an area that needs protection" whereas, there is a statement of confidence in saying that no 'we are part of a broader research council because our activity actually stands shoulder to shoulder with any other activity within the system."

In addition, interdisciplinary research – which policy is requiring more of – does not fit neatly into many of the funding categories or schemes. A1 (a senior arts scholar) says:

"Theatre studies is totally interdisciplinary. It is cultural studies now. We borrow from psychoanalysis, we borrow from anthropology. There's a huge influence of anthropology on our subject; sociology. So when I'm reading theory, I'm not reading so-called dramatic theory, I'm reading anthropological theory, sociological theory, literary theory. So we're a magpie subject. And that was certainly my conscious decision."

A6 (a senior arts academic) says:

"That's one of the things that I would put in place: a funding-mechanism where you've a mixture – where you do encourage the non cross-disciplinary project, but you do have an incentive for cross-disciplinary projects. I would also look at: having that leader being able to identify where there are possibilities for this cross-collaboration."

A4 (a senior science scholar) says:

"Research is the creation of new knowledge in any area. Some of that would be reviewing what's out there and developing new insight. To me that's what research is. Now in some of the disciplines there's a performance element to it. You know the traditional generation of knowledge might be producing a book, or a paper. Some of our disciplines in music and drama would have a performance element to them; and I'm very aware that the researchers in that space feel that their work isn't valued."

P8 (a public-sector policy-maker) says:

"I'd understand from that group for example that there are really two, at least communities. There's an arts humanities gang and there's a social sciences gang. And that they do consider themselves perhaps to be in quite different disciplines."

5.4.4 Doctoral Training

A2 (a senior science scholar) discusses quality in doctoral training:

"...there's a fairly stringent gateway, at the latest 18 months into a doctoral programme, where the student has to present a well-shaped chapter. And the members of the doctoral panel (who are available to the student in an advisory capacity), they would judge the material; and if the student was failing to meet standards at that point, the whole project would have to be re-assessed. Or even the validity of the student continuing as a doctoral student. That's one check within the system. And then quality is constantly being negotiated between me and the student: in terms of supervision and meetings, and discussions about drafts of chapters, and trying to work out with the student how they can shape their ideas better and improve their arguments; and make sure that their dissertation is fully delivering what they want it to deliver."

P2 (a policy-maker in a state agency) also discusses quality doctoral training:

"The basics that we start with it, if we have a postgraduate scholar that we're funding, we look to delivery of the project in line with what was specified at the outset, time to completion, so a rapid completion of the PhD, and delivery of the project on time, and then of course, completion of the PhD. They're simple indicators. The next bit then I suppose is looking at people post-PhD; where do they go next? We did a little bit of that, that's more difficult."

And P2 (a policy-maker in a state agency) talks about post-PhD progression too:

"For the postdoctoral fellowship, the first indicator is satisfactory progress in terms of completing a monograph for publication, or completion of a data-set or completion of the project: along the lines that were specified to us in the project application. The next step from that is their employability; so are you seeing the postdocs go on and get lecturing posts, or research posts, and so on like that. There are other areas people go to other than just academia of course... So as I say it's mostly publications outputs; but it's also career progression. Cause in a way that's what we're about. We look for the concrete outputs (from the projects as specified to us) and then we look at how people are progressing in their careers."

C2 (a locally-based community stakeholder) raises the issue of the quality of courses:

"I think there's a lot of undergraduate and postgraduate courses sprung up in the field of performing arts practice and performing arts research. And I don't think that a debate is being had openly about the quality of those courses. And having seen the work that comes out of those courses, I would question the value of some of them. Or I think there possibly needs to be a debate around them. Oftentimes when somebody is a school-leaver, or an arts graduate who is going to do some specialised research, they want to do the study cause (sic) they don't know the stuff yet, and they

potentially are going to study in an environment where I don't think the standard of teaching and research is necessarily as rigorous as it could be."

A7 (a junior humanities scholar) describes the reduced level of funding for doctoral training in the arts and humanities: "The funding situation here – dire is the only word for it. Even small things like the travel grant to go to conferences – that's gone." This will have a great impact on young researchers if they cannot get to the conferences: the primary venues for disseminating new research and networking with colleagues. Young researchers will need to be more creative in the current climate regarding how to accomplish their objectives.

C4 (a science journalist for a national newspaper) says:

"You could look at it in a personal way and say well I have a PhD and I don't want to devalue my PhD by letting people in who aren't good enough to get PhD's that are as well done as mine, lets say... You could say okay this is, you know, so I'm protecting my patch in that regard but internationally there is a recognised view that, you know, you have to attain a certain standard otherwise you don't merit one of these things."

A3 (a senior humanities scholar) says:

"We have doctoral panels... so there's a fairly stringent gateway, at the latest 18 months, into a doctoral programme; where the student has to present a well-shaped chapter. And the members of the doctoral panel (who are available to the student in an advisory capacity), they would judge the material; and if the student was failing to meet standards at that point, the whole project would have to be re-assessed. Or even the validity of the student continuing as a doctoral student. That's one check within the system. And then quality is constantly being negotiated between me and the student: in terms of supervision and meetings, and discussions about drafts of chapters, and trying to work out with the student how they can shape their ideas better and improve their arguments; and make sure that their dissertation is fully delivering what they want it to deliver..."

We don't grade dissertations; we don't star them or anything like that. I guess we indicate differences in quality... if a dissertation is publishable in part or not. And for a really good dissertation you would say, yeah this definitely should be published. But nonetheless there are different standards achieved by the students, I guess in terms of their own intellectual ability."

6. Assessing Arts and Humanities Research

6.1 Assessing university-based research

Not everything that counts can be counted, and not everything that can be counted counts. (Sign hanging in Einstein's office at Princeton)

The assessment of university-based research has become a prime factor in national and research policy because of the interlinked roles of education, research, and innovation for social and economic development and, now economic recovery. The relationship between university-based research and social and economic growth relies on two notable connectors: human capital and knowledge production. First, higher education produces graduates with modern skills who are capable of independent, autonomous operation. This raises the overall productive capacity of the economy. Second, university-based research generates new ideas and discoveries leading to new applications and technologies. This connection between university-based research and the economy has lain at the heart of EU policy since adoption, in 2000, of the Lisbon Agenda with the aim of making Europe "the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion". Irish national policy reflects these same dynamics.

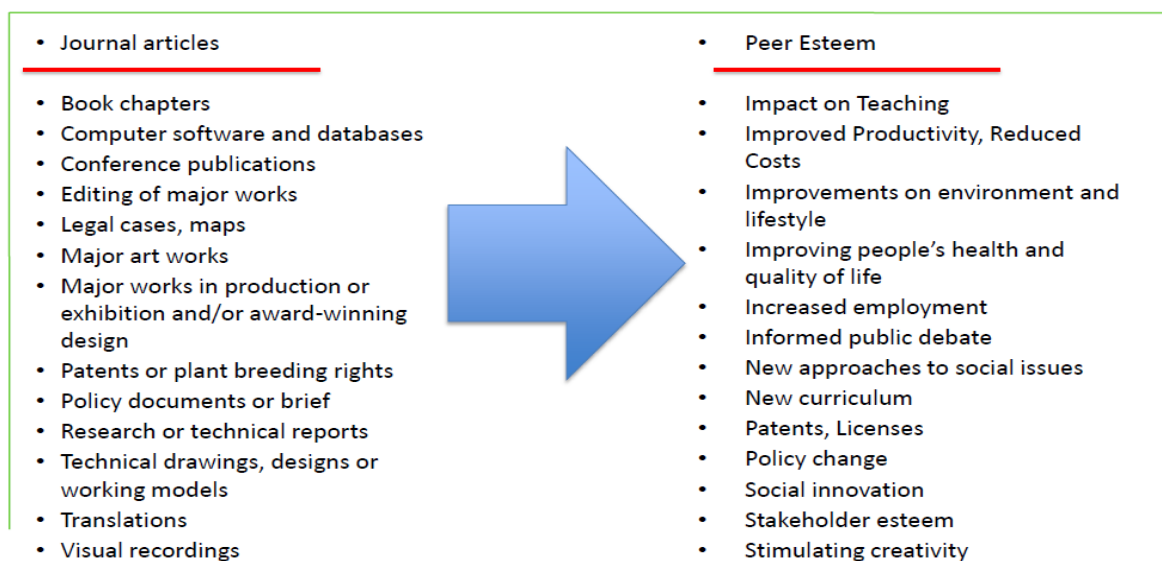
Assessment of publicly-funded research is inevitable, and is part of a growing demand for greater transparency, accountability and responsibility, by the public, of all public institutions. Students, parents, employers, industry and academic peers – and the tax-paying public – are demanding more information about the quality of higher education, student learning outcomes, and faculty performance and productivity. Indeed, cross-national comparisons are an unavoidable by-product of globalization and will only intensify in the future. In fact, the transparency agenda is accelerating at such a pace that higher education risks losing all control over determining what constitutes "quality" unless it involves itself more fully in the debate about quality. Wider dissemination and adoption of research by society, the growing use of open source and digital repositories, and the rapid expansion of social networking and web-based tools challenges the traditional proprietary embrace of the academy. In this environment, peer-review can no longer be the sole or even primary method by which research is assessed. End-user or stakeholder esteem is fast becoming a necessary component. As a consequence, a broader range of processes, methodologies and indicators are now required.

In recent years, there has been a steady growth in methods to evaluate and assess the activity and outcomes of higher education, with particular emphasis on the assessment of university-based research (AUBR). Cross-national or worldwide comparisons of research performance and quality are an inevitable outcome of globalisation. University rankings have become popular around the world because they appear to provide a simple method to gauge world class excellence and provide accountability. Research assessment can play an important role in improving performance and quality, supporting institutional autonomy and strategic planning, differentiating research missions and attracting talent. But indicators are not value-free. As Einstein says, measuring the wrong things can easily distort.

Accordingly, the process by which research is assessed is coming under critical review. The most commonly used indicators are measures of research inputs (funding, staff numbers) or research outputs (publication counts, number of doctoral students). Other measures include internationalisation of research (visiting lectures, incoming researchers and graduate students, number of researchers in international networks); researcher productivity (number of monographs, journal articles, publications in international journals, indexing in international bibliographic database, book chapters, refereed conference proceedings, citations, organisation of significant national and international conferences; research esteem: membership on national evaluation bodies, invited lectures/keynotes, awards and prizes (Dolan, 2008).

However, there are many criticisms of this approach especially with respect to its affect on the arts and humanities, and the social sciences. The current practice of counting peer-reviewed journal articles or measuring impact (i) ignores differences in disciplinary practice, (ii) rewarding quantity over quality (iii) weighs all outputs equally, e.g. grant income, and (iv) overlooks important categories of publication and research output (for summary of arguments, see Hazelkorn, 2011, 70-74; AUBR, 2010). Figure 16 shows that the current practice of counting peer-reviewed journal articles and measuring peer-esteem through citations (above the red line) ignores the full breadth of research activity across all disciplines and across the research-innovation eco-system (below the red line). These problems are particularly acute because the primary bibliometric data-bases, ISI Web of Science and Scopus, include "have a much stronger representation of journals in the Natural Sciences and Medicine fields compared to others such as Social Sciences or, especially, Arts and Humanities, which is virtually non-existent" (see Gómez-Sancho and Pérez-Esparrells, 2011, 369-371). There is a "lot of rhetoric about multi-disciplinary and interdisciplinary research, [but] the metrics used are all single discipline-based. Finally, the practice of only highlighting research which has a global impact can undermine important work of cultural and/or regional significance. These issues have particular significance for the work undertaken arts and humanities scholars as discussed below.

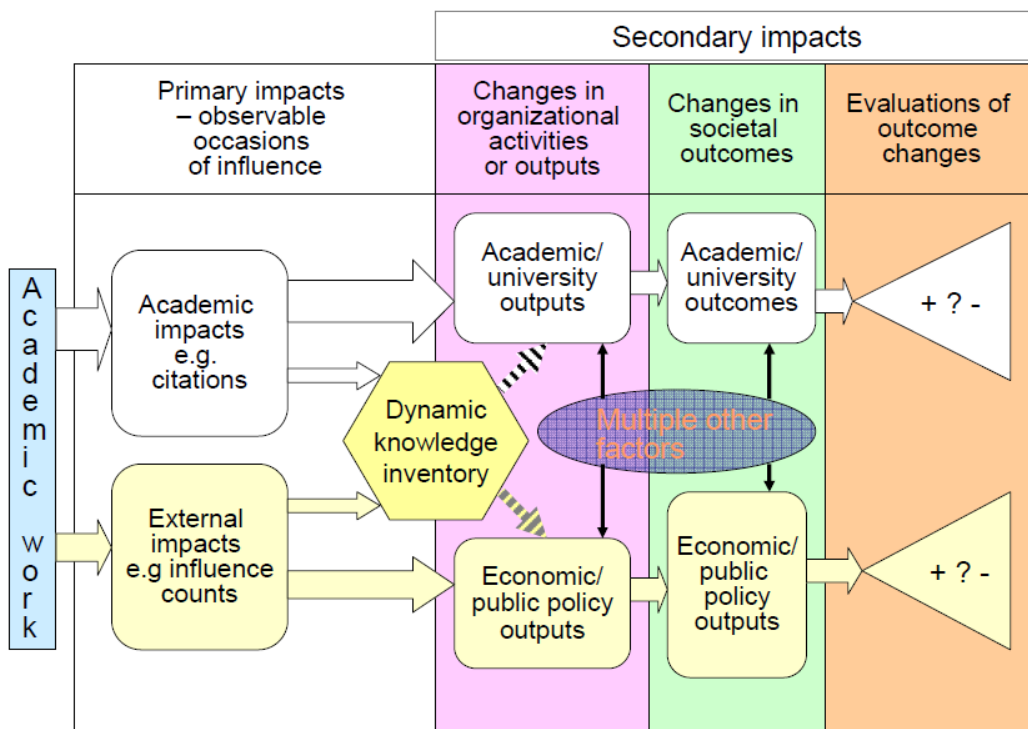
Figure 16 Tip of the Iceberg? Research Outputs and Impacts



Source: Hazelkorn, 2012a

Because research does not exist in isolation, the current practice of assessing impact through academic citations can disregard the way research provides evidence for policymaking, social improvements, the translation of research into cost-effective, practical, policy- and technology-based interventions that improve people’s lives or influences ideas within the public realm (see Figure 17). Once research is seen to have value and impact beyond the academy, there are implications for the organisation and management of research at the national and institutional level, what kind of research is funded, how it is measured and by whom. This is leading to some significant policy rebalancing between considering research as vital for human capital development vs. its contribution to economic development; between an emphasis on researcher curiosity vs. alignment with national priorities; between funding excellence wherever it exists vs. targeting funding to strengthen capability or build scale; and between encouraging new and emerging fields and higher education institutions vs. prioritising existing strengths. At the same time, there has been a noticeable shift away from measuring inputs and outputs to evaluating benefit and relevance; from relying solely on peer accountability instruments such as bibliometrics and citations to assessing a wider range of outputs and outcomes through social and public accountability.

Figure 17 Primary and Secondary Impact of Academic Research



Source: Tinkler, J. (n.d.), p.15

New methodologies that seek to assess the social, cultural and economic impact of research are emerging; this includes consideration of its "benefits" (AUBR, 2010, 41-42):

- *Economic Benefits*, e.g. improved productivity; adding to economic growth and wealth creation; enhancing the skills base; increased employment; as well as unquantifiable returns resulting from social/policy adjustments.

- *Social Benefits*, e.g. improving people’s health and quality of life; stimulating new approaches to social issues; changes in community attitudes; influence upon developments or questions in society at large; informed public debate and improved policy-making;
- *Environmental Benefits*, e.g. improvements in environment and lifestyle; reduced waste and pollution; improved management of natural resources; reduced consumption of fossil fuels; and adaptation to climate change;
- *Cultural Benefits*, e.g. supporting greater understanding of where we have come from, and who and what we are as a nation and society; contributing to cultural preservation and enrichment; and bringing new ideas and new modes of experience to the nation.

Table 5 highlights some of the pros and cons of the commonly used indicators in rankings and research assessment methodologies.

Table 5 Are We Measuring What Counts

Indicator	Metric	Pro	Con
Research Publications and Outputs	e.g. Total number of peer publications	Measures & Improves Activity	Basis not always clear
Quality and Scholarly Impact	e.g. Citations; High Impact Publications	Measures & Improves Quality	Which journals? Most effective in English-language.
Human Capital	e.g. PhD completions; output/FTE or active researcher	Measures Timeliness of completion & Productivity	Differences between disciplines
Investment	e.g. Income & donations	Predictor of performance	Difficult to get valid comparable data
Economic and Social Benefit	e.g. Commercialised IP & employability	Link between R and D	Time-lag and context
End-User Esteem	e.g. Appointments to high level orgs.	Measures reputation	Time-lag and difficult to verify
Research Infrastructure	e.g. Library & research space	Measures capability	Difficult to get valid comparators

Source: Hazelkorn, 2012b.

6.2 Valuing arts and humanities research

In the absence of humanities specific indicators, it is possible that the measures long-used and approved by the science community will become the de facto measures used to assess quality and impact of research in the arts and humanities. (Royal Irish Academy, 2011)

Ireland does not have a formal or official research assessment process. Arguably the biennial *Higher Education R&D Survey*, conducted by Forfás, Ireland’s policy advisory board for enterprise, trade, science, technology and innovation, could be considered the nearest equivalent. It relies predominantly on traditional quantitative indicators such as number of researchers by category (PI,

post-doctoral, etc.), research income. This is similar to that used for the national Research Prioritisation Exercise (RPE), conducted in 2011, although the latter also drew heavily on institutional submissions which could incorporate a breadth of (institutionally-defined) outputs and impacts. Both exercises aimed to capture capacity and capability at a national level, with only passing reference to individual HEIs. Links to resource allocation are most evident in the RPE although again at the national rather than institutional level; it identified fourteen research fields, in order to "target investment...more precisely to current and likely future societal and economic needs" (Forfás, 2012, 8). These fields will account for approximately 80% of national competitive funding, with additional funding available for research for knowledge and policy.

Responding to the growing influence of rankings on higher education and concern about the use of science-informed practices to measure and evaluate research, the Irish Research Council for the Humanities and Social Sciences (IRCHSS) and Royal Irish Academy (RIA) had earlier convened a meeting in March 2009. The aim was to develop appropriate key performance indicator (KIPs) for the evaluation of Irish humanities research. The then president of the RIA, Professor Nicholas Canny, said it was incumbent upon humanities scholars and researchers to come to

rapid agreement on how their research performance is to be measured if they wish to uphold the reputation of their disciplines within their institutions. [If they did not do so] they would either find themselves ignored and marginalised within the institutions or else measured by criteria with little factual basis in their research worlds. (RIA, 2011)

The results were published as *Developing Key Performance Indicators for the Humanities* (RIA, 2009), followed by *The Appropriateness of Key Performance Indicators to Research in Arts and Humanities Disciplines: Ireland's Contribution to the European Debate* (RIA, 2011).

The reports aspired to: (i) catalogue the range of current research norms and outputs in the various disciplines in the larger arts and humanities field, (ii) provide discipline specific research statements, (iii) articulate the research aspirations of the disciplines, and (iv) provide an understanding of how research quality and activity should be assessed and are currently valued. The rationale was to provide early career researchers, in particular, with a comprehensive sense of the benchmarks to which they should aim – but the objective was much wider. The latter report sought to challenge

the assumptions of those charged with capturing the extent and quality of research activity in Ireland...particularly as it applies to long-held assumptions concerning the hierarchy of activities in which peer-reviewed journal articles and monographs are accepted as superior to all other research outputs (RIA, 2011, 4).

The report claimed a "one-size-fits-all" approach to capturing the quality and impact was outdated and particularly disadvantageous to arts and humanities research.

The RIA (2009, 2011) identified difficulties which arise from applying traditional bibliometric indicators to the arts and humanities. This includes, inter alia:

- Humanities researchers have different publication patterns to those in the natural and life sciences; they typically publish more monographs and scholarly books than journal articles. Such

articles account for between 20-35% of humanities research output compared with 45–70% in the social sciences. Most humanities publications are by individual authors for whom one publication typically represents the key output of a significant number of years of scholarship. In contrast, researchers in the natural and life sciences tend to publish more frequently and more often with co-authors thereby increasing their visibility in citation indices;

- There are critical weaknesses in the principal citation indices used for bibliometric data: ISI Web of Science and the Arts and Humanities Citation Index fail to allow for differences in citation cultures within specific disciplines, over-represent English language research outputs, and inadequately cover non-journal research outputs e.g. reports on art conservation, electronic outputs, scholarly monographs and textbooks. Citation usages in the humanities also differ to those in the natural and life sciences. Because monographs and scholarly books play a more significant role as reference sources for the humanities than journal articles, the citation window for humanities' research is considerably longer than that of the natural sciences;
- Arts and humanities scholars produce a wide range of research outputs, including cultural artefacts and original designs, performances/exhibitions, compositions, dramaturgy or adaptations, film, audio, animation and/or broadcast material, curating exhibitions nationally or internationally in addition to case studies, translations and textual analyses, maps, monographs, etc. The “multiplicity of activities and outputs illustrates the wealth of methodologies, perspectives and practices followed by the arts and humanities community as scholars attempt variously to create, understand and apply the knowledge generated through their research undertakings. No single key performance indicator (KPI) currently exists that could adequately capture the quality and impact of research activity described within this guide” (RIA, 2011, 4).
- Traditional measurements of research activity often rely on research income/expenditure as an indicator of activity and/or quality. However, research income can disproportionately disadvantage arts and humanities research because the overwhelming majority of costs are for the individual researcher, and there are often little capital or equipment costs. The situation is reversed for the natural sciences, and is also much higher for engineering and technology, and medical and health sciences.

To illustrate this diversity of research approaches and impacts, the RIA used examples drawn from individual statements across eleven disciplines (archaeology, classical and near eastern studies, film and media studies, folklore studies, historical sciences, history of art, international affairs, literatures in English, modern languages, literary and cultural studies, musicology and philosophy and ethics) to illustrate distinct research approaches and methodologies used to examine and explore areas of inquiry. For example, archaeology is both an academic and a professional discipline with academic, cultural and commercial dimensions. Academic archaeological research seeks to create knowledge about the human past while:

consultancy research [is] undertaken by individuals and companies on development-led projects such as infrastructural projects and general building construction...For universities, there is an emphasis on academic publication, whereas museums and state monument services may prioritise exhibitions, monument management and presentations, and the development of heritage policy (RIA, 2011, 8).

Given this variety, no single key performance indicator (KPI) currently exists which can adequately cover arts and humanities research, in the same way that bibliometrics are used for the sciences. Instead, the choice of key performance indicators should be much broader, and encapsulate a wider range of activity, outputs and outlets, and should also vary depending upon the needs and priorities of the discipline and the user (RIA, 2011).

There has been some improvements in research assessment in recent years in response to these criticisms, however many have been largely "technical rather than conceptual" (Gómez-Sancho and Pérez-Esparrells, 2011, 365; Rauhvargers, 2011; AUBR, 2010). This is because (i) alternatives to ISI Thomson databases still do not have the range of coverage of publications that would be adequate to benchmarking humanities research outputs across Europe, and (ii) mining citation databases to extend coverage does not address the lack of coverage of non-Anglophone journals adequately. Scopus is developing a new methodology to better capture books and book chapters, and account for citation impact, but this will still overlook the myriad of outputs and outlets identified in Figure 17 which almost by definition are difficult to capture in a single database. While the focus of the HERAVALUAE project is arts and humanities research, difficulties also pertain to other disciplines such as engineering:

Science deserves to showcase its merits in a way that is as objective as possible but also respects, if not celebrates, its variety. The highest standards of quality assurance are needed not only to build support for research beyond the scientific community, but also because transparent assessment of research is beneficial for scientists themselves. The challenge is to ensure that the method used to measure quality is compatible with the intrinsic value of the relevant field of research (KNAW, 2010, 5).

Even if solutions could be found it is not clear that applying this to the wide range of outputs and outlets used by the arts and humanities would reduce distortions and inaccuracies. As a result Dolan (2008, 54-55) suggests that the best hope for such a system would appear to be simplified weighting method, with the weights agreed through consultation and peer review.

Acknowledging these difficulties, there is willingness, by the government and funding agencies, to support all disciplines, and to embrace new approaches which more adequately reflect the diversity of disciplinary practices and their achievements. The HEA's attention has been drawn to the need to ensure "balance in the profile of research activity from a disciplinary perspective so that the higher education and research system can play its full role in national development" (HEA, 2012, 2). The Irish Minister of State for Research has also pointedly said no "scientific discipline" will be excluded from the research funding programme – although this may depend upon one's interpretation of the word "scientific" (Ahlstrom, 2013a). He has also thrown down the gauntlet to the arts and humanities (and social science) communities to actively see themselves within and contributes to the broad national priorities – rather than taking an exclusionist approach.

6.3 A way forward

A more comprehensive assessment strategy – one that recognises the different ways different disciplines contribute to wider societal, cultural and democratic national objectives alongside the purely economic ones – is therefore required. But this is where the difficulties lie. Policymakers ability to "exploit these wider benefits have considerably lagged their capacities to effectively promote commercialisation in disciplines like engineering, natural sciences, information technology

and life sciences” (Benneworth and Jongbloed, 2010, 568). Assuming that accountability is the overriding objective, some of the difficulties with the purpose of the evaluation exercise: control, improvement or resource allocation (see Molas-Gallart, 2012a). Quantitative indicators are unlikely to provide a meaningful understanding of social and cultural value, impact and benefit. Measuring impact through case studies brings its own complexity (Molas-Gallart, 2012b).

Table 6 provides a summary of selected research assessment methodologies – at the institutional, research agency and national level, some of which take particular note of the arts and humanities; full details are available in Appendix B. It is divided into two parts: Section A depicts methodologies which currently operate while Section B refers to two proposals from arts and humanities organisations which, accordingly, argue for a greater account to be taken of the particularities of arts and humanities research. Distinctions are made according to the unit of analysis, type of indicators, link to resource allocation or quality assurance, and involvement of expert/peer review. Some approaches are linked to resource allocation, others are not; it is clear however that once resources allocation is attached to research assessment it changes the drivers and incentives of the exercise, positively and perversely. Figure 18 plots the various methodologies according to two axes: primary usage of quantitative or qualitative indicators, and usage of academic/peer accountability or social/public accountability. The latter reflects increasing interest in assessing the impact and benefit of publicly funded research, captured through traditionalist metrics, such as patents and licenses, but also by way of impact studies, whereby researchers record the their research has impacted beyond the academy, e.g. on knowledge, policy, public discourse, technological developments, etc., albeit navigating through the labyrinth of case studies can be both inefficient and subjective (Molas-Gallart, 2012). To get around disciplinary practices regarding different outputs/outlets, some methodologies rank journals/publications or score outputs (e.g. Norway; Australia); the UK REF and the Australian ERA include impacts accounts. The most sophisticated approach is that of the Royal Netherlands Academy of Arts and Sciences (KNAW) as proposed in its report, *Quality Indicators for Research in the Humanities*; which is intended to operate from 2015-2021 (see Section 9.3).

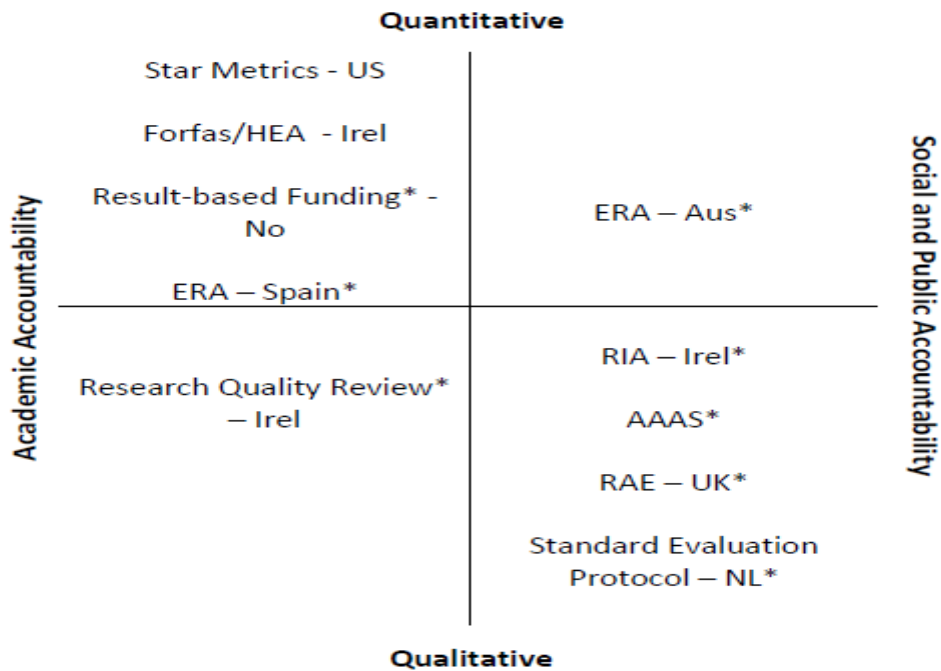
Table 6 Summary of Research Assessment Methods

Country	Name	System Author	Methodology	A&H Element	Linked to Resource Allocation	Expert/Peer Review	Internal or External Review	Unit of Analysis	Timescale
(i) IMPLEMENTED									
Australia	Excellence in Research for Australia 2012	Australian Research Council	Quantitative and Qualitative	Yes	Yes	Yes	External	Institute & National	1 Year
Canada - Canada Research Chairs	Canada Research Chairs Program / Tenth Year Evaluation of the CRC Program	Canada Research Chairs	Quantitative and Qualitative	Yes	Yes	Yes	Both	Department & Institute	1 Year
Finland - Triennial Review	State of Scientific Research in Finland 2012	Academy of Finland	Quantitative and Qualitative	Yes		Yes	Both	Institute	3 Years
Finland - Art and Design Review	Research in Art and Design in Finnish Universities	Academy of Finland - Research Council for Culture and Society	Quantitative and Qualitative	Yes	Advisory	Yes	Both	Institute	One-off

Ireland - Forfás	Higher Education R&D (HERD) Survey	Forfás	Quantitative	No	Advisory	No	External	National	2 Years
Ireland - UCC	University College Cork Research Quality Review	UCC Quality Promotion Committee	Quantitative and Qualitative	Yes	No	Yes	External	Department	One-off
Netherlands	Standard Evaluation Protocol 2009 - 2015	Royal Netherlands Academy of Arts and Sciences, Association of Universities in the Netherlands, Netherlands Organisation for Scientific Research	Qualitative	Yes	No	Yes	Both	Department & Institute	6 Years
Norway	New Model for Result based University Research Funding	Norwegian Research Council	Quantitative	No	Yes	No	External	Department & Institute	1 Year
Spain	Evaluation of Research Activity	National Commission for the Evaluation of Research Activity	Quantitative	Yes	No	No	External	Individual	6 Years
UK	Research Excellence Framework	Higher Education Funding Council for England	Quantitative and Qualitative	Yes	Yes	Yes	External	Individual, Department, Institute	1st Iteration
US - STAR METRICS	STAR METRICS	National Institutes of Health, the National Science Foundation	Quantitative	No	Yes	No	External	Institute	1st Iteration

(II) PROPOSED									
Canada - Opportunity Agenda	Opportunity Agenda for B.C.	Research Universities' Council of British Columbia	n/a	No	Advisory	No	External	n/a	n/a
Ireland - RIA	Key Performance Indicators for the Arts and Humanities	Royal Irish Academy	Qualitative	Yes	No	Yes	External	n/a	n/a
US - AAAS	AAAS Humanities Indicators Project	American Academy for Arts and Sciences	Quantitative	Yes	No	No	External	n/a	n/a

Figure 18 Framework of Research Assessment Methods



• = special recognition of the arts and humanities

While the “good practice” examples reflect public responsibility of research, they arguably don’t take sufficient account of the impact of research and teaching, and the responsibility of researchers to engage with the educational mission of the institution. This point is made strongly by various interviewees in the Irish study. Drawing on international “good practice” and this HERAValue project, revisions should be made to how research is assessed, for both internal institutional purposes (recruitment, promotion, etc.), and for external purposes (benchmarking, rankings, etc.) (HEA, 2010, 6). The following concepts and guidelines should be incorporated into any assessment of research in order to give full and appropriate balance to arts and humanities research, and to the public responsibility of research/researchers:

- *Research should be assessed according to four domain of responsibility:* a) Promote academic excellence and impact; b) Enrich the scholarly community; c) Encourage teaching and learning; and d) Contribute to civil society (RIA, 2009, 8);
- *Broaden out the way in which research is valued and measured.* Peer-reviewed journal articles may be the primary publication channel, but complexity and democratisation of knowledge has led to a diverse range of output formats and outlets which must also be recognised and valued. Arts and humanities research in particular produces a wide range of outputs and outlets which by their nature cannot be captured by traditional bibliometric formats;
- *Combine indicator-based quantitative data with qualitative information.* Quantitative information should be tested and validated within the context and purpose of the assessment, with appropriate reference to the discipline and disciplinary practice. This includes peer and end-

user esteem. Some consideration might also be given to the distinction between indicators and metrics.

- *Integrate self-evaluation.* This is a useful way to include the research community in assessing its contribution, but it is also a good way of placing the research process in context and to help situate the research in relationship to the distinctive institutional mission;
- *Include assessment of impact and benefits because research does not exist in isolation.* This differs for different disciplines because it's clear that publicly-funded research does need to demonstrate (justify) its meaning and value to the wider (tax-paying) community. Thus, research's impact should not be valued or measured narrowly only through new products and services, but through myriad meaningful engagements with many different publics. It should look at university/society relationships more generally and not just university/business interactions (Benneworth and Jongbloed, 2010, 568). This includes interactions with, and uses by, the public and "third" sector and not only the private sector.
- *Faculty recruitment and promotion should be revised to value and reward research across the entire research spectrum, from basic to knowledge transfer, from peer journals to public interventions and exhibitions/performances.* It should also include research which is co-produced with users and the community (RIA, 2011, 6; Hazelkorn, 2009b).

7. Conclusions

The on-going fiscal and economic crisis, accompanied by very high levels of unemployment, colours all conversations about research in Ireland. This accounts for the national focus on the (re)alignment of publicly-funded research to the fourteen national priorities areas identified in the National Prioritisation Exercise, with an emphasis on market-driven or application-focused research and new products and services. This has raised the bar and thrown down the gauntlet to researchers of all disciplines. Recognising the challenge, IRCHSS organised a conference in 2010, on the occasion of its ten year anniversary. Its purpose was to assert how the humanities (and the arts) could help save Ireland. Mary Canning, then Deputy Chairperson of the HEA, argued that:

Internationally, we are known for our writers, dramatists, musicians, educators and social campaigners, as well as for our heritage and our history. In these difficult times, we have not lost our ability to think, to create, to innovate and it is up to every one of us in this room to develop our ideas to help solve current economic and social problems (Quoted in Fearn, 2010).

Despite disquiet about the (re)orientation of the national research agenda, there is broad support for the rationale for targeting limited resources: “Prioritisation is absolutely a necessary concept for a small country like ourselves. We can’t cover everything” (Feeley, 2013, quoted in Alhstrom, 2013b). How can this approach ensure that the diversity of intellectual contribution is preserved? How should the arts and humanities respond to this new policy regime and public discourse? Should it ignore the new demands or should it engage? Can the arts and humanities continue to argue a disciplinary *exceptionalism* or should the “same rules” apply? In this context, what does application-focused research mean? What can be learned about how the sciences have positioned themselves?

It often appears easier to explain why we should invest millions of dollars in research which might cure cancer or lead to the patenting of a new drug rather than in literary history, heritage or language studies or the analysis of philosophic texts. However, it should not be forgotten that the arts and humanities have led to world-changing insights. For example, one of the most important discoveries of all time is the rule-based system for human language, otherwise known as “*grammar*”, by the Indian linguist Panini in the 6th century. His grammar-formalism was ultimately used as a model for higher-level programming languages which have made information and communications technologies possible. Current developments in computational and digital humanities are leading to many important advances in speech recognition and automatic translation, such as Google Translate. These developments would not have been possible without the study of theoretical linguistics, which brings us back to Panini via Noam Chomsky (Bod, 2012).

Closer to home, the arts and humanities are widely acknowledged as playing a critical role in shaping our understanding of contemporary Ireland and public discourse – manifest in the way in which Irish history, literature, music and theatre, the visual arts and culture permeate radio/television and other media, urban and rural life, etc. - and contributing to aspects of Irish life that we today take for granted. The work of historians, for example, has contributed immensely to a deeper understanding of events over recent decades which have been crucial for better appreciation of the cultural differences which in turn has opened the door for a “settlement” in Northern Ireland. This work has also been of use to those working and researching in the realm of conflict resolution. In recent years,

the stories of the Magdalene laundries have exposed a raw nerve running throughout Irish society and culture.

Irish arts and humanities scholars have left an important albeit often untold legacy – in the same way that Irish scientists have done:

- John Field (1782-1837), born in Dublin, was the son of a theatre violinist. Taught music by both his father and grandfather, he made his first public appearance as a performer aged twelve, in London. He was then apprenticed to the composer Muzio Clementi, who gave him tuition, while Field was expected to work as a demonstrator and salesman in return. This apprenticeship gave him opportunity to travel and perform throughout Europe, gaining recognition as a performer and composer, and settling in Europe. He is known above all this as the originator of the nocturne. This is a lyrical piano piece, usually quiet and meditative in nature, wherein an expressive melody in the right hand is accompanied in the left by broken chords. Field was the first to work in this form, which was subsequently taken up by Frederic Chopin who went on to develop the genre considerably.
- Mary Parsons (1813-1885), Countess of Rosse through marriage to William Parsons, was an important early pioneer of photography. She and her husband were interested in astronomy, both working to build a giant telescope at Birr (known as the “Leviathan of Parsonstown”), and her interest in photography developed out of this. Unusually for a woman at that time, Parsons was also an accomplished blacksmith, and she was responsible for the wrought iron construction of the great telescope tube. She experimented with numerous new techniques at a period when the materials and processes of photography had not yet been industrialised and mass produced, thus making this part of photography more akin to chemistry. In 1859 she became a member of the Dublin Photographic society, and created what is believed to be the oldest surviving darkroom in the world. This darkroom, in the Rosse castle at Birr, is little changed since she left it, freezing in time the equipment and setup which she used in the early days of the photography, only to be discovered again in 1983.
- Seán Ó Donnabháin (1806-1861) started out working for the antiquarian James Hardiman, which trained him in the use of state papers and other sources for research, being appointed to the Irish Records Office in 1826. In 1829 he worked in the topographical department of the Irish Ordnance Survey for the first Ordnance Survey of Ireland, examining manuscripts and touring Ireland. As part of this work he worked on collecting place names and finding, discovering, preserving, and translating many maps and manuscripts in the process. He founded the Irish Archaeological Survey in 1841, and became the professor of Celtic Languages in Queen’s College Belfast in 1849, working to publish the ancient Brehon laws, which are still used for research today. Further to this philological research, the letters he wrote to various collaborators and fellow researchers during his travels are priceless first-hand descriptions of social conditions and the state of economic development in Ireland. It gives a picture of Ireland from the perspective of an observer, and so his “Letters” are still widely used by researchers to this day.
- John Bagnall (J.B.) Bury (1861 – 1927) born and raised in Monaghan, studied history in Trinity College, Dublin and elected to a fellowship in 1885. As well as being a historian (being made professor of modern history in 1893) scholar of Greek, he edited numerous texts, becoming Regius professor of Greek in 1898. He resigned both positions in 1902, becoming a professor in the University of Cambridge. Primarily a scholar of the later roman empire, he edited Gibbon’s

Decline and Fall, as well as writing a histories of Greek history and, and also a history of St. Patrick, as well as being one of the first western historians to participate in a revival of Byzantine studies. Perhaps more interesting for modern scholars is his work on the history of ideas, such as his 1920 book *The Idea of Progress*, which prefigures much subsequent theory and scholarship in its position as a critique of the role of this idea in the course of human history.

- Eileen Gray (1878-1976) is rightly regarded as a pioneer of the modernist movement in design. Gray worked as a furniture designer and architect, and her work is on display in numerous galleries and museums around the world. She studied at the Slade school of art in London, originally working in drawing and painting, but then began concentrating her efforts elsewhere. In 1902 Gray moved to Paris, where she continued her training with the Japanese lacquer master Seizo Sugawara. In following years, she moved away from the traditional materials and methods associated with this approach to design. In doing this, she distanced herself somewhat from the revivalist style of art deco, and in embracing modern materials such as glass and tubular steel Gray worked on developing an aesthetic which exemplified the modernist ethos of multi-purpose objects. Pieces such as her E-1027 table and “Bibendum” chair are roundly and rightly considered modern design classics, which have had a profound influence on the subsequent history and practice of design.
- Philip Pettit (b. 1946) is a philosopher who is little known in his native land, outside of professional circles, but who can be credited with having considerable influence on the politics of one of Europe’s largest countries. Following in the footsteps of Johannes Scottus Eriugena in the middle ages, through to Berkeley, and Edmund Burke’s philosophical development of classical liberalism, Ireland has consistently played a role in the history of philosophy. This has not come to a stop in recent times, though Irish philosophers do not play the same public role in Ireland that they once did. Pettit has held various academic positions around the world, but is currently based in Princeton University. He is best known for using his research in analytic philosophy of mind to develop political theory, a broad form of civic republicanism, which provides an alternative to traditional liberalism. His book *Republicanism: A Theory of Freedom and Government* provided the theoretical foundations of the reforms undertaken by Spain’s José Luis Rodríguez Zapatero. He was subsequently invited by Zapatero to review the performance of the government according to the principles he outlines in his work, such as the idea of freedom as “non-domination”. This is an interesting demonstration of a philosopher who engages with the public square, rather than analyzing from behind the walls of the academy.

These examples suggest that the flaw lies, not in the value of the research being undertaken, but in our thinking of what matters. Measuring the quantity and impact of research through peer-reviewed journal articles and citation impact factors is only the tip of the iceberg (see Figure 16), and overlooks the real value of arts and humanities research.

It might be better to consider research creating value through “ripples” of new ideas, which are felt throughout society in a variety of - sometimes oblique - ways (Benneworth, 2012). The influence of research occurs in more dispersed ways than simply through the publication of peer-reviewed articles. For example, measuring economic impact can be complicated for all disciplines, as the linkages are usually too indirect and there are too many confounding variables (Impact, 2008, p4, 9) For example, our understanding of the natural world has probably been more influenced by watching David Attenborough’s various wildlife programmes than reading articles in either *Science*

or *Nature*. The popularity of the *Discovery* and *History* channels provides another example of the myriad ways the public consumes research. The UK Open University has had over 56 million downloads of its material on *iTunes* since it launched in January 2012. YouTube and other forms of social media will further democratise access to new ideas. The difficulty is capturing this complex web of ideas and influences in a way that is not a simplistic counting exercise but does address genuine policy and public pressure for greater accountability.

If it is complicated for scientific disciplines, it is moreso for the arts and humanities. This is because the type of research undertaken does not necessarily produce identifiable products and services, in the traditional sense. Molas-Gallart (forthcoming 2013) talks of the “diffuse nature of valorisation” the “research results become socially valuable”. This is because of the way that the ideas can influence and “shape private and public activities and policies by providing a background of ideas that ‘creep’” (Molas-Gallart, forthcoming 2013; Weiss, 1980). Tinkler (2008, p18) likewise argues the humanities and social sciences (but this is equally true for the arts and humanities) “add to a dynamic knowledge inventory, an ever-changing stock of ideas about how society and culture work and about possible innovations and reforms.” The output from such research influences and shapes public discourse in myriad ways. It is taken up and adopted/adapted by a wide range of users (known and unknown; identifiable and diffuse) not simply by and within the academic community. As a result, breakthroughs are not easily be credited to a single individual. This makes traditional means of documenting, recording, assessing and evaluating the impact of such research especially problematic.

This need not be the case, but it does require a more sophisticated and shared understanding of what we mean by value, benefit, impact and relevance of research, by all stakeholders, and then how to assess and demonstrate it. This presents a particular challenge for the arts and humanities – but as this study has shown, stakeholders interviewed for this project agreed this task was necessary. Attempts to define societal impact have been hampered by the specifications of impact, which are often perceived narrowly in market terms as patents, licences or HPSUs; in contrast, arts and humanities scholars make a distinction between contributing to “society” as distinct from the “economy”. There has also been an admitted reluctance to engage fully with public assertions and questioning about value-for-money. While stakeholders, including policymakers, acknowledged that many benefits can take a long time to emerge, others were sceptical; some said the work being conducted was of little value to them, and there was a disconnect between higher education and the real/working life of the creative arts in particular. This gap may derive from the fact that 90% of arts and humanities research in Ireland is classified as “basic”, undertaken by individual researchers addressing research questions about which the researcher him/herself feels passionately rather than as members of cross or inter-disciplinary teams addressing wider societal or global challenges.

The challenge is multi-fold.

What constitutes research in the arts and humanities can appear to vary not least because the range of outputs and outlets is more varied than in the sciences. However, there is a debilitating, underlying tension between the creative arts and humanities which has led to the former being absent from many important conversations about the value and contribution of A&H research. This is manifest in the name of the now former Irish Research Council for the Humanities and Social Sciences, and the title given to the various RIA reports. The reasons stem from traditionally-held views within the academy itself about disciplines and research, and the fact that creative arts

research is an emerging field. There may also be some misunderstanding about the role played by organisations promoting and supporting arts practice (e.g. Arts Council, Aosdána). As a consequence, interviewees commented upon the failure to value "performative" work with one person suggesting this was putting programmes and research at risk.

At the same time, arts and humanities scholars have both, in their different ways, sought refuge in "exceptionalism". Some of the arguments have (over)emphasized the "performative" or "practice-led" component as a way of describing something particular to the arts or humanities whereas there is probably much greater commonality with other disciplines than is often acknowledged. Practice-based/informed, application/use-inspired approaches are not exceptional to the arts and humanities. Rather, they are characteristic of, for example, engineering and lab science, both which also produce experimental work or prototypes as a way of testing theoretical or philosophical concepts. Arts and humanities researchers should take advantage of the real opportunities for collaborative research between arts practitioners/researchers, cultural organisations and/or enterprise, which are essentially on their door-step and largely untapped (HEA, 2013b, 39). Both Ultimately, the concept of value and impact needs to be seen and understood more broadly – by both the academic community and by its stakeholders. One way to ensure this happens is to identify more appropriate ways to recognise and measure the full value and contribution of arts and humanities research, and to ensure that such practices are embedded within research and institutional reward systems (Hazelkorn, 2009b, 74).

While there are differences in research practice between disciplines, there is much to be learned from the way in which the sciences have built up sustainable research teams, and have been able to create convincing stories which interest external stakeholders, and can convey, succinctly and clearly, the value of their research to the wider society, to government, and also to other academic disciplines, to justify public support. Many interviewees expressed strong views about the necessity for "institutions and researchers...to articulate better what they are doing and why it's important". This includes working out "how to make industry interested. The profit motive is obvious but there can also be huge potential for enabling research which can either respond to industry's needs in a task oriented way or product development way" (Donovan, 2012, 16).

Better communication is vital, but this is not a silver bullet. Research must be seen to deliver not just economically and in the pursuit of knowledge, but also for the benefit of society and the education system (Feeley, in Ahlstrom, 2013b). Ultimately research should inform and underpin teaching (see 5.3.1; Tinkler, 2008b, p12).

There should be a clearer stress on the links between teaching and research, as well as an immediate end to the practice where principal and/or associate research investigators are not obliged to teach at undergraduate level over prolonged periods of time (HEA, 2010, 13).

Yet, while the arts and humanities are seen to have a particularly strong role to play as the public intellectual, it was not always clear whether policymakers, civil society stakeholders or the researchers themselves were talking the same language. Are the arts and humanities seen as broad disciplines contributing to civil society, in other words human capital (e.g. graduates) or is there an interest in arts and humanities research, in other words new knowledge production? There is little questioning that research should make an impact, and that researchers should actively and creatively engage beyond campus walls. Deeper collaborations should lead to work of direct

relevance to the needs of commerce, industry, the public and/or the voluntary sectors and/or it may lead to the generation of new ideas, images, performances or artefacts, or to new or substantially improved insights, practices or processes.

Disappointed with the way they have felt treated in the Research Prioritisation Exercise, which understands innovation as driven only by economic sectors narrowly defined, the arts and humanities community may have another opportunity. The decision to embark on a new strategy for science, technology and innovation should be seized upon as an opportunity to make a strong statement challenging the zeitgeist of the technological model of innovation, and propose instead a set of societal challenges, aka *Horizon 2020* (Geoghegan-Quinn, 2011), to which the arts and humanities can contribute. This would constitute an important signal of the importance of arts and humanities research, and harking back to the 2010 IRCHSS conference, illustrate that these disciplines have a valuable contribution to make to Irish social and economic development and prosperity.

Finally, all disciplines contribute different ways of knowing and understanding, provide insights and tools of discovery, and help us understand and solve societal, cultural and economic challenges – and the complex interactions between these challenges. Technological solutions are worthless unless we better understand how and why people want to use them; we have, for example, tried for years to encourage better nutrition and condemn smoking – but our societies continue to record rising obesity rates and tobacco-related cancers. Thus, the arts and humanities must to engage directly and openly with the national agenda; they must situate themselves at the centre of the national priorities, and as offering a solution to Ireland's many challenges. Arguably the terrain is more difficult, but there are choices.

8. Appendix A: Methodology

8.1 Overview

The changing economic and research policy environment set the background against which the Irish national study was conducted. This helped focus the discussion in particular ways, especially with respect to i) changing direction of research policy and funding, ii) expectations of key stakeholder especially those of policymakers about the impact and relevance of research outputs/outcomes, and iii) arts and humanities researchers and research in particular. The study considered the following research questions:

- What is the contribution that arts and humanities research makes to society and the economy?
- What are the best ways to measure and assess the societal impact and benefits of arts and humanities research?
- Given the depth and extent of the global economic crisis, are there special attributes that arts and humanities research can contribute to society and the economy? How can this best be measured and assessed? What are the implications for research policy?

The Irish national study gathered the views of a diverse range of people across multiple stakeholder groups – researchers, policy makers, and civil society. Both sectors of Irish higher education, universities and institutes of technology, are represented in the sample. In addition, both private-sector and state agency policy-makers are represented. Members of civil society range from community-based to national-level arts organisations and bodies, as well as the media. A mixed-method approach was adopted, drawing material from a multi-stakeholder research forum, semi-structured interviews with key individuals within each stakeholder group, and quantitative data collection and analysis. Combining participation at the Research Forum and the semi-structured interviews, the view of 41 people were gathered during 2011 and 2012 for this study.

The research forum and interviews explored how arts and humanities research is conceptualised, understood and utilised by each group, what forms the research takes, how quality is defined and assessed in addition to perception of its impacts and benefits research to society and the economy. The study is grounded in a literature review of arts and humanities research, and European and national policy.

Both the research meetings and the individual interviews were audio recorded and transcribed. Transcripts were standardised and prepared for input into qualitative software NVivo. Multiple levels of coding was carried out beginning with a phase of open coding (cite) to identify emergent and common themes. From here, researchers coded based on the guiding research and interview questions. A phase of further axial coding (cite) allowed us to collapse individual codes into categories and themes (cite) thus beginning our analysis of the data. The reliability of the coding process was ensured through a series of intercoder reliability where one research team member checked the coding of another research team member.

Permission to audio record and transcribe the Research Forum and the structured interviews was sought from all participants and consent forms were signed. Confidentiality was guaranteed to participants through non-attribution of quotes directly to individuals. Further measures to protect

confidentiality have been undertaken through the safe storage of data and the secure sharing of files among the research team. Ethical clearance was received from the Dublin Institute of Technology Research Ethics Committee.

Because respondents in all interviews were guaranteed anonymity, quotations used throughout the report are amplified by reference to this simple classification system, when sufficient information is available, e.g. Humanities Professor or City Government Official. The subject area and institutional role of academics is noted to contextualise comments with reference to position and role, and whether they are working in science or arts/humanities. Interview quotes from policy-makers are contextualised by whether they work in the private-sector or for a state agency. Interview quotes from civil society stakeholders are contextualised by whether they are based locally or nationally.

8.2 Overall Study Design and Methodology

The project set out to assess the extent to which academics, policymakers and members of civil society value arts and humanities research – with a particular focus on policymakers. The work was divided into the following elements, undertaken by the lead PI supported by a post-doctoral researcher and two research assistants (in succession).

- Literature Review
- Research/Stakeholder Forum – January 2011
- Structured Interviews – 2011-2012
- Secondary Data Analysis
- Write Up

8.3 Literature Review

A literature review was conducted to aid understanding and definition of arts and humanities research and the research policy context – at a national and European level. There were two phases: 1) review of the international literature on research in the arts and humanities; 2) review of national and European policy related to research policy, strategy, management and support.

In phase one, literature was gathered from national and international sources, as well as project, programmatic and institutional websites. The literature was mined for examples of arts and humanities research, understandings and interpretation of arts and humanities research, and examples of such research. In phase two, European and national policy documents were reviewed from, inter alia, the European Commission, Departments of Education and Skills, Department of Jobs, Enterprise and Innovation, Forfás – the Ireland’s Policy Advisory Board for Enterprise, Trade, Science, Technology and Innovation, the Higher Education Authority, HETAC - Higher Education and Training Awards Council (now part of the Qualification and Quality Authority). A mapping of the above policy documents was conducted to gain a holistic picture of the main drivers of Irish research policy formation and regulation, and the connectivity between Irish and European research policy.

8.4 Research/Stakeholder Forum

A research forum was organised in January 2011. The morning session brought together three arts and humanities researchers to help set out a baseline understanding of arts and humanities research. The afternoon session comprised city and national policy makers, civil society, and the business and enterprise community, plus representatives of higher education institutions and researchers.

In the first session, three academics responded to a series of guiding questions (see Annex X) beginning with a twenty minute presentation from each in which they described the research s/he were undertaking, and contextualised its significance in terms of the discipline and Ireland. The guiding questions included consideration of how is research in the arts and humanities defined? What form does the research take, and what are the typical outputs? Are there methodologies that are particular to the arts and humanities, such as practice-based or practice-led? What is a PhD in the arts and humanities? How do you distinguish between research, scholarship, creative practice and engagement in your work? How is the research assessed? How do researchers characterize the impact and benefit of their work?

The second session involved a round table discussion with 16 people stakeholders, also guided by a series of questions (see Appendix D, 139-140), and six representatives of the HERAVALUE project team; there were a total of 22 people. The discussion was chaired by the HERAVALUE lead PI. Table 7 shows the spread of participation from each stakeholder group.

Table 7 Stakeholder Representation at Research Forum

Researcher/Academic	Policy Maker	Civil Society
8	8	6

The emphasis was on understanding the value the different stakeholders placed on arts and humanities research and what contribution such research makes to society/the economy. Given the extent of the global economic crisis, are there special attributes that arts and humanities research can contribute to society and the economy? What are the best ways to measure and assess the societal impact and benefits of arts and humanities research? What are the implications for research policy?

8.5 Structured Interviews

Data from these research meetings was used to devise the interview protocol for the semi-structured interviews for each of the three stakeholder groups (see Table 8). Purposive and snowball sampling methods were used to locate participants for our study, which included representatives from across Irish higher education, local and national government, in addition to members of civil society ranging from community-based to city level arts organisations. Semi-structured interviews were conducted with thirty participants across the three stakeholder groups; they were conducted either in person or over the phone and lasted between 30 to 75 minutes. Table 2 presents the coding index for the semi-structured interviews

Table 8 Coding-Index for Semi-Structured Interviewees

Code	Descriptor	Stakeholder Group
A1	Professor Drama	Academic
A2	Head of Development	Academic
A3	Professor Literature	Academic
A4	Vice President Research	Academic
A5	Research Director	Academic
A6	Senior Lecturer Music	Academic
A7	Lecturer Art History	Academic
A8	Senior Lecturer/Composer	Academic
P1	Business/Education Liaison Officer, Private Sector	Policymaker
P2	Arts/Humanities Policy Officer 1, Public Sector	Policymaker
P3	Higher Education Policy Officer, Public Sector	Policymaker
P4	Science Policy Officer 1, Public Sector	Policymaker
P5	Research Policy Officer, Public Sector	Policymaker
P6	Arts/Humanities Policy Officer 2, Public Sector	Policymaker
P7	Government Policy Officer, Public Sector	Policymaker
P8	Science Policy Officer 2, Public Sector	Policymaker
C1	Regional Arts Organisation Officer	Civil Society
C2	Regional Drama Organisation Officer	Civil Society
C3	Regional Voluntary Arts Organisation Officer	Civil Society
C4	Science Journalist	Civil Society
C5	National Arts Organisation Officer	Civil Society
C6	National Academic Organisation Officer	Civil Society

The aim was to more fully understand what individuals and each stakeholder group thinks about and characterize arts and humanities research, how quality is assessed, and ultimately the impacts and benefits of arts and humanities research for society and to the economy especially in the context of increasing emphasis on research as a critical component for economic recovery.

8.6 Secondary Data Analysis

Existing data from a number of sources were collected, formatted in Excel, visually represented using charts and interpreted in accompanying text. These data sources include the Forfás Annual

Reports, Eurostat, the Forfás HERD Surveys, the Forfás Bibliometric Study and the statistics section of the Higher Education Authority website (in Ireland). Forfás is Ireland's policy advisory board for enterprise and science. The topics covered in the secondary data analysis were expenditure, research classification, researcher manpower-numbers, pay costs, bibliometric performance, and student numbers.

9. Appendix B: Selected Research Assessment Strategies with reference to Arts and Humanities Research

9.1 AUSTRALIA

Executive Summary:

The Excellence in Research for Australia (ERA) 2012 is the second comprehensive review of research in higher education undertaken by the Australian government, following a previous ERA in 2010, and a pilot scheme in 2009. The responsibility of the Australian Research Council, the ERA builds upon these previous iterations of research evaluation, with a view to providing researchers and administrators in Australian higher education with a view of where they stand vis-à-vis international research. On top of this, there is an appreciation that because much research in Australian higher education is funded by tax-payers, questions of value for money require that information be made available to government, industry, business, and other stakeholders to ensure that the research quality within Australian universities has been assessed with an eye to international standards.

Name/Title of Research Assessment Exercise:

Excellence in Research for Australia (ERA) 2012

Policy Context, incl. circumstances under which the exercise came about:

In December 2003 the Australia Vice-Chancellor's Committee (AVCC, now Universities Australia) launched a policy document *Advancing Australia's Abilities: Foundations for the future of research in Australia* in response to the Government's various research reviews. In May 2004, the then Prime Minister John Howard announced the start of an 18-month process to establish "Quality and Accessibility Frameworks for Publicly Funded Research" as part of the *Backing Australia's: Building our Future through Science and Innovation* project, a five year initiative launched in 2001 to provide an additional \$3 billion of additional funding for science and innovation. In May 2005, the AVCC launched a statement outlining how it thought the planned Research Quality Framework (RQF) should work, roughly modelled on the UK's Research Assessment Exercise. In September of that same year the RQF was launched by John Howard's government. In December of 2007, the new Rudd Labor government announced that the RQF would be scrapped, and that it would begin developing a new assessment model, the ERA, with a pilot to be rolled out in 2009.

Policy Objective(s):

According to the ERA 2012 Report, the objectives of the ERA are as follows:

1. Establish an evaluation framework that gives government, industry, business and the wider community assurance of the excellence of research conducted in Australia's higher education institutions.
2. Provide a national stock-take of discipline-level areas of research strength, and areas where there are opportunities for development in Australia's higher education institutions.
3. Identify excellence across the full spectrum of research performance.
4. Identify emerging research areas and opportunities for further development.
5. Allow for comparisons of Australia's research nationally and internationally for all discipline areas.

Methodology, incl. time-frame, resources, costs, technologies:

All eligible Australian universities completed comprehensive submissions on their research activities for ERA 2012. Information included data in relation to 413,477 publications and other research outputs, 60,668 salaried and non-salaried researchers and related staff, \$8,767,725,070 of external research income and 781 patents. One controversial element of previous iterations of the ERA (2009 trial and 2010) was a measure ranking the publications in which researchers published their work as being either A*, A, B or C. This was not included in the 2012 ERA, but in this round universities were asked to submit their own list of the top 20 journals in which their researchers publish most frequently. The time-frame for ERA 2012 was from 2005 to 2010. Citation data on publication outputs were provided by Elsevier's SciVerse Scopus.

Universities were required to provide information regarding: research outputs by type, research outputs by year, details of various forms and sources of research income, staffing profile, research commercialization income, patents, esteem, and other categories. Research outputs by type could either be traditional (books, book chapters, conference papers, journal articles) or non-traditional (curated or exhibited event, live performance, original creative work and recorded/rendered work), with the latter group able to be submitted as a portfolio. All disciplines were required to submit traditional outputs, and those within the Humanities, Creative Arts, and Social Sciences were required to submit eligible, non-traditional research outputs (see Figure 19).

The ERA distributes research under eight "clusters" of Fields of Research (FoR): Physical, Chemical and Earth Sciences (PCE), Humanities and Creative Arts (HCA), Engineering and Environmental Sciences (EE), Education and Human Society (EHS), Economics and Commerce (EC), Mathematical, Information and Computing Sciences (MIC), Biological and Biotechnological Sciences (BB), Medical and Health Sciences (MHS). Each of these clusters is further subdivided into different fields according to different FoR codes, at different levels of granularity. As such, each cluster is divisible into two-digit, four-digit, and six-digit codes. The purpose of these FoR codes is to provide flexibility for and recognition of activities and behaviours which are discipline specific at the two- and four-digit FoR code level, and the ERA assesses accordingly with a matrix-based approach for these levels of analysis. Although the six-digit FoR level codes are not assessed in the ERA, they are included as it was felt that they are necessary to capture the diversity of activities taking place within any research context. The six-digit FoR codes represent a breadth and diversity of sub-disciplines which may have quite different publishing activities, but this would not be captured at the disciplinary (i.e., two- or four-digit FoR code) level.

Dissemination, incl. how much information is available regarding data and methods:

The ERA's findings are made available via the ARC's website, both via the entire report itself, and as individual chapters. The data from which the final report's rankings are assigned to universities and their subject clusters are made available in spreadsheet format on the ARC website, allowing for mining and further manipulation of the data by interested parties.

Measurement of Arts and Humanities Research:

For the purposes of the ERA, research is defined as "the creation of new knowledge and/or the use of existing knowledge in a new and creative way so as to generate new concepts, methodologies and understandings." Institutions were asked to use this definition of research (which tallies with the OECD's Frascati Manual definition of research as "creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of humanity, culture and society, and the use of this stock of knowledge to devise applications") when making their submissions to the ERA. In terms of the eight subject clusters according to which research is distributed, Humanities and Creative Arts (HCA) is clearly defined as a separate collection of fields of research. The research areas which comprise HCA are: FoR 18 Law and Legal Studies; 19 Studies in Creative Arts and Writing; 20 Language, Communication and Culture; 21 History and Archaeology; and 22 Philosophy and Religious Studies. These two-digit codes are further sub-divided, as explained above. There are

requirements specified for Arts and Humanities research in terms of the ‘non-traditional research outputs’ which must be submitted.

Figure 19 Diversity and Differences of Output Types for Non-traditional Research

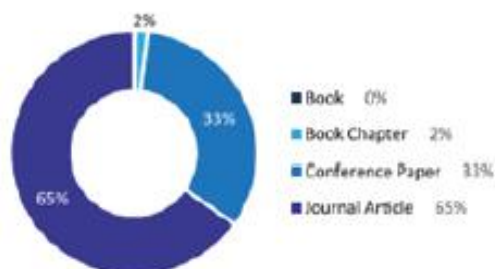
1904 Performing Arts and Creative Writing



1905 Visual Arts and Crafts



0205 Optical Physics



Source: Excellence in Research for Australia (ERA) 2012 National Report

Intended and Unintended Consequences:

The pilot of the ERA in 2009 covered two subject clusters, Physical, Chemical, and Earth Sciences (PCE), and Humanities and Creative Arts (HCA). From the outset of the ERA, then, it is evident that there was a commitment to evaluating the broadest forms of research taking place in Australian higher education, and not just Sciences and Technology. Concomitant with this is a capacity to accommodate multi-disciplinary research within the ERA. It is unclear at present, however, if the same time-scale of a research evaluation every two years is sustainable, in terms of both the costs and time demands made upon universities and their researchers. Although there has been a move

away from journal rankings, and this indicates a difference in the role being played by journals in the ERA, exactly what this difference may lead to or what it might be used for remains unclear.

Observations /Additional Comments:

The ERA is only in its third iteration, and so no longitudinal results are evident yet. Furthermore, any thorough evaluation process such as this is not cheap, and in time it may need to become more focussed and also more demanding. Nevertheless, in dropping the journal ranking requirement from ERA 2012 (though it was present in ERA 2009 and ERA 2010) there is evidence that the approach being taken by the ARC and Australian Government is flexible, and that there is a willingness to respond to the feedback and concerns of researchers. Furthermore, the inclusion of six-digit FoR codes appear to be overkill in the sense that these six-digit FoR sub-disciplines are not reported on in the ERA, but their inclusion shows an appreciation of the nuances and diversity that all broad categorizations of research inevitably elide. By including these categories which capture the diversity of research activities, and thus allowing such diversity to speak for itself, the ERA's approach to some extent pre-empts a reductive interpretation of the results gathered in terms which might create a monolithic or simplistic interpretation of the research being conducted in Australia HEIs.

Selected References:

- *Advancing Australia's Abilities: Foundations for the future of research in Australia*, AVCC, 2002
- *ERA Indicator Descriptors*, ARC, 2008
- *ERA Submission Guidelines*, ARC, 2012
- *ERA 2012 Evaluation Handbook*, ARC, 2012
- *Excellence in Research for Australia (ERA) 2012*
- *National Report*, ARC, 2012

9.2 CANADA

Executive Summary:

Canada has a federal system, and as a result of this there is no over-arching approach to the measurement or evaluation of research. That said, there are federal organizations, member organizations, as well as regional or local ministries and councils that oversee policy with regard to this area. As a result of this complex and disparate situation, any picture of the state of research evaluation in Canada will be fragmentary. There are or have been efforts made towards examining how research in Canada is undertaken and assessed in the higher education context, but not necessarily in an exclusive evaluation context.

The first of these is within the Canada Research Chairs (CRC) programme, launched in 2000. Each eligible degree-granting institution receives an allocation of Chairs. For each Chair, a university nominates a researcher whose work complements its strategic research plan and who meets the program's high standards. There are two types of Chair, and each is geared towards a researcher in a specific point in their career, the first for established world leaders in their field, and the second type for emerging promising researchers. The allocation of chairs to disciplines is set out by a proportional model which holds for every year of the programme. Institutions nominating their researchers for either type of Chair are obliged to submit a Strategic Research Plan, which is the evaluative element of the program. In 2011 Science-Metrix provided a detailed evaluation of the first ten years of the CRC according to various quantitative and qualitative measures, and this referred to in the following country overview.

The Research Universities' Council of British Columbia (RUCBC) consists of six research institutions: University of British Columbia, Simon Fraser University, University of Victoria, University of Northern British Columbia, Royal Roads University, and Thomson Rivers University. Its purpose is to provide a single voice on behalf of these institutions on public policy issues including funding, research, accountability, admissions and transfer. It is funded by the member universities. As part of this work, in October 2012 the RUCBC published the *Opportunity Agenda for B.C.*, intended as a discussion document for the direction which education and research, including higher education research, should take in the province of British Columbia. Although not a research evaluation in the strict sense (British Columbia has no such evaluation procedures or processes in place at the provincial level) it serves as a useful provincial point of contrast to the federal CRC Program.

Name/Title of Evaluation Model:

Canada Research Chairs Program / Tenth Year Evaluation of the CRC Program

The Research Universities' Council of British Columbia *Opportunity Agenda for B.C.*

Context, incl. circumstances under which the evaluation came about:

Canada Research Chairs (CRC) was established in 2000 by the Government of Canada as a permanent programme to establish 2000 research chairs. It is a tri-agency program funded by the Social Sciences and Humanities Research Council (SSHRC), the Natural Sciences and Engineering Research Council (NSERC) (which are departmental agencies of the Government of Canada and report to Parliament through the minister of Industry), and by the Canadian Institutes of Health Research (CIHR), (which reports to Parliament through the minister of Health). Through this programme, \$300 million is spent annually on the 2000 research chairs to attract and retain what the CRC describes as "some of the world's most accomplished and promising minds."

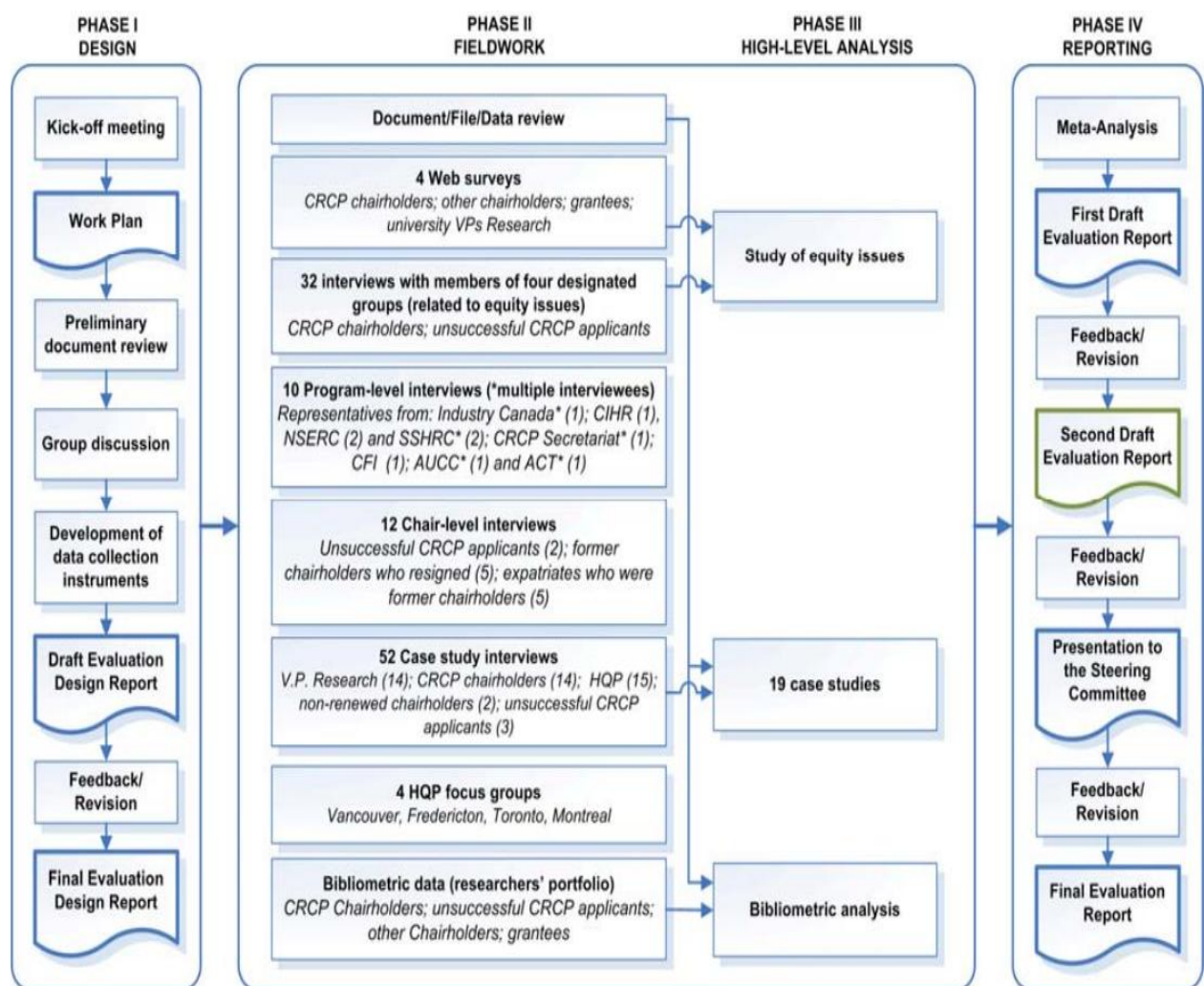
This permanent program aims to "strengthen Canadian research performance and to position Canada among the international leaders in order to maintain a dynamic economy, increase future job opportunities, and, ultimately, improve Canadians' quality of life." This permanent program aims to strengthen Canadian research performance and to position Canada among the international

leaders in order to maintain a dynamic economy, increase future job opportunities, and, ultimately, improve Canadians' quality of life. It has the following objectives:

- to attract and retain excellent researchers in Canadian universities
- to improve universities' capacity for generating and applying new knowledge
- to strengthen the training of highly qualified personnel (HQP)
- to optimize the use of research resources through strategic planning.

The evaluation undertaken by Science-Metrix was intended to address these objectives in order to consider whether - and if so, how well – the CRC Program was succeeding (Figure 20).

Figure 20 CRC Evaluation Approach Overview: Phases, Processes, and Deliverables

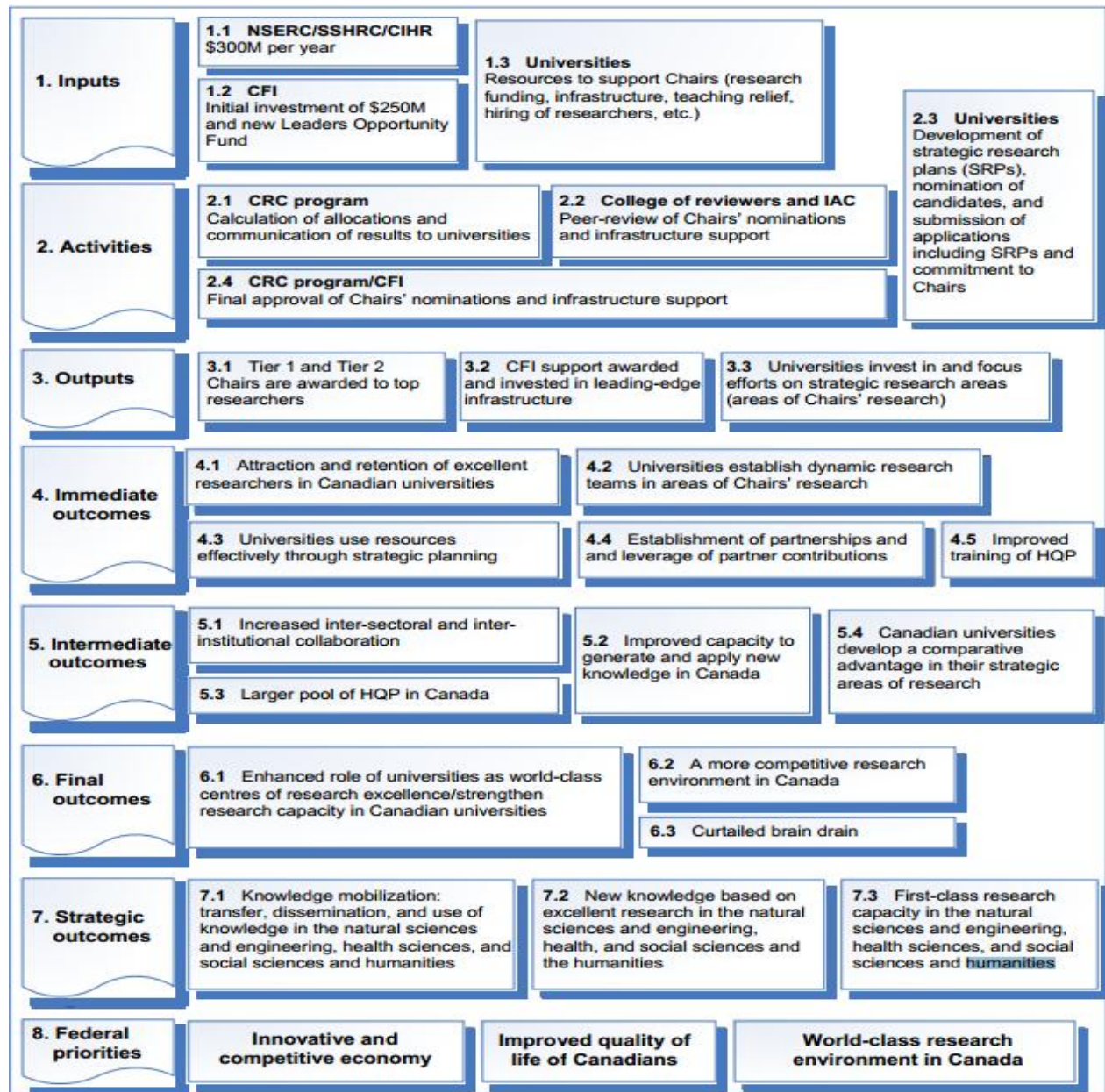


Source: Tenth-Year Evaluation of the CRCP 2011

The RUCBC is made up of six research institutions: University of British Columbia, Simon Fraser University, University of Victoria, University of Northern British Columbia, Royal Roads University, and Thomson Rivers University. As a coordinating forum for the interests of these six higher education institutions, the RUCBC acts as a coordinating forum for its members. Further to this, it serves as a provincial focal point for dealing with the Government of British Columbia, as well representing the interests of its members in interactions with other provincial or federal bodies

dealing with higher education. As part of these activities the RUCBC drafted a policy document to set out a vision for education and research in British Columbia which could be sustained through successive governments. The report notes that the challenges of globalization, technological change, growing inequality, and an aging workforce create conditions for which investments in post-secondary education and research are the best economic and social response.

Figure 21 Canada Logic Model of the CRC Program: Activities, Outcomes and Priorities



Source: Tenth-Year Evaluation of the CRCP 2011

Policy Objective(s):

The CRC (Figure 21) was established as means of attracting and retaining outstanding researchers, in order to achieve research excellence in engineering, the natural sciences, health sciences, humanities, and social sciences. This is done by focussing on two types of researcher, and establishing separate levels of research chairs that can best serve the needs of these researchers and the wider higher education research community. The first type is the Tier 1 Chair, a position which is

tenable for seven years, but renewable indefinitely. This type of CRC position is for outstanding researchers who are regarded by their peers as world leaders in their field. Nominees for this type of position are either full professors, or associate professors who are expected to be promoted to full professor within one or two years of their nomination to the CRC Program (there are exceptions for those coming from outside the academic world if the nominee is in possession of the necessary qualifications). Tier 2 chairs are tenable for five years, but in contrast with the Tier 1 chairs are only renewable once. These are for “exceptional emerging researchers” acknowledged by their peers as having the potential to lead their field. The CRC Tenth year evaluation focused on the following five evaluation issues:

1. continued need and relevance
2. success
3. efficiency and effectiveness
4. governance, design, and delivery of the program
5. equity of the program for the four designated groups (women, members of visible minorities, persons with disabilities, and Aboriginal people).

The objective of the RUCBC’s *Opportunity Agenda* lie within the usual frame of using HE research and development to gain and maintain a competitive edge in national and international markets, in turns of making developments which build upon existing research strengths to encourage economic growth for the region. Further to this, there is the expectation that provincial government investment in research and development activities will encourage outside investors – both private investors and federal government – to invest in British Columbia. In order to address these objectives, the *Opportunity Agenda* sets out the following goals:

- A space for every qualified B.C. student
- A guarantee for students in need
- A commitment to innovation and jobs.

Dissemination, incl. how much information is available regarding data and methods:

All collected data for the CRC is made available on the CRCP website.

Measurement of Arts and Humanities Research:

Of the \$300 million of funding allocated annually, 20 per cent goes through the Canadian SSHRC, and so is earmarked specifically for Chairs in the Social Sciences and Humanities. There is little specific focus on the arts and humanities (as in the United States, these terms are broadly understood as being synonymous), but reference is made to them with regard to the Canada Research Chairs Program. Chairs are awarded following a rigorous peer review process, in which members of the College of Reviewers assess each application and make recommendations for funding. Perhaps most relevant to the question of measuring Arts and Humanities research is the role played in the Canada Research Chairs of the Strategic Research Plans (SRP). These are integral to the Chair nomination process, in that each HEI must draw up an SRP which outlines.

For example, Concordia University’s SRP 2008-2012 has specific focus on the Humanities and Social sciences in its “The Person and Society” cluster, which outlines niches of excellence such as “Creative expression”, “Communication and culture”, and “Identity, gender, and sexuality”. SRP summaries for all participating HEIs are made available on the Canada Chairs Website. Further to this, the matter of ‘equity’ as addressed by the Tenth Year Evaluation is significant.

Criteria are indicated in Figure 22 below. The RUCBC report makes no mention of arts and humanities, nor the social sciences.

Figure 22 Overview of Data Collection and Analytical Methods for CRC

Data Collection Method*	Details
1. Document and file review	<p>The review of documents, secondary literature, files, and program data included:</p> <ul style="list-style-type: none"> • CRCP documents, past evaluations/reviews, and administrative data (CIMS) • CRCP Chair reports (annual university and chairholder reports and financial reports) • Departmental documents (CIHR, NSERC, SSHRC, CFI, and IC) and governmental documents • Documents related to non-CRCP chairs and other relevant documentation and literature
2. Interviews	<p>Total number of interviews 106</p> <ul style="list-style-type: none"> • Program-level key informant interviews (1–6 interviewees per interview) 10 • Chair-level interviews (three groups) 12 • Case study interviews (for 19 case studies) 52 • Equity-related interviews with members of four designated groups 32
3. Focus groups with HQP	<p>Total number of focus groups (Fredericton, Montréal, Toronto, Vancouver) 4</p> <p>Total number of participants 34</p>
4. Web surveys	<p>Total number of completed responses (valid response rate†, margin of error‡):</p> <ul style="list-style-type: none"> • Survey of CRCP chairholders 1,009 (55.8%, 2.1%) • Survey of other chairholders (excluding federal granting agency chairs) 173 (29.3%, 6.3%) • Survey of grantees (not CRCP chairholders) 172 (29.0%, 6.3%) • Survey of university VPs Research 44 (60.3%, 9.4%)
Analytical Method	Details
Case studies	<p>Total number of case studies: 19</p> <ul style="list-style-type: none"> • 14 CRCP Chairs, 2 non-renewed Chairs, 3 non-awarded Chair applications
Bibliometric analysis	<p>a) Analysis of the scientific performance of CRCP chairholders compared with three groups:</p> <ul style="list-style-type: none"> • a group of unsuccessful CRCP applicants • a group of other chairholders (matched; excluding federal granting agency chairs) • a group of grantees (matched; not CRCP chairholders) <p>b) Pre-post analysis of the output of CRCP chairholders to assess the effect of the CRCP on their scientific performance</p>

Notes: * The methodological approach is presented in more detail in Appendix A, Methods.
 † Valid response rate = Number of completed surveys, divided by the valid sample, which excludes unreachable potential respondents.

Source: Tenth-Year Evaluation of the CRCP 2011

Intended and Unintended Consequences:

One of the benefits of the approach taken by the Canada Chairs programme is that evaluation takes place on an on-going basis, and with a view to the specific characteristics of different subjects and research areas, but also the context of each individual HEI, and how the addition of a Canada Chair holder will affect and/or augment the research activities being undertaken there. The *Tenth Year Review of the Canada Research Chairs Program* noted continuing dissatisfaction within elements of the academic community with what is perceived as a proportionately lower representation of SSH researchers within the Canada Research Chairs program relative to the total population of academics in Canada, and recommends a re-evaluation of the 20 per cent allocation. The CRC's response to this simply stated that any such revision is a Cabinet-level decision.

The CRC only accounts for a part of the funding for the Canadian research landscape. The federal government makes significant contributions, of which the CRC is a prime example. Nevertheless, provincial governments also have a role to play in defining the sorts of research they undertake. Looking at the RUCBC's *Opportunity Agenda* leads one to suspect that a rather traditional and restricting notion of what qualifies as valuable research is being promoted here. The selection of engineering, mathematics, health sciences and other subjects within the traditional fold of STEM does not reflect a willingness to engage with notions of cross-over or interdisciplinarity with arts and humanities subjects, not to mention the social sciences. There are no explicit recommendations made in terms of where these new students places are to be made available, in terms of what

subjects will be studied, but it can be inferred that when this document notes “British Columbia produces far fewer graduates in fields such as engineering, mathematics and computer sciences than other provinces” that these subjects are to be the focus.

Observations/Additional Comments:

It is to be noted that Canada is an interesting case in that it is officially bilingual. For research, this can have potentially negative effects, as outlined by Higher Education Strategy Associates in *Measuring Academic Research in Canada: Field-Normalized Academic Rankings*. This report notes that for “Francophone academics publishing in French may produce the same volume of work as someone publishing in English, but they are speaking to a much smaller worldwide audience and therefore their work is substantially less likely to be cited by others.” The report goes on to further note that though this may not be a great concern for science and engineering (given that these disciplines traditionally publish in English anyway), in the social sciences and the humanities, French is still a language by which scholarly research is disseminated. As a means of illustrating the possible negative effects of not writing in English on bibliometric analysis, the report states that if the École des Hautes Études Commerciales - a business school where scholars for the most part publish in English - was treated as a separate institution, it would come eleventh overall, substantially higher than any other francophone institution (conversely, without HEC, Montreal would fall from 18th to 21st overall).

The last of the evaluation criteria in the Science-Metrix report is perhaps most interesting for those interested in the evaluation of higher education research. In its outline, this evaluation issue is raised primarily in terms of structural access to the CRC Program, and whether there are social or other barriers to gaining access to the programme on the basis of gender, being a member of a visible minority, being a person with disabilities, and Aboriginal people. Beyond this, however, it considerably expands and deepens the concept of impact to come into line with questions of how research can accrue social as well as economic benefits, specifically here in terms of expanding educational enfranchisement.

The notion of focussing on STEM subjects for research and education in times of straitened economic and fiscal circumstances for a government is a tempting one, and understandable. Valorisation understood as research’s contribution to economic growth and innovation. STEM subjects appear to offer the best options for short-term gains, and near-immediate returns on investment by way of knowledge and technology transfer. That said, any explicit or implicit elision of Arts and Humanities research from discussions of what sort of research is to be conducted with government funds when these funds are squeezed is myopic. The responsibility of research councils to maintain a place for and explicitly reaffirm the importance of Arts and Humanities research at the discussion table should be maintained.

Selected References:

- *Opportunity Agenda for British Columbia*, RUCBC, 2012.
- *Measuring Academic Research in Canada: Field-Normalized Academic Rankings*, Higher Education Strategy Associates, 2012.
- *Steering Committee Response to the Tenth-Year Evaluation of the Canada Research Chairs Program*, CRC, 2011.
- *Tenth Year Evaluation of the Canada Chairs Program – Final Evaluation Report*, Science Metrix, 2010.
- *Mobilizing Science and Technology to Canada’s Advantage – Progress Report*, Government of Canada, 2009.

9.3 FINLAND

Executive Summary:

Research policy and evaluation takes place at different levels, from the Academy of Finland at the higher level, down to those evaluations undertaken by individual institutions such as universities and polytechnics. The Academy of Finland is responsible for the funding research through its competitive grants, and is responsible for the majority of Arts and Humanities research. The Academy of Finland undertakes different research evaluations, its primary one being the triennial review of research, which have been undertaken since 1997. The most recent of these was in 2012, which studied that changes in the research environment, and reviewed the state of the research system in international comparison, specifically with the following countries: Austria, Denmark, Ireland, Netherlands, Norway, Sweden, Switzerland, and World. It further called on the individual Research Councils of the Academy of Finland to identify the strengths, weaknesses, opportunities, and threats to research, and to make proposals to the relevant research fields within their remit. The Research Councils' reviews are based on the assessments of the state of different disciplines made by 42 discipline-specific task forces in autumn 2011. The task forces were attended by a total of 366 researchers. The report also provides a thematic overview of the extent to which Academy funded projects have dealt with themes associated with the grand challenges facing society.

The Academy of Finland invited an international panel to carry out the evaluation of the art research in Finland. The evaluation focused on research and doctoral education at all four Finnish art universities (University of Art and Design Helsinki, Theatre Academy, Sibelius Academy, and the Finnish Academy of Fine Arts) and the University of Lapland's Faculty of Art and Design in 2003–2007. The panel was asked to evaluate the quality of research, doctoral education, research environments, national and international cooperation, and the societal impact of research in the field. The panel also made recommendations regarding the development of research and doctoral education at the units evaluated, as well as a number of recommendations that concern all units and the development of the field more generally.

Name/Title of Evaluation Model:

The State of Scientific Research in Finland 2012

Research in Art and Design in Finnish Universities, 2009

Policy Context, incl. circumstances under which the exercise came about:

There are various forms of evaluation that take place in the Finnish education landscape. These include those undertaken by FINHEEC (the Finnish Higher Education Evaluation Council), the National Board of Education, and the Finnish Education Evaluation Council. Those undertaken by the Academy of Finland have greater bearing on the direction taken by higher education and research, and so these will be focussed on. There are two funding agencies in Finland, the Academy of Finland and Tekes which is the Finnish funding agency for technology and innovation. The majority of Tekes funding is funnelled into Research and Development carried out by the private sector, but a portion also goes towards the sciences and technical fields in higher education, with some also going towards the social sciences. Research evaluations are used in Finland to ascertain the effectiveness of a number of players in higher education, from the relevant ministries, higher education institutions, as well as the funding agencies themselves. There are also evaluations of specific projects and programmes prior to their launch, as well as ex-post evaluations. The different triennial evaluations can also have a different theme or focus, with that of the 2006 review being the assessment and projection of the impacts of scientific research. The 2012 triennial evaluation places an emphasis on Finnish research within an international context.

Along with the triennial evaluations are specific discipline and/or field based evaluations. One example of such an evaluation which is the Arts and Humanities is the Research in Art and Design in

Finnish Universities review. Such specific evaluations take place periodically, and are a key element in the long-term development of Finland's research and science policy. In the performance agreement for 2007, the Academy of Finland's Research Council for Culture and Society agreed to evaluate, with respect to international standards, the quality and status of art research being done in Finland's Art Universities. Such an evaluation of art research had never before been undertaken in Finland, and was regarded as timely and useful. The original proposal for this evaluation came from researchers in the field of art and design. An exploratory workshop took place in February of 2008, and at this it was agreed that art universities and the Faculty of Art and Design at the University of Lapland would be evaluated. In Spring of 2008 detailed questionnaires were sent out to these universities and faculty where these units were asked to conduct a self analysis and to submit all the information requested, which was to be used for the evaluation. These units were asked to return their completed questionnaires in June 2008. In April 2008, the President of the Academy of Finland appointed an evaluation panel of five members, who were all internationally respected and well-known. The panel's first meeting, which also included the steering group, took place on the 28th September, 2008. The final report was published in March of 2009.

The Finnish Government's Evaluation plan states that from 2014 all evaluation activity will be undertaken by a central entity, a concentrated Education Evaluation Centre. Part of the reason given for this is so that a greater degree of international comparability will be brought into the evaluation process, allowing a greater understanding of the strengths and weaknesses of Finland's Higher Education Institutes in the context of international rankings, as well as in national evaluations.

Policy Objective(s):

In June 2011, the Board of the Academy of Finland identified six grand challenges facing humankind and society. These were: *The Northern Climate and Environment, Sustainable Energy, Dialogue of Cultures, Knowledge and Know-how in the Media Society, A Healthy Everyday Life for All, and The Ageing Population and Individuals*. The 2012 evaluation noted that its purpose was to present the Academy with the tools needed to define and carry out its role in addressing and resolving these problems. A second objective of the 2012 evaluation is to ascertain how the funding for research projects and programmes connects to the six grand challenges, and to examine the interactivity of research engaging with the relevant themes. It must be noted, however, that at the time of filing their applications, the projects and research teams investigated in the 2012 evaluation had no knowledge of the Academy's definition of grand challenges.

The purpose of the Research in Art and Design in Finnish Universities evaluation was to examine:

- Organizational aspects such as the size of the institutions
- Profile of the doctoral schools
- International networking
- Research education, its effectiveness, and society
- Problems in research education
- Strategies for the future.

Dissemination, incl. how much information is available regarding data and methods:

The report of the 2012 evaluation does not make all of its information available regarding the data collected, but there is an exhaustive breakdown of the report's evaluation processes and structure. It also clearly delineated the role played by bibliometric data in an appendix, illustrating that the publications included were those indexed by the Thomson Reuters Web of Science databases. This appendix also defined the definitions informing the role of fractionalization, self-citations, citation window, trend lines, relative citation impact, and the top 10% of publications. Discipline reports for individual fields (Philosophy, History and Archaeology, Arts, etc.) are made available on the Academy of Finland website.

The questionnaires submitted to the Academy of Finland's Research Council for Culture and Society are not made available to the public, as they were for the evaluation panel and steering group to develop findings. The methodology in terms of the structure of the questionnaires is made available as an appendix to the report.

Measurement of Arts and Humanities Research:

The 2012 triennial evaluation is structured in such a way that each of the Academy of Finland's Research Councils examines the subjects and fields that can be regarded as their responsibility. The 2012 evaluation is the first assessment of its kind that focuses on the performance of individual Research Councils, and as such the report states that the report is "explorative by nature and seeks to develop new research tools." As such, though there are elements that if used in isolation would favour STEM subjects over AH (such as exclusively bibliometric indicators, patents, etc.) this is less of a danger when a Research Council which is responsible for and understands Arts and Humanities is given the responsibility of evaluation. The Research Council for Culture and Society is charged with the evaluation of the subjects which elsewhere would fall under the rubric of AHSS. Its SWOT analysis focuses on matters which are of direct consequence to the AHSS research environment, noting that the fields of cultural and social research are characterised by the interaction of distinctive national features and international engagement, as well as being contextual in terms of being rooted in a time and place. Finnish researchers, therefore, have a specific responsibility to explore Finnish culture and society, and to some extent, Nordic culture and society. Within the SWOT analysis, it may be said that good news is no news, so to focus on some of the weaknesses is of most use to the international observer of Arts and Humanities research. One observation of the report is that most research activity is conducted through projects, which does not support the long-term development of research environments. As research funding is project-oriented, this detracts from diversity. In some fields, funding pressures push researchers towards applied research. Also, that national mobility is limited despite structural reforms which needs to be addressed.

Although the *Research in Art and Design in Finnish Universities* report notes that all the institutions evaluated face the similar problem of the relationship between theory and practice, it specifically draws attention to the innate diversity of the approaches taken and circumstances faced by the different faculty and universities. As a result of this, the panel's discussions were discretely concerned with each individual unit being assessed. In recognition of this, summaries of the research taking place in each unit are given in the report. These summaries are structured under the following headings: *Vision, Organization, Capability, Environment and Equipment, Productivity of Faculty and Staff, Assessment of Research Education, Social Impact of Art and Design, Recommendation (and Challenges)*. Peer review and self-reporting are assumed to be integral parts of an evaluation of the research undertaken by these arts and design higher education institutions. In the questionnaires which were sent out in Spring 2008, there is a comprehensive list of headings under which information was gathered. The questions fall under the following headings: 1. Staff Members, 2. Funding, 3. Doctoral Training, 4. Postdoctoral Research, 5. Research, Publications, and Artistic Work, 6. National Cooperation, 7. International Cooperation, 8. Infrastructure and Information and Documentation Activities, 9. Societal Relevance, 10. The University's Self-Assessment (which included a SWOT analysis), and space for 11. Other Comments. In addition to this, another questionnaire was sent out to the units being assessed which dealt specifically with their doctoral schools, and information pertaining to this (such as somewhat quantitative details such as numbers of students, degrees completed, number of doctoral school students who had studied abroad, etc.)

Intended and Unintended Consequences:

One of the interesting points to be raised about the *Research in Art and Design in Finnish Universities* report is that in the questionnaire sent out to the units being assessed, it explicitly requests information relating to the placement of doctoral graduates in working life, and asks the assessed

units to describe the tasks or positions which these graduates have sought after graduation. This suggests that the Academy of Finland's Research Council for Culture and Society takes a rather longer view of the responsibilities of higher education in Finland. While it does not explicitly evaluate of where doctoral graduates end up working, that it raises the question at all is to suggest that the Research Council regards this as worth considering. This takes evaluation beyond of measurement of peer-respect of research being currently undertaken, or of the number of doctoral students or postdoctoral researchers, or of measuring research outputs of various forms. Rather, it moves evaluation into the sphere of the long-term results of research and education on the individual researcher, and perhaps eventually also society as a whole.

Observations/Additional Comments:

The 2012 triennial report notes that external peer reviews, when conducted on a large scale, are quite "heavy and expensive tools to use". Accordingly, the evaluation made use of task forces that produced SWOT analyses of the strengths, weaknesses, opportunities and threats to the development of individual disciplines.

The Academy of Finland's identification of grand challenges faced by humankind –and not just Finnish society - is a bold move. By looking beyond simply quantitative measures, and considering how one might define impact in such audacious terms is testament to an independence of mind, and is a gesture that research councils elsewhere would do well to emulate if the notion of "impact" is to be given true depth.

A point to be raised is the outward-looking nature of the Research in Art and Design evaluation. The rubrics of International Cooperation and Internationality draw attention to recognition within the Finnish higher education environment that insularity cannot serve a country of the size of Finland, nor perhaps, of its linguistic situation. Finland does not have an equivalent of the Anglophone world as does Ireland for example, a ready-made network of international potential collaborators, and so a commitment to a cosmopolitan attitude is advantageous.

Finally, in the questionnaires, there is a structural acceptance of development, of room for improvement. This is to be seen from the SWOT analysis in question 10, in the final space for comments of question 11 which asks researchers to call attention to "research-related issues that are not touched upon" in the questionnaire, to proposals for improvements to the doctoral school system. By allowing for feedback in this manner (there are other examples) the Academy of Finland's questionnaire trusts the researchers to offer an analysis, knowing that they know their field and their institution better than anybody else. It also recognises that the collection of apparently quantitative information can be misleading if not arbitrary, and so must be contextualised within a broader and more thorough qualitative, discursive framework.

Finally, both of these evaluations focus on the fact that the traditional ways and methods of doing research are very much in flux. The growing importance of electronic access to research materials and data, multidisciplinary research approaches, robust information policies and infrastructure, which a focused problem orientation and various networks of collaboration are not just of importance to research concerned with the six grand challenges, but all higher education research. The new tools and techniques available in these areas can be allied with awareness that improving the quality and impact of scientific research in Finland requires optimising the allocation of scarce resources.

Selected References:

- *The State of Scientific Research in Finland*, Academy of Finland, 2012
- *Research in Art and Design in Finnish Universities Evaluation Report*, Academy of Finland, 2009
- *FinnSight 2015 - The Outlook for Science, Technology and Society*, Academy of Finland and Tekes, 2006
- *Media Culture Research Programme Evaluation Report*, Academy of Finland, 2003

9.4 IRELAND

Executive Summary:

Forfás is Ireland's policy advisory board for enterprise, trade, science, technology, and innovation. As part of its remit, it provides research, advice and support in the areas of enterprise and science policy for the Irish government. This includes collecting data to ascertain the role played by research and development in higher education institutions in the broader Irish economy. The main report produced by Forfás along these lines is the biennial *Higher Education R&D Survey*, which provides an overview of research capacity (in terms of personnel, income, awards, etc.), the most recent iteration of which was the 2011 Survey, and is awaiting publication. A survey was not conducted in 2009-2010 due to financial constraints. The survey is carried out every two years and analyses R&D expenditure and R&D personnel data in universities and Institutes of Technology throughout the country. There is no overall national research evaluation system in Ireland, but the Forfás survey represents an attempt by the Irish government to collect data which may provide some policy guidance. The exercise is voluntary, and is not connected with funding at the most abstract level and depends upon HEIs being sufficiently organized to have the data prepared and ready to return to Forfás for analysis.

In 2009, University College Cork was the first (and to date, the only) institution in Ireland to have undertaken a comprehensive review of its research status with its Research Quality Review (RQR). In a process involving 115 international experts in 15 different panels, the research performance of all staff was evaluated according to international standards and criteria, in order to present an accurate and fair picture of the quality and level research as it stands in UCC. This is a part of UCC's quality assurance process, which is overseen by the university's Quality Promotion Committee. The objective of the review was to provide an assessment of the quality and level of research activity in UCC, at the departmental, school, and research institute level. The benchmarking of this process was to be undertaken on a disciplinary basis. After a period of consultation and following the recommendations of a Research Review Implementation Group, each academic unit or subject area was assigned to a disciplinary panel. There were to be fifteen international Peer Review Panels, experts in each academic subject area drawn from top-ranking universities and institutes around the world. It was hoped that the RQR would provide: an assessment of areas of interest within academic subjects, an overview of the research strengths and weaknesses across the university at various levels, and inform strategic planning within the university. Following a pilot exercise in 2008 of two panels, one for the Humanities and one the Sciences, the university proceeded with the review of all research of all the academic units in UCC.

In March of 2009, the Irish Research Council for the Humanities and Social Sciences (IRCHSS) and Royal Irish Academy (RIA) convened a meeting to discuss the growing influence of rankings on higher education and concern about the use of science-informed practices to measure and evaluate research. The aim was to develop appropriate key performance indicator (KPIs) for the evaluation of Irish humanities research. The resulting reports which emerged from this meeting were *Developing Key Performance Indicators for the Humanities* (2009), followed by *The Appropriateness of Key Performance Indicators to Research in Arts and Humanities Disciplines: Ireland's Contribution to the European Debate* (2011). These reports had four broad intentions: (i) catalogue the range of current research norms and outputs in the various disciplines in the larger arts and humanities field, (ii) provide discipline specific research statements, (iii) articulate the research aspirations of the disciplines, and (iv) provide an understanding of how research quality and activity should be assessed and are currently valued. To illustrate the diversity of research approaches and impacts, the RIA used examples drawn from individual statements across eleven disciplines to illustrate distinct research approaches and methodologies used to examine and explore areas of inquiry, and to highlight the need to eschew any one-size-fits-all approach to any system of KPIs related to the Arts and Humanities

Name/Title of Evaluation Model:

Forfás Higher Education R&D Survey 2008
University College Cork Research Quality Review 2009
RIA Key Performance Indicators for the Arts and Humanities

Policy Objective(s):

The objective of the Forfás survey is simply to provide data to the Irish government, and consequently to various funding agencies. It is used to inform government and all public agencies (including the surveyed HEIs) about their processes and decisions.

Methodology, incl. time-frame, resources, costs, technologies:

The Forfás survey is carried out following the OECD Frascati Manual (2002) guidelines for estimating levels of research and development in the higher education sector according to:

1. An analysis of financial data from each institution;
2. An analysis of personnel data and time-use data based on the amount of research per person employed from each institution.

Questionnaires were sent out at the end of October 2009 to the surveyed HEIs, with a follow-up of non-respondents by telephone from mid November 2009 until mid February 2010 when final outstanding information was received. Detailed departmental income and expenditure was obtained from each university and institute of technology, which comprised total capital and current expenditure from the colleges' block grant (i.e., recurrent funding from the Department of Education and Skills to the HEA for direct disbursement to HEA-institutions) for all departments, from which a research proportion was derived, based on the amount of research-time reported by the respondents. Headcounts of personnel were collected, and divided into research academic staff and research support staff, and split between male and female to provide data for gender comparisons. The percentage of time spent on research was also obtained by asking each academic department to estimate the time spent on research activities by each member of staff in his/her department (see Figure 23).

Figure 23 Time Spent on Research Activities by People in HE

The following activities are deemed as “research activities” for the purpose of this survey: ✓	The following activities are not deemed as “research activities” for the purpose of this survey: X
Personal research Team research Writing research proposals Writing research reports Supervision of PhD students Other research based activities including admin and planning	Teaching General Admin Supervision of non-PHD students Other non-research based activities External activities

Source: Forfás Higher Education R&D Survey 2008

Dissemination, incl. how much information is available regarding data and methods:

Forfás's R&D Survey data is made available to all, which enables HEIs to make global comparisons with one another. It is purely a statistics generating exercise.

Measurement of Arts and Humanities Research:

There are no specific (or even general) provisions made for Arts and Humanities research in the Forfás survey.

A template for the submissions to the review panels was developed and agreed upon, and the information required of each unit included the following: (I) a publication portfolio for all academic and research staff of the academic unit for the last 5 years, (II) research grants and awards for the last 5 years, (III) a unit research portfolio, (IV) a description of how research is organized within the unit (e.g., research groups, clusters, etc.), (V) postgraduate research activity (numbers graduated over the last 5 years, and the number of those currently registered), (VI) scholarly activity of staff for the last 5 years, and (VII) detailed research and scholarly CV covering the full career of all academic and research staff in the unit. The process, required three-and-a-half day site visits by the panels to UCC to view facilities and meet with staff, students and officers of the university. Submissions were prepared by all the academic units, and uploaded to a secure website where they were to be evaluated by the expert panels. The criteria for assessment were as follows: (I) published output, (II) research-related activities, (III) funding and (IV) peer esteem. Evaluation of individual staff members was not a part of the process. As a review report from each review panel was provided for each academic unit, the process was tailored for each of the units/subjects evaluated within the RQR. Those of relevance to the Arts and Humanities were Panels L through to Panel O. In all, nearly 1,100 academic and research staff, working in 61 different academic units, and with over 13,500 research outputs were considered in the RQR.

Given that there is no national assessment for Ireland, the RIA's two documents are concerned with ensuring the measures applied to the evaluation of research are not specifically Irish, that is that they are in line with best practice on an international, and especially on a European level. The RIA approach emphasises that publications are but one measure of performance, and that no one KPI can capture the quality and impact of research undertaken within Arts and Humanities. Alternative indicators which are suggested include: supervision and mentoring of PhD and postdoctoral researchers, editing of monographic series and journals, holding office within university or learned societies, presenting at international conferences, the designing of undergraduate courses, and participating in media and popular debates and curating exhibitions. This list indicates that the notions of methodology and practice must be expanded upon to better capture the types of knowledge created in these research undertakings. That said, the RIA notes that peer review remains the prime measure of quality in Arts and Humanities research, once it is accepted that peer review is expanded beyond the narrow understanding of peer review relating only to publications. Further to this, the RIA notes that for certain research areas in the Arts and Humanities in Ireland (i.e., research related to topics in the Irish-language), it cannot be expected that such subjects are to be evaluated in the same way as another language-related research area such as Italian or Spanish. The research community for areas centred on Irish topics (in terms of Irish language, literature, linguistics, and philology, but also within law, sociology, politics, etc.) is generally – though not exclusively – to be found undertaking such research in Ireland itself.

Intended and Unintended Consequences:

Even though the Forfás survey is purely for the generation of statistics, with such an exercise there is a danger that there is a reinforcement of the status quo in terms of how research is perceived, and arguably this status quo favours STEM subjects. The matrix by which activities are divided into research or non-research is shallow and restrictive. "External activities" by another measure could be labelled as research having engagement with stakeholders (who need not necessarily, of course,

be based in a HEI, or engaged in research themselves), or that gold-standard of modern research evaluation, “impact”.

There is intended to be a degree of feedback between the RQR and its delivery to the research community of UCC. It was not expected that this would be a report which would score the work being undertaken by academic units, and that a positive report or a negative report would stand as a fixed evaluation of that unit until the next evaluation. As such, each academic unit was asked to respond to the findings and the recommendations of the expert panels in order to develop a quality improvement plan, along with an amended research strategic plan for the unit. This post-RQR review process was to take place not just at the unit level, but also at the college and research institute level, with a view to these reviews going on to inform a university-wide review of UCC’s research strategic plan. An unintended consequence of the RQR was that a very significant body of data was collected in the process which could in turn be used to develop improved research information systems in UCC, which could feed back in to the research community of the university. As with other evaluation processes, there is not a sufficient distinction to be made between Humanities research and Arts research, given that for the latter, only expert Panel O (Music and Drama & Theatre Studies) falls into this category. One possible drawback for external consideration of the RQR is that because it is an evaluation undertaken by a university for its own internal strategic purposes, and this combined with the peer-review system means that there is little that is made explicit in defining what is specific to Arts research. This Panel does note, however, that “practice-led research in performance is still an emerging field in Irish higher education”, so there is at least an awareness of such issues, even if there isn’t a great deal made specific on the topic.

These texts by the RIA are to a large extent exploratory, and can only offer guidelines for how they hope research in the Arts and Humanities in Ireland will be understood in terms which are both broad enough to capture the richness of such a vast area, and yet also specific and robust. Any alternative or supplement to scientific bibliometrics must be rigorous. Furthermore, the 2011 guide notes in passing the opportunities offered to Arts and Humanities research by the growth of the Digital Humanities field. This is somewhat impressionistic, however, and does little to stop the march of metrification upon higher education research as a whole. One consequence of this project’s status as providing guidelines and suggestions is that it lacks in concrete proposals. The RIA offers a robust defence of Arts and Humanities research (though with an emphasis on Humanities) but more is required to provide a defence of such research in the face of what is perceived by policy-makers as the rigour and supposed scientific nature of metrification. Each subject overview undertaken does, however, allow researchers to highlight what they consider to be specific to their own discipline. For example, the chapter on KPIs for Film and Media Studies notes the role of practice-based and practice-led research (i.e., the production of films of whatever form), and notes other outcomes such as screen-writing and digital media outputs. This chapter also suggests “graded differential metrics”, equivalent to traditional peer-reviewed texts, specific to such research, in terms of funding attracted for realising a project, or inclusion in recognised film festivals, etc.

Observations /Additional Comments:

According to the Forfás definition of research, it is by HEIs, for HEIs. Activities are by this definition internal, and need not engage with the wider world beyond higher education. Even internally, the definition of research completely excludes the idea of valuable research being conducted at the Masters level. This is somewhat peculiar, given that if there are Masters degrees which are by definition research based, what does Forfás believe they are for? For this notion of research to be adopted wholesale, it would imply that only those who have both the time (3+ years) and money to study for a PhD should do so, which has numerous worrying implications.

The “non selective” aspect of the RQR appears to be one of its strengths, in that it does not require editing of a department’s staff profile, or editing of individual researchers’ publication outputs, for the reason that their entire publication output for the previous 5 years is reviewed, as well as their

career CV. This strength of the RQR is also a potential drawback, given the resources which are required to undertake it properly, on both the side of the evaluators (i.e., the expert panels) and the evaluatees. Those being evaluated are expected to have up-to-date research profiles and publication lists, which shows the importance for researchers of maintaining their information which is held in university research systems. Such an evaluation as the RQR illustrates how data and information management is becoming a central part of any researcher's day-to-day activity. Nevertheless, this combination of self-assessment, combined with external peer-review appears to be the most balanced approach to evaluation of research undertaken at the University level.

A defence in isolation is useful, but a defence of Arts and Humanities research which at the same time engages with the reality of a higher education landscape internationally which focuses on measurement of impact and metrics is indispensable. Further work is required, not only at a national but also at a wider European level, to this end.

Selected References:

- *Advancing Humanities and Social Sciences Research in Ireland*, RIA, 2007
- *Developing Key Performance Indicators for the Humanities*, RIA/IRCHSS, 2009
- *The Higher Education R&D Survey 2008*, Forfás, 2008
- *Playing to our Strengths: the role of the arts, humanities and social sciences and implications for public policy*, IRCHSS, 2010
- *Quality Promotion Committee UCC*, 2010
- *Research Quality Review 2009*, <http://www.ucc.ie/en/qpu/reports/research/RQRR/>,
- *The Appropriateness of Key Performance Indicators to Research in Arts and Humanities Disciplines*, RIA, 2011.

9.5 NETHERLANDS

Executive Summary:

The three main Netherlands organisations responsible for publicly funded research defined a protocol for practical use in all future research evaluations conducted under their auspices, aimed at assessing all publicly funded research once every six years. A crucial element is that once every three years research units produce a self-evaluation. This case study describes the protocol. The 2009-2015 Protocol is the fourth such evaluation, following those that took place in 1994, 1998 and 2003. A large part of the information provided below is extracted from a document published by the three organizations listed below.

Name/Title of Research Assessment Exercise:

Standard Evaluation Protocol 2009-2015.

Policy Context, incl. circumstances under which the exercise came about:

The three main Dutch organisations responsible for publicly funded research - the Royal Netherlands Academy of Arts and Sciences (KNAW), Association of Universities in the Netherlands (VSNU), and the Netherlands Organisation for Scientific Research (NWO) - defined the Standard Evaluation Protocol (SEP) for practical use in all future research evaluations conducted under their auspices. In this evaluation system all publicly funded research is evaluated once every six years. Once every three years, at the mid-point between such evaluations, research units produce a self-evaluation, which alternates between preparation for the external evaluation and serving as an internal mid-term evaluation.

The board of the organisation under whose jurisdiction a given research institute falls, i.e. the board of a specific university, of KNAW or of NWO, is responsible for the organisation of the evaluation of that institute and for applying proper procedures.

The evaluation system is a combination of retrospective and prospective analysis. The relationship between retro- and prospective evaluation is to some extent the result of confidence in the future based on insight into the past. In other words: discussions about the future require knowledge of the past. The emphasis is on prospective analysis.

The system aims at operating with the least possible burden for the researchers, with a self-evaluation once every three years, and an external evaluation once every six years. On the basis of a yearly monitoring system, the institutes maintain data needed for these evaluations in a systematic way. The three research organisations intend to create a national research information system, accessible through the Internet, to store all relevant data.

Policy Objective(s):

The 2009-2015 iteration of the SEP has two objectives regarding the evaluation of research (which includes PhD training) and research management:

- Improvement of research quality based on an external peer review, including scientific and societal relevance of research, research policy and research management.
- Accountability to the board of the research organisation, and towards funding agencies, government and society at large.

An important condition is also to keep the administrative burden as low as possible. For that reason these evaluations are intended to serve all regular public evaluation goals.

Methodology, incl. time-frame, resources, costs, technologies:

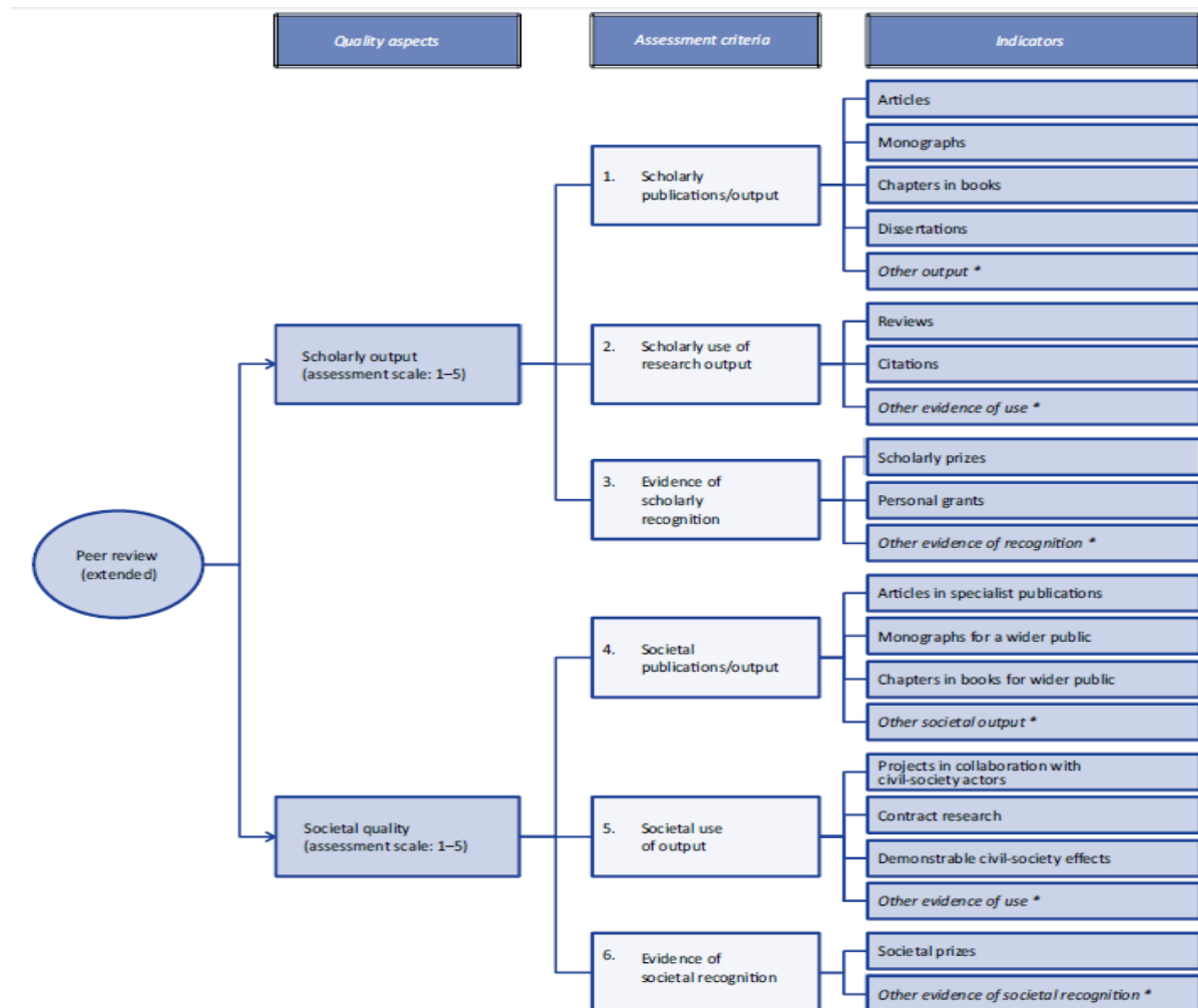
The SEP entails what it calls three main characteristics. These are: two levels of assessment (at the two levels of research organisation, i.e. the entire institute assessed, and the individual research

groups), three vital tasks (producing results for the academic community, producing results that are relevant for society, and educating and training the next generation of researchers), and four main criteria. The criteria used in evaluation are as follows (Figure 24 and 25):

- Quality (international recognition and innovative potential)
- Productivity (scientific output)
- Relevance (scientific and socio-economic impact)
- Vitality and feasibility (flexibility, management, and leadership).

The evaluation committee presents its judgement on these criteria according to a five-point scale: excellent, very good, good, satisfactory, and unsatisfactory.

Figure 24 Diagram of Indicators in the Humanities (NL)



Source: Quality Indicators for Research in the Humanities, 2011

Figure 25 List of Indicators

Assessment criteria	Indicators	Information requirement (to be made more specific in the pilot phase)
1. Scientific/scholarly publications	Articles	<ul style="list-style-type: none"> • List • Numbers, marked according to A, B, and C journals • Selection of key publications
	Monographs	<ul style="list-style-type: none"> • List • Numbers, marked according to A, B, and C publishers and series • Selection of key publications
	Chapters in books	<ul style="list-style-type: none"> • List • Numbers, marked according to A, B, and C publishers and series • Selection of key publications
	Completed dissertations	<ul style="list-style-type: none"> • List per research group • List per researcher (main supervisor)
	<i>Other scientific/scholarly output, for example, conference papers, editorships, handbooks, dictionaries, editions of texts, databases, software</i>	Quantitative and/or qualitative information to be delivered as determined according to the context
2. Scientific/scholarly use of research output	Reviews	Traceable references to samples
	Bibliometric indicators	Citation analysis (only if the databases provide sufficient coverage)
	<i>Other evidence of use, for example books sold/loaned, articles downloaded, use of databases, software</i>	Quantitative and/or qualitative information to be delivered as determined according to the context
3. Evidence of scientific/scholarly recognition	Scientific/scholarly prizes	Simple statement with dates (years)
	Personal grants (VENI, VIDI, VICI, Spinoza, ERC)	Simple statement with dates (years)
	<i>Other evidence of scientific/scholarly recognition, for example memberships of academies, honorary doctorates, external appointments, invitations to give keynote lectures, invitations to contribute to handbooks, dictionaries or editions of texts, chief/full editorships of noted national/international journals/books/collections, advisory/ referee appointments (for example NWO, external review committees), fellowships at prestigious institutes/foreign institutes</i>	Quantitative and/or qualitative information to be delivered as determined according to the context

4. Civil-society publications	Articles in specialist publications (not being primarily scientific/scholarly journals)	<ul style="list-style-type: none"> • List • Selection of key publications
	Monographs for non-scientists/scholars and interested individuals	<ul style="list-style-type: none"> • List • Selection of key publications
	Chapters in books for non-scientists/scholars and interested individuals	<ul style="list-style-type: none"> • List • Selection of key publications
	<i>Other civil-society output, for example collections for non-scientists/scholars and interested individuals, editorships of specialist publications, handbooks, dictionaries, editions of texts, databases, software, exhibitions, catalogues, translations, advisory reports on policy</i>	Quantitative and/or qualitative information to be requested as determined according to the context
5. Civil-society use of research output	Projects carried out in collaboration with civil-society actors	Simple statement with dates (years)
	Contract research	Simple statement with dates (years)
	Demonstrable civil-society effects of research	Simple statement with dates (years)
	<i>Other types of civil-society use, for example reviews, citations in policy reports, use of publications, media attention, books sold/loaned</i>	Quantitative and/or qualitative information to be requested as determined according to the context
6. Evidence of civil-society recognition	Civil-society prizes	Simple statement with dates (years)
	<i>Other evidence of civil-society recognition, for example civil-society appointments, invitations to give lectures, invitations for media appearances, advisory positions/membership of advisory committees</i>	Quantitative and/or qualitative information to be requested as determined according to the context

Source: Quality Indicators for Research in the Humanities, 2011

Each institute is assessed by an external peer evaluation committee once every six years. The institute also produces an internal mid-term self-evaluation every six years, which includes a SWOT analysis. This self-evaluation has the intended function as a half-way point of consultation between the units evaluated and the board of the institution, to allow reflection upon what happened with the recommendations made by the review committee three years previous, and also to look ahead to the next external review.

There may be some overlap between different institutes; for example, researchers may work both in an Academy institute and in a university-based research school. It is one of the goals of this system to avoid unnecessary overlap between the evaluations of the various institutes. A leading principle therefore is that information about groups, programmes or parts of the institute evaluated in one evaluation may be used in another. The evaluation committee visits the institute being evaluated. A review is prepared of each research programme run by the institute, containing:

A quantified assessment of the quality, productivity, relevance and prospects of the research programme

An explanation of this quantified assessment, containing:

- A reflection on the leadership, strategy and policy of/for the research programme
- An assessment of the quality of the research staff, (human) resources, funding policies and facilities
- An assessment of the quality and quantity of the publications and of the publication strategies
- An assessment of the academic reputation of the group/ programme
- An assessment of the relevance of the programme from an academic perspective and from a broader social perspective
- An assessment of the future perspectives of the group/ programme.

Data must be provided about funding and resources. The academic reputation of a given institute may be indicated in several ways. Institutes and disciplines may refer to the practice of presenting a bibliometric analysis of the citations of the scientific results. Previous peer reviews, rewards and prizes may also be cited.

In the past few years several evaluation committees, mainly in the natural and life sciences, have used the outcomes of extended bibliometric studies carried out by the Centre for Science and Technology Studies (CWTS).

Dissemination, incl. how much information is available regarding data and methods:

The final evaluation reports are sent to the boards of the institutes evaluated. Each board then writes a commentary for which it may or may not consult the advisory board. On the basis of the report, the board's advice and discussions with the institute, the university / KNAW / NWO board will draw conclusions for the future of the institute. The self-evaluation document, the final evaluation report, and the conclusions made by the board together constitute the results of the external evaluation.

Measurement of Arts and Humanities Research:

The SEP is not prescriptive in terms of the measurement of Arts and Humanities research specifically, given the role of self-evaluation in the evaluation process is in part a bottom-up approach. It is left to institutions to emphasise the areas of research which they consider relevant. Thus, though the SEP is an evaluation process taking place on a rolling basis across all disciplines in all Dutch institutions, according to generally accepted principles of measurement and assessment, each institute is expected to present the specific characteristics of a given discipline which is being evaluated. As such, a SWOT analysis (Strengths, Weaknesses, Opportunities, Threats) plays a role in the self-evaluation. This allows researchers to triangulate their research with respect to the wider research environment, and where they would like their research to be.

That said, it is to be noted that in terms of measurement of outputs, the Dutch model is somewhat conventional. In the submission of tables in the quantitative part of the self-evaluation process, the main categories of research output do not make allowances for research outputs beyond the usual headings of book, book chapter, journal article, conference paper. There is however space given for "other research output", but this just goes to indicate that by having what remains in effect a one-size-fits-all approach to research outputs, the specific character of disciplines is elided, and this elision does not favour arts and Humanities research.

Intended and Unintended Consequences:

The board is meant to report on the results of both the mid-term self-evaluation and the external evaluation in its annual report. The board should then make the outcome of the external evaluation available to anyone on request; preferably, with the results being made available online.

A systematic account of intended and unintended consequences would require a separate study. It does not appear that such a study has not been carried out. Though bibliometric evaluation is not stipulated by the SEP regarding research outputs, and though the external peer review committees do not necessarily use it, there is however room for concern that explicit reference is not made to the specific characteristics of Arts and Humanities research. Some institutes seem to take the internal self-analysis far more seriously than was intended, making it akin to the external evaluation. This misinterpretation of the intended purpose of the internal self-evaluation puts onerous demands on institutes and researchers, and incurs the danger of death by assessment.

Observations /Additional Comments:

For some disciplines an external peer review was carried out at the national level, evaluating all research groups in all Netherlands universities at the same time (e.g. computer science; chemistry). In other disciplines (e.g. physics), several evaluation committees were established, each dealing only with a limited number of institutions (e.g., Leiden University and Delft University of Technology in the field of physics). Difficulties with using bibliometric methods for Arts and Humanities research was recognised in the 2009 report of the Committee for the National Plan for the Future of the Humanities, Sustainable Humanities [Duurzame Geesteswetenschappen]. On this report, there have been pilot studies to test the system of quality indicators for the humanities, with the intention to implement these in the next SEP (2015-2021). There have also been similar reports by the Royal Netherlands Academy of Arts and Sciences for Engineering and the Social Sciences, and it is hoped that the next SEP will allow for more flexibility in criteria and indicators for different subjects and fields. The Academy has established a steering group to review developments in the humanities regarding evaluation in the next two years.

Selected References:

- *Evaluating Research in Context*, COS, 2007
- *Guide for Evaluating the Societal Relevance of Scientific Research* [Handreiking Evaluatie van Maatschappelijke Relevantie van Wetenschappelijk Onderzoek], ERiC, NWO, and VSNU, 2010
- *Impact Assessment Humanities* [Impact Assessment Geesteswetenschappen], NWO, 2009
- *Interdisciplinariteit in de Geesteswetenschappen*, KNAW, 2003
- *Judging Research on its Merits*, KNAW, 2005
- *Kwaliteit en Relevantie in de Geesteswetenschappen*, KNAW, 2012
- *New Prospects in Literary Research*, KNAW, 2005
- *Quality Indicators for Research in the Humanities*, KNAW, 2011
- *Research Quality Assessment of the Faculties of Arts/Humanities*, Radboud University Nijmegen, Tilburg University, Universiteit van Amsterdam Vrije Universiteit Amsterdam, 2007 <http://www.tilburguniversity.edu/research/humanities/assessments/>
- *Standard Evaluation Protocol 2009 - 2015 for Public Research Organisations*, KNAW, 2010 updated
- *The Dutch Research Agenda*, KNAW, 2012

9.6 NORWAY

Executive Summary:

A new model for result based university research funding was established in Norway in 2006. The main policy objective was to stimulate increased research activities and allocate resources to centers performing excellent research. The methodology is based on three elements: i. a base component, ii. an education component, and iii. a research component. This system will probably result in quite substantial restructuring of the Norwegian research system. An evaluation of the system took place in 2009, resulting in the Norwegian Research Council's strategy for 2009 - 2012.

Name/Title of Research Assessment Exercise:

New Model for Result based University Research Funding

Policy Context, incl. circumstances under which the exercise came about:

In 2006, Norway adopted a partly new system for allocating funding to universities and colleges. The new model is partly based on science indicators and gives more weight to research quality and competition than the previous funding system. The 2009-2012 strategy intends to stimulate increased research activities by allocating resources to centres that were able to document excellence in research, in areas specifically outlined by the Norwegian government as being of interest. These are: Energy and the Environment, Food, Oceans, Health and Welfare, ICT, Biotechnology and New Materials.

Policy Objective(s):

The policy objective is to stimulate increased research activities and research excellence.

Methodology, incl. time-frame, resources, costs, technologies:

The model is based on three components: I. a base component, II. an education component, and III. a research component. Part of the research component is result based, where the allocation of funds is based on performance according to an indicator model measuring recorded research results.

The result-based research component consists of four sets of indicators designed to measure research quality: a) Number of doctorates, b) scientific publication 'points', c) funding from Research Council Norway (RCN) and d) funding from the EU's Framework Programme for research.

The result based component has a fixed annual volume. Funds are allocated and reallocated annually, based on the performance of universities and colleges, according to the 4 sets of indicators, during the two previous years. Allocations are made nationally to the universities and colleges, which then decide how to allocate these funds locally.

The indicator for scientific publications was developed by the Norwegian University and College Council, on commission by the Norwegian Government.

Dissemination, incl. how much information is available regarding data and methods:

All information regarding data and methods is available. However, the overall system, as well as its indicator part, is quite complicated and therefore requires quite sophisticated competences on indicators and accounting procedures, including their consequences, to fully understand the workings and consequences of the system, particularly in relation to strategic decisions at the level of universities and colleges.

Measurement of Arts and Humanities Research:

The emphasis which has been put on Norway's national thematic and technological priority areas means that Arts and Humanities research had not been given a specific role or place in the 2006

model. There has been no systematic overview of Arts and Humanities research. The Research Council of Norway (Forskningsradet), however, undertakes subject-specific evaluations that aim to critically evaluate Norwegian research in an international context, and some attention has been paid to Humanities subjects in these, such as the Evaluation of Philosophy and History of Ideas in Norway (2010) and the Evaluation of Norwegian historical research (2008). The 2009-2012 Strategy calls for “better and more coordinated Humanities and Social Science research on the cultural prerequisites underlying social development”, beyond such piecemeal reviews of individual subject areas such as history or philosophy. The emphasis in the thematic and technological priority areas is thus being expanded beyond the earliest version of the research assessment, which is to say beyond science and technology. With the Research Council of Norway proposing that the “cultural prerequisites underlying social development” become designated as a new national thematic priority area, a more thorough engagement with Arts and Humanities research will become imperative in Norway.

Intended and Unintended Consequences:

Intended consequences are, broadly speaking, to improve scientific quality within the Norwegian higher education system. Despite arguments to the contrary, unintended consequences may be incentives to prioritize certain science fields over others because of the differences in the way the design of the GUF model works for different science fields.

The publication indicator has been debated in Norway. An investigation made by a committee (Vagstad Committee) for the Norwegian Ministry of Education (2007) argued that the publication indicator could result in a development away from relatively resource-demanding publications to publications requiring relatively less resources. In response to this, the Ministry of Education argued that the risks of such tendencies had partly been met by the fact that the publication indicator consisted of two levels. The Ministry is, however, considering an extension of the different kinds of publications that are included in the publication indicator, which for example could result in an inclusion of new textbooks and other kinds of academic production.

The Vagstad Committee also argued that it was ‘...a weakness of the research component that it concerns all research areas and all institutions. The report indicates that this could result in the favoring of certain research areas and [therefore] suggests an investigation of a segmentation of the research areas in two or three parts [within the system] in the result-based reallocation.’ Statistics on higher education seem, however, to indicate that different research areas get relatively similar impact in the research component, which is taken as support for arguing that the indicator set is treating different research areas in a ‘fair’ way.

In terms of an overarching strategy for the Arts and Humanities, Norway has some way to go. The Research Council of Norway recommends that some cultural element be introduced to the thematic areas, but whether the emphasis in this area will fall on the Social Sciences rather than Arts and Humanities remains to be seen. The Research Council’s subject evaluations show some level of engagement with the Humanities, but in terms of the council’s subject-specific strategic development plans the only subjects which have been given such attention so far are within the sciences.

Observations /Additional Comments:

The Norwegian model for measuring research has been adopted by Denmark, and is one of several inspirations for the new Swedish model for block funding of universities. The Swedish and Norwegian systems accordingly show important similarities, but also potentially important differences. A deeper comparative evaluation of the workings and impacts of the two systems on science excellence and other intended and unintended impacts would be highly interesting and potentially important for research policy within the EU. The latest model of the research evaluation is coming to an end in 2012, and it is hoped that the new iteration will give Arts and Humanities research a more prominent role. The continued economic focus in the research strategy means that

on a policy level, for the Arts and Humanities to have a role they will need to integrate with innovation efforts.

Selected References:

- *Commitment to Research, Summary in English: Report no. 20 to the Storting* (2004-2005), Norwegian Ministry for Education and Research
- *Climate for Research, Summary in English: Report no. 30 to the Storting* (2008-2009), Norwegian Ministry for Education and Research
- *Innovation Strategy for the Research Council of Norway, 2011-2014*, Research Council of Norway, 2011
- *In the Vanguard of Research*, Research Council of Norway, 2012

9.7 SPAIN

Executive Summary:

The research outputs of university teachers in terms of publications are evaluated on a voluntary basis every six years. The evaluation criteria differ among fields, and the evaluators take into consideration the quality of publications measured by articles in Journal Citation Reports and their impact factor. In a number of fields, books (Humanities) or patents (Engineering) are also considered. This policy has increased the internationalization of Spanish research publications while probably biasing against research of direct interest to industry or local governments, which is less likely to be published in reputed journals.

Name/Title of Research Assessment Exercise:

Evaluation of Research Activity

Policy Context, incl. circumstances under which the exercise came about:

In 1989, a new scheme was launched to increase the research activities of both university teachers and researchers in public organizations. It formed part of the policy actions undertaken under the auspices of the first National Research and Development Plan, following the first comprehensive Science Law issued in 1986 (Ley 13, April 14, 1986 for the General Coordination of Scientific and Technical Research).

A mechanism for the evaluation of individual research activities was established, enabling all teachers and researchers fulfilling certain requisites to have their published research results evaluated every six years.

Policy Objective(s):

There was great concern at that time about the quality of university research in a number of areas, and this mechanism was designed to provide an incentive for teachers and researchers to increase the publication of their research results while at the same time reaching worldwide standards. The underlying hypothesis was that this would encourage both research activities per se and the diffusion of results.

Methodology, incl. time-frame, resources, costs, technologies:

Different scientific fields were defined. The breakdown by fields has been modified several times since the initial launch of the exercise. The current breakdown, made in 2006, distinguishes 11 fields: Mathematics and Physics; Chemistry; Cellular and Molecular Biology; Biomedical Sciences; Nature Sciences; Engineering and Architecture; Social, Political and Educational Sciences; Economics and Management Sciences; Law and Jurisprudence; History and Art; Philosophy, Philology and Linguistics.

Every field has slightly different rules regarding the evaluation of research results, and for every field there is a Committee of six to eight experts from different areas within the field. The members of a given Committee, a number of whom are changed every year, analyse the information provided by the researchers and make proposals to the National Evaluation Commission of the Research Activity. Proposals may be positive, which means that the 6-year period (a sexesium) is granted, or negative, in which case it is not. The National Evaluation Commission rarely overturns a proposal made by one of the Committees.

Applicants present, on a voluntary basis, their CVs for the six years for which the evaluation is requested. They must select five publications out of their total, summarize them briefly and provide quality evidence (impact in Journal of Citation Reports, number of citations, etc.). In general terms, the main criterion for a positive evaluation is that a minimum number (2 or 3) of the five publications selected should be JCR publications. In several fields (Humanities), books and book

chapters are evaluated on a higher scale, and in Engineering other research results (such as patents) are also considered.

The criteria for evaluating the scientific quality of publications in journals which are not JCR or of publications in other media are all described in the law. A minimum number of sexenia are required for securing tenure or for becoming a member of the commission which grants tenures. Sexenia are also very favourably looked upon in the context of applications for research funding under national and regional R&D plans.

Dissemination, incl. how much information is available regarding data and methods:

Because there is not complete transparency in the way each candidate is evaluated by the Committee, there is sometimes an official claim against an evaluation. In this case the Committee (i.e. the Committee nominated for the following year) re-examines the information provided by the person in question and may reconsider the evaluation.

The law which lays down the evaluation process is claimed to be clear and precise; however, the members of the Committees work within wide margins when making their decisions.

The information on the number of sexenia every individual has is not publicly available, whereas the aggregate data by faculty, scientific area, etc. are, and are used for comparisons. Otherwise, comprehensive and detailed breakdowns of the data according to the 11 disciplines are available on the Ministry of Education website, with in either pdf or xls formats.

Measurement of Arts and Humanities Research:

Of the evaluations of the 11 fields delineated above, those regarded as being a part of STEM (Mathematics and Physics, Chemistry, Cellular and Molecular Biology, Biomedical Sciences, Life and Earth Sciences) are evaluated only according to traditional publication outputs. The evaluation of Arts and Humanities (History and Art, and Philosophy/Philology/Linguistics) allows for a broader definition of what is to be regarded as acceptable published outputs. Regarding music outputs, the evaluation process considers published or premiered compositions by renowned performers, as well as critical editions of musical works. In terms of Arts research, evaluation considers the impact and public recognition of the work or research in question, also taking into account the prestige of such in terms of its diffusion and reception in the media. On a more specific level for the Humanities, it is stated in the evaluation guidelines that: at least one of the research outputs should be a monograph of international impact; or that two of the outputs are articles published in journals of international standing; or that one of the contributions is an article in an international journal or in proceedings of a conference, and the other should be a book chapter.

Intended and Unintended Consequences:

The process has had positive consequences with regard to the quantity and quality of research and to the publication of research results in international publications. Therefore, the main objective of the initiative has been attained. Another positive consequence is that several Spanish journals, conscious of the importance of being included in the JCR or other national or international databases, have improved the evaluation and peer review processes.

As an unintended consequence we should highlight the fact that there has been a change in the behaviour of a substantial number of researchers, who now orient their research activities and publication habits mainly towards JCR, the only journals that are considered worthwhile. At the same time, research done directly for industry, or local / regional governments may be suffering because it is not highly valued and, as a result, less likely to be published in renowned international journals.

Furthermore, there has been an overall decline in recent years in the numbers of applications made by researchers, which points to a form of self-censorship in that researchers want to ensure that

when they do make an application to the evaluation process that this evaluation is successful. The reason for this is that a rejected application makes the researcher ineligible for evaluation for another three years.

Observations /Additional Comments:

There are certainly allowances made within the evaluation process for the kind of outputs which are specific to Arts and Humanities research, once these are published outputs. The evaluation process betrays a definite bias in favour of bibliometric evaluation, which doesn't sufficiently consider non-published outputs. Or, at any rate, it does not make it explicit that alternative outputs are given consideration. That said, within the realm of bibliometrics, Arts and Humanities indices and databases (Francis, International Bibliography of the Social Sciences (IBSS), Arts and Humanities Citation Index and Social Science Citation Index, Bibliography of the History of Arts (RLG), Historical Abstracts, International Medieval Bibliography, Abstracts of Music Literature RILMS, etc.) are considered as indicators of quality. That said, even online journals, which are not indexed, are to be appraised by the advisory committees according to their merits, allowing for alternative and new routes of publication to be evaluated.

Selected References:

- "The evolution of research activity in Spain", *Research Policy* 32, 2003
- *White paper on research in the Humanities*, Spanish Foundation for Science and Technology, 2006
- *Country Report: Social Sciences and Humanities in Spain*, Metris, 2011

9.8 UNITED KINGDOM

Executive Summary

Since 1986 the UK national funding bodies have evaluated the quality of research in UK universities through peer review and have used the results to inform the selective distribution of public funds. The most recent Research Assessment Exercise (RAE) took place in 2008, with an assessment of 2344 submissions from 159 HEIs, and informed research funding for universities in 2009-10. Inevitably, the RAE results were converted by the media into league tables for ranking the quality of subject areas and universities. The RAE developed into and is being succeeded by the Research Excellence Framework (REF). The intention of the REF is to blend a lighter touch peer review with bibliometric indicators where these are appropriate. The first REF results will be published in 2014.

Name/Title of Research Assessment Exercise:

Research Assessment Exercise 2008, Research Excellence Framework 2014.

Policy Context, incl. circumstances under which the exercise came about:

The first RAE was undertaken in 1986 and introduced an explicit and formalised assessment process of the quality of research. Further exercises held in 1989, 1992 and 1996 became gradually more transparent, comprehensive and systematic. The fifth exercise in 2001 considered the work of almost 50,000 researchers in 2,598 submissions from 173 higher education institutions. The RAE was the principal means by which institutions assured themselves of the quality of research undertaken in the HE sector, until the REF. From 2012-2013 universities will prepare their REF submissions, and in 2014 expert panels will evaluate these submissions, with results to be published in December 2014. This assessment will inform the selective distribution of funds by the four UK higher education funding bodies.

Policy Objective(s):

The primary purpose of the RAE 2008 was to produce quality profiles for each submission of research activity made by higher education institutions. The four higher education funding bodies in the UK used the quality profiles to determine the grant for research for each higher education institution from 2009-10. With the REF, the four higher education funding bodies intend to use the assessment outcomes to inform the selective allocation of their grant for research to the institutions which they fund, with effect from 2015-16.

Methodology, incl. time-frame, resources, costs, technologies:

RAE 2008 - Peer review with panels meeting to determine a collective view on the quality of research for each submitted unit of assessment in each higher education institution. The main body of assessment took place in 2007-08. A central RAE team based within the HEFCE manages the process for all four UK funding bodies.

REF 2014 – Universities prepare their submissions (2012-2013) according to the various criteria, which the expert panels will review (2014), results to follow in December 2014. The method of assessment is a blend of various measures, broken into what are regarded as appropriate proportions, assessed by one of four expert panels according to subject. Each submission of research output (up to four per member of staff) will be weighted according to the quality of research outputs (65%), the impact of research beyond academia (20%), and the research environment (15%).

The REF's guidelines specify that in the area of bibliometrics, none of the sub-panels "will make use of journal impact factors, rankings, lists or the perceived standing of publishers in assessing the quality of research outputs."

Dissemination, incl. how much information is available regarding data and methods:

The RAE 2008 assessment method was transparent and all aspects of the methodology are in the public domain. Full information about RAE 2008 can be obtained from the HEFCE website – www.hefce.ac.uk -The RAE results are made available publicly both by the funding bodies and the media. The REF assessment continues this open model, with full documentation available on the REF website - <http://www.ref.ac.uk> – with results to be made available in December 2014.

Measurement of Arts and Humanities Research:

The REF has been developed as a single means of assessing research across the entire higher education landscape. Of the four assessing panels, Panel D is that which assesses what can be considered Arts and Humanities research. Ten specific fields identifying different arts and humanities subjects are delineated in the REF according to which an institution must make its submissions to the expert panels. Research outputs are to be assessed according to their own merits; and alongside such standard research outputs as books, journal articles, conference papers, etc., the REF also includes other outputs, including curatorship and conservation, grammars, performances and other types of live presentations. This illustrates that the REF has made allowances for the types of outputs which are specific to arts research and humanities research. Further to this, the REF allows for the double-weighting of assessed outputs according to various criteria specific to Arts and Humanities research.

Intended and Unintended Consequences:

It was not the intention of the funding bodies to create league tables from RAE results but that has been the consequence through the media and by others. Relatedly, the results have led to greater hierarchical differentiation within the higher education system, and more concentration of research resources. Rather, the intended consequence for the funding bodies is to find a way of assessing the quality of research and then linking that quality judgement to funding in a way that commands the confidence of the higher education sector. With the REF, various criticisms have been levelled at assessing the “impact” of research. One is that it may undermine academic freedom by skewing proposals towards demonstrable economic returns, and also that impact itself (however broadly defined) remains hard to measure in any rigorous and impartial manner. Given that the REF is not complete, actual results of the exercise remain to be seen. Furthermore, Arts and Humanities research is not often outcome-based in the sense of research which is goal directed by the nature of the topic or problem under investigation, and so an unfair burden of conformity with fields where such outcomes are the norm may be placed on the Arts and Humanities. There also may be a gap between the approaches and expectations of agencies which fund or commission Arts and Humanities research, and the approach of documenting outcomes that is required by the REF.

Observations /Additional Comments:

The REF consists of a single unified framework for the funding and assessment of research across all subjects. It makes greater use of quantitative indicators in the assessment of research quality compared to the RAE system, while taking account of key differences between the different disciplines. Accordingly, for Arts and Humanities research, one of the benefits of the REF’s approach is that by making use of the “expert panels” in the review process, the assessment takes account of the qualitative aspect of Arts and Humanities research. Similarly, in terms of impact, the REF guidelines are generous in their delineation of what possible impacts may be. Here, in policy at least, there is awareness that the outcomes of such research cannot be quantified in purely economic terms. Assessment combines quantitative indicators – including bibliometric indicators wherever these are appropriate – and light touch expert review. Which of these elements are employed, and the balance between them, will vary as appropriate to each subject, and so for the Arts and Humanities, there is a very special role to be played by the expert review.

Selected References:

- *Maximizing the Social, Policy and Economic Impacts of Research in the Humanities and Social Sciences*, LSE Public Policy Group, 2008
- *Leading the World: The Economic Impact of UK Arts and Humanities Research*, AHRC, 2010
- *Past Present and Future: The Public Value of the Humanities*, RA, 2010
- *Assessing the impact of arts and humanities research at the University of Cambridge*, RAND Europe, 2010
- Kerstin Mey, “‘It takes two to Tango’ Artistic research and impact assessment under the new Research Excellence Framework (REF) in the UK”, 11th ELIA Biennial Conference Nantes, 2010
- *The Public Value of the Humanities*, AHRC, 2011
- *The Social Impact of Research Conducted in Russell Group Universities*, Russell Group, 2011
- *Assessment Framework and Guidance on Submissions*, <http://www.ref.ac.uk/pubs/>, REF, 2011
- *Panel Criteria and Working Methods*, <http://www.ref.ac.uk/pubs/>, REF, 2012

9.9 UNITED STATES

Executive Summary:

There is no overall systematic national evaluation system or policy in the United States, and so it is not possible to present a single, all-encompassing picture of the landscape of research evaluation. That said, there are efforts being made to examine how research is undertaken and assessed in the higher education context, and below are two such approaches.

The American Academy of Arts and Sciences (AAAS) Humanities Indicators Project (<http://www.humanitiesindicators.org>) came about as a result of the awareness that in the present atmosphere of quantifying education in economic terms, the Arts and Humanities were at a disadvantage to areas such as the Sciences and Engineering. Unlike these subjects, the benefits of the Arts and Humanities are not immediately amenable to measurement and evaluation, and even if they were there is no federal or state level apparatus to collect data and evaluate subjects in Arts and Humanities. The Humanities Indicators Project was undertaken by the AAAS, an honorary society, to address this gap.

STAR METRICS is a collaborative effort undertaken by research institutions and federal agencies to develop a repertoire of methods and a repository of data and information to assess the impact of federal investment in research and development. It was created as a response to a request by the White House Office of Management and Budget and the White House Office of Science and Technology Policy that federal agencies coordinate their spending toward specific goals in the realm of Science and Technology. STAR METRICS involves the National Institutes of Health, the National Science Foundation, as well the United States Department of Energy, Environmental Protection Agency, and the United States Department of Agriculture.

Name/Title of Evaluation Model:

AAAS Humanities Indicators Project <http://www.humanitiesindicators.org>

STAR METRICS - Science and Technology for America's Reinvestment: Measuring the Effect of Research on Innovation, Competitiveness and Science <http://www.starmetrics.nih.gov>

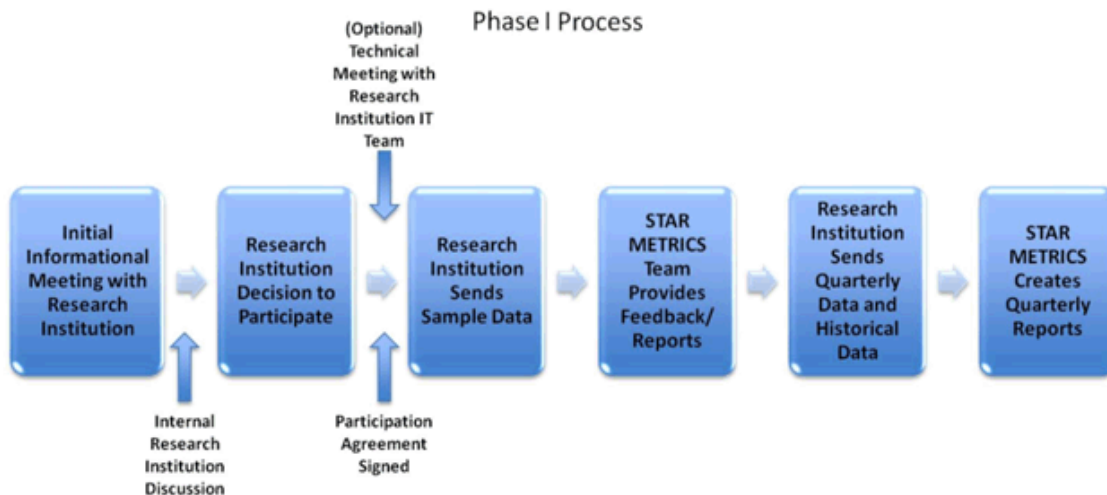
Context, incl. circumstances under which the exercise came about:

In *Tracking Changes in the Humanities*, a collection of essays published by the AAAS in 2005, Patricia J. Gumpert and John D. Jennings outlined a set of questions and possible framework to measure the Humanities specifically, in their paper "Toward the Development of Liberal Arts Indicators". In this engagement with the state of the liberal arts in higher education in the United States, the authors noted that to even begin to answer questions about the status and vitality of these subjects in higher education would require a systematic collection of data at institutional, disciplinary, and national levels. This simply had not taken place, and for it to take place at the federal level, the National Centre for Education Statistics (NCES) Integrated Postsecondary Education Data System (IPEDS) would require a major overhaul. Even before this, however, the authors also noted that there was a need to identify the measures and definitions which would yield sufficient amounts of data. The AAAS launched their Humanities Indicators Project online in 2009, and continues to supplement and update them. In the Fiscal Year 2011 budget proposal, the Obama Administration emphasised the need for an effort at the federal level to collect more and better data about the Humanities, pointing to the AAAS Project as a model for such a data infrastructure.

As well as being a response to a request from the White House Office of Management and Budget, and the White House Office of Science and Technology Policy, STAR METRICS was also a direct response to the American Recovery and Reinvestment Act of 2009 (ARRA) (Figure 26). ARRA, also known as the Recovery Act, included provisions for the stimulus of research and development. Along with these stimulus provisions, there were stipulations which require that information relating to federal spending on research and development by federal agencies be collected and made available

to the taxpayer. The reporting requirements of ARRA and STAR METRICS are separate, but the data collected via the latter feeds into ARRA. After an input gathering period of engagement with stakeholders in late 2010, a pilot version of the STAR METRICS project was undertaken by seven institutions of the Federal Demonstration Partnership in 2011, and the formal governance structure was established in January 2012, with a view to entering “Phase II” of the exercise.

Figure 26 Outline of steps involved in Phase I of STAR METRICS participation



Source: STAR METRICS

Policy Objective(s):

The AAAS was interested in devising a system of measurement which was comparable to the National Science Foundation’s (NSF) annual Science and Engineering Indicators, giving a comprehensive overview of the state of the Humanities in education, and to provide an alternative to the various other measurement approaches in existence which inherently favour Science, Technology, Engineering, and Mathematics.

STAR METRICS is a result of a push towards “outcome oriented goals” at the policy level, with a view to measuring the result of federal funding given to research and development, and to ascertain the impact of such research funding. Entering into a commitment to “Phase II” of STAR METRICS will only be possible if stakeholders find value in the approach taken by the exercise, i.e. if it reduces the reporting burden on scientists, if it aids institutions in their reporting, if it facilitates better reporting to congress, etc.

Measurement of Arts and Humanities Research:

In 2003 the NSF began collecting data about research in areas beyond Science and Technology, including the Humanities, but this NSF approach underestimated the size of the Humanities for various reasons.

The AAAS Project emphasises the need for both qualitative and quantitative indicators. The Indicators are broken into five elements: I. Primary and Secondary Education in the Humanities, II. Undergraduate and Graduate Education in the Humanities, III. The Humanities Workforce, IV. Humanities Funding and Research, and V. The Humanities in American Life. Within fourth element, there is a further division of indicators into (a) Research and Development Expenditures at Colleges and Universities, (b) Research Libraries, and (c) Academic Publishing. Within this last indicator, Academic Publishing, there is an emphasis on book publications rather than publishing in academic journals as the scholarly monograph remains the primary means by which research in the Humanities is disseminated.

There are no provisions in STAR METRICS for the measurement of either Arts or Humanities research.

Intended and Unintended Consequences:

Although the AAAS calls for qualitative indicators, on the whole this approach is quantitative, relying upon funding data, or simple number increases (as is seen in the Academic Publishing indicator within element IV of the indicators). This does not sufficiently illustrate that there are aspects of Arts and Humanities scholarship and research which must be recognised as calling for a different approach to those in Engineering or the Sciences.

As with all measurement exercises, there is a real danger that the map will become the territory, i.e. that what is being measured comes to be viewed as the full picture as researchers align their work with the expectations of the STAR METRICS system. In excluding the Arts and Humanities from consideration, there is a danger of the notion that anything that cannot be measured in terms of immediate economic payback (patents, companies spun out of technological developments, etc.) is not to be funded. This is especially problematic in the light of the so-called Culture Wars of the 1980s and 1990s when federal funding of Arts and Humanities was threatened, and there were calls from the right for both the National Endowment for the Arts and the National Endowment for the Humanities to be abolished.

Observations /Additional Comments:

The specific place of the Humanities in the remit of the AAAS is secure, but as with other assessment models, the role of the arts goes somewhat undefined. There needs to be more of a distinction made between Arts and Humanities, but this conflation is perhaps a result of the fact that the terms Arts, Humanities, and Liberal Arts are all often used interchangeably and without precision.

Though it is to be expected that the money given to research needs to be accounted for, given the vast amounts of federal funding that Science and Engineering subjects receive in higher education research, STAR METRICS is not actually a true innovation in higher education. The emphasis which is still put on STEM in higher education in the United States leaves the impression that Vannevar Bush's Science the Endless Frontier (1945) remains the last word in American research, and that the Arts and Humanities are something of an indulgence.

Selected References:

- *Making the Humanities Count: The Importance of Data*, American Academy of Arts and Sciences, 2002
- *Foundation Funding for the Humanities*, American Academy of Arts and Sciences, 2004
- *Gifts of the Muse: Reframing the Debate about the Benefit of the Arts*, RAND Corporation, 2004
- *Tracking Changes in the Humanities*, American Academy of Arts and Sciences, 2005
- *Cultivating Demand for the Arts: Arts Learning, Arts Engagement, and State Arts Policy*, RAND Corporation, 2008
- "Reflecting on the Humanities", *Dædalus: Journal of the American Academy of Arts & Sciences*, Winter 2009
- *STAR METRICS – Research Institution Participation Guide*, NIH, 2010 (latest update)

10. Appendix C: Chronology of Irish Education and Research Policy

Date	Document/Act/Policy	Details
1900	3,200 students	There are 3,200 students at university (Coolahan, 1981).
1908	Universities Act	Irish Universities Act brought into being the National University of Ireland with its constituent University Colleges - Dublin, Galway and Cork. Maynooth became a constituent college of the NUI in 1910.
1908	Scholarships	Legislation from 1908 allowed for local authorities to provide scholarships to university. However, this legislation did little to address social imbalance in the student composition of Irish universities (Coolahan, 1981).
1921	Irish Independence	Foundation of Irish Free State
1946	IIRS	The Institute of Industrial Research and Standards was set up.
1949	IDA	The Industrial Development Authority was formed as part of the Department of Industry & Commerce. This is the organisation responsible for the development and growth of Irish enterprises in world markets.
1958	Economic Development White Paper	<p>First introduced in 1958 in de Valera's last government, its main recommendations formed the basis for the First Programme for Economic Expansion, which was adopted by Lemass as government policy upon his ascension in 1959. The programme, which was the brainchild of T. K. Whitaker, involved a move away from the protectionist policies that had been in place since the 1930s.</p> <p>A Second Programme was launched in 1963, with even more ambitious targets. In particular, the policy focused on expenditures for education, with a doubling of expenditures planned. The Second Programme was discontinued in 1967, after Lemass had left office.</p>
1958	Agricultural Institute	The Agricultural Institute was set up.
1960	ESRI	The Economic and Social Research Institute was set up.
1964	Physical Planning Institute	The Physical Planning Institute was set up.
1965	Investment in Education Report	<p>The project was initiated in October 1962 by the then Minister for Education, Dr P. J. Hillery, in co-operation with the Organisation for Economic Co-operation and Development.</p> <p>The report is credited with rescuing Irish education from its focus on character development and religious formation. It reconceptualised education as a social institution, directing it to the needs of the economy and placing importance on the needs of schools to respond to the technological requirements of industry (Hahessy, 2009).</p> <p>“The Report on Investment in Education prepared by a survey team under the direction of Mr Patrick Lynch not alone makes a major</p>

		<p>contribution to the evolution of educational policy in Ireland; it also represents a break-through to a new level of economic and statistical sophistication in the preparation of the groundwork for public policy decision” (Fitzgerald, 1965).</p> <p>“The report’s two central propositions were that a non-meritocratic education system was wasteful of natural talent, and that investment in the education of that talent had contributed significantly to European postwar economic growth... (it) was scathing in its assessment of the Irish education system of the time. It reported that over half of Irish children left school at or before the age of thirteen, a finding that generated newspaper headlines and that presaged the introduction of ‘free’ second-level education and free access to special transport networks for all second-level school pupils in 1967” (Barry, 2005).</p>
1965	AIFTA	Anglo-Irish Free Trade Agreement.
1966	Science and Irish Economic Development	This second survey (by Patrick Lynch) looked at the requirements of the Irish economy in respect of scientific research, development and technology. It is the “report of the Research and Technology Survey Team appointed by the Minister for Industry and Commerce in November 1963 (in association with OECD).”
1967	Report of the Commission on Higher Education	This report recognized that there would be growing demand for third-level places. A network of nine regional technical colleges was established. According to Daly (1981), the development of regional technological colleges (RTC’s) in Ireland occurred between 1970 and 1977, when nine RTC’s were established to provide courses in technical and commercial subjects. According to Barry (2005), five RTCs were established around the country in 1970 and a further four were established between 1971 and 1977.
1967	Report of the Steering Committee on Technical Education	<p>As the report of the Steering Committee on Technical Education (1967) put it: “The main long-term function of the Colleges (RTCs) will be to educate for trade and industry over a broad spectrum of occupations ranging from craft to professional level, notably in engineering and science, but also in commercial, linguistic and other specialities. They will however be more immediately concerned with providing courses aimed at filling gaps in the industrial manpower structure, particularly in the technician area” (Barry, 2005; Clancy, 1993).</p> <p>Besides the RTCs, third-level vocational education was also provided through five older Dublin colleges: a college of commerce, a college of catering, a college of marketing and design, and two colleges of technology. These colleges, which would eventually be amalgamated to form the Dublin Institute of Technology in 1978, also saw their enrolments increase throughout the decade (Barry, 2005).</p>
1967	NSC	Establishment of the National Science Council.
1967	Donogh O’Malley Merger Proposal	Minister for Education, Donogh O'Malley, proposes plan to merge UCD and Trinity.
1967	Donogh O’Malley Reform	This reform made access to second-level education free.

1968	HEA	The Higher Education Authority was founded on an ad-hoc basis, and was primarily concerned with implementing government policy on university re-organisation, and with the planning of a binary system of higher education (O’Buachalla, 1984).
1968	Little Report	In the 1960s the external consulting firm Arthur D. Little, Inc. was asked to examine the existing IDA organizational structure and to make recommendations on alternative structures that would facilitate the achievement of the organisation’s institutional objectives. The report, submitted in 1968, suggested that agency autonomy would allow greater flexibility and more rapid decision making, a position strongly supported from within the IDA (Barry, 2006).
1968	NUIM Expands Mandate	Lay students admitted to NUI Maynooth.
1969	Grants	The scholarship system was abolished and replaced by a system of means-tested university grants.
1969	IDA	IDA Ireland was incorporated as an autonomous state sponsored body under the Industrial Development Act. Responsible for all aspects of industrial development.
1970	SPRU-UCD	Patrick Lynch set up the Science Policy Research Unit at UCD, in conjunction with colleagues from the Science Faculty.
1970	Limerick NIHE	A national institute for higher education (NIHE) was established in Limerick. The first students enrolled in 1972 according to Daly (1981).
1971	HEA	The HEA was established on a statutory basis, with general responsibility for advising the government, keeping demand under review, and planning the location and form of new institutions and facilities (O’Buachalla, 1984).
1972	ROSLA	The school-leaving age was raised to 15. This became known as the raising of the school-leaving age (ROSLA).
1972	NCEA	The National Council for Educational Awards was established on an ad hoc basis, with a general function in relation to the granting of degree and sub-degree awards in relation to courses validated by the Council (O’Buachalla, 1984).
1973	20,518	There are 20,518 students at university (Daly, 1981).
1973	EEC	Ireland joined the European Economic Community.
1973	Science, Technology and Industry in Ireland	The National Science Council produced a report that contained strong criticism of reliance on inward investment. Charles Cooper and Noel Whelan: Science, Technology and Industry in Ireland, Report to the National Science Council, January 1973.
1973	Committee on Industrial Progress	Committee on Industrial Progress, General Report, Dublin, the Stationery Office, Dublin 1973.
1973	NESC	Establishment of the National Economic and Social Council. Advises the Taoiseach on strategic issues for Ireland’s economic and social development.
1975	Teacher Training Colleges join the NUI	In 1975 the teacher training colleges of Cary fort College, Blackrock, St. Patrick’s College Drumcondra and Mary Immaculate College, Limerick

		became recognised colleges of the NUI, as was Thomond College of Education, Limerick for 1976 and 1977. In 1978 St. Angela's College, Sligo became affiliated to the NUI.
1975	European Social Fund	<p>In 1975 the EEC Council decided to make a special Social Fund provision to facilitate the employment and geographical and professional mobility of young people below 25 years of age. One of the applications, from the Irish Department of Education, covered the training of young persons in middle-level technician skills in the newly established RTCs (Barry, 2005).</p> <p>The introduction of Social Fund aid to the RTCs was gradual and low-key and entailed an element of subterfuge on the part of the Irish authorities since EU regulations at the time permitted funding of training only, and not of education. In 1979 there were 2000 students obtaining such assistance, by 1982 numbers had grown by a further 50 percent, and by 1986 almost 90 percent of all new entrants to full-time courses at the RTCs – i.e. about 20 percent of those entering third-level education in Ireland – were in receipt of ESF grants (Barry, 2005).</p>
1975	TCD Confers Degrees for DIT	The Colleges of Technology that now form the Dublin Institute of Technology had their degrees conferred by the University of Dublin (TCD). This arrangement was discontinued in 1998 when the DIT obtained degree-granting powers of its own.
1976	CAO	The Central Applications Office was set up to streamline and co-ordinate student applications for university places. This was done through the operation of a points system based on success rates in the Leaving Certificate and became the predominant factor in discriminating among applicants for places in higher education courses (Coolahan, 1981).
1978	DIT	Dublin Institute of Technology set up on an ad-hoc basis. Under the Dublin Institute of Technology Act, 1992, there was a statutory basis for the organisation.
1978	NBST	Establishment of the National Board for Science and Technology (NBST) in 1978: a dedicated agency for promoting and funding R&D and innovation. This entity replaced the National Science Council (which was set up in 1967).
1978	Manpower Consultative Committee	Establishment of the Manpower Consultative Committee, to provide a forum for dialogue between the IDA and the education system. The state agency, concerned by the looming disparity between electronics graduate outflows and its own demand projections, convinced the government to fund a massive expansion in educational capacity in these areas. The output of engineering graduates, as a result, increased by 40 percent between 1978 and 1983, while the output from computer science increased tenfold over the same short period (Barry, 2006).
1979	Second Oil Price Shock	Irish public finances in disarray for most of the next decade.
1979	NCEA	The National Council for Educational Awards was established on a statutory basis, with a wider function to generally encourage, facilitate, promote, coordinate and develop technical, industrial, scientific,

		technological and commercial education, and education in art and design, provided outside the universities, whether professional, vocational or technical, and to encourage and promote liberal education (O’Buachalla, 1984).
197X	CHIU	Conference of Heads of Irish Universities set up on an ad hoc basis in the late 1970s. It was later formalised in 1997, and became the IUA in 2005.
1980	White Paper on Educational Development	This document gave clear expression to a preference for the technological sector and links investment priorities to the manpower requirements in those employment sectors identified in government policies. While capital projects in the universities had been deferred or delayed, a major proportion of the capital provision throughout the 1980s was committed to expansion in the technological sector (O’Buachalla, 1984).
1980	NIHE Dublin	A national institute for higher education (NIHE) was established in Dublin at Glasnevin.
1980	Telesis Report	“This report suggested increased promotion of indigenous Irish-owned enterprise, particularly larger indigenous enterprise, alongside FDI. While Telesis made some references to the need for R&D and innovation in this context, the emphasis was quite limited.” (Fitzpatrick Associates, 2006). Emphasised the needs of indigenous firms, calling for the promotion of linkages with foreign firms and the need to further develop local-firm capabilities (Barry, 2006).
1980	First Clancy Study	First study by Patrick Clancy on new entrants to higher education. 50% of new entrants enrolled in the technological sector.
1981	Financing of Third Level Education in Ireland	This report by Tony Barlow (published by the ESRI) reviewed the equity and efficiency of systems of third-level educational finance and in particular looked at a scheme of student loans which would be repayable through the income tax system.
1984	Action Plan on Education	Produced by the Dept. of Education, this document made extra demands on the universities to increase productivity on reduced funding (O’Buachalla, 1984).
1984	1st Framework Programme	Launch of first Framework Programme for Research and Technological Development. The Framework Programmes for Research and Technological Development, also called Framework Programmes or abbreviated FP1 through FP8, are funding programmes created by the European Union in order to support and encourage research in the European Research Area (ERA). The specific objectives and actions vary between funding periods. FP1 ran from 1984-1988.
1986	European Single Act	The first major step in the introduction of the Structural Funds was the articulation of Europe’s cohesion policy in the Single European Act (1986). Cohesion policy was originally designed to offset the burden of the single market for less favoured regions. A significant part of that policy involved a complete overhaul of the operation of solidarity funds (subsequently referred to as Structural Funds) in February 1988. The significant increase in EU Structural Funds and the priority to be given to less-developed regions, such as Ireland, was recognition by the

		Commission of the threat that the Single European Market could pose for many economic activities in those regions (Fitzpatrick Associates, 2006).
1987	Tallaght Strategy	Turn-around in public finances of Ireland.
1987	IFSC	Financial Services Act establishes International Financial Services Centre in Dublin. Profits of qualifying activities carried out from the Centre are taxed at 10 percent until 2005. In 1990, the government extended the 10 percent corporation profits tax rate to 2010 (Barry, 2006).
1987	2nd Framework Programme	FP2 ran from 1987-1991.
1989	EU Structural Funds	The first main period of EU structural funding: 1989-1993.
1989	Dublin City University	The NIHE in Dublin, at Glasnevin, was re-classified as Dublin City University.
1989	University of Limerick	The HIHE at Limerick was re-classified as the University of Limerick. It was noted earlier that the RTCs quickly shed virtually all of their secondary-level functions. A similar phenomenon – known as ‘academic drift’ – manifested itself within the new NIHEs. They rapidly began to operate primarily at degree level. Indeed when the second National Institute opened in 1980 it offered no sub-degree level courses. The same pattern had been recognised within the British polytechnics (Barry, 2005).
1990	STRIDE	A European Initiative, STRIDE (Science and Technology for Regional Innovation and Development) was introduced in 1990 to improve the research, technology and innovation capacities of the regions whose development was lagging behind (Fitzpatrick Associates, 2006).
1990	3rd Framework Programme	FP3 ran from 1990-1994.
1991	Diplomas	Diploma and certificate courses are now processed through the CAO.
1991	HECA	Founding of the Higher Education Colleges Association, an association of independent providers of higher education. HECA members currently provide higher education for approximately 19,000 students.
1992	Culliton Report	A Time for Change: Industrial Policy for the 1990s, Report of the Industrial Policy Review Group, Government Publications, Dublin, 1992. The Culliton report advocated a restructuring of the IDA into separate agencies with different responsibilities, a move implemented in 1994 when three separate agencies were created out of the IDA. IDA-Ireland was allocated the task of FDI promotion, Forfás took charge of overall strategy, and a separate agency, Forbairt, renamed Enterprise Ireland in 1998, was charged with promotion of indigenous development. All three agencies operate under the Department of Enterprise, Trade, and Employment (Barry, 2006).
1992	Dublin Institute of Technology Act	Under the Dublin Institute of Technology Act, 1992, six existing technological colleges in Dublin were brought together to form the DIT.
1992	Re-branding of RTCs	The re-branding of RTCs begins. According to Daly (1981), the re-

		branding of RTC's as the institutes of technology (ITs) was enabled by Section 3 of the 1992 - 2001 RTC Acts.
1992	Teaching Courses	Teaching courses are introduced to the CAO system.
1992	Treaty of the European Union	Cohesion was designated as one of the main objectives of the Union. The Treaty established the Cohesion Fund for transport and environmental projects in the least favoured regions.
1993	Moriarty Report	Moriarty Task Force on Implementation of the Culliton Report, Employment Through Enterprise, The Stationery Office, May 1993.
1993	De Buitleir Report	Official title: Report of the Advisory Committee on Third-Level Student Support. An expert group led by Donal De Buitleir assessed the fairness of maintenance grant awards. It was proposed that family assets, including businesses and large farms, should be taken into account as well as declared taxable income, when eligibility for maintenance grants is being calculated.
1994	4th Framework Programme	FP4 ran from 1994-1998.
1994	EU Structural Funds	The second main period of EU structural funding: 1994-1999.
1994	IDA	IDA Ireland was divided into three separate organisations following a government review: IDA, Forfas and Forbairt. Since 1994 IDA Ireland focuses exclusively on the promotion and development of high-quality foreign direct investment (FDI) in Ireland, in the manufacturing and international services sectors.
1994	Forfas	Forfas established as an agency of the Department of Enterprise, Trade and Employment. This is Ireland's policy advisory board for enterprise, trade, science, technology and innovation. Includes the Advisory Science Council (ASC), or the Advisory Council for Science, Technology and Innovation.
1994	Forbairt	The domestic industry side of IDA was combined with the technology agency Eolas to form Forbairt. This was renamed as Enterprise Ireland in 1998.
1995	STIAC Report	Report of the Science, Technology and Innovation Advisory Committee.
1996	STIAC White Paper	White Paper from the Science, Technology and Innovation Advisory Committee. Department of Enterprise, Trade and Employment.
1996	Access	The HEA introduced access programmes.
1996	Abolition of tuition fees	The abolition of tuition fees (announced in 1995) is partly introduced. The decision was popularly referred to as the "free fees policy".
1997	Abolition of tuition fees	The abolition of tuition fees is fully introduced. According to the OECD (2004), the annual fees paid by students before 1995 averaged approximately 2,500 euro per annum and accounted for about one-third of the total cost of attending higher education, the remainder being mainly housing and maintenance costs.
1997	Universities Act	
1997	EGFSN	Establishment of the Expert Group on Future Skills Needs.

1997	NCC	Establishment of the National Competitiveness Council.
1997	CHIU	Conference of Heads of Irish Universities was incorporated, formalising an ad hoc body that had been set up in the late 1970s. It would become the IUA in 2005.
1998	5th Framework Programme	FP5 ran from 1998-2002.
1998	PRTLII	The Programme for Research in Third Level Institutions (PRTLII), operated by the Higher Education Authority (HEA), was established in 1998, to develop high quality research infrastructure in third level institutions. Headline results reported by International Assessment Committee in 2004 included new capital, new research buildings along with 34 new academic appointments (14 professorial) as well as over 1,500 new postdoctoral or postgraduate research appointments (Dagg, 20XX).
1998	Enterprise Ireland	Launch of Enterprise Ireland, the government organisation responsible for the development and growth of Irish enterprises in world markets. Enterprise Ireland was created in two steps. In 1994, the domestic industry side of IDA was combined with the technology agency Eolas to form Forbairt. In 1998, new legislation was passed which created Enterprise Ireland through a merger of Forbairt and the Irish Trade Board to provide one-stop-shop assistance for domestic industry (Barry, 2006).
1998	DIT Confers Degrees	DIT obtains degree-granting powers of its own. Previously the Colleges of Technology that now form the Dublin Institute of Technology had their degrees conferred by the University of Dublin (TCD).
1999	Access	The Department of Education and Science and Science began providing additional funding for access and retention to the institutes of technology, including the LEAP programme at the Dublin Institute of Technology.
1999	Qualifications Act	Qualifications (Education and Training) Act 1999.
1999	Technology Foresight Report	The Irish Council for Science, Technology and Innovation (ICSTI), Technology Foresight Ireland, 1999. Laid the foundation for the establishment of Science Foundation Ireland.
2000	Lisbon Strategy	This was designed “to make the Union the most competitive and dynamic knowledge-based economy in the world by 2010.” This strategy was re-launched following its Mid-Term Review in March 2005 (Fitzpatrick Associates, 2006).
2000	EU Structural Funds	The third main period of EU structural funding: 2000-2006. Referred to as the National Development Plan.
2000	White Paper on Adult Education	Publication of white paper on adult education entitled “Learning for Life”.
2000	Millennium Partnership Fund	The Millennium Partnership Fund (MPF) was introduced within area partnerships to promote participation in further and higher education.
2000	Research Councils	Two new research councils were also established in 2000/01: The Irish

		Research Council for Science, Engineering and Technology (IRCSET) and the Irish Research Council for Humanities and Social Sciences (IRCHSS). The research councils have annual budgets of around €24 million and €10 million respectively, and have funded hundreds of postdoctoral and postgraduate researchers over the last few years as well as providing substantial project based research funding (Dagg, 2006).
2001	Report of the Action Group on Access	HEA policy document
2001	HETAC	HETAC was established in 2001, under the Qualifications (Education and Training) Act 1999.
2001	SFI	Science Foundation Ireland is set up with a focus on establishing world-class research capability in niche areas of ICT and biotechnology.
2001	Fourth Clancy Study	Now more than half of school-leavers progressing to higher education.
2002	6th Framework Programme	FP6 ran from 2002-2006.
2002	Report of the Taskforce on Lifelong Learning	HEA policy document
2002	Creating and Sustaining the Innovation Society	HEA policy document
2003	National Access Office	The National Access Office was set up in 2003 to develop a co-ordinated national strategy on access and to consolidate and expand access funding.
2003	Nursing	Nursing degrees are included on the CAO system.
2003	Creating Ireland's Innovation Society	HEA policy document by Liam Downey.
2004	OECD Review	OECD Review of Higher Education in Ireland.
2004	Finance Act	Introduction of an R&D tax credit. Also, the establishment of a new headquarters regime aimed at attracting international corporations to establish their regional HQ in Dublin.
2004	Chief Scientific Adviser	Establishment of the Office of the Chief Scientific Adviser.
2005	Building Ireland's Knowledge Economy	Inter-Departmental Group, on Science, Technology and Innovation, Building Ireland's Knowledge Economy, 2005.
2005	IUA	The Irish Universities Association replaced the Conference of Heads of Irish Universities (CHIUI).
2006	Review of Quality Assurance	HEA policy document.
2006	ESRI take over the Clancy reports	It is noted that the 40-year period from 1965 to 2005 is characterised by growth in overall student numbers from 18,200 to almost 140,000.
2006	Institutes of Technology Act	The Department of Education and Science and Science had responsibility for the IT sector, but this changed in accordance with the Institutes of Technology Act 2006. The HEA would take responsibility for the sector the following year.

2006	SSTI	Launch of the Government Strategy for Science Technology and Innovation.
2006	SIF	“The Strategic Innovation Fund (SIF) is a multi-annual fund, amounting to €510 million over the period 2006 – 2013, which is directed towards support for innovation in higher education institutions. It supports new approaches to enhancing quality and effectiveness within higher education and research, incorporating the use of existing resources (including capital resources) more effectively, as well as new funding. Projects approved to date under SIF are aimed at enhancing collaboration between higher education institutions, improving teaching and learning, supporting institutional reform, promoting access and lifelong learning and supporting the development of fourth level education” (http://www.heai.ie/en/sif).
2007	7th Framework Programme	FP7 runs from 2007-2013.
2007	HEA Expansion	The HEA takes responsibility for the IT sector.
2007	Technology Transfer Strengthening Initiative	Since Ireland’s Technology Transfer Strengthening Initiative was established in 2007, 55 new spin-out companies have emerged from State-funded research in Ireland; over 1,300 inventions have been disclosed, more than 470 new patents filed and close to 220 deals have been signed between companies and researchers to license new technologies (Irish Dept. of Enterprise, Trade and Employment, 2010).
2007	Supporting Investment in Higher Education	HEA policy document.
2007	Research Infrastructure in Ireland	HEA policy document.
2007	Towards a National Skills Strategy	Report from the Expert Group on Future Skills Needs.
2008	National Access Plan	National Plan for Equity of Access to Higher Education (HEA).
2008	Governance of Irish Universities	HEA/IUA report on Governance of Irish Universities.
2008	Building Ireland’s Smart Economy	The outline of a set of actions to facilitate a thriving enterprise sector, high-quality employment, secure energy supplies, an attractive environment, and first-class infrastructure.
2009	Registration Fee	Charges for 2008/09 were on average €850 per student, but this was raised to €1,500 per student for the 2009/10 academic year.
2009	Commercialisation Fund	The Enterprise Ireland/Science Foundation Ireland Commercialisation Fund was introduced in 2009 to accelerate the realisation of national economic benefits through active commercialisation of research outputs.
2009	An Bord Snip Nua	Report of Ireland’s Special Group on Public Service Numbers and Expenditure Programmes (colloquially known in Ireland as the report of An Bord Snip Nua).
2009	Student Contribution	Policy Options for New Student Contributions in Higher Education,

	Policy Document	Report to Minister for Education and Science.
2010	Report of the Innovation Task Force	A central idea in this report is for Ireland to focus on being a “clever copycat” rather than developing its own R&D capacity; that is, Ireland should just do the 'D' in R&D (Innovation Task Force, 2010). This approach is motivated by the scale of Irish investment and the evidence that absorption of foreign knowledge (or absorptive capacity) is an important factor for economic growth.
2010	A&H Policy	Playing to Our Strengths: The Role Of The Arts, Humanities And Social Sciences And Implications For Public Policy.
2010	Rescue Package	Ireland takes an EU/IMF rescue package in autumn 2010.
2011	Student Contribution	In 2011, after large annual increases, the Registration Fee was abolished and replaced with a Student Contribution. For the academic year 2012/2013, this fee will stand at €2,250, with plans to raise it to €3,000 by 2015.
2011	National Strategy for Higher Education	The most recent policy-development in the financing of Irish higher education is the suggestion to introduce a graduate tax scheme or an income contingent loan system - as possible alternatives to the current free fees scheme (National Strategy for Higher Education, 2011).
2011	Access	Mid-Term Review of National Plan for Equity of Access to Higher Education 2008-2013.
2011	Qualifications and Quality Assurance Act, 2011	This legislation provides for a new single agency, Qualifications and Quality Assurance Ireland (QQAI), replacing FETAC, HETAC, NQAI and IUQB. It is anticipated that the QQAI will be established in 2012. “The establishment of a single unified agency to assure the quality of qualifications and of learners’ experience of education and training at all levels in Ireland will make it easier for employers and others to make sense of Irish qualifications, including within a global context.”
2012	Research Prioritisation Exercise	A business case for fourteen research areas was prioritised over the next five years.
2012	HEA Landscape Documents	Motivated by implementation of the Hunt Report (National Strategy for Higher Education). Particular focus on regional clusters, and the conditions for re-designation of ITs as technological universities.
2012	Merging of the Research Councils	Merging of IRCHSS and IRCSET.
2012	Review of the Department of Education	Department criticized for lack of long-term thinking.

11. Appendix D: Interview Protocol

11.1 INTERVIEW PROTOCOL – Academic/Researcher

General and Demographic Information

1. Please tell me your discipline/field or area related to arts and humanities research.
2. How would you define research in your field?
3. Which sector do you conduct your research in? University or IoT?

Academics/Researchers

1. Describe what form your research takes? What does it look like?
2. In what form do you disseminate your research?
3. Where do you disseminate your research?
4. How would you 'define' research in your field?
5. What – in your view – constitutes “good” or “quality” research in your field? Why?
6. Who decides what is “quality” research in your field?
7. What indicators are used to measure this “quality”?
8. Are there any current debates in your discipline/field about what constitutes research and what constitutes the quality of this research? What are these debates?
9. What would you see as the benefits of research in your field?
 - a. Who are the beneficiaries?
10. What are the impacts of research in your field?
 - a. Who is impacted? In what way?
11. What do you view as the current political pressures around the measurement of research in the arts and humanities?
 - a. How do you feel about these debates?
12. Is there anything that I haven't asked you but that you would like to add?

11.2 INTERVIEW PROTOCOL - Civil Society

General Information

1. Please tell me a bit about your area/role related to arts and humanities research.
2. In what ways do you interface with arts and humanities research and researchers?

Understanding arts and humanities research

1. How would you define research in the arts and research in the humanities? Are there differences between and among arts and humanities/across the disciplines in terms of defining research in the field?

2. What contribution/impacts do you believe arts and humanities research makes to society? Who are the beneficiaries?
 3. What contributions/impacts do you believe arts and humanities research makes to the economy? Who are the beneficiaries?
 4. What are the impacts of research in the arts and humanities? Who is impacted? In what way?
- Assessing arts and humanities research
5. In your view, what constitutes “good” or “quality” research in the arts and humanities? Why?
 6. In your view, who decides what is “quality” in research in the arts and humanities?
 7. In your view, what indicators are used to measure this “quality”? Are these indicators helpful/useful? Are some more helpful/useful than others?
 8. What, in your view, are the best ways to measure and assess the societal impact and benefits of arts and humanities research?
 9. Are there any current debates about what constitutes research and what constitutes the quality of this research? What are these debates?
 10. Are there any significant debates around impact of this research?
 11. What do you view as the current political pressures around the measurement of research in the arts and humanities?
 12. Given the depth and extent of the global economic crisis, are there special attributes that arts and humanities research can contribute to
 - a. Society
 - b. The economy
 13. How can this be best measured and assessed?
 14. Is there anything that I haven’t asked you but you would like to add?

11.3 INTERVIEW PROTOCOL – Policy Makers

General and Demographic Information

1. Please tell me the area of policy you are in related to arts and humanities research.
2. In what ways do you interface with arts and humanities research and researchers?

Policy Makers

1. How would you define arts and humanities research?
2. In your view, what constitutes “good” or “quality” research in the arts and humanities? Why?
3. In your view, who decides what is “quality” in research in the arts and humanities?
4. In your view, what indicators are used to measure this “quality”? Are these indicators helpful/useful? Are some more helpful/useful than others?
5. Are there any current debates about what constitutes research and what constitutes the quality of this research? What are these debates?
6. What is the contribution that arts and humanities research makes to society?
7. What are the contributions that arts and humanities research makes to the economy?

8. What would you see as the benefits of research in arts and humanities?
 - a. Who are the beneficiaries?
9. What are the impacts of research in the arts and humanities?
 - a. Who is impacted? In what way?
10. Are there any significant debates around impact of this research?
11. What are the best ways to measure and assess the societal impact and benefits of arts and humanities research?
12. What do you view as the current political pressures around the measurement of research in the arts and humanities?
13. Given the depth and extent of the global economic crisis, are there special attributes that arts and humanities research can contribute to
 - a. Society
 - b. The economy
14. How can this be best measured and assessed?
15. What are the implications for research policy?
16. Is there anything that I haven't asked you but you would like to add?

12. Bibliography

- Ahlstrom, D. (2013a) 'State funds for science to be based on merit'. *Irish Times*, 7 January. Available at <http://www.irishtimes.com/newspaper/ireland/2013/0107/1224328507515.html> (Accessed 18 February 2013)
- Ahlstrom, D. (2013b) 'New research strategy prompts unease'. *Irish Times*, 7 January. Available at <http://www.irishtimes.com/newspaper/finance/2013/0107/1224328506201.html> (Accessed 18 February 2013)
- AHRC (2010) *Leading the World: The Economic Impact of UK Arts and Humanities Research*. AHRC. Available at: <http://www.ahrc.ac.uk/News-and-Events/Publications/Documents/Leading-the-World.pdf> (Accessed 18 February 2013)
- AUBR – EU Expert Group on Assessment of University Based Research (2009) *Assessing Europe's University-based Research*. Brussels: DG Research. Available at: http://ec.europa.eu/research/science-society/document_library/pdf_06/assessing-europe-university-based-research_en.pdf (Accessed 18 February 2013)
- Bakhshi, H., Schneider, P., and Walker, C. (2008) *Arts and Humanities Research and Innovation*. Bristol: AHRC.
- Bangemann, M. (1994) *Report on Europe and the Global Information Society: Recommendations of the High-level Group on the Information Society to the Corfu European Council*. Bulletin of the European Union, 2 (94). Available at: <http://www.cyber-rights.org/documents/bangemann.htm> (Accessed 18 February 2013)
- Barry, F. (2005) Third-Level Education, Foreign Direct Investment and Economic Boom in Ireland. *UCD Centre for Economic Research* WP05.
- Barry, F. (2006) FDI and Irish Economic Development over Four Stages of European Integration. Available at: <http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.175.4646> (Accessed 18 February 2013).
- Benneworth, P. (2012) 'The equilibrium view of arts & humanities research's value?', HERAVALUE, 10 September. Available at: <http://heravalue.posterous.com/the-equilibrium-view-of-arts-humanities-resea> (Accessed 12 February 2013).
- Benneworth, P., E. Hazelkorn and M. Gulbrandsen (2009) 'Measuring the societal impacts of universities' research into arts and the humanities (HERAVALUE)', a research proposal to the Humanities in the European Research Area (HERA) Joint Research Programme.
- Benneworth, P. and B. W. Jongbloed (2010) "Who matters to universities? A stakeholder perspective on humanities, arts and social sciences valorisation". *Higher Education*, 59, 567-588.
- Bew, P. and Patterson, H. (1982) *Seán Lemass and the making of modern Ireland, 1945-66*. Dublin: Gill and Macmillan.
- Biggs, M. (2007) "Modelling Experiential Knowledge for Research". In Mäkelä, M., and Routarinne, S. (Eds.) *The Art of Research: Research Practices in Art and Design*. Helsinki: University of Art and Design (UIAH).
- Bod, R. (2012) "How the Humanities Changed the World". *HERAVALUE Symposium and Evidence Session*. Amsterdam, 30 May.
- Bollen, J., Van de Sompel, H., Hagberg, A., Bettencourt, L., Chute, R., Rodriguez, M.A., and Balakireva, L. (2009) "Clickstream Data Yields High-Resolution Maps of Science", *PLoS ONE*, 4(3) [Internet]. Available at: <http://dx.plos.org/10.1371/journal.pone.0004803> (Accessed 4 February 2013).

- Boyer, E. L. (1990) *Scholarship Reconsidered. Priorities of the Professoriate*. Princeton, NJ: Jossey-Bass.
- Bric, M. J. (1999) *The Humanities and the Social Sciences: A Case for a Research Council. A Report to the Minister for Education and Science*. Higher Education Authority, Dublin.
- British Academy for the Arts and Social Sciences (2008) *Punching Above Our Weight*. Available at: <http://www.britac.ac.uk/policy/punching-our-weight.cfm> (Accessed 12 February 2013).
- Bush, V. (1945) *Science the Endless Frontier*. National Science Foundation, US. Available at: <http://www.nsf.gov/od/lpa/nsf50/vbush1945.htm#summary> (Accessed 16 July 2009).
- CFIR – Committee on Facilitating Interdisciplinary Research (2004) *Facilitating Interdisciplinary Research*, National Academy of Sciences, National Academy of Engineering, Institute of Medicine., Washington, D.C.: National Academies Press. Available at: http://books.nap.edu/openbook.php?record_id=11153&page=2 (Accessed 4 February 2013).
- Chenail, R. (2008) “‘But is it Research?’ A Review of Patricia Leavy’s Method Meets Art: Arts-Based Research Practice”. *The Weekly Qualitative Report* 1 (2): 7-12 Available at: <http://www.nova.edu/ssss/QR/WQR/leavy.pdf> (Accessed 4 February 2013).
- Clancy, P. (1993) Goal Enlargement and Differentiation: The Evolution of the Binary Higher Education System in Ireland, in C. Gellert (ed.) *Higher Education in Europe*. London and Philadelphia: Jessica Kingsley.
- Cobban, A. B (1988) *The medieval English universities: Oxford and Cambridge to c.1500*. Aldershot: Scholar Press.
- Coolahan, J. (1981) *Irish Education: Its History and Structure*. Dublin: Institute of Public Administration.
- Corbett, A. (2003) “Ideas, Institutions and Policy Entrepreneurs: towards a new history of higher education in the European Community”, *European Journal of Education* 38 (3). Available at: http://www.utwente.nl/mb/cheps/summer_school/literature/dr%20%20corbett%20ideas%20institutions%20and%20policy%20entrepeneurs.pdf (Accessed 18 February 2013).
- Corbett, A. (2006) “Higher Education as a Form of European Integration: How Novel is the Bologna Process?”, Working Paper. Oslo: Arena.
- Crimmins, C. (2009) “Singing & dancing seen helping Ireland out of crisis”, Reuters, 19 September 2009. Available at: <http://www.reuters.com/article/2009/09/19/ireland-forum-idUSLJ46784220090919> (Accessed 4 February 2013).
- Dagg, M. (2006) Public Investment in R&D in Ireland, in O’Toole and Aylward (eds) *Perspectives on Irish Productivity*. Available at: http://www.forfas.ie/media/productivity_chapter20.pdf (Accessed 20 February 2013).
- Daly, M.E., (1981) *Social and Economic History of Ireland since 1800*. Dublin: The Educational Company.
- DoE (1980) *White Paper on Educational Development*. Department of Education, Government Publications Office: Dublin.
- DES (2011) *National Strategy for Higher Education*. Department of Education and Skills, Government Publications Office: Dublin. Available at: http://www.hea.ie/files/files/DES_Higher_Ed_Main_Report.pdf
- Diamond, R.M. (1999) *Aligning Faculty Rewards wit Institutional Mission: Statements, Policies and Guidelines*. Bolton, MA: Anker.

Dolan, C. (2008) *Feasibility Study: The Evaluation and Benchmarking of Humanities Research in Europe*. Humanities in the European Research Area (HERA) Available at: http://www.heranet.info/system/files/hera_report_-_evaluation_and_benchmarking_of_humanities_research_in_europe.pdf (Accessed 18 February 2013)

Donovan, B. (2012) Quoted in RIA, *Report on Dialogue on Research Funding*. Available at: <http://www.ria.ie/getmedia/0b1e34ba-c427-47e3-9d77-ba40e0e2719b/Royal-Irish-Academy-Report-on-Research-Dialogue.pdf.aspx> (Accessed 18 February 2013).

DoT – Department of the Taoiseach (2008) *Building Ireland's Smart Economy. A Framework for Sustainable Economic Renewal*. Dublin: Stationary Office. Available at: http://www.taoiseach.gov.ie/eng/Building_Ireland's_Smart_Economy/Building_Ireland's_Smart_Economy_-_Executive_Summary.pdf (Accessed 18 February 2013).

DoT – Department of the Taoiseach (2010) *Ireland – the Smart Economy. Summary of Progress. Future Priorities*. Dublin: Stationary Office. Available at: http://www.taoiseach.gov.ie/eng/Building_Ireland's_Smart_Economy/Summary_of_Progress_Future_Priorities_.pdf (Accessed 18 February 2013).

ELIA – European League of Institutes of Art (2008) *The Importance of Artistic Research and its Contribution to "New Knowledge" in a Creative Europe*. Available at: <http://www.elia-artschools.org/Documents/elia-strategy-paper> (Accessed 12 February 2013).

ELIA – European League of Institutes of Art (2011) *ArtFutures: Current Issues in Higher Arts Education*. Available at: <http://www.elia-artschools.org/images/products/58/ArtFutures.pdf> (Accessed 12 February 2013).

ELIA – European League of Institutes of Art (2011) *Releasing the Potential for Arts & Design Research in Europe – Proposals for the Future Research Programmes*. Available at: <http://www.elia-artschools.org/Documents/releasing-the-potential-for-arts-design-research-in-europe> (Accessed 4 February 2013).

EUI-Net (2007) *"Teaching and Research Synergy in the context of University-Industry cooperation"*. Brasov-Eindhoven: EUI-Net. Available at: http://www.ier.nl.net/Teaching_and_Research_Synergy_pre-final.pdf (Accessed 12 February 2013).

Fallon, B. (1998) *An Age of Innocence, Irish Culture 1930-1960*. Dublin: Gill and Macmillan.

Fearn, H. (2010) "Can the Humanities Save Ireland?" *Inside HigherEd*. Available at: <http://www.insidehighered.com/news/2010/12/02/ireland> (Accessed 12 February 2013).

Fitzgerald, G. (1965) Investment in Education. *Studies: An Irish Quarterly Review* 54 (216): 361-374.

Fitzpatrick Associates (2006) *EU Structural Funds and Ireland's RTDI Transition*. Available at: <http://www.fitzpatrick-associates.com/> (Accessed 20 February 2013).

Forfás (2004) *Building Ireland's Knowledge Economy. The Irish Action Plan for Promoting Investment In R&D To 2010*. Report to the Inter Departmental Committee on Science, Technology and Innovation. Dublin: Forfás. Available at: <http://www.djei.ie/publications/enterprise/2004/knowledgeeconomy.pdf> (Accessed 12 February 2013).

Forfás (2009a) *Research and Development Statistics in Ireland, 2009 – at a Glance*. Dublin: Forfás. Available at: http://www.forfas.ie/media/forfas090908_research_development_statistics.pdf (Accessed 12 February 2013).

Forfás (2009b) *Research strengths in Ireland: A bibliometric study of the public research base*. Dublin: Forfás. Available at: http://www.forfas.ie/media/forfas091209_bibliometric_study.pdf (Accessed 12 February 2013).

Forfás (2011) *Research and Development Funding and Performance in the State Sector 2009-2010*, Dublin: Forfás. Available at: http://www.forfas.ie/media/forfas110811-RD_funding_performance_2009-2010.pdf (Accessed 12 February 2013).

Forfás (2012a) *Report of Research Prioritisation Steering Group*. Dublin: Forfás. Available at: http://www.djei.ie/publications/science/2012/research_prioritisation.pdf (Accessed 4 February 2013).

Gannon, F. (2010) "Guest Blog: The Other Lisbon Agenda and Investment in Higher Education", Available at: <http://universitydiary.wordpress.com/2010/01/22/guest-blog-the-other-lisbon-agenda-and-investment-in-higher-education/> (Accessed 18 February 2013).

Geoghegan-Quinn, M. (2011) "The Future of Social Sciences and Humanities in Horizon 2020", Speech at the British Academy, London, 10 November.

Gibbons, M., Limoges, C., Nowotny, H., Schwartzman, S., Scott, P., Trow, M. (1994) *The New Production of Knowledge: The Dynamics of Science and Research in Contemporary Societies*. London: Sage.

Gómez-Sancho, J. M. & Pérez-Esparrells, C. (2011) "International Higher Education Rankings at a Glance: How to Valorise the Research in Social Sciences and Humanities?" In Lopez-Varela, A. (Ed.) *Social Sciences and Humanities. Applications and Theories*. DOI: 10.5772/38617

Grierson, E., and Brearley, L. (2009) *Creative Arts Research: Narratives of Methodologies and Practices*. Rotterdam: Sense Publishers.

Guston, D. H. (1992) "The demise of the social contract for science: Misaconduct in science and the nonmodern world", Program in Science, Technology and Society. Boston: MIT. Available at: http://web.mit.edu/STS/pubs/pdfs/MIT_STS_WorkingPaper_19_Guston_2.pdf (Accessed 9 July 2013).

Hahessy, E. (2009) "Third-Level Education: University Challenge." *Business and Finance*, October 29th. Available at: <http://www.businessandfinance.ie/index.jsp?n=500&a=2199> (Accessed 18 February 2013).

Harpur, John (2010) *Innovation, Profit and the Common Good in Higher Education. The New Alchemy*. London: Palgrave MacMillan.

Hazelkorn, E. (1992) "'We can't all live on a small island": the political economy of Irish Emigration". In O'Sullivan, P. (Ed.) *The Irish World Wide. History, Heritage, Identity. Volume 2: The Irish in the New Communities*. Leicester: University Press.

Hazelkorn, E. (2001) "The Dynamics of Cultural Production in Ireland: Economic Strategy, Digital Technology and Public Policy Making". In Ernst, K., Halbertsma, M., Janssen, S., and Ijdens, T. (Eds.) *Trends and Strategies in the Arts and Cultural Industries*. Rotterdam: Barjesteh van Waalwijk van Doorn & Co.'s .

Hazelkorn, E. (2004) "Art schools for tomorrow: challenges and opportunities", *Higher Education Management and Policy*, OECD 16 (3). pp. 135-152. Available at: <http://arrow.dit.ie/cserart/12/> (Accessed 18 February 2013).

Hazelkorn, E. (2009a) "The Impact of Global Rankings on Higher Education Research and the Production of Knowledge", *UNESCO Forum on Higher Education, Research and Knowledge Occasional Paper N°16*. Available at: <http://unesdoc.unesco.org/images/0018/001816/181653e.pdf> (Accessed 18 February 2013).

- Hazelkorn, E. (2009b) "Community engagement as Social Innovation", In L. Weber, L. and Duderstadt, J. (Ed.s) *The Role of the Research University in an Innovation-Driven Global Society*, Geneva: Glion Colloquium.
- Hazelkorn, E. (2011) *Rankings and the Reshaping of Higher Education: The Battle for World Class Excellence*. Basingstoke: Palgrave Macmillan.
- Hazelkorn, E. (2012a) "'Everyone wants to be like Harvard' – or do they? Cherishing all Missions Equally", in Sir Peter Scott, Adrian Curaj, Lazăr Vlăsceanu and Lesley Wilson (eds.), *European Higher Education at the crossroads: between the Bologna Process and national reforms*, Volume 2, Dordrecht: Springer.
- Hazelkorn, E. (September 2012b) "Assessing University-based Research: Advocating Best Practice", Keynote to the German Science Council/German Stifterverband Conference, Bonn
- Hazelkorn, E. and A. Moynihan (2010) "Ireland: The challenges of building research in a binary higher education culture", In Svein Kyvik and Benedetto Lepori (Eds) (2010) *The Research Mission of Higher Education Institutions outside the University Sector*. Dordrecht: Springer.
- Hazelkorn, E. and C. Murphy (2002) "The Cultural Economy of Dublin". In Corcoran, M. and Peillon, M. (Eds.) *Sociological Chronicles*, 3rd ed. Dublin: IPA.
- HEA (1999) *The Humanities and the Social Sciences: the Case for a Research Council*. Dublin: Stationary Office. Available at: <http://www.research.ie/sites/default/files/Case%20for%20a%20Research%20Council.pdf> (Accessed 4 February 2013).
- HEA (2008) *Transformations: How Research is Changing Ireland*. Dublin: WG Bairds.
- HEA (2009) *Policy Options for New Student Contributions in Higher Education*, Report to Minister for Education and Science. Dublin: HEA.
- HEA (2010) *Playing to Our Strengths. The Role of the Arts, Humanities and Social Sciences and Implications for Public Policy*. Dublin: HEA. Available at: <http://www.heia.ie/files/files/file/HEA%20FAHSS%20Report.pdf> (Accessed 18 February 2013).
- HEA (2011) *Sustainability Study. Aligning Participation, Quality and Funding in Irish Higher Education*. Dublin: HEA. Available at: <http://www.heia.ie/files/files/file/News/SustainabilityReport.pdf> (Accessed 18 February 2013).
- HEA (2012a) *Proposed Reconfiguration of the Irish System of Higher Education*. Dublin: Stationary Office. Available at: <https://share.heia.ie/Extranet/landscape-submissions/a-proposed-reconfiguration-of-the-irish-system-of-higher-education/view> (Accessed 4 February 2013).
- HEA (2012b) "The Strategic Role of the HEA in Research, Graduate Education and Innovation. Discussion Document", Task Force on National Strategy Implementation, Dublin. 19th June.
- HEA (2012c) *Creative Arts and Media Provision in the Dublin Region – An Overview*. Dublin: Stationary Office.
- HEA (2013a) *Landscape Submissions*. Available at: <https://share.heia.ie/Extranet/landscape-submissions> (Accessed 12 February 2013).
- HEA (2013b) *Review of the Provision of Creative Arts Programmes in Dublin*. Report of International Review Panel.
- Healey, M. (2007) "Linking Research and Teaching to Benefit Student Learning", *Journal of Geography in Higher Education*, 29(2). Available at: <http://www.tandfonline.com/doi/abs/10.1080/03098260500130387> (Accessed 12 February 2013).

Hennessy, J. (2011) "HEA Chair: Ireland's Research Focus Must Centre More on Humanities", *EUR Ireland* (18 March). Available at: <http://www.eurireland.ie/news/hea-chair-ireland%E2%80%99s-research-focus-must-centre-more-on-humanities.631.html> (Accessed 4 February 2013).

HETAC (2010) *Good Practice in the Quality Assurance of Arts Research Degree Programmes by Practice*, Available at: http://www.hetac.ie/docs/Fine_Arts_Research_Degree_Programmes_by_Practice_2010.pdf (Accessed 18 February 2013).

ICTSI – Irish Council for Science, Technology and Innovation (1999) *Technology Foresight Ireland An ICSTI Overview*. Dublin: Forfás. Available at: http://www.forfas.ie/media/icsti990430_technology_foresight_overview.pdf (Accessed 12 February 2013).

Impact Group (2008) *The Economic Role and Influence of the Social Sciences and Humanities: A Conjecture*, Report for the Social Sciences and Humanities Research Council of Canada (SSHRC). Available at: http://www.sshrc-crsh.gc.ca/about-au_sujet/publications/impacts_e.pdf (Accessed 12 February 2013).

IRC (2011) *Irish Research Council Year 2011 Awards*. Available at: <http://www.research.ie/awards/year-2011-awards> (Accessed 12 February 2013).

IRCHSS (2010) *Mosaic: A Celebration of Irish Research in the Humanities and Social Sciences* Dublin.

KNAW (2010) *Quality Assessment in the Design and Engineering Disciplines: A Systematic Framework*. Amsterdam: Royal Netherlands Academy of Arts and Sciences (KNAW). Available at: http://www.know.nl/Content/Internet_KNAW/publicaties/pdf/20111021.pdf (Accessed 12 February 2013).

KNAW (2011) *Quality Indicators for Research in the Humanities*. Interim Report. Amsterdam: Royal Netherlands Academy of Arts and Sciences (KNAW). Available at: http://www.know.nl/Content/Internet_KNAW/publicaties/pdf/20111024.pdf (Accessed 18 February 2013).

Laver, J. (1994) *The Independent*, 2 June.

Lindsey, C.N (1996). "Statement by HEA", *A Comparative International Assessment of the Organisation, Management and Funding of University Research in Ireland*. Report of the CIRCA Group Europe for the Higher Education Authority. Dublin: HEA.

Love, G. (2012) "Beware false dichotomies in debate over science funding", *The Irish Times*, 10 September. Available at: <http://www.irishtimes.com/newspaper/finance/2012/0910/1224323790949.html> (Accessed 18 February 2013).

Mac Carron, P. and Kenna, R. (2012) "Universal Properties of Mythological networks". *Europhysics Letters* 99 (2): 1-6. Available at: <http://iopscience.iop.org/0295-5075/99/2/28002> (Accessed 14 February 2013).

McCarthy, K. F., Ondaatje, E. H., Zakaras, L. and Brooks, A. (2004) *Gifts of the Muse. Reframing the Debate About the Benefits of the Arts*. Santa Monica, CA: Rand Corporation.

McGuinness, S., Bergin, A., Kelly, E., McCoy, S., Smyth, E., and Timoney, K. (2012) "A Study of Future Demand for Higher Education in Ireland". Dublin: ESRI. Available at: <https://share.heia.ie/Extranet/landscape-submissions/a-study-of-future-demand-for-higher-education-in-ireland/view> (Accessed 4 February 2013).

Molas-Gallart, J. (2012a) ""Research Governance and the Role of Evaluation: a Comparative Study." *American Journal of Evaluation*. 33(4), 577-592.

- Molas-Gallart, J. (2012b) "Towards a Policy, Public and University Consensus on Humanities' Public Value", Keynote Presentation to HERAValue conference, *Measuring the Public Value of Arts and Humanities Research: From theoretical challenges and practical problems towards a policy, public and university consensus*, Dublin Institute of Technology, 25-26th October 2012. Available at: <http://www.youtube.com/watch?v=G7QZ06SYMpM> (Accessed 18 February 2013).
- Molas-Gallart, J. (2013) "Research Evaluation and the Assessment of Public Value", *Arts and Humanities in Higher Education*, forthcoming.
- NESC - National Economic and Social Council (NESC) (2010) *Re-finding Success in Europe: The Challenge for Irish Institutions and Policy*. National Economic and Social Development Office (NESDO). Available at: http://files.nesc.ie/nesc_reports/en/NESC_122_2010.pdf (Accessed 18 February 2013).
- NPC - National Programme Conference (1922) *National Programme of Primary Instruction*. Dublin: Browne and Nolan.
- Ó Buachalla, S. (1984) Policy and Structural Developments in Irish Higher Education. *European Journal of Education* 19 (2): 165-71 .
- Ó Buachalla, S. (1988) *Education Policy in Twentieth Century Ireland*. Dublin: Wolfhound Press.
- Ó Riain, S. (2004) "State, Competition and Industrial Change in Ireland 1991-1999". *The Economic and Social Review* 35 (1): 27-53. Available at: <http://eprints.nuim.ie/221/> (Accessed 4 February 2013).
- OECD (2004). OECD Directorate of Education: Review of Higher Education in Ireland.
- Pearse, P.H. (1916) *Collected Works of Pádraic H. Pearse: Political Writings and Speeches*. Dublin: Phoenix Publishing Company.
- Rauhvargers, A. (2011) *Global University Rankings and their Impact*, Brussels: European University Association. Available at: http://www.eua.be/pubs/Global_University_Rankings_and_Their_Impact.pdf (Accessed 18 February 2013).
- RIA – Royal Irish Academy (2009) "Developing Performance Indicators for the Humanities". Dublin: RIA. Available at: [http://www.ria.ie/getmedia/6154483b-3c09-438c-aeb1-39bcae62da32/KPI-in-the-Humanities-\(Oct-2009\)-Report.pdf.aspx](http://www.ria.ie/getmedia/6154483b-3c09-438c-aeb1-39bcae62da32/KPI-in-the-Humanities-(Oct-2009)-Report.pdf.aspx) (Accessed 4 February 2013).
- RIA – Royal Irish Academy (2011) *The Appropriateness of Key Performance Indicators to Research in Arts and Humanities Disciplines: Ireland's Contribution to the European Debate*. Dublin: RIA. Available at: <http://www.hea.ie/files/Key-Performance-Indicators-2011-Full-PDF.pdf> (Accessed 18 February 2013).
- RIA – Royal Irish Academy (2012) *Report on Dialogue on Research Funding in Ireland*. Dublin: RIA>
- Schich, M. (2010) "Revealing Matrices". In Steele, J., and Iliinsky, N., *Beautiful Visualization: Looking at Data through the Eyes of Experts*. Sebastopol, CA: O'Reilly.
- Seldin, P., and Miller, J.E. (2009) *The Academic Portfolio: A Practical Guide to Documenting Teaching, Research, and Service*. San Francisco, CA: Jossey-Bass.
- Skilbeck, M. (2003) Towards an integrated system of tertiary education – A discussion paper. Unpublished.
- Tinkler, J. (2008a) *Maximising the social, policy and economic impacts of the humanities and social sciences*. LSE Public Policy Group Report to British Academy. London: British Academy. Available at: <http://www.lse.ac.uk/government/research/resgroups/LSEPublicPolicy/pdf/BA%20Final%20Report%20July%202008.pdf> (Accessed 7 July 2013).

Tinkler, J. (2008b) *Maximising the social, policy and economic impacts of the humanities and social sciences*. Research Report. Supplement Report by LSE Public Policy Group Report to British Academy. London: British Academy. Available at: <http://www.lse.ac.uk/government/research/resgroups/LSEPublicPolicy/pdf/BA%20Final%20Report%20July%202008.pdf> (Accessed 7 July 2013).

Tinkler, J. (n.d.) *Maximising the Impacts of Your Research: A Handbook for Social Scientists*. LSE Public Policy Group. Consultation Draft 3. Available at: http://www.lse.ac.uk/government/research/resgroups/LSEPublicPolicy/Docs/LSE_Impact_Handbook_April_2011.pdf (Accessed 7 July 2013).

White, T. (2001) *Investing in People. Higher Education in Ireland from 1960 to 2000*. Dublin, Institute of Public Administration.

Ziman, J. (2000) *Real Science: What It Is and What It Means*. Cambridge: Cambridge University Press.

Webography

Attenborough, D. (2013) David Attenborough. Available at: <http://www.davidattenborough.co.uk/> (Accessed 12 February 2013).

Cendari (2013) "About us", The Cendari Project. Available at: <http://www.cendari.eu/sample-page/about-us/> (Accessed 4 February 2013).

Culture Ireland (2013) *Culture Ireland*. Available at: <http://www.cultureireland.ie/> (Accessed 12 February 2013).

DAH PhD (2013) Digital Arts and Humanities PhD. Available at: <http://dahphd.ie> (Accessed 4 February 2013).

DHO (2013) Digital Humanities Observatory. Available at: <http://dho.ie> (Accessed 4 February 2013).

DRAPler –Digital Research and Projects in Ireland (2013) DRAPler. Available at: <http://dho.ie/drapier/> (Accessed 15 February 2013).

HEA (2013) PRTL Interactive Map. Available at: <http://www.heai.ie/en/node/233> (Accessed 12 February 2013).

HHS (2013) U.S. Department of Health & Human Services: Human Subjects Research (45 CFR 46). Available at: <http://www.hhs.gov/ohrp/humansubjects/guidance/45cfr46.html> (Accessed 12 February 2013).

Imagine Ireland (2013) Imagine Ireland. Available at: <http://www.imagineireland.ie/> (Accessed 12 February 2013).

Unsworth, J. (2005) "New Methods for Humanities Research", *The 2005 Lyman Award Lecture* November 11, National Humanities Center Research Triangle Park, NC. Available at: <http://people.lis.illinois.edu/~unsworth/lyman.htm> (Accessed 18 February 2013).