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TECHNICAL REPORT

Assessing the impact of arts and humanities research at the University of Cambridge

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Prepared for the
University of Cambridge and the Arts and Humanities Research Council

RAND EUROPE

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Preface

RAND Europe was commissioned jointly by the University of Cambridge and the Arts and Humanities Research Council (AHRC) in summer 2009 to undertake an independent assessment of the impact of arts and humanities activities conducted at the University of Cambridge. The brief focused on arts and humanities research and researchers at that university, and on the impacts reported by the people generating the research there. It was beyond the scope of this study to attempt to validate or quantify those reported impacts, or to compare the reported impacts with arts and humanities research conducted elsewhere.

In Chapter 1 we introduce the topic of research impact, knowledge transfer and approaches to impact assessment. Chapter 2 presents our approach and methodology and introduces a framework for describing and analysing research impact (the Payback Framework), which we have specially adapted for arts and humanities using the evidence we have gathered for this project. Chapter 3 presents the findings from (a) a survey of the University of Cambridge's arts and humanities researchers, (b) interviews with senior University of Cambridge academics and (c) interviews with external informants. In Chapter 4 we present four detailed cases. Finally, in Chapter 5 we present our suggestions for the assessment of arts and humanities research at the University of Cambridge and more widely.

RAND Europe is an independent not-for-profit policy research organisation that aims to serve the public interest by improving policy making and informing public debate. Its clients are European governments, institutions and firms with a need for rigorous, impartial, multidisciplinary analysis. This report has been peer-reviewed in accordance with RAND's quality assurance standards.

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Executive summary

This report describes the impacts of arts and humanities research at the University of Cambridge. Research impact is a topical and controversial issue, and the UK's higher education funding and research councils are currently reforming their arrangements for the allocation of public money to research. This study was jointly commissioned by the University of Cambridge and the Arts and Humanities Research Council (AHRC) in 2009 in order to provide an assessment of the reported impacts of arts and humanities research activities that is suitable for dissemination to local and national stakeholders, including senior levels of government.

The context for the study includes these factors:

- The University of Cambridge is seeking to account for the impact of its arts and humanities research alongside that of its (better known) science research.
- The University of Cambridge, like other universities, is seeking to influence the design and use of the new research assessment framework (Research Excellence Framework) that the Higher Education Funding Council for England (HEFCE) is currently developing, which will become a significant mechanism for funding arts and humanities research at the University of Cambridge.
- The AHRC needs to account convincingly for its use of public money to support arts and humanities research and is developing better ways to understand, describe and assess research impact.
- The AHRC is interested in supporting the development of a methodology that could be used by other universities to assess and track their arts and humanities research impact.

1.1 Methods of assessing the impact of arts and humanities research

This study used four methods to assess the impact of arts and humanities research activities at the University of Cambridge, underpinned by a robust analytical framework. Each method provided a specific type and depth of evidence, and all four were necessary and complementary in order to create a thorough analysis. The methods of assessment were:

- **interviews with senior University of Cambridge arts and humanities researchers** (22 from all the main faculties and departments) to clarify the scope, context, language and concerns about an investigation into research and research impact that the other methods in this study needed to accommodate. The interviews generated rich evidence of research and research impact as understood

and practised by senior, experienced individuals in all the arts and humanities disciplines and fields at the University of Cambridge, who also had knowledge of experience among colleagues in their areas and departments at the University. Several of them regard their teaching and research as intimately interrelated activities, and find that their research is influenced by and has impact through teaching.

- **a survey of all arts and humanities researchers** at the University of Cambridge (39% of the 737 responded) to provide breadth of evidence across the whole population of arts and humanities researchers, at all levels of seniority across all the main faculties and departments. The survey provided information and generated evidence about the researchers' career stages, levels of seniority and experience, and types of research activity and research impacts; some open-ended questions stimulated responses that informed selection of external interviewees and cases.
- **interviews with external users of research** outside the University of Cambridge. We interviewed 17 senior people from arts journalism, radio broadcasting, a national museum, public festivals of arts and ideas, international academic publishers, parliament, the law and architecture professions and international business) to clarify their interactions with and uses of arts and humanities research.[1]
- **four detailed cases** of arts and humanities research at the University to reveal and illustrate how research ideas can be developed over time, and where and how opportunities to enable research to be influential and make a difference can be encountered and enhanced.

An **analytical framework** provides a further essential foundation for identifying the logical connections that can be made between evidence selection, analysis and interpretation. The analytical framework used for this study is the adapted Payback Framework (presented and discussed in Chapter 3).

A **caveat**: comparisons with arts and humanities research elsewhere would be necessary in order to make more general observations about the impact of arts and humanities research in universities and other institutions elsewhere. Such a comparison is outside the scope of this project, which was not designed to investigate how representative the University of Cambridge evidence is of arts and humanities research impact more generally.

[1] We requested interviews with several politicians, Whitehall civil servants and government agencies; all declined or did not respond within the study timeframe.

1.2 Main messages

A. Arts and humanities research by University of Cambridge academics has many impacts.

The evidence for this statement comes from all four sources of empirical data that RAND Europe used for this study. Chapters 2 and 4 provide much detail. Some examples:

- Research books on "best seller" lists – such as *The Third Reich at War 1939-1945* by Professor Richard Evans, which was on the *New York Times*' best seller list in 2009, one of the *New York Times*' best books of 2009 and one of the *Atlantic Monthly*'s five best books of 2009.
- Research used directly in professional practice – such as Professor J.R. Spencer's *Cambridge Law Journal* article in 1989 tracing the history of public nuisance law, which is repeatedly referred to and quoted from in court cases, often forming part of the background to a judgment.
- Researchers as experts on current events and issues speaking via the mass media – such as Professor Jonathan Riley-Smith, historian of the crusades "…post-9/11, he was our biggest media-academic".
- Research profile underpinning international cultural events – such as academic research in Cambridge on the work of the Mexican novelist Carlos Fuentes; the Mexican embassy asked the Faculty of Modern and Medieval Languages to host a large event in 2009 for Fuentes' 80th birthday; Fuentes brought other young Mexican writers along and the influence of the event went beyond the university.
- Online resources to broaden access to research and research skills – such as that created by researchers in the Faculty of English; *English Handwriting 1500-1700: An Online Course* is free to use, together with digitised manuscripts and other images; it was produced (with AHRC and HEFCE funding) in order to broaden access to the manuscripts without damaging the originals, and to enable more people in many fields to acquire the skills needed to read such material.

B. Accurate attribution of research impact is often difficult. Research impact is difficult to predict or assess in advance.

Evidence for these two statements comes mainly from interviews with academics and the survey respondents. Attribution of impact is difficult because (a) impact may not be traceable to a particular piece of research or individual researcher; (b) time lags between doing the research and evidence of its impact may be (very) long.

Assessment of research impact in advance does not inspire the confidence of respondents, whereas they regard ex post assessment as a more convincing method of evaluation. Many of them prefer to use the term "value" rather than "impact". However, they realise that these issues will not go away. As fashions and trends in research and in the relevance of research to other interests can change (sometimes quite rapidly, for example regarding the preservation of languages, objects, sites), this may make some impact evaluation criteria unfair.

The cases in Chapter 4 include legal research, contemporary historical research, modern foreign literature and language research, and research resources for medieval manuscripts, and shed more light on attribution and assessment of impact.

C. Arts and humanities research impact tends to work cumulatively, through depth and/or breadth of research over many years; this means that the work of senior or longer-active researchers is more likely to achieve impact.

Evidence for this statement comes from all four sources. Less senior or less well-known University of Cambridge arts and humanities researchers may encounter three obstacles to achieving research impact: (a) academic status, which can affect the visibility of their research; (b) opportunities to undertake research and communicate the results of their research within and beyond academic circles, which may be less available to them; and (c) reputation, which may make a significant difference to the attention that a researcher or a piece of research attracts. More junior researchers may find it more difficult than their senior colleagues to disseminate their research through media, trade publishing and other public platforms. Several researchers also described how reputation and influence can build indirectly, for example through teaching generations of students who themselves go on to be influential in other careers and settings.

D. Public knowledge creation is a key non-academic impact of arts and humanities research by University of Cambridge researchers.

The evidence for this statement comes from all four sources. The external interviewees emphasised that many platforms exist outside universities for communicating research. These platforms offer significant opportunities to reach out beyond the academic milieu (e.g. through periodicals, the media, festivals, public lectures, popular books, and so on) to the general public, school students and school teachers, and local, national and international communities of interest. Some respondents indicated that in parts of the academic sphere there is still a detectable bias against popularisers.

E. Research impacts are often unplanned; nevertheless more academics could use existing opportunities to ensure their research has greater impact.

Evidence for this statement comes from all the sources. It shows that although some researchers may have planned some research impacts in advance, more often this was not the case. They might respond to chance opportunities or encounters to enable their research to be more influential, particularly beyond the academic sphere. These unplanned opportunities and their results could then inform researchers' hopes, intentions and plans for designing and communicating other pieces of their research. The cases show this vividly. By extension, more academics could position themselves to benefit in this way. Some of the external interviewees were disappointed or even frustrated by the reluctance of some academics to be more actively communicative about their research beyond their academic peers.

F. The adapted Payback Framework provides an effective way to examine the impacts of arts and humanities research.

Evidence for this statement comes from all the sources. The Payback Framework has been adapted and used here to analyse the impacts of arts and humanities research. The most important modifications were (a) to the categories of impact; (b) the introduction of teaching as a new interface in the model; and (c) the differentiation of academic impact as a distinct stage. These modifications were developed through a consultative process with the academic researchers and in discussion with the originators of the Payback Framework, to reflect more accurately the characteristics of arts and humanities research in the model.

1.3 Shared responsibilities and next steps

The University of Cambridge and AHRC continue to develop ways to increase the breadth and depth of impacts that arts and humanities research can achieve. They recognise that this is a shared responsibility.

The University centrally, the School of Arts and Humanities, the School of Humanities and Social Sciences, and the faculties, departments and centres within them, and individual researchers together are responsible for enabling more of their research to achieve greater breadth and depth of impacts.

Likewise, the AHRC's continuing efforts to explore and communicate the breadth, depth and range of impacts of arts and humanities research are essential, not least where individual researchers may be unaware of the potential value of their own research. A wide range of potential impacts exists, and more impacts could be achieved if awareness was raised of the routes and methods for achieving those impacts and if researchers became more ambitious and more confident in seeking broader and deeper impacts for their research.

Alongside the academic benefits from research there can be distinct benefits to a range of non-academic interests, through many forms of knowledge creation and enrichment. Creating opportunities and incentives for all researchers, regardless of level or tenure, to expand these types of impacts could help to strengthen this vital public benefit. Building a larger base of evidence about the research impacts that non-academic informants use and need would help to strengthen the definitions of categories of impact to underpin any weighting or other quantification that research funders may be considering.

Using the solid foundations developed here and widening the inquiry to other arts and humanities research at other universities, it would be possible to assess how typical or atypical the evidence from the University of Cambridge is. That would also enable the development of a larger pool of evidence, and thereby support comparisons across institutions. The AHRC may therefore want to consider using the adapted Payback Framework further with other universities. We would recommend that the Framework informs the design and analysis of such assessments, and that it would be important to include all four of the methods of data gathering employed in this study.

Further work could also usefully be done to delineate more precisely the similarities and differences (in terms of impacts), not only between fields of research within arts and humanities but also between the arts and humanities and the sciences and social sciences.

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CHAPTER 1 Introduction and context

1.1 This project

RAND Europe was commissioned jointly by the University of Cambridge and the Arts and Humanities Research Council (AHRC) in summer 2009 to undertake an independent assessment of the reported impacts of arts and humanities activities conducted at the University of Cambridge "that will be suitable for dissemination to stakeholders locally and nationally, including at senior levels of government, in particular to the Treasury. The successful tenderer will provide in-depth analysis of arts and humanities research and related activities underpinned by rigorous methodology" (University of Cambridge, 2009).

The University stated that it wished:

> to draw attention to the contribution of the arts and humanities to economy and society, by assessing the impact of research and associated activities from those disciplines. […] The significant scale and prominence of the University of Cambridge's arts and humanities activities conducted in its faculties, research centres, museums, libraries and archives provide a diverse range of evidence, case study material and possible metrics for such a study. (University of Cambridge, 2009)

For the AHRC:

> on a national scale, the UK government is demanding more justification of investment in arts and humanities research provided via the AHRC. […] the study should provide a robust methodology for assessing investment in arts and humanities research across a wide range of activities, with a focus on AHRC-funded projects. (University of Cambridge, 2009)

The scope of this project is arts and humanities research only at the University of Cambridge. Comparisons with arts and humanities research elsewhere would be necessary in order to make more general observations about arts and humanities research impact. Such a comparison is outside the scope of this project, which was not designed to investigate how typical or atypical the Cambridge findings may be.

1.2 Research impact

The concept of research impact is regarded as controversial and causes strong reactions among many academics, some of whom prefer to consider the "value" of arts and humanities research rather than its "impact". Nevertheless the research councils endeavour to allocate public funds to specific grants or programmes of research and the Higher Education Funding Council for England (HEFCE) uses metrics to award funds to

universities. In the absence of building an approach that appears tailored to the arts and humanities, other approaches will be applied.

The AHRC has stated that it wants to "support research that delivers excellence with impact". By this it means: "research in the arts and humanities that has world-class quality, which is driven by research questions or problems of strategic significance and academic urgency that result in outputs that exhibit both academic excellence and impact" (ARHC, 2008). The AHRC has been taking a number of steps to strengthen the assessment of arts and humanities research impact, including developing a model for "asserting the economic impact" (ARHC, 2009), which we refer to again in Chapter 3.

Research impact has been studied and debated for many years, particularly in relation to the natural sciences and to some extent for the social sciences. According to a review of research use,

> Diverse models have attempted to explicate "research use" […] Research impact forms a continuum, from raising awareness of findings, through knowledge and understanding of their implications, to changes in behaviour. Strategies to enhance research impact may address any point on this continuum. The aim of research impact strategies will determine how their effectiveness is measured. (Walter, Nutley and Davies, 2003)

That review identifies several forms of research impact:

- changes in access to research
- changes in the extent to which research is considered, referred to or read
- citations in documents
- changes in knowledge and understanding
- changes in attitudes and beliefs
- changes in behaviour.

In 2006 the Warry Report (on the economic impact of research councils) provided a broad definition of economic impact: "An action or activity has an economic impact when it affects the welfare of consumers, the profits of firms and/or the revenue of government. Economic impacts range from those that are readily quantifiable, in terms of greater wealth, cheaper prices and more revenue, to those less easily quantifiable, such as effects on the environment, public health and quality of life" (Warry, 2006).

1.3 Knowledge transfer

Warry acknowledged that "generating cutting edge research and adding to the stock of knowledge" is only a part of impact. He noted that it can often take more than ten years for funded research impact to be evident, and that "the flow of the output of highly educated people rather than research results is widely regarded as the most effective knowledge transfer mechanism" (Warry, 2006).

A study of the use of research in the government policy and practice environment, undertaken for the National Audit Office by RAND Europe in 2003 (NAO, 2003), drew

attention, among other things, to the importance of knowledge transfer for non-commercial research, which it defined as "any process or mechanism that facilitates the uptake of research in order to improve service delivery and develop policies" (p.16). That study found that "for non-commercial research, there is also a need to help researchers realise the social benefits of their findings" (p.6), and that there were "few knowledge transfer mechanisms in place to ensure effective communication and dissemination" (p.29). The study noted that (in the policy environment) involving users throughout the research process, "helps to create a cadre of sophisticated research users" (p.33). However, that approach is not yet very widespread; a number of informants in this study had comments on this, to which we refer later. Knowledge transfer continues to be notoriously difficult to achieve, for reasons that had already been identified over 30 years ago by Carol Weiss (1972). The reasons include:

- Research results are not easily accessible.
- Policy questions are poorly understood by the researchers.
- Research results are poorly communicated by the researchers.
- Research results are poorly understood by policy makers.
- Research results have no direct, short-term relevance for policy (Grant and Krapels, 2009).

Knowledge transfer in relation to arts and humanities research, however, is salient in other environments apart from policy making, as the AHRC (2009) has already discussed and as this study will show in some detail.

As the above sources suggest, the current debate about research impact places significant emphasis on wider impacts, beyond the academic sphere. Academic impact is one element among a range of possible impacts.

1.4 Approaches to impact assessment

The purposes of research and research impact are at the heart of discussions about what assessments of research impact would be considered meaningful, appropriate, reliable and acceptable, and by whom. Research impacts could be sought for one or more of four purposes – accountability, advocacy, resource allocation and analysis – and the measures used need to suit the purpose(s). In the interest of developing a suitable and effective means of assessment of arts and humanities research impacts, it is useful to explore how similar and dissimilar they are to research and research impacts in other fields and disciplines.

As a constructive contribution to discussion of these matters, the University of Cambridge and the AHRC jointly commissioned this study, to help both institutions develop evidence about and analysis of arts and humanities research impact and assessment. In this study we have therefore attempted to reveal more about how arts and humanities research actually works at the University of Cambridge, whom it influences, and how interested parties can assess its impact.

The UK research councils and higher education funding councils' allocation systems attempt to assess merit and seek to some extent to influence or incentivise researchers' choices of subjects and methods of research. However, they use different approaches, which have their respective strengths and weaknesses. The funding councils look at universities' academic performance historically. The research councils look at researchers' possible future performance prospectively.

The funding councils are in the process of designing a revised approach – the Research Excellence Framework (REF) – to replace the Research Assessment Exercise. This is of particular interest to arts and humanities researchers at the University of Cambridge because more of their research time tends to be funded through funding council allocations, and a smaller proportion is funded through research council grants (or other sources).

One existing approach for assessing academic (i.e. not wider) impact currently under consideration for performance assessment within REF is bibliometric analysis. This has been used for some time internationally in the natural sciences as an indicator of research excellence (tracking articles by researchers published in peer reviewed scientific journals, and subsequent citations of those articles in articles by other researchers). The AHRC recognises that this approach is still at an early stage for humanities research (AHRC, 2009). HEFCE commissioned a pilot exercise in 2008-09 on using bibliometric analysis as part of the forthcoming REF. The "lessons learned" report observes: "There remains an undercurrent of concern about the use of such citations in performance assessment, which while it reduced greatly across the two consultation rounds, suggests it will take one or two iterations of the REF bibliometrics proper before the community is fully acclimatised" (HEFCE, 2009b). HEFCE stated in January 2010 that "citation information is not sufficiently robust to be used formulaically or as a primary indicator of research quality; but there is considerable scope for it to inform and enhance the process of expert review" (HEFCE, 2009a).

The study we have carried out has investigated the perceptions and intentions of University of Cambridge arts and humanities researchers in relation to impact, and what measures of assessment are being used or could readily be used. We have consulted a large number of academic researchers active in arts and humanities in the University of Cambridge and some other individuals outside Cambridge and other universities, who need and use research that academics produce; and we have looked in greater detail at some cases. In Chapter 2 we present the findings from (a) our survey of University of Cambridge's arts and humanities researchers, (b) our interviews with senior Cambridge academics and (c) interviews with external informants. The methodological details are in the appendices. In Chapter 3 we introduce a conceptual scheme (the Payback Framework) for describing and analysing research impact, which we have specially adapted for arts and humanities using the evidence we have gathered for this project. In Chapter 4 we present four detailed cases. Finally, in Chapter 5 we suggest some next steps for addressing the assessment of the influences and impacts that research by arts and humanities researchers can have.

CHAPTER 2

What are the impacts of arts and humanities research?

2.1 Introduction

The impacts from arts and humanities research at the University of Cambridge are wide-ranging and diverse, though sometimes difficult to identify and describe. Academics at the University of Cambridge were often able to articulate how research has value, but found it more difficult to identify impacts from their work and ways in which impacts can be assessed. Often, although researchers are usually able to discuss the social, cultural, academic and economic impacts of their research, they remain very resistant to the idea of "measuring" impact and generally feel more comfortable discussing impact in terms of "value" and "influence", rather than using the term "impact". Although our research indicates that impacts in the arts and humanities cannot easily be assessed, it is certainly possible to measure research outputs, as well as the forms and breadth of dissemination.

This chapter explores the different impacts of arts and humanities research at the University of Cambridge through the three sources of data we gathered during this research project: interviews with senior academics at the University of Cambridge; interviews with senior persons in the media, publishing, arts and industry sectors; and a survey of researchers in the arts and humanities at the University of Cambridge. This chapter outlines the findings from these three data sources on the impacts of arts and humanities research at the University of Cambridge both within and outside the academic community. It details the evidence for the scope and scale of different impacts identified through the three sources of data. The categories of impact discussed in this chapter are adapted from the Payback Framework, which is explained in Chapter 3 Approach and Methodology. The categories of impact used are: impact through teaching, academic impact, impact on policy, impact on practice, impact on public knowledge, impact on preservation of heritage, impact on leisure and entertainment, and economic impacts (both direct and on wider society). Finally, this chapter highlights some crosscutting findings from the interviews and open ended questions in the survey (issues of timeliness, attribution, trends) about the process by which arts and humanities research has impact.

2.2 Impact through teaching

The correlation between teaching responsibilities and research was stressed by the majority of those academics interviewed and surveyed. They stated repeatedly that the process of preparing and delivering lectures and supervising students frequently prompted new research questions; they then devoted their research time to addressing these questions or began to think about a research topic in a different way. More than one interviewee noted that research was being used in teaching and that it was rather difficult to differentiate between teaching and research for that reason. Conversely, one interviewee stated that teaching is the first *output* of research, implying that research and teaching are separate stages altogether. All the academics whom we interviewed variously mentioned ways in which their research has an impact upon their teaching or described the relationship between the two as integral or impossible to separate.

The relationship between teaching and research leads to impact in a number of different ways. First, students at the University of Cambridge are taught in small groups or individually by academics who are often leading the research in their field or subject area. The students are therefore the first beneficiaries of the research carried out and uniquely placed to gain academic and intellectual advantage for their own careers and personal development. By the same measure, the majority of researchers we interviewed revealed that their own career path was shaped and influenced by the teaching they received as undergraduate students at the University of Cambridge or elsewhere. A key point that was raised here related to how teaching and education can lead to unexpected impacts in the student's own career path. For example, a professor in the Faculty of Divinity described how he had put his undergraduate education in the Faculty of Classics at the University of Oxford into practice in unexpected ways by supervising and examining scholars in other subjects: "The people who taught me the plays of Sophocles at Oxford had no idea that one day I would be sitting in London University teaching some young budding scholar something about 10th century Hebrew manuscripts. They thought they were training a new generation of classicists!"

Second, interviewees also discussed the value of teaching in relation to producing an educated workforce who might go on to have impact in their careers in other fields and industries. As one interviewee in the Faculty of Modern and Medieval Languages said, "It's certainly true that one of Cambridge's great effects is to produce all sorts of people who go out into the 'culture industry' and operate in it in very influential ways." A professor in the Faculty of Philosophy described the "skills" that he and his colleagues impart to students as "an essential component of education", qualifying this by saying, "I don't think you could do [this] if you were not actively involved in research. You wouldn't have the confidence let alone the capacity. So that is an immediate impact – the educational value of what we do." This point was reinforced by a senior academic in the Faculty of Modern and Medieval Languages who also stressed how research leads to wider impacts through teaching and the education of undergraduates:

> It may be that linguists, even if they are working on literature, do perhaps have a particular sense of impact. I'm not sure it is identical to how things might feel in an English faculty or a History faculty. From the beginning –from the first year of your degree – we are odd-job men and women. We embrace this kind of hybridity, connecting linguistic aptitude with cultural knowledge. And you could argue that our research feeds

> into our teaching and that our teaching produces people who are very sophisticated not only linguistically but also culturally. And it's not that all these people end up working for the Foreign Office but in all kinds of other businesses as well.

The *ways* in which subjects are taught at the University of Cambridge was also mentioned by this interviewee as having led to impacts in schools and education more generally:

> Cambridge can have a real influence on the education of children. For example, in English, one of the main things that kids do in schools is practical criticism and you could trace that back to the history of English [Faculty research and teaching] in Cambridge going back at least as far as the Second World War.

However, it should be stressed that the finding that teaching is the route to different impacts and/or intensity of impact in no way implies that researchers who do not teach would have a lesser impact than those who teach because a multitude of factors have the potential to influence the type and strength of research impacts (reputation, subject of research, fashion and trends, socio-economic context and so on).

2.3 Academic impact

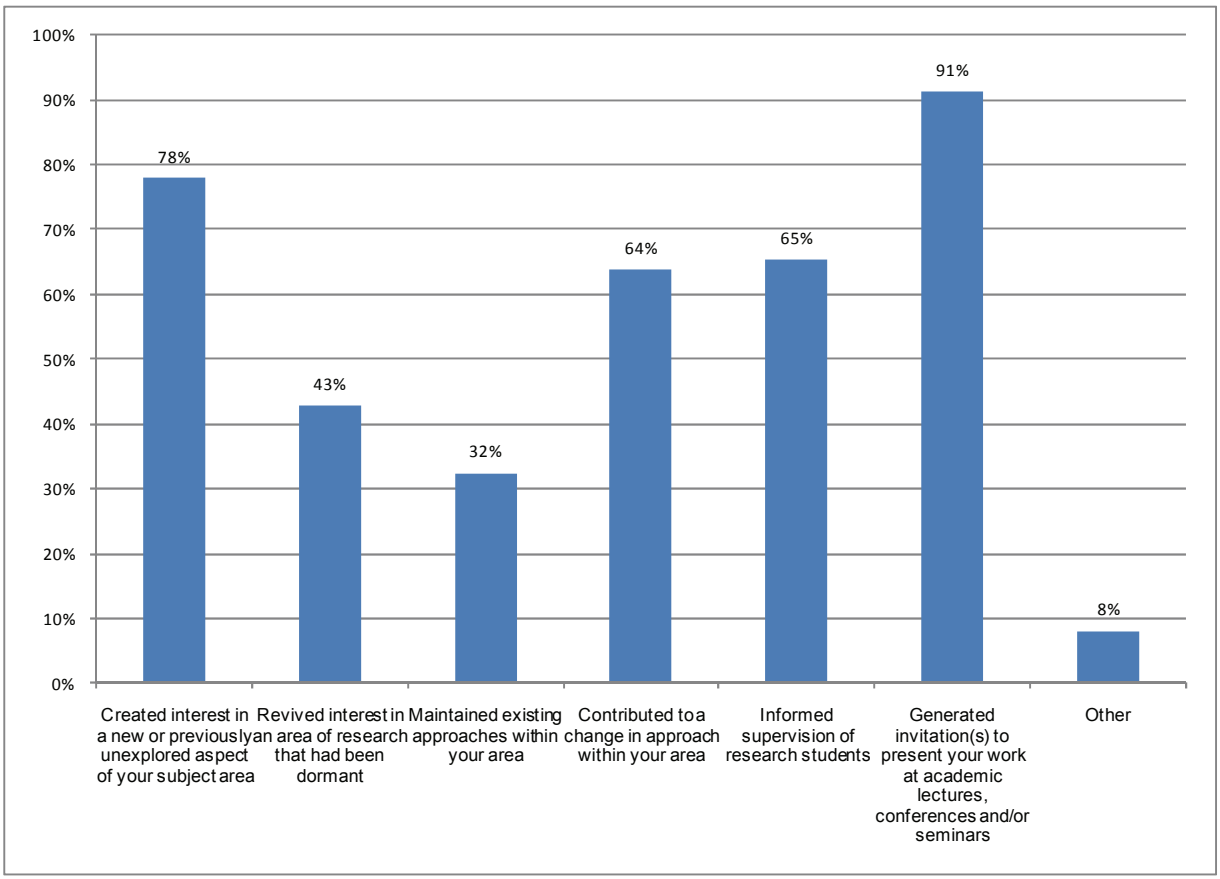
Academics across the arts and humanities disciplines at the University of Cambridge found it easiest to discuss their impact within the university through the creation of knowledge and of research resources. The majority of researchers we surveyed and interviewed saw the creation of knowledge and research resources as a key impact of their research. Although other impacts may and do follow this initial impact within the academy, they were not typically seen as a key motivation for research. A professor in the Faculty of Divinity stressed the centrality of knowledge creation to his own research impulses, saying "All my training, all my teaching, all my work is aimed at sustaining, improving and advancing the sort of things that universities have been good at for the last 800 years [which is] advancing knowledge and understanding."

Only 5% of survey respondents said that they were not aware that their research had influenced others in the academic community; 95% of survey respondents stated that their research had informed subsequent research in their area. Table 2.1 shows the breakdown of respondents who stated that their research had not informed subsequent research in their area by their position at the University of Cambridge.

Table 2.1 Respondents who stated that their research had not influenced subsequent research in their area, by job position (Q10)

Job position at the University of Cambridge	Number	
	Number of respondents	% of total
Assistant professor	0	0%
College teaching officer	0	0%
Junior research fellow	4	33%
Lecturer	2	17%
Other	1	8%
Postdoctoral research associate	1	8%
Professor	0	0%
Reader	0	0%
Research fellow	3	25%
Senior lecturer	1	8%
Senior research associate	0	0%
Senior research fellow	0	0%
Grand total	12	100%

Respondents who answered that their research had informed subsequent research in their area were also asked in what way this had been achieved (through a series of pre-selected options). The spread of responses is shown in Figure 2.1 below:



SOURCE: RAND Europe (2009)

Figure 2.1: How respondents' research has influenced subsequent research in their area (Q11, n = 262)

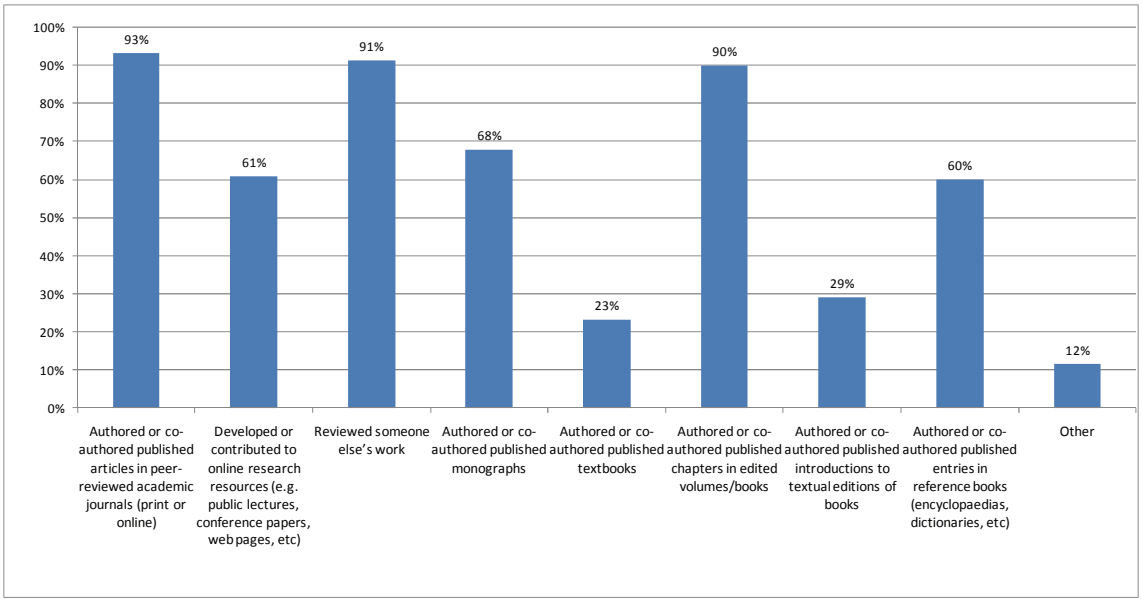
In the internal interviews, academics were able to describe a wide range of outputs directed at the academic community, likely to influence academic knowledge creation. Such outputs included articles in peer reviewed journals, monographs, lectures, conferences, online and offline research resources, textbooks, book chapters and non-peer reviewed articles, among others. In the survey, respondents were also asked about the academic activities they had undertaken either as a single or co-author through a series of pre-selected options. Figure 2.2 below shows the proportion of respondents for each option. The most selected options were "authored or co-authored published articles in peer-reviewed academic journals" (93%), "reviewed someone else's work" (91%) and "authored or co-authored published chapters in edited volumes/books" (90%).

Respondents were also asked whether there had been published reviews of their work. This was the case for an overwhelming majority of respondents (73%). Of those 19% of respondents who indicated there had been no published reviews of their work, 30% were junior research fellows (15 respondents), 22% were postdoctoral research associates (11 respondents) and 20% were lecturers (10 respondents).

A professor from the Faculty of Classics used the example of Sir Moses Finley, a former professor at the University of Cambridge and Master of Darwin College, to emphasise how

academic knowledge creation through research can occur over a long period of time and have an impact on a range of academic disciplines. Influence on other disciplines is not uncommon for researchers at the University of Cambridge: 69% of survey respondents indicated that their research outputs were used by academics within other arts and humanities disciplines than their own.

University of Cambridge academics often contribute to online research resources and entries in reference books: 60% of survey respondents had contributed to a reference text while at the University of Cambridge and 61% had contributed to online research resources. The resources include introductory texts, such as Professor Cook's *Music: A Very Short Introduction* (2000), part of the A Very Short Introduction series of Oxford University Press, which appears on university reading lists and various online resources. Professor Cook was also involved in a research project to develop computer models to analyse recordings of Chopin mazurkas. Academics in the Department of History and Philosophy of Science developed a website on the early history of astronomy called "Starry Messenger", intended to assist undergraduate students but used for teaching globally.

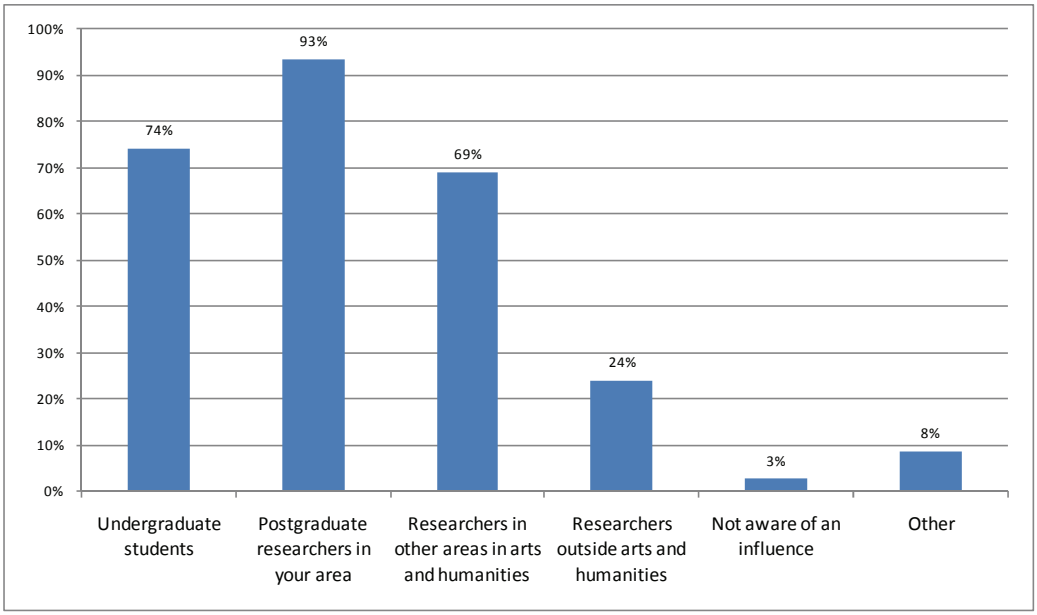


SOURCE: RAND Europe (2009)

Figure 2.2: Academic activities undertaken by respondents as a single or co-author (Q12, n = 276)

Respondents were asked who uses the resources mentioned in Figure 2.2 above, through pre-selected options. The most commonly cited "users" of these resources were: academics within their area(s) of research (96%), academics within their discipline beyond the University of Cambridge (96%), academics within their own faculty or department at the University of Cambridge (72%) and academics within other arts and humanities disciplines (69%). Interestingly, 22% of respondents indicated that those using the resources created by their research were outside arts and humanities disciplines and none of the respondents indicated that they were not aware of their research being used by others.

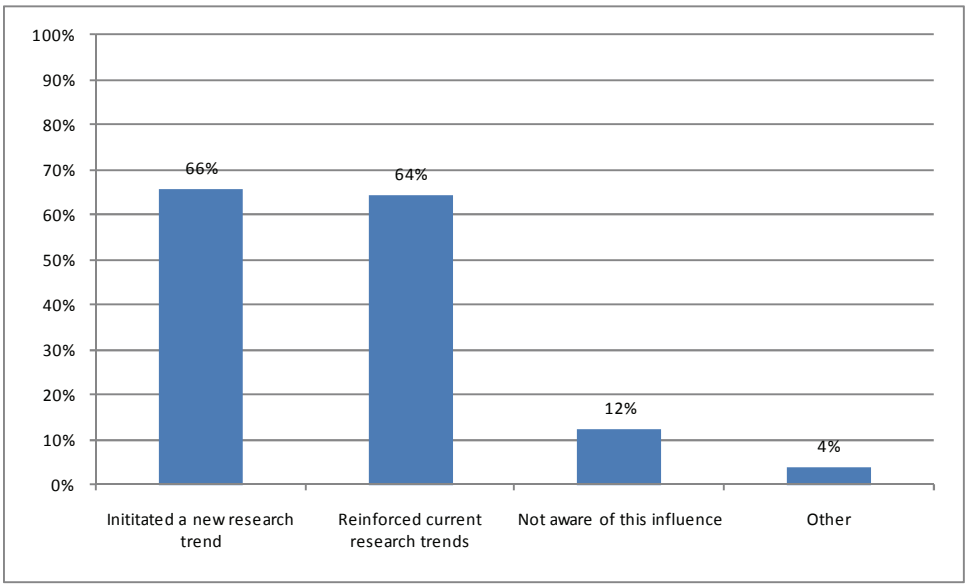
Respondents were also asked about who they thought their research had influenced, as shown in Figure 2.3 below, through pre-selected options. The most commonly cited groups were "postgraduate researchers in your area" (253 respondents), "undergraduate students" (201 respondents) and "researchers in other areas in arts and humanities" (187 respondents). It is interesting to note that almost a quarter of all respondents stated that their research had influenced "researchers outside arts and humanities" (65 respondents). Of those 65 respondents there was a large spread of responses across departments or faculties: 12% were from the Faculty of History (8 respondents), 11% were from the Department of History and Philosophy of Science (7 respondents) and 9% were from the Department of Archaeology (6 respondents) and 9% were from the Faculty of Law (6 respondents). Just 3% of respondents indicated that they were not aware of an influence in this area and these respondents tended to be in the most junior positions with 80% being junior research fellows (4 respondents) and 20% being research fellows (1 respondent).



SOURCE: RAND Europe (2009)

Figure 2.3: Groups influenced by respondents' research (Q15, n = 271)

Respondents were asked in what ways their research at the University of Cambridge had influenced the direction of research trends in their subject area through a series of pre-selected options. The breakdown of responses for each option is shown in Figure 2.4 below.



SOURCE: RAND Europe (2009)

Figure 2.4: Ways in which respondents' research has influenced the direction of research trends in their subject area (Q16, n = 270)

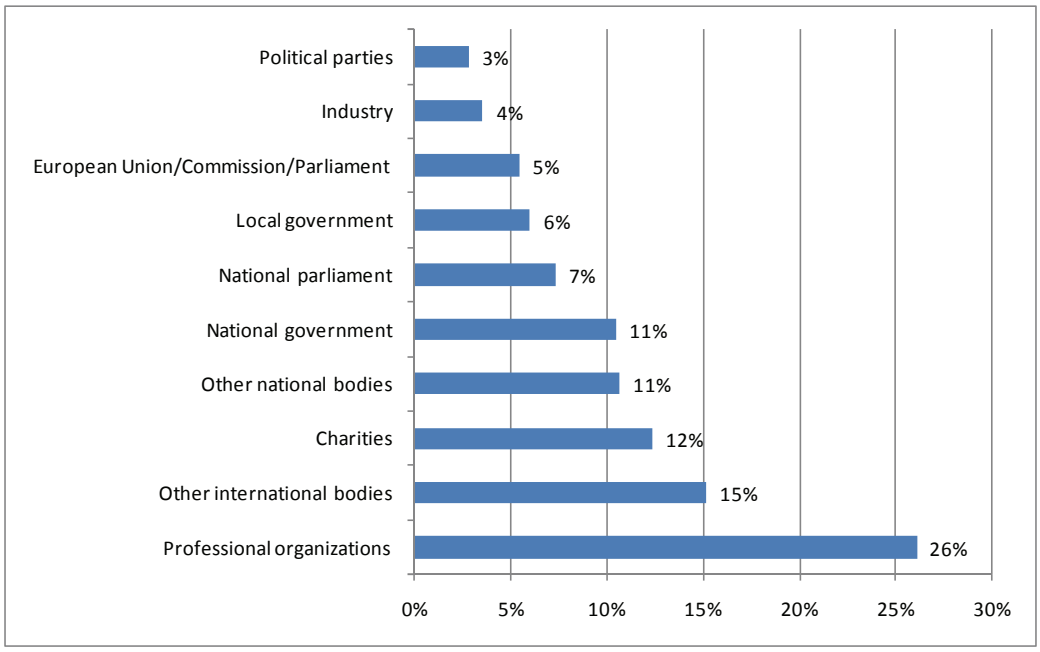
Affirming the value attributed by researchers to academic impact, either through knowledge creation or the development of research resources, a senior lecturer in the Department of French suggested that academic impact could be the most important influence of the arts and humanities at the University of Cambridge, stating: "Very pure research, often in monograph and article form, that seeps into intellectual life in a rather nebulous but pervasive fashion, that probably is what Cambridge does best."

2.4 Impact on policy

Communication of research to policy makers

Over 60% of survey respondents indicated that they had communicated their research to policy makers. Of those who were not aware of their research having an influence on policy, 24% were senior lecturers (19 respondents), 15% were lecturers (12 respondents) and 13% were professors (10 respondents).

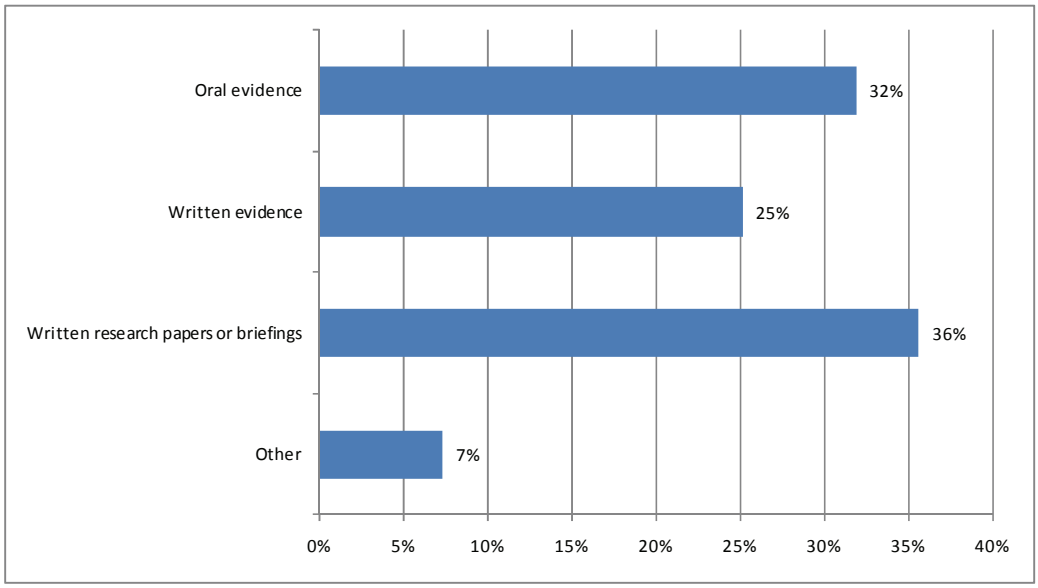
Figure 2.5 below details the levels at which respondents identified that their research had been communicated to policy makers. It shows that research in arts and humanities was most frequently communicated to "professional organizations" (139 respondents) and "other international and national bodies" (81 and 57 respondents respectively).



SOURCE: RAND Europe (2009)

Figure 2.5: The levels at which research had been communicated to policy makers (Q17, n = 314)

Respondents were asked about how this communication had taken place. The responses are detailed in Figure 2.6 below.



SOURCE: RAND Europe (2009)

Figure 2.6: Ways in which research had been communicated to policy makers (Q17, n = 314)

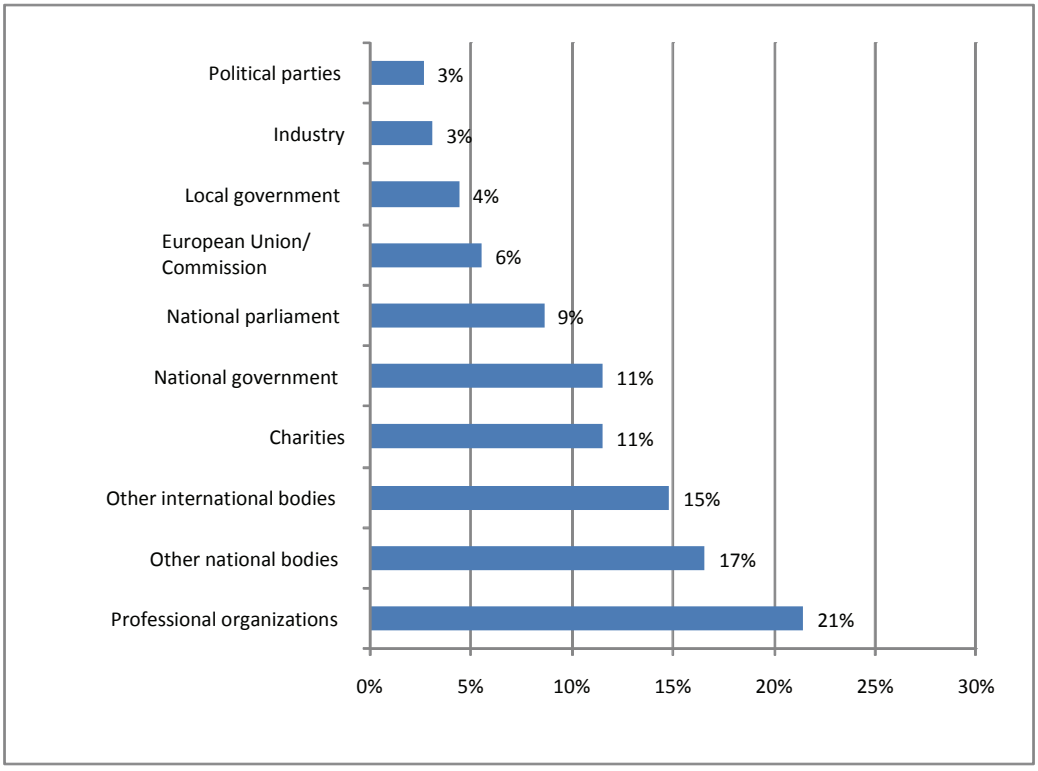
Influence on policy making

Two-thirds (64%) of respondents indicated that their research had influenced policy making. Of those who were not aware of an influence on policy making, 23% were from

the Faculty of Modern and Medieval Languages (including the Departments of Linguistics, French, German and Dutch, Italian, Spanish and Portuguese, and Slavonic Studies) (21 respondents), and 13% were from the Faculty of Classics (12 respondents).

More than 65% of survey respondents had influenced policy, from a number of faculties and departments, including: the Faculty of Divinity; the Department of East Asian Studies; the Faculty of English; the Department of French; the Faculty of History; the Department of History and Philosophy of Science; the Faculty of Law; the Department of Linguistics; the Department of Middle Eastern Studies; and the Faculty of Music.

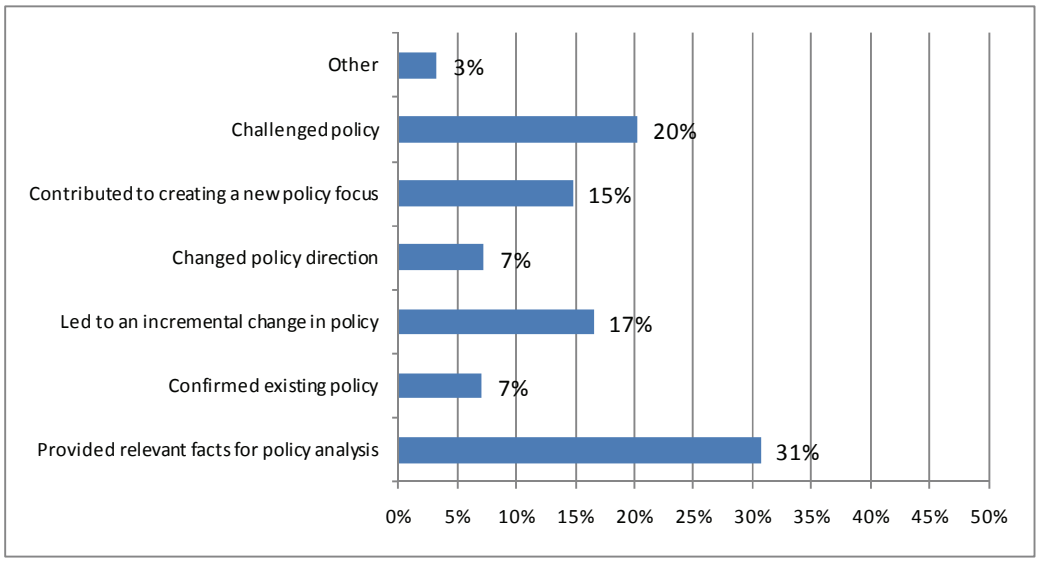
Figure 2.7 below shows the proportion of times that respondents identified that their research influenced different levels of policy making. It shows that research in arts and humanities has most often influenced "professional organisations" (97 responses) and "other national and international bodies" (75 and 67 responses respectively).



SOURCE: RAND Europe (2009)

Figure 2.7: Levels at which respondents' research had influenced policy makers (Q18, n = 273)

When asked how this communication had taken place, survey respondents suggested that the nature of the influence of research on policy varied from allowing for better informed policy makers by providing relevant facts, to actually contributing to a change in legislation. The responses are detailed in Figure 2.8 below. The most common ways in which research had influenced policy making were by providing "relevant facts for policy analysis" (31%) and by "challenging policy" (20%).



SOURCE: RAND Europe (2009)

Figure 2.8: Ways in which research had influenced policy making (Q18, n = 273)

University of Cambridge researchers, particularly in the Faculty of Law, could describe a clear relationship between policy making and research. For instance, research from the University of Cambridge was reflected in the Treaty of Lisbon. A group of academics from the University of Cambridge's Faculty of Law also gave anecdotal evidence of having had a very clear impact on policy when they were employed as consultants by the then Department of Trade and Industry's reform of the Companies Act between 1998 and 2001. The Department of Trade and Industry ceased to work on what University of Cambridge law academics showed to be an unfeasible option, resulting in the Department focusing time and resources to analysing more feasible policy options. Only 15% of respondents (5 respondents) from the Faculty of Law stated that they were not aware of their research having an influence on policy making and analysis.

In other disciplines, though the majority of survey respondents indicated that they had influenced policy making in some way, interviewees were sceptical of the extent to which policy makers considered their input. A professor in the Faculty of History maintained,

> The direct impact of historical research in politics has not been very fortunate. Sometimes, historical perspectives are requested for particular policy/political issues (for example, by Thatcher and Blair) and then disregarded completely.

However, though perhaps academic interviewees were unsure of the extent of their impact, external interviewees affirmed that although indirect and possibly difficult to measure, research, including that from the arts and humanities, does enter into policy making activities. For instance, although only 9% of responses identifying an influence on policy making stated that this was to parliamentarians directly, John Pullinger, librarian for the House of Commons, stated that he and his colleagues would often access written outputs from peer-reviewed academic research when providing a member of parliament with information on a particular subject. He suggested that academic research is essential to their task of informing parliamentarians:

> Part of our job is to try and help [members of parliament] sift the wheat from the chaff: which are the opinions which are actually backed up by some kind of analysis [and] which are just prejudice.

Although academics may not be aware of their research outputs being used in parliament, our findings indicate that House of Commons librarians search through academic databases and journals to find reports of relevant, up-to-date research that may be of use to members of parliament and other colleagues.

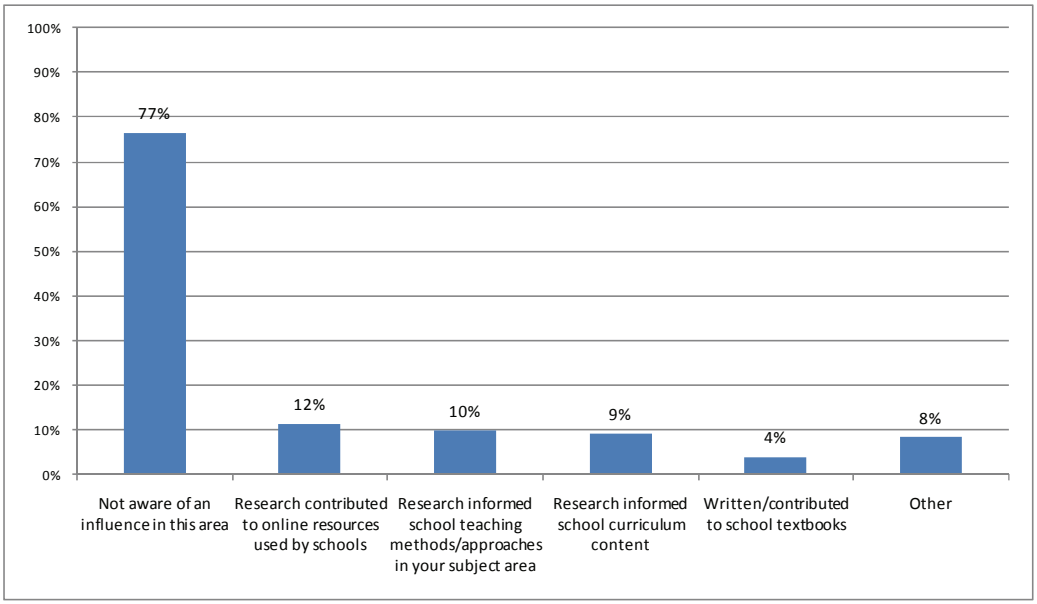
2.5 Impact on practice

Senior University of Cambridge academics were able to discuss the use of their research in professional practices. In the survey, fewer respondents were aware of having an influence on business or professional practice than were aware of having had an impact on policy making. Just over one-third (36%) of respondents stated that they had participated or organised activities that exposed businesses and professionals to their research. However, in interviews with senior academics, it became clear that academic research was having an impact upon professional practice outside the University of Cambridge. In the interviews, University of Cambridge academics discussed the impact of their research in arts and humanities on professional practice in three areas:

- the school curriculum
- business practice
- acting as an expert witness.

School curriculum

Figure 2.9 below shows the breakdown of responses by ways in which research influenced teaching and curricula in primary and secondary schools. One-third of respondents (33%) were aware of having an influence in this area. The most common influences respondents had on teaching in primary and secondary schools was by contributing to online resources used by schools (29 respondents), by informing school teaching methods and approaches in their subject area (25 respondents) and by informing school curriculum content (23 respondents).



SOURCE: RAND Europe (2009)

Figure 2.9: Ways in which research had influenced teaching and curricula in primary and secondary schools (Q19, n = 252)

Just under a quarter (23%) of survey respondents (59 responses) indicated that they were aware that their research had influenced learning at the primary or secondary school level through input into textbooks, talks and lectures, methodologies and approaches, online resources or curriculum content. This was a much lower proportion of respondents than those who had influenced teaching at university and college level. For example, 61% of respondents indicated that they contributed to online research resources for the academic community, while only 12% stated that their research had contributed to online resources used in primary and secondary schools.

Academics had various opinions of the extent to which their research had influenced the school curriculum. A professor in the Department of Archaeology suggested,

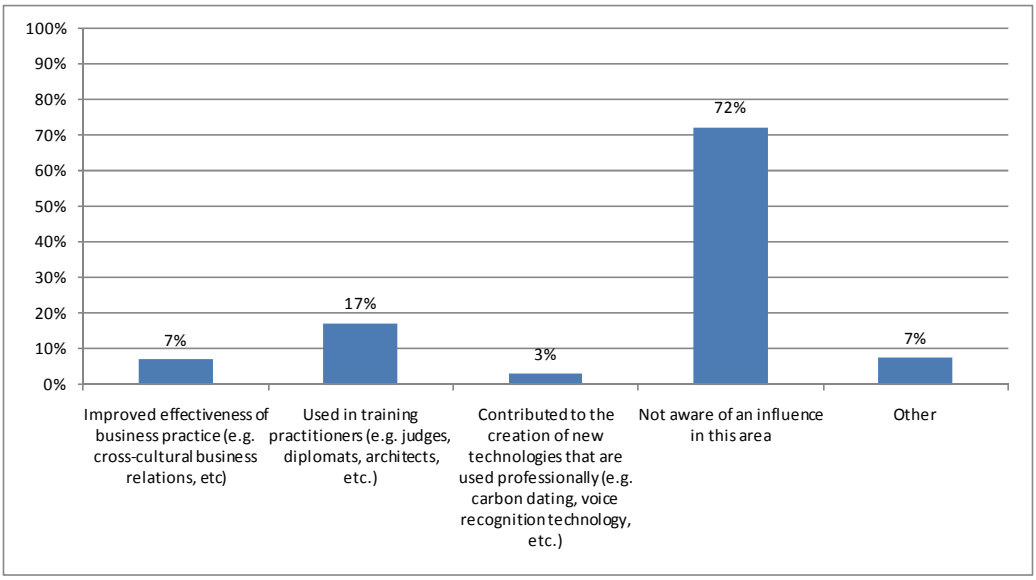
> The impact of current archaeological research on the national curriculum is debatable: on the one hand the highly selective nature of the history curriculum leaves little room for the subtleties of archaeological insights into the complex history of these islands from the first settlers onwards; on the other hand many teachers use archaeology imaginatively in other parts of the curriculum as students respond well to its emphasis on using material culture (objects) as a research tool.

Nevertheless, in specific cases, academic research from the University of Cambridge has clearly informed the school curriculum, either through lectures and talks to teachers or students, or by influencing written teaching and study resources. For instance, this was evident for one professor in the Faculty of History, who has given talks at schools about his research, and whose publications have been recommended to secondary school students and are found in secondary school and six form college libraries.

Business practice

Just over one-third (36%) of respondents organised or participated in activities that exposed businesses to their research. Of these, 21% (20 respondents) were from the Faculty of Law and 12% were from the Faculty of History (12 respondents).

As shown in Figure 2.10 below, most respondents were not aware that their research had influenced business or professional practice; of those whose research had had this influence, 42 respondents said that it had been "used in training practitioners" and 17 said that it had "improved effectiveness of business practice".



SOURCE: RAND Europe (2009)

Figure 2.10: Ways in which research influenced business or professional practice (Q21, n = 242)

When asked about how their research had influenced business or professional practice, 17% of respondents said that their research was used in training practitioners (e.g. judges, diplomats and architects) and 7% said that their research had improved the effectiveness of business practice (for example, through cross-cultural business relations).

Interviewees discussing the relationship between the legal profession and law research were particularly articulate in describing the influence of their research on professional practice. In the survey, only 33% of survey respondents from the Faculty of Law stated that they were not aware that they had influenced business or professional practice (11 respondents). In contrast, 65% of survey respondents in the Faulty of Law (20 respondents) stated that they had communicated their research with businesses or professionals. The nature of research in law can make it directly relevant to professional practice. According to a professor in the Faculty of Law,

> The most simplistic and straightforward meaning of research in law is writing notes responding to new developments from a new case, identifying errors and setting out how law should have been applied to that particular case.

Similarly, Lady Justice Mary Arden, a graduate of University of Cambridge, suggests that academic work can be of particular use in:

- areas of the law requiring knowledge of their context and framework (e.g. social housing law)
- providing knowledge on the economic results of aspects of the law
- quickly changing areas of the law, where legislation and analysis is more unknown (e.g. housing and property law)

In disciplines other than law, other academic and external interviewees suggested that the influence of research on business practice could depend on external interest and need. For instance, academics in the Department of East Asian Studies were able to impact the effectiveness of business practice within the context of growing business interest and economic activity in China. A professor in the Department of East Asian Studies stated,

> The interest in Chinese Studies has exploded in recent years and the faculty has explored ways to respond to that development, engaging with a wider audience, for instance, through Cambridge's Festival of Ideas.

This professor was then able to influence business practice effectiveness after being sought out by a personal friend working in the banking sector in China. This professor arranged a dinner between the businessman and academics who had experience of Chinese institutions and government bureaucracy. Through this informal network, the businessman obtained an independent view of Chinese institutions and business relations difficult to obtain within the banking sector.

Expert witness

One-tenth (10%) of respondents had acted as an expert witness in a legal case. Of those, a large proportion were from the Faculty of History (26%; 7 respondents) and the Faculty of Law (22%; 6 respondents). A wide range of University of Cambridge researchers have been able to impact legal practice through their research by acting as expert witnesses from departments and faculties such as Divinity, English, Music, Linguistics and East Asian Studies, but expert witnesses were more likely to be from the Faculty of Law and the Faculty of History.[2] Professors (29%) and readers (17%) were more likely to have acted as expert witnesses than other categories of academic.

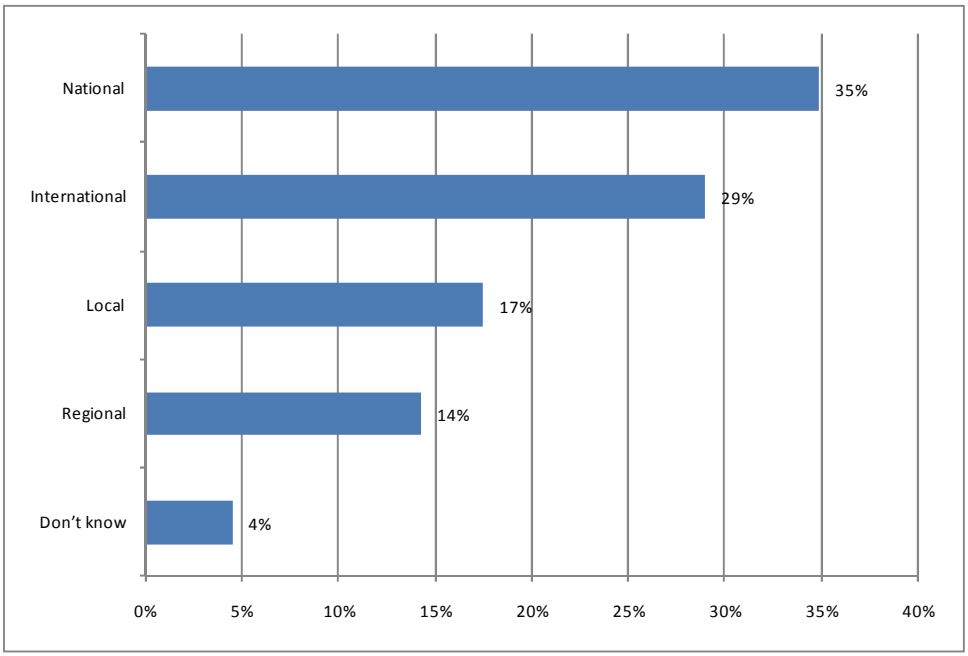
2.6 Impact on public knowledge creation

Researchers at the University of Cambridge believed that their research had an impact on public knowledge as well as on knowledge creation within the academic community. A senior researcher in the Faculty of Classics stated,

> Research [within academia] trickles down to [one's] own discipline, then other disciplines and to schools, and then to wider society. Contributions of academics to popular media (radio, TV, print media) are also part of the whole system of trickle down.

[2] Both the Faculty of Law and the Faculty of History had survey response rates of approximately 25-26%; 18.2% of respondents from the Faculty of Law and 21.2% from the Faculty of History indicated that they had acted as expert witnesses.

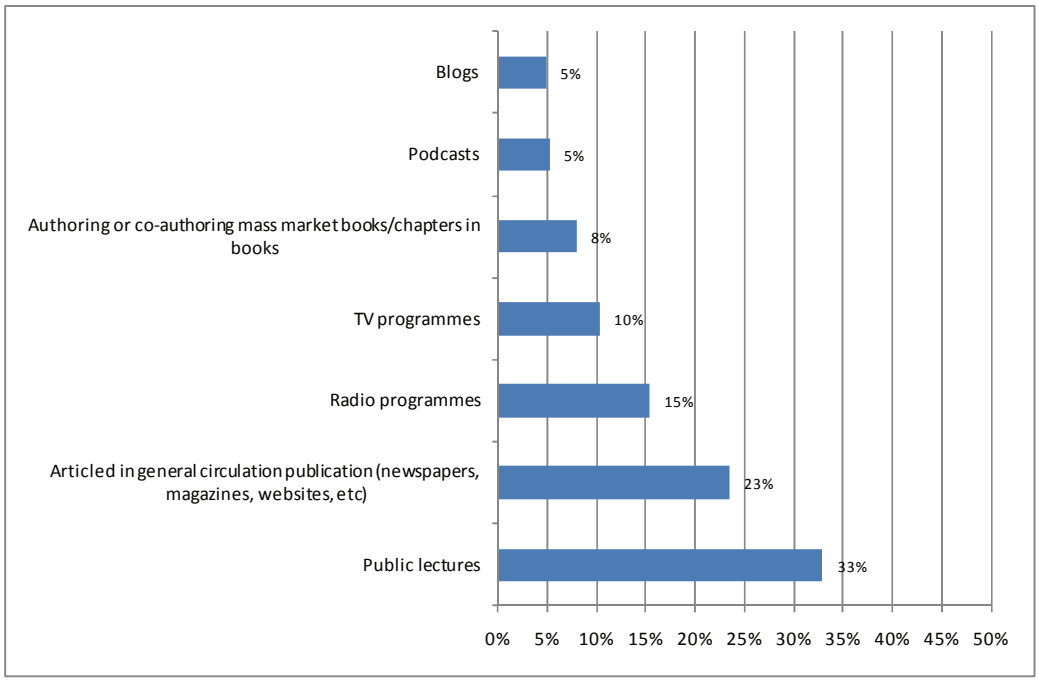
An overwhelming majority of survey respondents (95%) believed that their research had been communicated to the public. It had taken place most often at the national level (35%) and international level (29%) (Figure 2.11).



SOURCE: RAND Europe (2009)

Figure 2.11: Levels at which research had been communicated to the public (Q23, n = 272)

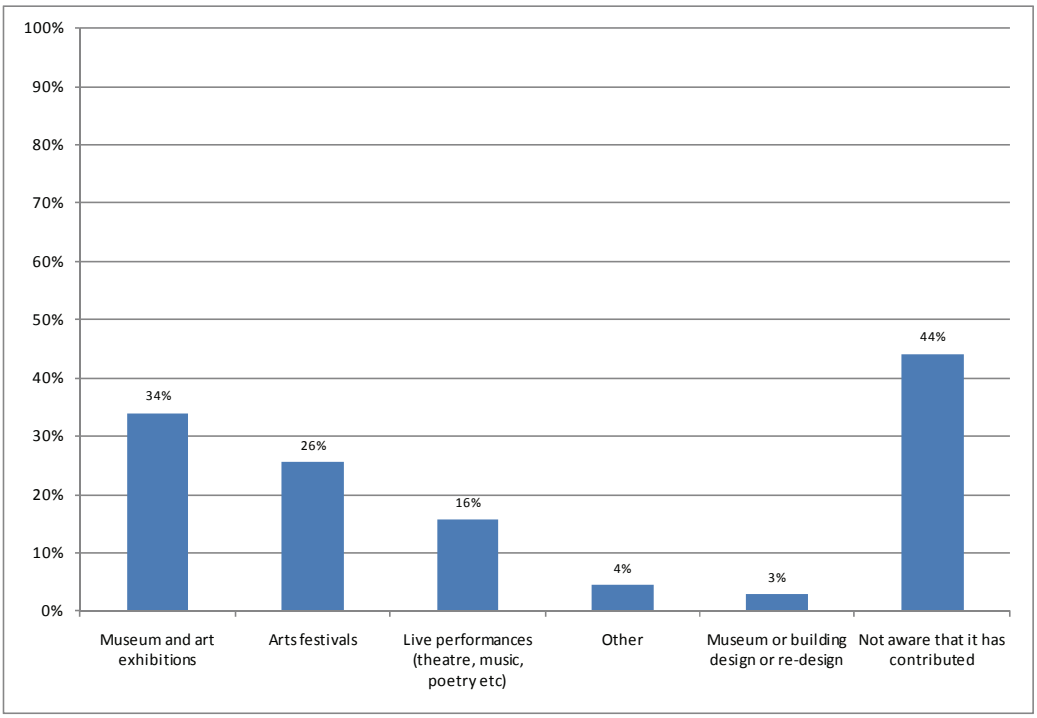
A variety of channels are possible for communicating research to this wider public. A professor in the Faculty of History said, "The media and publication of books are routes of impact, to try to persuade people, educating the wider public" while a professor in the Faculty of Classics thought that radio programmes "plus blogs and podcasts" make "academics accessible to the public in new ways". Figure 2.12 below shows how research had influenced the public, most commonly through public lectures (33%) and articles in general publications (23%).



SOURCE: RAND Europe (2009)

Figure 2.12: Ways in which research had influenced the public (Q23, n = 255)

Survey respondents were asked about the activities and events that their research had contributed to public knowledge creation (see Figure 2.13 below). Just under half (44%) of respondents were not aware that they had contributed in this way. Of those, 22% were from the Faculty of Law (24 respondents), 16% were from the Faculty of History (17 respondents) and 9% were from the Faculty of Classics (10 respondents).



SOURCE: RAND Europe (2009)

Figure 2.13: Activities and events to which respondents' research had contributed (Q25, n = 247)

Interviewees spoke about the complex and often serendipitous process through which they have seen arts and humanities research influence public knowledge creation. The University of Cambridge academics' impact on public knowledge creation has been influenced by fashions, trends and current events. According to a professor in the Faculty of Modern and Medieval Languages, public interest, shaped by fashions trends and current events, is necessary for public knowledge creation to occur:

> For Cambridge it is quite hard to tell where knowledge is going to be useful. Jonathan Reilly-Smith, Dixie retired Professor of Ecclesiastical History, is one of the star historians of the crusades. And that's a long time ago, isn't it? But post-9/11, he was one of our biggest media-academics.

A senior academic in the Faculty of Philosophy suggests that the global economic downturn is now beginning to alter the areas of public interest where public knowledge creation will be possible:

> If a one year ago, a book came onto the market saying that the idea that you can measure risk in financial markets is ridiculous, nobody would have listened because they all thought we'd been doing frightfully well for ten years or more by using these highly mathematical models of risk. Now that everyone's been run over, if you published a book saying that, people will have the experience to take it seriously. In other words, their ears will be more open or many ears will be more open.

Academic and external interviewees also commented that a factor in public knowledge creation is the education and knowledge of the outside audience. One professor in the Faculty of Philosophy suggests,

> As far as impact goes, you need intelligent people to be susceptible to the impact – to listen to research. But you need the research activities in order to produce the potential audience. In that it is like anything e.g. like music or literature. George Eliot needed an intelligent audience but also helped to form an intelligent audience; so it can be a spiral.

An example of this was described with reference to the BBC Radio 4 programme, *In Our Time*, in which University of Cambridge arts and humanities academics frequently make guest appearances. A radio programme such as *In Our Time* reaches an average audience of 2.1 million listeners. According to James Cook, *In Our Time* attracts high-minded listeners, including students and academics, but not necessarily to the exclusion of a wider audience: the programme reaches a number of listeners who are interested in expanding their knowledge and education.

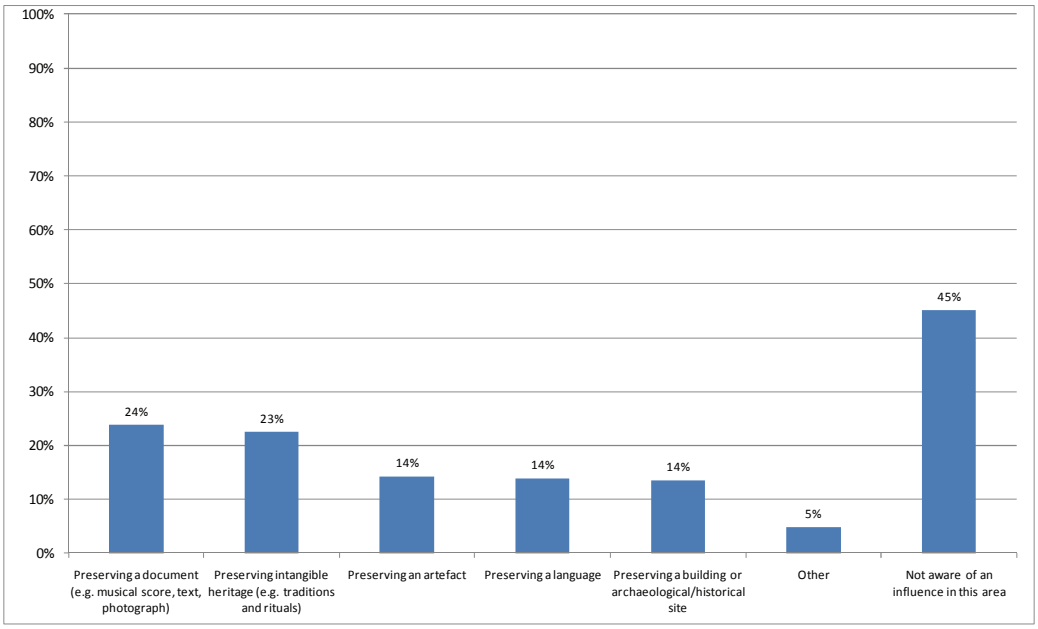
Finally interviewees again raised the problem of attribution, with one professor in the Faculty of History discussing the difficulties of assessing the impact of one's work on knowledge creation beyond the university:

> The media and publication of books are routes of impact, to try to persuade people, educating the wider public. But it is very difficult to assess the political, ideological and cultural impact of one's work. Even retrospectively, it is not easy to assess this in any precise way. This is compounded by the fact that research is superseded by newer research within two or three decades. Some research is over-turned, some is sidelined.

2.7 Impact on the preservation of heritage

Academic research across the arts and humanities at the University of Cambridge involves the preservation of heritage, including languages, documents, artefacts, buildings and intangible heritage, such as traditions and rituals. Respondents to the survey were asked about how their research had contributed to preserving cultural heritage. According to survey responses, researchers who had an impact on the preservation of heritage tended to come from the faculties and departments of English, Archaeology, Architecture, Modern and Medieval Languages, Classics and Music. However, a large proportion of respondents stated that they were not aware that their research had had an influence in this area (45%; 110 respondents), of whom 24% (26 respondents) were from the Faculty of History and 15% (17 respondents) from the Faculty of Law.

Figure 2.14 below shows how respondents' research had contributed to preserving cultural heritage. The most commonly cited ways were: "preserving a document" (24%; 58 respondents) and "preserving intangible heritage" (23%; 55 respondents).



SOURCE: RAND Europe (2009)

Figure 2.14: Ways in which respondents' research had contributed to preserving cultural heritage (Q26, n = 244)

Certain subjects, such as linguistics, are more likely to contribute to preserving cultural heritage than others: 27% of respondents from the Faculty of Classics (6 respondents) and 33% of respondents from the Faculty of Music (3 respondents) stated that they had contributed to preserving a written, artistic or musical document. For example, a senior academic in the Faculty of Modern and Medieval Languages mentioned the research of his colleague, Mari C. Jones, whose work on Guernsey French has been successful in preserving a dying language:

> Linguistics is quite an interesting case. One of the AHRC examples was to do with a scholar in Oxford who works on dying languages. And we have a similar example here – Mari C. Jones in the French Department works on languages that are dying out. And in particular she has worked on Guernsey French. She went around with her microphone and caught some of its last speakers and has written it all up. And that had a rebounding effect back in Guernsey. They are extremely interested in that research and there have been events in Guernsey to mark it which involved public figures and so forth.

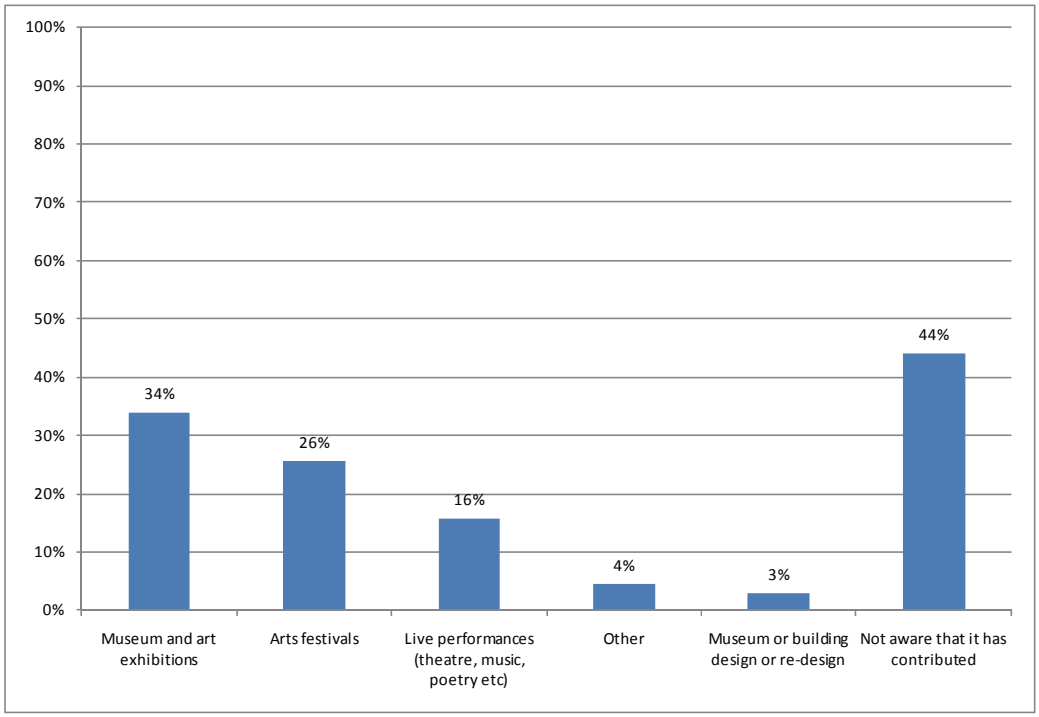
The potential value of preserving heritage to practice, policy or the general public is not necessarily understood at the time of preservation, but could become invaluable to those outside academia in the future. A professor in the Faculty of Philosophy notes:

> If you had asked one of my children what they are prepared to pay for the existence of the Beethoven's late quartets … They probably wouldn't give up an iPod for them. On the other hand, if you ask ex post, people might say that they are the most valuable thing they have ever come across.

2.8 Impact on leisure and entertainment

The University of Cambridge academics influence leisure and entertainment in a variety of ways, for example, by translating plays. One professor in the Faculty of Classics said: "The ability, for example, to translate a Greek tragedy in a particular way is what ensures it can be a success in the West End. There is a direct input from the academy to how the wider public thinks about a Greek tragedy." Other senior lecturers and professors in arts and humanities departments linked research to leisure and entertainment through festivals and museums.

As Figure 2.15 shows, 44% of survey respondents were unaware of their research having an influence on leisure and entertainment (109 respondents). In the area of leisure and entertainment, researchers were most likely to have influenced museum and art exhibitions (34%; 84 respondents) or arts festivals (26%; 63 respondents).



SOURCE: RAND Europe (2009)

Figure 2.15: Ways in which respondents' research had contributed to leisure and entertainment (Q25, n = 247)

Academics in the Faculties and Departments of English, History and Philosophy of Science, Classics, Music, and Archaeology were most likely to make contributions to social and cultural events and activities. Influences on museum and art exhibitions were most common among survey respondents from the Department of Archaeology, the McDonald Institute of Archaeological Research, and the Department of History and Philosophy of Science; 67% of respondents in the Department of Archaeology and 50% in the McDonald Institute stated they had contributed to such exhibitions. Approximately half of

respondents from the Department of History and Philosophy of Science indicated that they had contributed to arts festivals and/or museums and art exhibitions. In contrast, none from the Faculty of Law who responded to the survey had influenced social and cultural activities and events.

In these disciplines, academics with more senior positions were also more likely to state that they had influenced arts festivals, performances, or museums and exhibitions: 33% of professors (19 respondents) and 32% of readers (8 respondents) had contributed to an arts festival, and 40% of professors (23 respondents) and 48% of readers (12 respondents) had contributed to museum and art exhibitions. Established academics play an important role in the selection of other academics for participation in festivals, such as the Hay Festival; thus their high level of contribution to such festivals relative to other academic positions is not unexpected. However, their role in the Hay Festival selection is to identify other academics that are new, exciting thinkers making progress in their specific areas of research.

Although they had less influence than professors or readers, 21% of junior research fellows had contributed to an arts festival (5 respondents), 21% of junior research fellows had contributed to a live performance (5 respondents), and 23% of postdoctoral research fellows had contributed to museums and art exhibitions (5 respondents).

Social and cultural events take place at the University of Cambridge and elsewhere on the strength of the arts and humanities research that is undertaken at the university. For example, this reputation – the cumulative effect of centuries of research and endeavour – is responsible for attracting high numbers of cultural "producers", such as directors and writers, to the city. A senior academic in the Faculty of Modern and Medieval Languages told us:

> We had a big event in Emmanuel College before Christmas for the 80th birthday of the Mexican novelist Carlos Fuentes. It was because of academic links to Cambridge, because of how his work had been received critically within Cambridge, that the Mexican embassy chose Cambridge as the location for that big event. And it was a very interesting event not least because of our links to the Mexican cultural attaché which allowed other young Mexican writers to be included in the event alongside Fuentes. And so I think there are occasions where foreign language departments can plug into specific ethnic communities. Every Mexican in Cambridge seemed to be in the Queen's Lecture Theatre in Emmanuel! And it was clearly an event that went beyond the university.

Interviewees from the Faculty of Classics and the Faculty of English also mentioned the impact of their work on popular incarnations of literature and ancient theatre. There is, for example, a direct impact from the academy on how the wider public thinks about a Greek tragedy. Academic input is inextricably linked to popular experiences of these things. Podcasting, email and the internet have all had an impact on people's view of the accessibility of people like academics, who are now increasingly seen as a resource. Similarly, research in the Faculty of English informs performances by the Royal Shakespeare Company, cultural events, such as the Milton 400th Anniversary in 2008, as well as popular film and television adaptations of literary works.

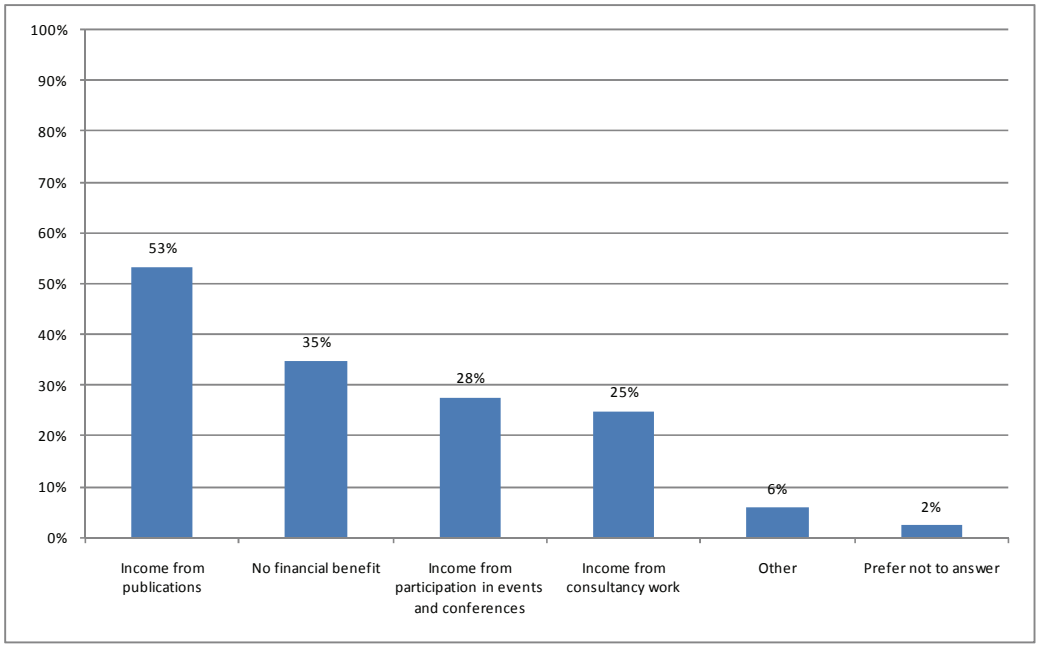
Finally, external interviewees suggest that academic research can have a pivotal role in the quality and cultural and economic success of exhibitions. According to Jeremy Hill, a

research manager at the British Museum, the transfer of knowledge between universities and museums to inform exhibitions is closely linked to the strength of an exhibition:

> Now the reason that [The First Emperor: Terracotta Warriors] was a good exhibition is that it drew on the latest academic research that was available on the first emperor of China at that time, and used that expertise to underpin every aspect of what we then said in the exhibition.

2.9 Direct economic impact

Figure 2.16 below shows how respondents had personally benefited from their research. A substantial number of respondents (35%; 91 respondents) stated that they had not personally benefited from their research. Of those, a large proportion were senior lecturers or lecturers (20% each; 17 respondents each), junior research fellows (19%; 16 respondents) and postdoctoral research associates (14%; 12 respondents). These respondents came from various faculties or departments, the largest proportion coming from the Faculty of History and the Faculty of Law (12% each, 11 respondents each).



SOURCE: RAND Europe (2009)

Figure 2.16: Ways in which respondents had personally benefited from their research (not including university or college salary) (Q27, n = 261)

A professor from the Faculty of Philosophy said:

> A company like Oxford University Press has a turnover of tens of millions and a large part of it is either directly due to arts and humanities research or piggybacks on it. We act as referees for them, academics write the introductions to the world classics, and so on. In the case of Oxford University Press and University of Cambridge Press, dons act the delegates to the press. And those are big industries. And, of course, academics in different

> disciplines act as consultants to TV programmes and that sort of thing. So, there is a very bread and butter economic side to it all.

Conversely, it is rare for junior researchers to have the kind of reach needed to be able to write for the public and maintain a successful academic career. When questioned about the tension between being seen as a serious academic and writing for a general public, a senior academic in the Faculty of Philosophy said:

> That's quite a rare thing in philosophy - to do that well. Usually, you don't see the failures because they fail so quickly. So you see one or two stars who just have that gift for communicating to a broader public. […] But it's very rare to find people like that. And people who are willing to give up their time because of course [academics who write for the general public] will get knocked within the profession for doing it […] And I wouldn't advise a junior colleague to [write for the public] – it would be a disaster.

This view was reinforced by a professor in the same faculty who has had success writing for a more general audience:

> I only started writing for the public when I was late-middle age when I began to get a slightly crusading zeal. I wouldn't [counsel] anybody very young to do the kind of writing I do now because I think they would find it very difficult to then make a career, because obviously you risk being called a populariser – and that's a put-down in academia. So it's only because I've got the sufficient standing in the profession to not care about that, that I can do it.

Our data suggest that it is rare for academics to benefit economically from their research. James Cook from the BBC Radio 4 programme *In Our Time* stated, "We don't pay [academics] that much money, but they come to London; they put in the hours." Similarly, Jeremy Hill, Research Manager at the British Museum, stated that there was little space for direct economic benefits to academics contributing to the British Museum's activities and exhibitions. Only a small minority of very senior researchers have attained the level of seniority and standing within academia to be able to reach a broader audience.

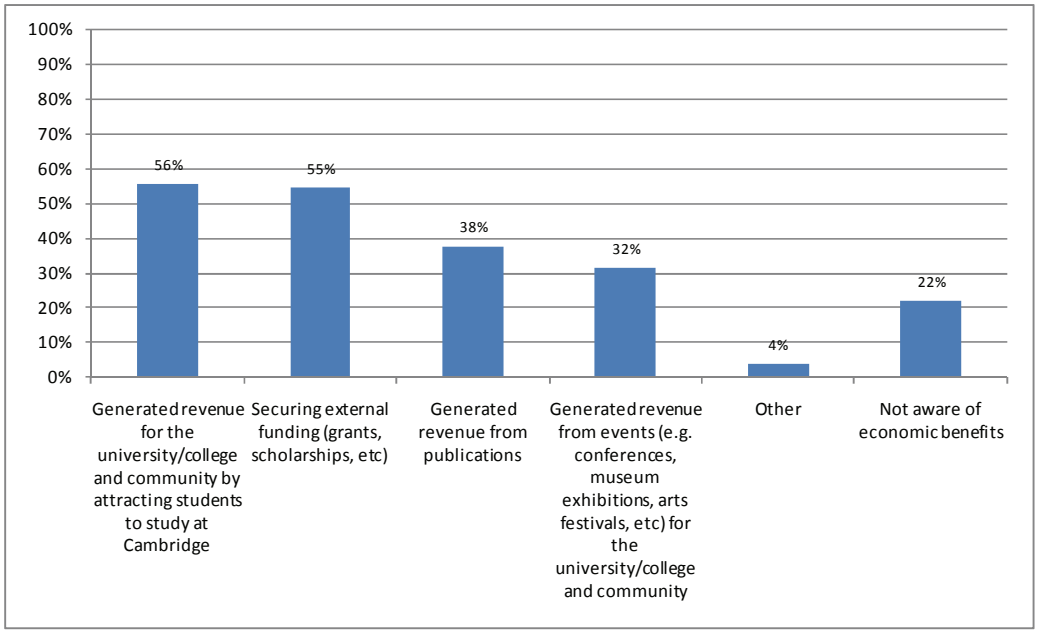
One of the key ways in which a researcher might gain personal economic benefits would be to write books for the general public but there can be a degree of tension between this kind of endeavour and maintaining one's academic reputation. One senior academic told us:

> There are all sorts of institutional structures. You don't get to be a professor at Cambridge by writing popular books. You don't get to be a fellow of the British Academy by writing popular books. So there are all sorts of flags of success which not only do not depend on impact in the way you mean it, but are actually antagonistic towards that idea, i.e. it would be "bad" to do it.

It is also rare for junior researchers to be approached by publishing houses which traditionally only commission very senior academics to write for them. Luciana O'Flaherty, editor of the A Very Short Introduction series by Oxford University Press, explained the publishing house's policy for recruiting authors: "It tends to be more established [academics]. Before writing A Very Short Introduction, you have probably written other things."

2.10 Economic impact on the wider society

Figure 2.17 below shows the ways in which respondents' research had brought wider economic impacts. Only 22% of respondents (57 respondents) were not aware of their research having economic benefits, but nearly 56% (145 respondents) believed that their research had generated "revenue for the university/college and community by attracting students to study at Cambridge" and 54% (142 respondents) thought their research had benefited the University through securing external funding.



SOURCE: RAND Europe (2009)

Figure 2.17: Ways in which respondents' research had brought wider economic impacts (other than for themselves) (Q28, n = 260)

In our interviews with senior researchers at the University of Cambridge, a small number of interviewees said that their research did not have any economic impact whatsoever. For example, a professor in the Faculty of Divinity claimed,

> I think that in a university like University of Cambridge most of the arts and humanities research that we do has no direct economic or social impact except in the most incidental way. I happen to be in theology and oriental languages so you might say that I'm even more in an ivory tower than, say, historians or people in social sciences.

However, given the evidence produced by colleagues in the same or similar departments, such a view suggests a resistance to the idea of valuing research in crude economic terms, such as the returns on admission tickets to a museum or travel costs to attend an event with which this academic's research might have been associated. Conversely, other respondents identified and spoke about the wide range of economic impacts that their research has had. When questioned about the possible economic impacts of arts and humanities research, a professor in the Faculty of Philosophy listed various impacts of arts and humanities research: "We bring in foreign students; we create literature; we bring in

research monies into conferences etc." Wider economic impacts were also mentioned by a professor in the Faculty of History in relation to publishing work for a broad, general audience. By publishing one's research for a commercial publication, revenues are generated that benefit not only the individual researcher, but also the publishing house, booksellers and other groups: "This is possible to achieve in particular when researchers write in an accessible way, for audiences wider than academia. When books are translated into other languages the impact extends to other countries and people." Interviewees from the Faculty of Classics suggested that their research had more removed economic impacts on cultural tourism. For example, it has significant indirect economic benefits for activities related to the classical world, such as an exhibition on Hadrian or cruises to the Bay of Naples. However, these interviewees emphasised that it is not possible to attribute particular impacts, such as the number of people at an exhibition at the British Museum, to particular pieces of research. Research feeds museums and site information, but it is not so easy to link individual research projects to specific economic or social impacts.

A number of respondents and interviewees mentioned the economic impact of international students coming to the University of Cambridge to study and the value to the region of international funding and grants. According to a professor in the Faculty of Philosophy, funding from external bodies such as the EU can have a significant economic impact beyond the university in which the student, grant or project is located:

> And to some extent, something that is [becoming] increasingly important, particularly in light of the EU, is scholars bringing in European funding. For example, in my department there is somebody who got a Marie Curie fellowship from the EU who has come to work with me and I think the budget for him is nearly €200,000 over two years. And most of that money is going into the UK economy in one way or another.

Again, the overall reputation and standing of the University of Cambridge and its researchers plays a critical role in attracting researchers and students to the university to study. For example, the profile and reputation of the Department of History and Philosophy of Science has, according to our interviewees, a measurable impact on the attractiveness of the faculty to scholars from other universities internationally. One of our interviewees from this department described how he had built up a critical mass of over 200 scholars, including visiting scholars, on the strength of this international profile.

Certain subjects, particularly in the arts, are naturally linked with economic activities and endeavours. For example, research undertaken in the Faculty of Classics informs museums, cultural tourism, and trends in theatres (such as a greater interest in Greek tragedy). Often, cultural movements are symbiotic with work that is going on within an academic context. As our interviewees told us above, the ability, for example, to translate a Greek tragedy in a particular way is what ensures it can be a success in theatres and enjoyed by a broad general public.

2.11 Cross-cutting findings

Cutting across types of impact, our evidence shows that there is a range of issues outlined in this section that must be considered in order to understand how and when arts and humanities research at the University of Cambridge has impact. It should be noted that not all of the issues outlined in this section are particular to arts and humanities research.

Indeed, many of them appear as common problems in other impact assessments. This is why we present these issues separately as issues that relate to impact assessments more generally and issues that relate to arts and humanities research in particular.

Issues that relate to impact assessments generally

Attribution of impact is difficult

Many senior academics suggested that it can be difficult to attribute impact to one piece of research (this point was recorded in 8 of the 13 interviews with senior academics). One senior academic from the Faculty of English said that "the further away the impact, the more difficult it becomes to attribute impacts back to the original research". This is particularly the case when impact has been achieved on the basis of a broad collective of research from a faculty or department. Although impacts may be traced to certain periods in a university's history or certain trends in approaches to a subject or study, it is difficult to trace such impacts to individuals or individual research projects, and this limitation should be acknowledged. However, while acknowledging that research builds on a body of knowledge already available, it is still possible to identify some enabling factors that can allow a particular piece of research to have a range of impacts that did not occur with previous pieces of research in the same area (for example, dissemination activities such as public lectures or books aimed at the general public can enable previously specialist areas of research to be known to the general public).

Impacts are cumulative

Cumulative impacts can happen both as the result of individual researchers or groups of researchers making contributions to the same discipline or area of research as well as through the cumulative research within faculties or departments in one area of research. Thus, groups of researchers and individual researchers as well as faculties and departments produce cumulative research over many years and can have far-reaching impacts on trends in popular culture, education and elsewhere. However, these types of impact, which stem from a collective body of research by many researchers and many institutions, are inherently difficult to attribute to specific individuals or projects as highlighted above.

There can be a time lag between research and impact

There is a long-term accretion of benefits from research. Some impacts occur decades after the research is carried out, which makes it especially difficult to attribute longer-term benefit to particular pieces of research. In other cases, research projects or outputs can be ignored within academia and the wider community, but may experience a revival in later years and achieve considerable – and unexpected – impacts at a much later date. Trends and fashions in academic research have much to do with such resurgence in interest for a particular topic or project.

Fashions and trends influence impacts

Many of our interviewees commented on the role of fashions and trends in academic research (this point was recorded in 5 of the 13 interviews with senior academics). Sometimes there is a revival of interest in subjects and projects after many years in which they were not particularly popular. A professor from the Faculty of Philosophy explained this point from the perspective of his own discipline, saying:

> [P]hilosophy happens in an historical matrix and social matrix – at different cultural moments people ask different questions and look for different answers. Philosophy now is

> very popular among school children and we've a rising application rate in Cambridge, and I'm sure that's partly to do with people's anxieties about things like unbridled economic growth, resources running out, or global warming.

Similarly, a professor in the Faculty of Asian and Middle Eastern Studies mentioned the substantially increased interest there has been in Sinology and Islamic studies in recent years, ascribing this partially to trends outside the university in business and politics.

Research can have planned and unplanned impacts

There are often unexpected impacts from a research project. For example, in the Faculty of English, an AHRC-funded project on medieval Irish glossaries developed a sophisticated database which had the unanticipated impact of becoming a model for other such databases in other fields.

Some fields or projects might have impact in mind from the start, such as the AHRC Research Centre for the History and Analysis of Recorded Music (CHARM), which was intended to create resources for students, scholars and the general public from the outset.

According to our respondents and interviewees, research projects are usually driven by the researcher's own curiosity and desire to produce excellent work within their own discipline. From this other impacts can and do follow, but this is not usually the primary consideration at the outset of a project. As a professor from the Department of Archaeology told us:

> At the heart of what researchers do should be top-quality, curiosity-driven research. This will have an impact on one's own academic discipline, and maybe on other disciplines as well. It may also have an impact on heritage policy in the UK and/or abroad (e.g. applications for UNESCO world heritage site status, illicit antiquities legislation), national school curricula, on the economy (the tourism industry), on the quality of life (e.g. TV and media, museum exhibitions, site presentations).

There are tradeoffs and obstacles involved in having impact

Academic interviewees were asked about the specific obstacles and tradeoffs that can inhibit the ability for research to have impact. The obstacles mentioned included a lack of research time; conflicts with the criteria for staff promotions, which are geared at academic excellence; lack of specific spaces for impact activities in the university; and potential negative impacts on academic reputation. A senior lecturer in the Faculty of Philosophy commented,

> If you really are going to focus on impact, then you've got to take away the other pressures. There are competing pressures here. And if you're going to focus on impact, you must take away the pressure to produce blue skies research. You can't do everything.

Issues that relate to arts and humanities research in particular

Academic reputation influences impact

Reputation is generally seen as a key element in the production of impacts. Researchers who are very well respected and have attained a senior standing within the university are more likely to be invited to write publications and review books for the general public than other academic staff. For junior researchers without a high academic profile, one route to getting published is through recommendations from their supervisors and other senior colleagues (this point was made by interviewees from the Faculty of English and the

Faculty of Modern and Medieval Languages). Impact from research then becomes increasingly possible through the progression of an academic's career. Researchers build up their expertise over the long term and are able gradually to develop a reputation in their field.

Research is often financed by quality-related research funding

Research funding in arts and humanities at the University of Cambridge is often financed through quality-related research funding rather than funding obtained from the AHRC or other funding bodies. This was confirmed by the survey responses where 54% of respondents indicated that they had not received an AHRC grant for research and 42% had not received a grant from another funding body while researching at the University of Cambridge. At the time of the survey, only 12% of respondents were working on an AHRC-funded project.

Teaching is central to the research process at the University of Cambridge

The majority of our interviewees and survey respondents stressed the centrality of teaching to their research processes. Teaching and research were often described as indistinguishable from each other when assessing how one influences the other. Our interviewees in the Faculty of English mentioned the impact that their research has on their teaching by saying that they would not be able to teach so well without carrying out their ongoing research. Other respondents and interviewees discussed how the process of teaching and preparing for lectures often informs their research questions. In addition, the modules and papers offered by a department or faculty are often influenced and shaped by the research interests of the teaching staff.

CHAPTER 3 Approach and methodology

This research project had two objectives: first, to assess the impacts of arts and humanities research at the University of Cambridge and, second, to develop a methodology that could be used by the AHRC for conducting similar assessments of impact in the future. In this chapter we describe the analytical approach chosen by RAND Europe, consisting of two elements: a conceptual framework to guide and direct the collection and analysis of evidence, and a set of techniques to gather evidence from different sources.

3.1 Adapting the Payback Framework for the arts and humanities

A robust framework for analysing impacts is essential to achieve the above mentioned objectives, as it will allow those interested in determining the impacts of research to gather and structure evidence, to present the findings and to develop a methodology that can be used for future studies.

Conceptually and methodologically, the assessment of academic and non-academic impact of arts and humanities research is still very much in its infancy compared with other subjects, in particular science and medical research; thus this project required the development and adaptation of an existing framework to the field of arts and humanities. This development was informed by a review of existing approaches to assessing impacts of arts and humanities research (CHASS, 2005; HERA, 2007; AHRC, 2008b); RAND Europe's previous experience with using the Payback Framework; and the key informant interviews conducted with University of Cambridge researchers, which allowed us to identify and take into account the specificities of arts and humanities research. After an initial assessment, the research team decided to adapt the Payback Framework for this research project.

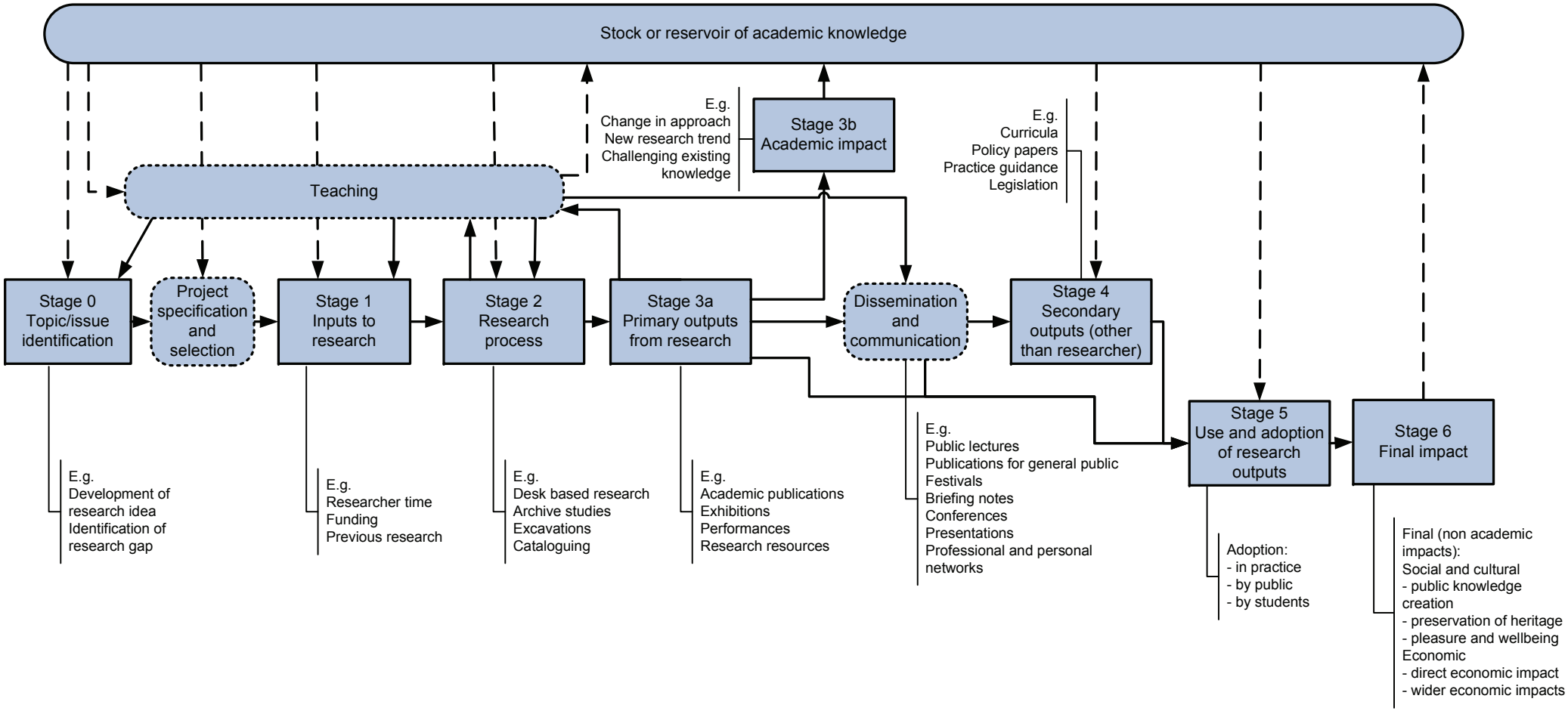
The Payback Framework was initially developed by the Health Economics Research Group (HERG) at Brunel University to examine the payback of health services research (Buxton and Hanney, 1994; Buxton and Hanney, 1996) and subsequently refined and developed further in collaboration with RAND Europe (e.g. Wooding et al., 2004; Hanney et al., 2004).

Although it was originally designed only to capture the socioeconomic impact of health services research, the framework has been adapted and applied successfully in an increasing number of studies both within and outside health and medical research. For an overview of studies using a payback approach see Buxton and Hanney (2008) and Marjanovic (2009). For example, RAND Europe and HERG collaboratively adapted and applied the

framework to assessing social science research funded by the Economic and Social Research Council (ESRC) (Wooding et al., 2007). In the field of arts and humanities the Payback Framework has been recently refined by Seares and Schippers (2009), who explored the application of the Payback Framework for the performing and creative arts.

The Payback Framework consists of two interlinked elements: a multidimensional categorisation of benefits from research (the so-called paybacks or impacts), and a logic model of the complete research process (for the purposes of research evaluation). The logic model is a simplified model of the research process, indicating when specific impacts can be expected, and linking inputs (often grant funding) to specific outputs (such as publications) and ultimately outcomes (such as saving lives through a new drug for example). The categories of benefits from research include both those within the academic world (such as knowledge production and research capacity) as well as wider benefits (such as health sector benefits or wider economic benefits).

The revision of the Payback Framework here was informed by the interviews RAND Europe conducted with a wide range of arts and humanities researchers at Cambridge. The evidence from these interviews was analysed and organised at a workshop, which provided the basis for developing new categories of impact and a revised logic model of the research process. An overview of the revised framework can be found in Figure 3.1 below followed by a more detailed description of the main element of the framework: the categories of impact and the logic model.



SOURCE: RAND Europe, adapted from Hanney et al. (2004)

Figure 3.1: The adapted Payback Framework

3.1.1 Categories of impact (the "paybacks")

Table 2.1 summarises the new categories of payback defined as the result of the revision of the Payback Framework. These can be arranged in four wider categories: academic impact, impact on policy and practice, wider societal impacts and finally economic impacts. Revisions to the framework were based on the types of impact discussed in interviews with University of Cambridge arts and humanities researchers and validated through interviews with persons external to the University. (See Appendix A for a list of interviewees and Appendix B for the interview protocol).

Table 3.1 The revised payback categories

Category
Academic impact
Knowledge creation
Research resources
Impacts on policy
Impacts on policy
Impacts on practice
Impacts on practice
Wider societal and economic impact
Public knowledge creation
Preservation of heritage
Leisure and entertainment
Direct economic impact
Economic impact on the wider society

Knowledge creation

The first and, for the researchers interviewed at the University of Cambridge, most important impact created by arts and humanities research is the (academic) knowledge it produces. In comparison with other research subjects, arts and humanities have a wider range of primary research outputs, including peer reviewed journals, a large number of monographs, and non-written outputs such as exhibitions or performances. As academic knowledge creation we understand research that advances the stock or reservoir of knowledge, for example, by increasing understanding, challenging existing understanding or establishing a new research trend.

Research resources

A second and common output from research is resources for research. These resources can be tools and methodologies (ranging from excavation techniques to methods of historical research), or the opening up new sources for other researchers by cataloguing, and making artefacts such as medieval scripts available. The case of Scriptorium, discussed in Chapter 4, is an example of creating such a research resource.

In natural science and medical research, and to a lesser extent in social science research, bibliometric analysis is often used as a means of assessing the academic impact of research (see for example, Grant et al. 2009). However, the application of bibliometric analysis to arts and humanities research is controversial because, among other reasons, the final outputs of research are much more diverse, and the peer reviewed journal article is not necessarily the most important form of research output (Dolan, 2007).

For this study, therefore, we used the survey of researchers to gather information about the type of research outputs created and how influential researchers perceived them to be in increasing knowledge and providing resources to other researchers.

Impacts on policy

Arts and humanities research can be used to inform policy making in a wide range of circumstances. We consider all cases in which research leads to the design or change of official policy of an organisation at national, local or even international level to be an impact on policy. As discussed by University of Cambridge researchers in the interviews, examples of this would include changes to national curricula or changes to the advice and guidelines issued by professional bodies. We would also consider the effects of research on the ability of policy makers to make informed decisions as a further (intangible) impact on policy.

Impacts on practice

However, as became evident in the interviews with academics and the external persons, having an impact on policy is not a necessary condition for impacts on practice to occur. We consider changes in practice to encompass changes in individuals' (professional) behaviour as a result of research findings, even if there are no changes to official policy. First, such cases could alter the effectiveness of individuals' behaviour. For example, a history teacher could update his classes with new research results; an architect could rethink the design of lighting based on new research findings; or a judge might take into account academic studies of existing laws or previous cases.

The second aspect of impact on practice is the adoption of new technologies: one of our interviewees reported how a new technique to identify "ear witnesses" could be used in criminal investigations; another example would be the development of new excavation or preservation technologies in archaeology.

Public knowledge creation

Throughout this project, interviewed researchers pointed towards the importance of increasing the knowledge of the general (interested) public as one of the key impacts of arts and humanities research, and argued that awareness and knowledge about arts and humanities is a value in itself. Arts and humanities research also stimulates the general public and encourages people to contribute to public debates.

Although it is inherently difficult to measure the actual impact of arts and humanities research on the public's knowledge, there are output indicators that can gauge some of this impact, for example, attendance at public lectures and arts festivals, or sales of publications for the general public can indicate public access to knowledge.

Preservation of heritage

Interviewees also determined that arts and humanities research had an impact on the preservation of a society's heritage, including the preservation of physical artefacts and buildings, and the less tangible heritage such as medieval poetry, or languages in danger of extinction. This type of impact was partly captured through the survey of arts and humanities researchers at the University of Cambridge.

Leisure and entertainment

In addition to its effect on public knowledge, academic interviewees also described how arts and humanities research might contribute to leisure and entertainment for the general public. Arts and humanities research is used, for example, in editions of novels and other literary works, in

public festivals and other events, and to inform theatrical performances. Although one can approach a play, exhibition or piece of music from an educational perspective, they can also be enjoyed simply as entertainment. The amount of entertainment and enjoyment experienced by the audience is difficult to assess, but researchers in our survey suggested that output information about events such as attendance figures, and print runs for books or sales of music might be used to gauge the potential amount of enjoyment derived from the performance or event.

Direct economic impact

Economic impacts can be understood in very broad terms. The Warry Report (2006) suggests that

> An action or activity has an economic impact when it affects the welfare of consumers, the profits of firms and/or the revenue of government. Economic impacts range from those that are readily quantifiable, in terms of greater wealth, cheaper prices and more revenue, to those less easily quantifiable, such as effects on the environment, public health and quality of life.

Within this broad understanding of economic impact, academic and external interviewees discussed more specific economic benefits arising through arts and humanities research. In order to present economic impacts in more tangible terms, the definition of economic impacts has been narrowed from the broad definition suggested in the Warry Report to fit with the understanding of economic impacts described by interviewees.

Economic impacts could be categorised as those affecting the welfare, profits and revenues of the university and individual researcher directly, for instance, the direct economic impacts that occur through research that attracts international students paying foreign fees to the university, by securing external funding for research (grants, sponsorships), and by generating revenues from events such as exhibitions.

Economic impact on the wider society

Arts and humanities research can also have an impact upon the wider economy by contributing to wealth and profits outside the university, and to the composition and education of the workforce. University of Cambridge interviewees discussed the influence of arts and humanities research on the economy through teaching and educating students, producing commercially exploitable knowledge (patents), and through improvements in the efficiency and effectiveness of activities triggered through changes in policy and practice.

3.1.2 The logic model of the research process

The second element of the payback model is a logic model, which presents a schematic and simplified picture of the complete research process. The linearity of the model indicates a sequence of interdependent stages through which research progresses; however, it is important to note that research will not necessarily follow this linear process and is instead often characterised by feedback loops. The stages of the model are shown in Figure 3.1 above. As previously mentioned, the model has been developed from previous versions by introducing a new interface, "teaching", and by adding a new stage 4 "academic impact", but otherwise follows the model developed in Wooding et al. (2004) and Hanney et al. (2004).

The benefits and impacts of research identified in the categorisation occur during the research process and, as indicated in Figure 3.1, some can be attributed to specific stages, but not all of them. For example, knowledge creation and academic impact is often the result of primary

research outputs such as peer reviewed papers and books, but impacts on the general public might occur at different stages of the process.

Stage 0: Identifying topics and issues

The first stage of the research process involves the generation of the original ideas for the research and varies considerably, depending on whether the main research idea is generated internally by the researcher or externally, for example, by public events or research fashions and trends. Most arts and humanities research falls within the former category: curiosity driven research based on a researcher's assessment of the current knowledge and research gaps. Research can also be commissioned externally, for example, to find solutions to specific, defined problems, and at this stage the researcher will respond to an externally formulated demand for research.

Interface A: Specifying and selecting projects

Following the initial development of a research idea and possible draft question, the research process usually involves a phase of project specification and selection in which a researcher interacts with the wider academic community or at least with research funders. Once an initial idea has been developed, a researcher might test the idea with colleagues in the field or make an initial assessment of existing research. Much of the research in arts and humanities is financed through quality-related research funding, so there are no formal requirements to interact with the wider academic or funding community. This is different when the researcher applies for external grants. In this case, comments from peer reviewers might influence the draft question, design and set up of a research project, which might also have a consequence for the impacts of the research.

Stage 1: Inputs to research

Inputs to research are the resource inputs into a project, for instance the financial, human and physical resources used to conduct research. For many arts and humanities research projects, the researcher's or principle investigator's time is the most important input of a research project, but the research might also require additional financial, staff and technical resources. Importantly, we should also consider previous research and research resources such as catalogues, dictionaries or bibliographies as inputs into research.

Stage 2: The research process

This stage aims to examine how the research was conducted. In particular it is interesting to analyse the interactions that take place at this stage with other academics, students, practitioners or politicians. These could affect the research itself, as well as have an impact upon these other groups directly, even before the research has been completed.

Interface B: Teaching

The University of Cambridge places a high importance on the relationship between the student and the researcher, as teaching and supervision of university students is a common activity for arts and humanities researchers at the University of Cambridge. Reflecting the findings from the consultation with researchers at the University of Cambridge, we amended the previous versions of the Payback Framework to include the new interface "teaching".

Not all arts and humanities research is accompanied by teaching, and teaching is not a necessary interaction within the research process for research to have impacts. However, teaching *can* influence research and have impact. Arts and humanities researchers interviewed at the University of Cambridge suggested that teaching might influence research and its impact in a number of ways, for example:

- Students might challenge ongoing research if the researcher is presenting their own research ideas, questions and findings during teaching.
- Teaching requires the lecturer to prepare; to engage with the existing knowledge in the field, and then to summarise, synthesise and categorise it. This has been described as challenging but also rewarding as it widens the researcher's understanding of the subject and discipline.
- In the process of preparing for lectures and supervisions, new research questions (or problems) can present themselves to researchers which they might then investigate in their own research.
- Teaching is one avenue for having impact through educating and training students who might later move on to pursue careers outside academia.

Stage 3a: Primary outputs from research

Academic research is primarily geared towards producing academic knowledge and thus academic output. In the Payback Framework the first outputs, representing the academic research findings, are labelled primary outputs. In arts and humanities research, these are often written products such as journal articles, book chapters or monographs, but they might also take other forms, such as exhibitions, performances or websites. An essential part of the assessment would also be to analyse the audience for the primary outputs.

Stage 3b: Academic impact

Primary research outputs can be expected to create academic impact and contribute to the creation and maintenance of the reservoir or stock of existing knowledge. This stage has been added to the original payback model to make the role of academic impact more visible. Based on the outputs it produces, research will contribute to knowledge creation by, for example, challenging existing understanding and knowledge, creating new research trends, or increasing understanding of a previously not researched topic.

Some research might also have research resources as its final output, which allows other researchers to advance more subject specific knowledge; it is thus interesting to explore whether a specific resource or methodology has been used by other researchers. Another way in which research might affect future knowledge creation is through generating new research questions based on uncovering research gaps.

Interface C: Dissemination of research

Research results are disseminated through activities and channels that distribute research findings beyond academic audiences and in forms other than primary academic research outputs. The line between primary outputs and dissemination might be slightly blurred on occasions, for example, in the case of conferences, but in general research findings are disseminated to wider and more varied audiences than academia.

In the arts and humanities, research results can be disseminated through activities that are open to the general public, such as public lectures or arts festivals. However, interviews with festival producers, media persons and editors revealed that in actuality the audiences for these types of events often consist of a limited section of the public, for instance those who have been through higher education or who have a specific interest in a subject area. Dissemination might also be altogether more targeted, for example, taking the form of targeted briefing notes.

Stage 4: Secondary outputs

If research outputs and findings generate interest among a wider audience they might lead to the development of secondary outputs from research. For this version of the Payback Framework, we defined secondary outputs primarily as outputs produced by a third party, building on the research. Examples of research being used in another output are a new school curriculum, an official policy paper, and new legislation or guidance issued by a professional body.

Stage 5: Adoption of research outputs

Behavioural change in a wide range of actors is often the precondition for research to have an impact. Guidelines and policies must be acted upon before they have an effect; new technologies must be used and new research considered if arts and humanities research will have an impact. So the question is whether changes in practice can be observed as the result of a research led change in policy.

For some of the final impacts, this adoption process can be subtle and difficult to observe individually. For instance these complexities in adoption of research outputs could occur in the way that public knowledge is influenced or the way that students process the information and knowledge they are provided with during teaching.

Stage 6: Final impacts

The adoption of research outputs is a necessary condition for research to have final wider impacts in society. This may occur in different ways by different audiences and users of research. Like our categories of research impacts, the final impacts of arts and humanities research could fall into these broad groups:

- public knowledge creation
- preservation of heritage
- leisure and entertainment
- direct economic effects
- economic effects on wider society.

3.1.3 Further considerations

In applying the model, two further considerations require attention: the unit of analysis or level of aggregation, and the consideration of the time frame that is analysed.

Available health research evaluation frameworks have different levels of aggregation (Brutscher et al., 2008): a low level, looking at individual researchers or research projects; an intermediate level, such as a faculty or a research programme; or a high level, such as a research discipline, research council or university.

For this study we focused the cases at the level of a researcher or research project at the University of Cambridge, but use the framework categories also to assess the impact of whole faculties. One difficulty arose in identifying research projects, as the boundaries of non-grant funded work (most University of Cambridge arts and humanities research) are less visible. To overcome this difficulty we defined research project pragmatically as a "stream" of interrelated research resulting in single or multiple outputs.

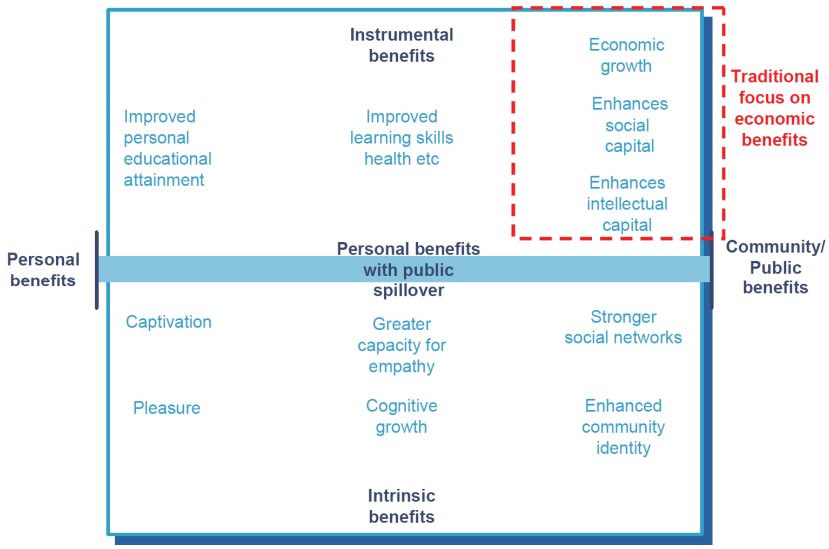
A typical characteristic of research impact is the time lag between final research outputs and wider societal impacts. In some cases, impacts might occur almost instantly, for example, when research covers a hot or fashionable topic. In other cases impact might occur 10 or 20 years later

as research slowly filters through to policy and practice. In extreme cases, research might be forgotten and only rediscovered decades later. Again, this exploratory research into the impacts of arts and humanities research at the University of Cambridge did not define a specific timeframe for impact in the case studies, but a flexible definition of time frames was used.

3.1.4 Placing the Payback Framework into current assessment frameworks

A growing interest in the impacts of research has, as outlined in the introduction, led to the development of new frameworks to assess the impacts of research, both within AHRC as part of the ex ante assessment of impacts during the grant making process, and ex post as part of the Research Excellence Framework currently developed by HEFCE.

On a low level of aggregation AHRC introduces a categorisation of impacts in its impacts strategy (AHRC, undated). In this framework, impacts can be organised along two axes: a continuum between individual and public benefits, and a continuum from instrumental benefit to intrinsic benefits (see Figure 3.2). The key argument AHRC wants to convey with this framework is that impacts of arts and humanities research are much wider than the effects that would usually be measured under a traditional focus on economic benefits, which occupies only one of the four quadrants, which also include impacts on community identities, personal pleasure and entertainment.



SOURCE: AHRC (2006)

Figure 3.2: Framework for understanding the benefits of the arts and humanities

At a higher level of aggregation, AHRC has developed a second framework to describe the impacts of arts and humanities research (AHRC, 2009). Again, this classifies research impact along two key dimensions (see Figure 3.3 below).

SOURCE: AHRC (2009)

Figure 3.3: AHRC model of the impact of arts and humanities research on UK society and economy

This model distinguishes between impact on the economic capital and civic capital of a society, and between the maintenance and growth of this capital stock or extension. Impacts of different subjects and disciplines can now be allocated to one of the four quadrants within this framework. For this particular study, AHRC located 33 commissioned essays on the impact of research in this framework.

Arguably more controversial attempts to develop ways to measure the non-academic impact of research have been undertaken in conjunction with the development of the new research excellence framework (HEFCE, 2009c). In September 2009 HEFCE published its proposal on the new research excellence framework. In brief, the assessment of impact within this framework consists of three key elements:

- an impact statement following a still to be developed standard template for the unit
- specific case studies following a common structure to highlight and illustrate the most important impacts
- a "common menu" of impact indicators, which should be referred to in the impact statement and case studies.

This draft list of indicators is shown in Table 3.2, which contains indicators that should measure impacts along the spectrum of HEFCE funded institutions.

Table 3.2 Draft common menu of impact indicators

Type of impact	Possible indicators
Delivering highly skilled people	• Staff movement between academia and industry • Employment of post-doctoral researchers in industry or spin-out companies
Creating new businesses, improving the performance of existing businesses, or commercialising new products or processes	• Research contracts and income from industry • Collaborative research with industry (for example, measured through numbers of co-authored outputs) • Income from intellectual property • Increased turnover and reduced costs for particular businesses or industry • Success measures for new products and services (for example, growth in revenue) • Success measures for spin-out companies (for example, growth in revenue or numbers of employees) • Patents granted or licences awarded and brought to market • Staff movement between academia and industry
Attracting R&D investment from global business	• Research income from overseas business • Collaborative research with overseas businesses
Better informed public policy making or improved public services	• Research income from government organisations • Changes to legislation, regulations or government policy (including references in relevant documents) • Changes to public service practices and guidelines (including references in guidelines) • Measures of improved public services (for example, increased literary and numeracy rates) • Staff exchanges with government organisations • Participation on public policy and advisory committees • Influence on public policy debate (for example, as indicated by citations by non-government organisations or the media)
Improved patient care or health outcomes	• Research income from the NHS and medical research charities • Measures of improved health outcomes (for example, lives saved, reduced infection rates) • Measures of improved health services (for example, reduced treatment times or costs, equal access to services) • Changes to clinical or healthcare training, practice or guidelines (including references in relevant documents such as National Institute for Health and Clinical Excellence guidelines) • Development of new or improved drugs, treatments or other medical interventions; numbers of advanced phase clinical trials • Participation on health policy or advisory committees • Changes to public behaviour (for example, reductions in smoking)
Progress towards sustainable development including environmental sustainability	• Application of solutions to sustainable development (new technologies, behavioural change and so on) • Measures of improved sustainability (for example, reduced pollution, regeneration of natural resources)
Cultural enrichment, including improved public engagement with science and research	• Increased levels of public engagement with science and research (for example, as measured through surveys) • Changes to public attitudes to science (for example, as measured through surveys) • Enriched appreciation of heritage or culture (for example, as measured through surveys) • Audience and participation levels at public dissemination or engagement activities (exhibitions, broadcasts and so on) • Positive reviews or participant feedback
Improved social welfare, social cohesion or national security	• Application of new ideas to improve social equity, inclusion security or cohesion • Measures of improved social equity, inclusion or cohesion (for example, improved educational attainment among disadvantaged groups, or increased voting rates in lower participation communities)
Other quality of life benefits	[to be added]

SOURCE: HEFCE (2009c)

If we compare the revised Payback Framework as outlined in this section to these other approaches of assessing impacts of research, we can safely conclude that it encompasses the wider set of non-economic impacts towards which the AHRC framework points. For instance, one of the categories of impact emerging through interviews with University of Cambridge researchers was the preservation of cultural heritage. The Payback Framework provides a longer list of discipline specific and relevant impacts and indicators than the REF proposal developed by HEFCE, and could thus supplement the list of indicators in Table 3.2. The Payback Framework also provides alternative ways of systematically structuring case studies and summaries of impacts.

3.2 Four sources of evidence used to assess the impacts of arts and humanities research

Based on this analytical framework, four complementary sources of evidence were used to assess the impacts of arts and humanities research at the University of Cambridge, each serving a specific purpose in the research design:

- key informant interviews with a selection of senior researchers at the University of Cambridge
- an online survey of all research within arts and humanities at the University of Cambridge
- four case descriptions
- key informant interviews with external experts.

3.2.1 Key informant interviews with University of Cambridge researchers

As a starting point to this research project, the research team carried out 13 interviews with 22 academics (see Appendix A). All relevant departments were represented at these interviews, by either a single senior academic or a small group of up to six senior academics. These interviews were carried out in July and August 2009. In these interviews the RAND Europe team aimed to gain a better understanding of how the issue of impact is understood by academics in the arts and humanities in order to frame the issue in terms that were meaningful and relevant to the academic community at the University of Cambridge and external stakeholders.

The findings from these interviews were subsequently used in a number of ways. First, they informed the revision of the Payback Framework by helping to identify the range of arts and humanities impacts as well as increasing the understanding of the research process. Second, the findings fed into the development of the survey to make it as meaningful and accessible to the researchers as possible. Finally, the interview findings were one source of evidence to describe the impacts of research.

3.2.2 Survey

The second source of evidence was the results of a survey of researchers at the University of Cambridge, which was conducted between 9 October 2009 and 6 November 2009. The survey built on the definitions and discussion of impacts in the interviews with senior academics and was intended to explore the scale and breadth of different impacts of arts and humanities research at the University of Cambridge; it followed the outline of the Payback Framework. On behalf of the heads of the departments, department and faculty administrators invited 737 people to complete the survey; 289 responded, providing an overall response rate of 39%.

The survey respondents represented a cross-section of academics by position, sex, age, department and years of experience in research as shown in Table 3.3 and Figure 3.4 below.

Table 3.3 Position at the University of Cambridge of respondents

Position	Proportion of respondents	Number of responses
Professor	20%	57
Senior lecturer	18%	51
Lecturer	12%	34
Reader	9%	25
Junior research fellow	8%	24
Postdoctoral research associate	8%	22
Other	4%	12
Research fellow	4%	12
Senior research associate	4%	11
Senior research fellow	3%	8
College teaching officer	2%	6
Assistant professor	1%	2
No answer	9%	25
Total respondents	100%*	289
Gender	% of total	Count
Male	55%	159
Female	44%	128
Prefer not to disclose	1%	2
Total respondents	100%	289

* due to rounding, the sum of the subcategories does not add up to 100%

Table 3.4 Age range of respondents

Age range	Proportion of respondents	Number of responses
70+	1%	4
60-69	17%	49
50-59	22%	62
40-49	17%	48
30-39	30%	85
20-29	12%	35
Prefer not to disclose	1%	4
Grand Total	100%	287

The survey was sent out by departmental administrators, and the response rate varied significantly between departments. There was a 20% response rate from the Department of Architecture and History of Art but a 79% response rate from those associated with the Faculty of Modern and Medieval Languages and/or one of the language departments (see Table 3.5). For

a list of survey questions, see Appendix D. In order to give an accurate representation of survey responses, all statistics included in this report are given as a proportion of the total number of respondents to each question; this figure varies, as not all respondents replied to all questions.

Table 3.5 Survey response rate by department

Department	Number of responses[3]	Population size	Response rate
Anglo-Saxon, Norse and Celtic and English	33	72	46%
Modern and Medieval Languages (including Slavonic studies, Italian, French, German and Dutch, Linguistics, and Spanish and Portuguese	53	67	79%
Philosophy	11	30	37%
Divinity	17	35	49%
Music	10	29	35%
East Asian and Middle Eastern Studies	16	39	41%
Architecture and History of Art	7	35	20%
Classics	27	40	68%
Archaeology and McDonald Institute	33	69	48%
History	39	156	25%
History and Philosophy of Science	20	39	51%
Law and Criminology	34	126	27%

[3] The total population size does not adjust for those researchers who are associated with more than one faculty or department. Responses from researchers who were associated with more than one department were counted separately under each relevant faculty or department.

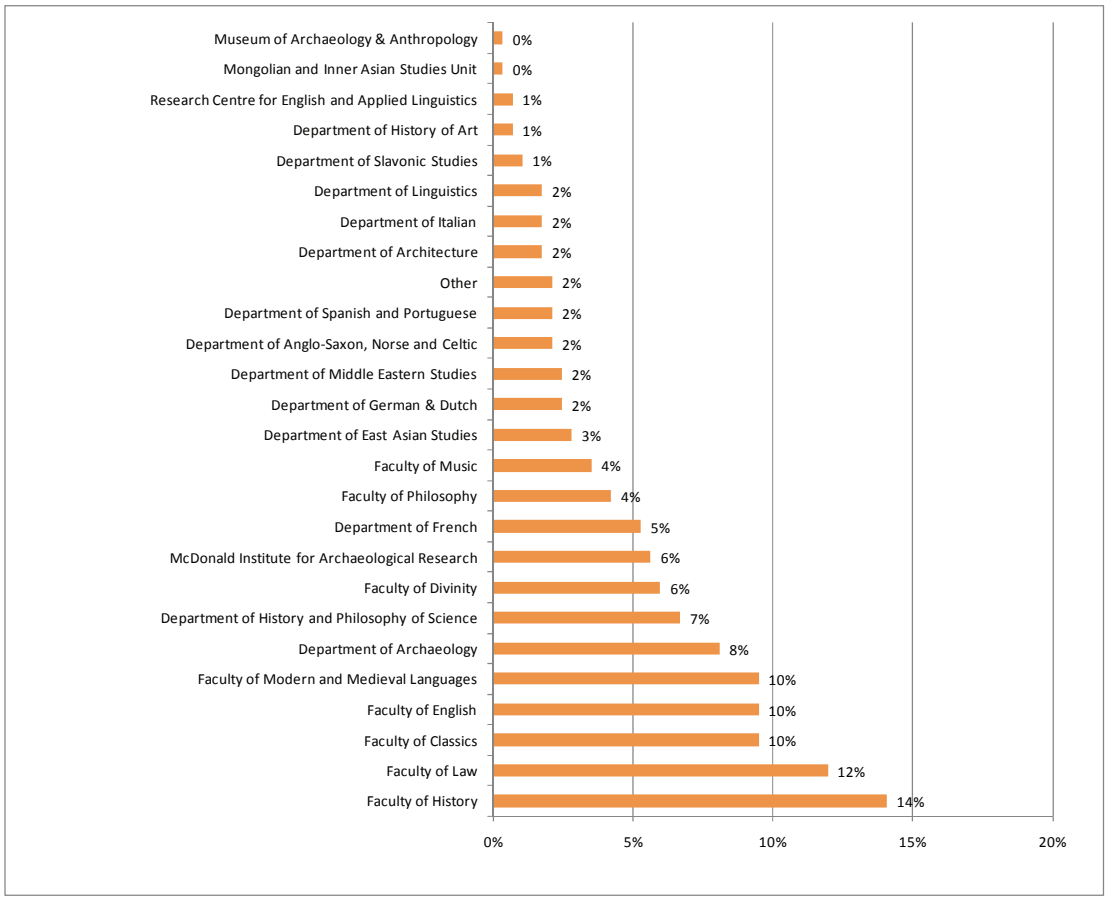


Figure 3.4: Respondents by faculty and/or department they belong to (Q5, n = 284)

SOURCE: RAND Europe

The survey allowed the research team to gather information about the overall scope of impacts and to arrive at conclusions about how often specific impacts occur, thus validating the findings from the interviews.

3.2.3 Cases

The third source of evidence was four cases, which explored the research process and impact of a specific research project or stream of research. The cases were selected in collaboration with the steering group for this project. We first produced a long list of potential cases by collating cases that were suggested to us in our interviews with academics at the University of Cambridge and in the survey.[4] The detailed cases are presented in Chapter 4 of this report. The cases are structured along the logic model of the Payback Framework and use the payback categories to describe the impacts of the specific research projects. Within the research design, the cases have the function of an exemplary, in-depth analysis of how research can have impact and how impact can occur during the research process.

[4] Survey respondents were asked to indicate any examples of research that they thought would be beneficial to this project.

3.2.4 Interviews with external experts

Finally, we interviewed people from outside the university in order to validate the types of impact and processes discussed by the academics. We conducted 15 short interviews with senior persons from the *Guardian*, the *London Review of Books*, BBC Radio 4 programme *In Our Time*, the British Museum, the Hay Festival, Cambridge Film Festival and Film Trust, Cambridge University Press, Oxford University Press, House of Commons Library, AHRC, Microsoft Research, Barclay's Capital, the Court of Appeal, Mallinson Architects and Engineers, and the Festival of Ideas. These senior persons discussed their interactions with arts and humanities research in general, and their specific experiences of using arts and humanities research from the University of Cambridge when possible. All the interviews were conducted by telephone (except one which was carried out face to face at the interviewee's request). Interviewees were identified in relation to the main types of impact described in the academic interviewees (broadcasting, books, festivals, etc.). For each type of impact interviewees were identified using recommendations from academics, existing networks and organisational websites. All external interviewees were senior persons within their organisations. See Appendix A for the list of interviewees and Appendix C for the interview protocol. The interviews with external experts had the primary function of validating some of the findings of the first round of internal interviews, as well as helping the researchers understand the process of having impact, in particular impact on the general (interested) public.

3.3 Conclusions

In this chapter we have demonstrated that with some modifications the Payback Framework can be adapted and used to analyse the impacts of arts and humanities research. The most important modifications were (a) to the categories of impact; (b) the introduction of teaching as a new interface in the model; and (c) giving academic impact additional emphasis by creating a sub-stage (academic impact, 3b). These modifications were developed through a consultative process with the academic researchers and in discussion with the originators of the Payback Framework, to reflect more accurately the characteristics of arts and humanities research in the model.

The combination of data sources used in this report permits a detailed analysis of the impact of arts and humanities research at the University of Cambridge. The initial interviews allowed the identification of impacts; the survey was then used to gauge how particular impacts were reported by researchers. The cases then contribute to a better understanding and illustration of how a particular strand of research can have impact.

CHAPTER 4 Impacts in detail: cases

4.1 Introduction

This chapter looks at the impacts of arts and humanities research in detail through four cases. It aims to show how the Payback Framework works in practice through cases that have been chosen to present a variety of impacts and types of research in the arts and humanities. We first produced a long list of potential cases by collating cases that were suggested to us in our interviews with academics at the University and in the survey.[5] The cases then were selected in collaboration with the steering group for this project. The cases chosen were:

- a multi-volume biography of the poet Johann Wolfgang von Goethe by Professor Nicholas Boyle
- a project to create an online research resource funded by AHRC: Scriptorium: Medieval and Early Modern Manuscripts Online, led by members of the Faculty of English
- a three-volume history on the Third Reich in Germany by Professor Richard Evans, published between 2003 and 2009
- a series of research outputs by Professor J. R. Spencer that addressed the inadequacies of children's legal evidence and which have led to changes in the law on child witnesses.

These four cases use the Payback Framework to illustrate the process through which four pieces of research at the University of Cambridge have had impact, providing an exemplary analysis of how impact can occur through the research process.

[5] Survey respondents were asked to indicate any examples of research that they thought would be beneficial to this project.

4.2 The Goethe biography

4.2.1 Introduction

Professor Nicholas Boyle was elected to the Schröder Professorship of German in 2006 and is a fellow of Magdalene College. He has a particular interest in German literature and thought of the eighteenth and nineteenth centuries, and especially in Goethe, and the intersections between religion and literature. He has published the first two volumes of his prizewinning biography, *Goethe: The Poet and the Age*, and is currently working on the third volume of what is anticipated to be a four-volume biography. Boyle's wide interests in European literature, philosophy, theology and politics are reflected in his book of essays, *Who Are We Now?*, which was published in 1998, and *Sacred and Secular Scriptures: A Catholic Approach to Literature*, published in 2005. He has also edited various volumes and a CD-ROM of Goethe's works, and published *Faust Part One* and numerous articles on French and German literature. His *German Literature: A Very Short Introduction* was published in 2008 by Oxford University Press.

This case describes the impacts emerging from Boyle's research on German literature and philosophy. In particular, it considers his research on Goethe, the key output of which has been a multi-volume biography of the poet. The case summarises the range of impacts that Boyle's research has had, both within the academy, where he has contributed to the growing profile of German literature and philosophy as well as new approaches to the study of Goethe, and among the general public and wider society.

4.2.2 Stage 0: Identifying topics and issues (development of research idea, identification of research gap)

Professor Boyle's interest in German literature stems from his study of German during his school education. Boyle regards his participation at the age of 16 in an exchange programme with a German school as a factor of "decisive importance" in his decision to pursue a career in German studies:

> It gave me, at the age of 16, an experience of what it was to look at Germany and be a German schoolboy which, in one sense, I've drawn on ever since because it gave me a feeling of intimacy with German family life and the educational system that I couldn't possibly have got any other way.

Goethe became a "special interest" for Boyle during his undergraduate studies. The University of Cambridge offered a special paper on Goethe, which Boyle took as a student. However, Boyle did not specialise on Goethe for his PhD "partly because he seemed too big a subject". To this day, he feels that it is still difficult to find native British postgraduate students who are working on Goethe because the degree of preliminary knowledge required to study Goethe is simply too great, even for students who have undertaken single honours German courses. Goethe produced 150 volumes of work so, according to Boyle, it is only German students who have come up through the German system who are likely to have read enough of Goethe's work to study him at doctoral level.

4.2.3 Project specification and selection

After having becoming interested in Goethe during his undergraduate studies, in 1978 Boyle was asked by Routledge to write a short biography of Goethe. Boyle's doctoral supervisor, a prominent Germanist in the UK at the time, had initially been asked to do

the work but he was unavailable and so passed the project over to Boyle. At this stage there had not been much biographical writing about Goethe for the general public in Britain for about 50 years. The last major biography of Goethe in English came out in the 1930s. After beginning the work, Boyle realised that this was a much bigger project than Routledge had anticipated and as a result, Routledge decided to pull out. Over the next ten years, Boyle continued to think about the project and to do some work on it. He finally approached Oxford University Press in the late 1980s with one chapter (out of a final eight) and persuaded them to publish a larger version of a Goethe biography than had previously been planned with Routledge. During the writing of this biography it became clear to Boyle that it would not be possible to complete the biography in a single volume and he convinced Oxford University Press to extend the project to two volumes. While this first volume was in production Oxford University Press decided to market the book as a trade rather than an academic book; Boyle says, "that was, in some ways, for the impact of my work, probably the most crucial decision".

4.2.4 Teaching and research

As with most of our survey respondents and interviewees, Boyle emphasises the relationship between research and teaching, and how one feeds off the other. Boyle describes a tutor's relationship with his students as "not confined to the lecture room or even to the supervision room. [It] is a lifetime affair." The impacts of this interrelationship between teaching and research is evidenced by the fact that Boyle has remained in contact with a number of students who attended his lectures or were supervised by him, either as undergraduates or postgraduates. Boyle and his former students share complementary research interests and call on each other reciprocally for advice or guidance, and many of these former students have gone to achieve high academic positions in other universities. The success of these former students is a further indication of the growth in interest in German literature and philosophy, within the University of Cambridge and at other universities. When Boyle was an undergraduate there was a tendency in English universities to separate German thought from German studies. Today there is a greater readiness in German departments to regard German philosophy as part of German studies and Boyle attributes this, in part, to the fact that the University of Cambridge has produced a number of influential academics with these particular interests.

4.2.5 Stage 1: Inputs to research (researcher time; funding; previous research)

Boyle has researched Goethe for the biography since the late 1970s. He carried out his work on Goethe in his own research time and without the aid of research assistants. Boyle has received no external funding for his Goethe research apart from a small grant from his German publisher, which was necessary to finish the volume's footnotes in time for publication during the Goethe anniversary year. The essential resource that the University of Cambridge provided was "writing time" through various arrangements for sabbatical leave and unpaid leave when Boyle was in Berlin researching. Boyle also held a British Academy Readership from 1990 to 1992.

4.2.6 Stage 2: The research process (desk-based, archives etc.)

Boyle's principal sources for research have been at the University Library and the Beit Library in Cambridge: "The University's Goethe holdings have developed over the years and are now good." He has also used libraries in Germany, principally Göttingen, which he has visited over the years since 1978. Boyle has spent a significant amount of time in

Germany as part of his research process: "I am always travelling to Germany. I had a year in Berlin in 1994-5 paid for by the Wissenschaftskolleg, during which I was able to make use of all the Berlin libraries." He has accumulated a number of the basic texts required for his work himself.

Discussing the process by which the biography developed from a single-volume work to the four-volume structure it has now taken, Boyle says:

> The biography developed its own logic in the process of writing. I needed to address three aspects in parallel: biography, literary criticism and intellectual history. As I got into the process I found that more space was needed, essentially I was writing three books in one, so it is not surprising it eventually had to turn into three volumes not the one I started out with. The detailed work proved the right thing for Goethe. It was hard to predict from the beginning where that would take it.

Key to the evolution of this multi-volume structure was the publisher's later willingness to see the biography extended. This was due entirely to the success of the initial volumes: "The publishers were prepared to contemplate further volumes because of the success of the earlier ones."

4.2.7 Stage 3a: Primary outputs from research (academic publications, research resources)

Professor Boyle's key research outputs include *Goethe: The Poet and the Age, Volume 1: The Poetry of Desire* and *Goethe: The Poet and the Age, Volume II: Revolution and Renunciation*. Volumes III and IV of this series are forthcoming. In 1998 he published his book of essays *Who Are We Now?* and in 2005 he published *Sacred and Secular Scriptures: A Catholic Approach to Literature*. *German Literature: A Very Short Introduction* was published in 2008. Boyle has also edited various volumes and a CD-ROM of Goethe's work, as well as numerous articles on French and German literature.

4.2.8 Stage 3b: Academic impact (change in approaches, new trends, challenging existing knowledge)

Boyle's work on Goethe emphasises the context of German philosophy, whereas previously academic work has tended to regard Goethe as relatively immune to the philosophical developments of his time. Boyle felt strongly that this was wrong and that it was clear from the available sources that Goethe "knew perfectly well what was going on": that he knew many of the people personally and had read their works. During the 1970s Boyle was involved in setting up a special paper for the Department of German and Dutch on German philosophy, which at the time that the project had begun in the 1970s was largely unstudied and untaught at the University of Cambridge. Certainly there was no coherent study of the German philosophical tradition taking place at the university. This special subject ran for seven years during which time Boyle "learned quite as much as I taught – and probably more. And in a sense you could say that the teaching was research, a large part of which went into, in the end, the Goethe book." This shift in research focus in the Department of German and Dutch is evidenced by the fact that the Leverhulme Trust recently gave it a £110,000 grant, which the Newton Trust will top up to £180,000, so that the department can have a special project on the impact of German philosophy of this period, not just in Germany, but in wider Europe and America too. This all stems from a key period in the 1970s when Boyle was doing his research on German philosophy with very few models within the department or university to go on. A number of students who

took this paper have gone on to academic positions in other universities. One research student is now a professor of philosophy in Warwick; another student is the dean of arts at Birkbeck; and another student who was around during that time is now professor of German in Durham.

4.2.9 Dissemination and communication (public lectures, publications for general public, conferences, presentations, briefing notes, professional and personal networks)

Biography of Goethe

The first two volumes of Boyle's of Goethe, *Goethe: The Poet and the Age, Volume 1: The Poetry of Desire* and *Goethe: The Poet and the Age, Volume II: Revolution and Renunciation* were published in the UK by Oxford University Press and in Germany by C. H. Beck. This biography, which have been sold in Europe and the US, were aimed at both a scholarly readership and the general public. The large sales of the biography and its prominence on university reading lists and paper citations would seem to indicate the success of the book in reaching both an academic and non-academic audience. The research for the third and fourth volumes of this biographical work is currently in progress.

Lectures

Although Boyle's Goethe biography is the most widely reviewed work that he has published, his essay collections *Who Are We Now?* and *Sacred and Secular Scriptures* are his best-known works within church circles and led to his association with the House of Bishops and other religious administrations. The House of Bishops, which is one of the three Houses of the General Synod, consists of all 44 Diocesan bishops of the Church of England, the Bishop of Dover, seven suffragan bishops elected from among the total number of suffragan bishops and the Bishop to the Forces. The three Provincial Episcopal Visitors can also attend and speak when the House meets separately. The House of Bishops meet twice a year in private session, at which they devote time to study and reflection on a relevant issue. Dr Rowan Williams, Archbishop of Canterbury, who Boyle knew from his days as Dean and Chaplain of Clare College, Cambridge, asked Boyle if he would speak on British and American identity, which was a theme of Boyle's ongoing research at that time. Boyle presented a number of papers, participated in the discussion that followed and then subsequently commented on the thoughts of the various working parties in a session that was chaired by the then Archbishop of York. Boyle was then invited to make a similar presentation to a gathering of retired bishops in York as well as to the Roman Catholic Bishops Conference. Boyle still receives enquiries from these bodies to give lectures and addresses.

German Literature: A Very Short Introduction

Following the publication of the second volume of the Goethe biography, Boyle was invited to speak on the Radio 4 programme *In Our Time*. He was also approached by Oxford University Press to produce a volume of their Very Short Introduction series on German literature. This volume, *German Literature: A Very Short Introduction*, was published in 2008. Professor Boyle believes that publications like the Very Short Introduction series and other publications aimed at communicating research to the general public are in many respects the ultimate purpose of academic research:

> I think that they are not only useful but I think that they frankly are the justification – the ultimate justification – for all research in the arts and humanities. Vulgarisation, as it is called is, in the end, the rationale of research. That's to say, you must write in such a way that you are capable of having some effect on the general public mind. You write, in the end, in order to improve the standard of knowledge and thinking in the country – perhaps it would be truer to say in your language community – as a whole.

Boyle regards comprehensibility as one of the prime requisites of academic research. Unlike many of his colleagues, he does not regard academic research as a purely "technical matter": "Obviously technical matters are essential if the work that you do is to be intellectually coherent but I regard comprehensibility as one of the prime requisites of writing in this area." This sense of the importance of writing for the general public and in seeing one's academic research as ultimately intended for the general public good is a notable dimension of Boyle's motivation and scholarly impulses. For Boyle, writing for the public is not a "vulgar" activity but rather a justification of scholarly research activity. It is because of this sense of duty to communication and dissemination that Boyle has managed to achieve such a high profile among the public, and far-reaching and significant impacts beyond academia.

4.2.10 Stage 4: Secondary outputs [(other than researcher) curricula, policy papers, practice guidance, legislation]

Although Boyle's work has been widely quoted and referenced by other researchers and academics, his research has not had any discernible secondary outputs in the form of curricula, policy papers, practice guidance or legislation.

4.2.11 Stage 5: Use and adoption of research outputs (in policy, in practice, by public, by students)

Boyle's biography has been used and read by both students and scholars of German literature, and the general public. The first two volumes of the biography are cited on the BBC Radio 4 Programme *In Our Time*'s suggested reading list on Goethe; they are also regularly cited by researchers and appear on reading lists for students in universities in the UK, US and elsewhere. The Forum for Modern Language Studies, referring to the first volume of the biography, described its usefulness as a resource for students and scholars:

> The first question that can reasonably be put about a work of these dimensions (this is the first volume of two) is whether its length is justified by the scope of its subject and its usefulness to students and scholars. That this is undoubtedly so is not only a function of the vast range of Goethe's output and the complex nature of his relationship to his own age, but is also a tribute to the meticulous and scholarly way in which Boyle has gathered and arranged his material. (Forum for Modern Language Studies, 1993)

4.2.12 Stage 6: Final (non-academic) impacts

In this case, final non-academic impacts are difficult to assess as the subject of Goethe is not easily applicable to policy making, business practice or teaching outside university. However, the biography's sales and the profile of this research in other countries such as Germany and the US suggest that Boyle's research on Goethe has had an impact outside academia, leading to a growth in knowledge and understanding of Goethe's life and works. The growth in public awareness of and interest in Goethe is evidenced by the number of enquiries Boyle receives from the general public, who have often "discovered" Goethe through the biography; Boyle receives at least one email every month asking questions

about his research or when the next volume will be published. These enquiries come mainly from Germany, the UK and the US, and he has been receiving them since 1999.

It is also perhaps possible to claim that Boyle has contributed to a diffusion of interest in Goethe in the wider society. Given the high profile of his work on Goethe and the volume of his book sales, it is reasonable to assume that Boyle's research has contributed to this trend.

4.2.13 Impacts on policy and practice

Given the subject matter of this case, there have been no discernible impacts on policy and practice.

4.2.14 Social and cultural impacts (public knowledge creation, preservation of heritage, pleasure and wellbeing)

The key social and cultural impact of Boyle's research has been his contribution to a greater understanding and higher profile of German literature and philosophy in the University of Cambridge and within academia more generally. This is most clearly evidenced by the growth in numbers studying German literature and philosophy, and the changes in the way that the study of Goethe has been approached following the publication of Boyle's work.

It is also reasonable to state that Boyle has contributed to greater public knowledge and public interest in Goethe. This statement is justified not only by the success of his publications on Goethe and German literature, but also by the profile of his work in the media in the UK and in German outlets such as *Der Spiegel*. In a review in the *Guardian*, George Steiner said: "Nicholas Boyle stands beside Carlyle, Emerson and Auden in the select galaxy of those who have striven to make Goethe part of the English-language inheritance" (2000). Similarly, the review of *Goethe: The Poet and the Age* in the *LA Times* reflected on the gap in public knowledge and understanding of Goethe that Boyle had filled with this publication:

> Of the world's great poets, Johann Wolfgang von Goethe is perhaps the least familiar in the English-speaking world. Although most educated people know that Goethe wrote the verse drama "Faust," new translations of that masterpiece receive nothing like the attention drawn by new English versions of "The Divine Comedy," the Homeric epics or even Rilke's lyric poetry. [...] What readers in the Anglophone world need is not just a translation of Goethe's German but a translation of Goethe's Germany. Nicholas Boyle, the head of the Department of German at Cambridge, has provided just that. In "Goethe: The Poet and the Age," Boyle has given the English-speaking world the definitive account of the life and times of Germany's greatest author. (Lind, 2000)

4.2.15 Economic impacts (direct economic impacts and wider economic impacts)

Although Boyle did not receive any personal economic benefits during the research process for his Goethe biography, it is reasonable to suggest that the subsequent success of the first two volumes, which have been sold in the UK, Germany and the US, has led to economic impacts for Boyle, the publishing houses in the UK and Germany, and the booksellers.

4.2.16 Concluding remarks

Boyle's biographical work on Goethe has had considerable impacts on the growth of interest in German philosophy and literature, both within in the academy and among the general public. He has been part of a movement, stemming back to the 1970s, which has

seen the profile of German literature and philosophy within academia rise, and the approaches to the study of the subject change. In particular, Boyle has been instrumental in the current centrality of the German philosophical tradition within German literary studies at the University of Cambridge and elsewhere, both as a result of his influential published work, and his input into the direction and management of the Department of German and Dutch. This trend in the study of German literature and philosophy has extended across academia, in part due to the success of Boyle's former students, many of whom have gone on to key positions in other universities.

The impact of Boyle's work on Goethe has also been due to his own commitment to reach a broader audience than academia. In his own words, Boyle writes "for an educated teacher of English" and it is his intention that his published works, not only fulfil an academic purpose, but are also accessible and enjoyed by the general public: "I thought that I ought to be able to write a book that would inform, be interesting, and be comprehensible to this person." Unlike some of our other interviewees and survey respondents, Boyle does not see a clear distinction between writing for an academic readership and a general audience. In his Goethe biography he attempted to do both, and the prominence of the work on bestseller lists in Europe and America, as well as the frequency with which it is cited by academic writers, is in some way a testament to his success:

> I think that just about everything I say in the biography is actually significant to academic students of Goethe. It contains things that have not been said before and analyses that have not been made before. But what I have to do has to be comprehensible to that general audience, including an audience that doesn't even speak German. The extent to which that has been successful – I don't know how I could estimate that – but I do know that the German translation of the book has sold well in Germany, as it has in England and America, and it is used by or referred to at any rate on some courses at some German universities. So, I suppose in has in that sense fulfilled that dual purpose that I see for it.

Boyle's reach has extended beyond the UK to the US and Germany, and members of the general public continue to contact him about his biography. He has generated this level of impact with minimal economic support in the form of grants and without research assistants. The main support he received from the University of Cambridge was research time in the form of sabbaticals and unpaid leave, and this has been a key element of his research process. Boyle's writing style and willingness to engage with media platforms, public lectures and public enquiries have all been part of the process by which his research has achieved evident social, cultural and academic impacts.

4.3 Scriptorium: Medieval and Early Modern Manuscripts Online

4.3.1 Introduction

Scriptorium: Medieval and Early Modern Manuscripts Online is a three-year AHRC-funded (2006-2009) resource enhancement project based in the Faculty of English at the University of Cambridge. The project was led by three co-investigators:

- Dr Richard Beadle, Reader in English Literature and Historical Bibliography in the Faculty of English at Cambridge, and a fellow of St John's College
- Dr Raphael Lyne, a University Senior Lecturer in English and a Fellow of New Hall, now Murray Edwards, Cambridge
- Dr Andrew Zurcher, a Fellow in English at Queens' College, Cambridge.

This case is primarily based on two key sources of information: a 45-minute face-to-face interview with Dr Andrew Zurcher, one of the co-investigators on this project, and the AHRC grant application that was submitted by the project team in 2005. Other documents and information were obtained either from Dr Zurcher (e.g. the programme and list of attendees for the events organised during the course of the project) or from further desk research on the Scriptorium website and other websites of relevance (e.g. the Centre for Applied Research in Educational Technologies at the University of Cambridge, CARET, and other University of Cambridge websites).

The project employed three staff: a senior research associate in years 1-3, a full time IT developer in years 1 and 2, and a second research associate in year 3. As stated in the grant application, the research associates' role was to "participate intensively in image-editing, XML-markup, web design, and routine IT work" (Burrow et al., 2005). The project team was supported by a project advisory board and a board of project consultants comprising a range of stakeholders.[6]

4.3.2 Aims of the projects

The project has six main objectives:

- to produce digital facsimiles of about 20 inaccessible commonplace books/manuscripts and miscellanies from a range of institutions
- to produce an open-access website hosting research and pedagogical resources relevant to manuscript studies in the period 1450-1750, of use to scholars, students and independent researchers from diverse disciplinary backgrounds
- to widen access to manuscript materials by enabling scholars at all institutions of higher education worldwide, as well as independent researchers, to develop skills in palaeography and manuscript studies
- to foster and support collaborative relationships through online discussion for three annual symposia between scholars in many disciplines who share an interest

[6] For full detail of who was involved in the project, please refer to the following page of the project's website: http://scriptorium.english.cam.ac.uk/project/members.php (last accessed January 2010).

in manuscript studies, and between these researchers and the librarians, lawyers and information technologists who shape the conditions of such textual study
- to produce an edited volume of essays on early modern manuscript culture by an international group of historians and literary scholars based on the second annual symposium
- to disseminate full project documentation, including the project's contribution to developing XML-encoding and metadata standards for manuscripts, and to provide access to the project's open-source software (Burrow et al., 2005).

4.3.3 Collaboration and partnership

The project entailed close collaboration with different stakeholders located in Cambridge and elsewhere in the UK. Stakeholders included: DSpace@Cambridge and the Centre for Applied Research in Educational Technologies (CARET) as well a number of partner libraries including: the University of Cambridge Library; King's College, Cambridge; St John's College, Cambridge; Gonville and Caius College, Cambridge; and Trinity College, Cambridge; the library of Holkham Hall, Norfolk; and Brotherton Library, University of Leeds. Other contributing or collaborating libraries included: Queens' College, Cambridge; Emmanuel College, Cambridge; Lambeth Palace Library; Belton House; and the libraries of the National Trust.

DSpace@Cambridge's main role was to store data in a dark archive[7] in case the file formats become incompatible on the website. CARET stored the website's data on its servers and provided access to it through the website URL, supervised and mentored the project's IT developer, and provided access to hardware and infrastructural resources (Burrow et al., 2005).

The project team also consulted a number of experts in the field during the development stage of the project, including: "librarians, palaeographers and experts on manuscript culture, educational technologists, and digital librarians" (Burrow et al., 2005).

4.3.4 Stage 0: Identifying topics and issues

The project aimed to enhance the study and teaching of late medieval and early modern manuscript texts by addressing the accessibility of that material. Although this subject has been substantially researched in recent years, it is still difficult to access some of these manuscripts, which are often kept in rare book libraries and "remain inaccessible to most researchers, because the skills required to read them are taught in only a few institutions, and because many scholars and students are unable to travel to inspect them" (Burrow et al., 2005):

> It is difficult to teach students how to read medieval and early modern handwriting, and how to handle the manuscripts in which this material is to be found. The best way to acquire the skills is through experience in reading and handling the manuscripts, but repositories and archives naturally restrict access to fragile materials to those who already have the skills. Traditional workarounds, based on facsimiles and xeroxes, fail to prepare

[7] A dark archive is "an archive that cannot be accessed by any users. Access to the data is either limited to a set few individuals or completely restricted to all. The purpose of a dark archive is to function as a repository for information that can be used as a failsafe during disaster recovery". Source: http://www.webopedia.com/TERM/D/dark_archive.html (last accessed January 2010).

> students for the problems attending on "live" handling of manuscripts, which can be considerable. (Interview with Dr Zurcher, 2009)

The Scriptorium project built on a previous pilot teaching tool project created by Dr Zurcher with two of his colleagues, Dr Raphael Lyne and Dr Gavin Alexander[8] entitled *English Handwriting 1500-1700: An Online Course*. This project received a small HEFCE grant for its development, and the Scriptorium project has integrated and enlarged the online course and placed it on its website where it can be accessed along with the uploaded manuscripts and images.

Dr Zurcher explained that the reason for pairing the digital images of the manuscripts with the enlarged version of the handwriting course was to find:

> ways to broaden access to the manuscripts, and to the skills needed to read them. Digitisation makes it possible to capture the manuscript-reading experience "in the round", and to emulate the full range of problems and demands that a researcher will confront in the real research environment. Linking the handwriting course to the full manuscripts from which the course materials were derived makes it possible for students to join handwriting skills to other manuscript study skills, such as manuscript description, provenance research, dating, and so on. (Interview with Dr Zurcher, 2009)

4.3.5 Stage 1: Inputs to the research

Inputs to the research for this project were funded by a three-year AHRC grant, enabling the project to employ three members of staff. Other inputs financed by the AHRC grant included:

- the purchase of IT and server support from CARET, which now hosts the website
- the use of a high-specification Dell Dimension workstation for processing manuscript images and for composing XML.

Additional inputs to the research included the time spent on the development of the project by the project advisory board and project consultants, as well as speakers and attendees to the events organised as part of the project, and anyone who gave feedback on the development of the website or its resources.

4.3.6 Stage 2: The research process

This project aimed to create a resource for both scholarly research and research by the wider public interested in these manuscripts. The research process primarily involved identifying and cataloguing the manuscripts to be included on the website and adding scholarly content to the manuscripts' images. The project focused "specifically on commonplace books and miscellanies, which because of their heterogeneity, complex authorship and provenance, wide subject and data range, and typically humanist ethos represent an important and representative subset of period manuscript materials" (Burrow et al., 2005). In addition, these manuscripts were chosen to allow the project team:

> the broadest possible appeal to different types of users, from academic researchers in various fields, to librarians and archivists, and even family historians. But these materials also present a wide range of challenges for digitisation, digital representation, and

[8] See the online course's website for more detail:
http://www.english.cam.ac.uk/ceres/ehoc/acknowledgements.html (last accessed January 2010).

> description – for example, the content of some manuscripts has been composed by different writers over centuries of casual use, and the writing added in different orientations, with inconsistent pagination or foliation. Our decision to work with commonplace or miscellaneous manuscripts from these early periods reflected a desire to challenge conventional models for capturing, structuring, and representing texts online. In a sense, then, our materials are homogenous; but in many other ways, they are very heterogeneous: some manuscripts are short, some long, some by princes, some by women (who didn't tend to write much in this period, even in manuscript), some collected by poets, others by scientists and legal writers. So while the project was driven in part by a pedagogical agenda to widen access to manuscripts and manuscript-handling skills, and in part by a desire to help libraries and archives to open their collections ever wider, it was also driven by an ambition to test the limits of conventional markup, database coding, and web display for materials that frequently pushed at the technical limits of TEI and XML. As libraries and archives, as well as individually-funded research projects, receive more funding for digitisation of this kind, the academic community needs to confront the methodological and technical challenges posed by describing and representing this kind of material online. (Interview with Dr Zurcher, 2009)

Research stages

For the project team, adding scholarly content to the digital images of the manuscripts was of particular importance:

> One of the problems we tried to address in Scriptorium is the tendency, in digitisation projects like ours, just to photograph and dump material online. We'd rather see a more labour-intensive process, and thus a more productive process, in which researchers capture images, but also mark them up in various kinds of ways, not only with the metadata that will make them discoverable, but with the content and description that will make them useful to students, scholars, and even general users. (Interview with Dr Zurcher, 2009)

The project had four key stages:

- Phase 1 (months 1-4): installation of project equipment; formal adoption of standards on image capture, and harmonisation of standards across capture methods (with participating libraries); adoption of XML schema for the mark-up of manuscript transcriptions and accompanying annotation and interpretative resources; establishment of protocols for metadata tagging, configuring of weblog software to support project communications among project staff, leaders, advisors and other contributors; and basic design of the image database and website architecture
- Phase 2 (months 5-12): coding for the two image databases; capturing and post-processing of manuscript images; application of metadata tagging protocols; Scriptorium interface plans finalised; and the structure of the final image deposit negotiated and agreed with DSpace@Cambridge
- Phase 3 (months 13-24): ongoing capturing and processing of images and development of the image database and web interface; some images archived several manuscript facsimiles launched in the beta version of the Scriptorium site
- Phase 4: augmenting the archive of manuscript images and databases; the project formally and publicly launched (Burrow et al., 2005).

The project team also carried out user testing of the website at the end of the first year and on how best to present the research content in the second year. User groups included: a

group of history students and a group of English graduate students, a group of local Cambridge academics who were part of the project's wider advisory board. As a result, the team would like to add a more developed image viewer to improve the quality of the zoomed images on the website and add functionality. A funding application for this to AHRC is pending. The project team is also seeking further funding from a local trust to help finance longer-term maintenance and development of the project at a relatively low level.

4.3.7 Stage 3a: Primary outputs from research

The project had three main outputs:

- the Scriptorium website hosted at http://scriptorium.english.cam.ac.uk/, which has two main components: a digital archive of medieval and early modern manuscript facsimiles and an English handwriting course of interactive teaching/reference resources in medieval and early modern palaeography. The website includes a searchable database, and Manuscript Studies Resources, containing resources on the conventions for describing late medieval and early modern manuscripts, alongside searchable image databases of manuscript provenance images, and bindings
- three events in Cambridge; these can also be seen as disseminating aspects of the project's work
- a book of collected essays, which resulted from the second event organised by the project, to be published as a special issue of *Journal of Manuscript Studies* later in 2010.

The events included two one-day symposia and a two-day scholarly conference. The first symposium in July 2007 dealt with intellectual property rights and some of the legal copyright issues related to digitisation. It was attended by 37 people, 18 of whom were from the University of Cambridge. The 19 remaining participants came from the universities of Reading, Leeds and Kentucky, and other institutions such as the British Library, the National Archives and Holkham Hall in Norfolk. The symposium included six presentations on the challenges faced by online manuscript research, with contributions on establishing standards for image capture and digitisation, intellectual property rights and digitisation, and user interfaces for online manuscript projects.

In July 2008 a two-day scholarly conference was devoted to the materials that the project was working on, and to the kind of scholarly research that might be undertaken by historians, literary scholars, archivists and librarians. The conference was attended by 71 people, 21 of whom were from the University of Cambridge. Other attendees came from Cornell University; the universities of Toronto, Amsterdam and St Andrews; and libraries such as John Hopkins Library and Middle Temple Library.

The second symposium, entitled "Sustaining Digital Resources in the Humanities", took place in July 2009, and dealt with the role of institutional repositories in sustaining the digital humanities, infrastructures to support sustainability and other issues. It was attended by 40 people, 21 of whom were from the University of Cambridge. The others

were from the universities of Glasgow, Sheffield, Birmingham and Oxford; the AHRC; the British Library; King's College London Digital Consultancy Services; and elsewhere.

In addition to disseminating and raising awareness about the project, these events influenced the course of the project. Following the first symposium on intellectual property rights and digitisation methods, the project team devised its own licensing structure for the images used by the project, based on the Creative Commons Licence.[9] The first symposium also influenced what Dr Zurcher described as the "actual physical means that are used to keep manuscripts flat, protect the spine, achieve a good camera angle [and] to protect the manuscript materials whilst at the same time achieving the best possible results with our technology" (interview, 2009). The events also made links to the work of colleagues undertaking similar or related work (for example the Perdita Project and the Devonshire Manuscript project at TAPoR).

4.3.8 Stage 3b: Academic impact

The aim of the project was for the website and its digital contents to be used by students, scholars and the wider interested public for learning and research purposes. The ultimate academic impact of the project will not be known for some years, but the final version of the website went live in its complete form in October 2009. How much the website is used for research is to be assessed, though there is local and anecdotal evidence that the project website is already used for undergraduate and graduate teaching in English. At a recent seminar given by Dr Gavin Alexander at the Folger Shakespeare Library, in Washington, DC, North American participants provided substantial positive feedback about the site and its pedagogical materials. The project has commissioned scholarly essays from a range of contributors to the 2008 symposium, most of which have since been published on the project website. These essays introduce and contextualise some of the contents of the manuscripts that they discuss. Several of these essays have formed the basis of scholarly articles recently published in academic journals and it is expected that more publications will follow. As a result of the two-day conference, the project has produced a book of collected essays, to be published as a special issue of *Journal of Manuscript Studies* in 2010.

4.3.9 Dissemination and communication

The work of the project has been disseminated and communicated by:

- producing a digital poster for libraries to display, in order to inform their users that some of their materials are freely available online on the Scriptorium website
- circulating the website address to email lists of the art and humanities digital community
- convening two workshops and a conference attended by participants from outside the University of Cambridge, including universities abroad and other institutions

[9] The definition of Creative Commons licences on the Creative Commons website is: "With a Creative Commons license, **you keep your copyright** but allow people to copy and distribute your work provided they give you credit – and only on the conditions you specify here. For those new to Creative Commons licensing, we've prepared a list of things to think about. If you want to offer your work with no conditions or you want to certify a work as public domain, choose one of our public domain tools." Source: http://creativecommons.org/choose/ (last accessed January 2010).

- teaching activities – students on the MPhil course are encouraged to use the online course.

4.3.10 Stage 4: Secondary outputs (other than researcher)

It is too early for evidence of secondary outputs from the use of the website to appear. Nonetheless, material on the website has already been used for research by undergraduate and graduate students working in the Faculty of English, and anecdotal evidence suggests that the project is being widely used in humanities departments in North America.

4.3.11 Stage 5: Use and adoption of research outputs

Because this project creates a resource for research rather than being a piece of pure research in itself, it is the contents of the website that can be used and adopted. The project team receives about 15-20 unsolicited emails a year from the US, the UK and elsewhere in Europe on the website from users about research and learning issues.

In order to understand more about how the website and its contents are used, the research team intends to send out a questionnaire to all those who have registered on the site. In particular, the team will want to find out more about how often academics use the website and if they use it for teaching or other purposes.

It is also possible that the project will be used as an example of good practice for similar projects, especially those related to digitisation. The team produced a protocol for this purpose, which is also available on the website.

4.3.12 Stage 6: Final impact

In addition to the academic impacts described above, the project has the potential to have impacts on:

- policy and practice
- public knowledge creation
- the preservation of heritage.

Some of these impacts are more visible than others at this stage. It can be envisaged that the project will have an impact on policy and practice as awareness of the project increases among its target audience in the future, for example if other projects used the protocol and guidelines developed by the project team for the digitisation of manuscripts in relation to intellectual property rights and copyright issues, and to photographing these materials using methods aimed at preserving rare books during the photographic process. This already may be happening, as the project team has interacted with a wide range of stakeholders when collaborating with libraries, the advisory board and consultants, and through the events.

The project has a potential impact on public knowledge creation, as the Scriptorium website makes manuscripts accessible and freely available to all potential interested users, including the general public. These rare books would be virtually inaccessible to most people. The online handwriting course can be used by any interested person to teach themselves how to read ancient forms of handwriting, from "beginners to more experienced hands" (Scriptorium, 2009):

> Bringing our selected manuscript materials into wider circulation – both by publishing facsimile editions, and by furnishing a wide community with the skills to read them – will broaden the user base of these resources and further our understanding of manuscript culture at a critical time of electronic expansion. (Burrow et al., 2005)

The impact of the project on the preservation of heritage is clear. By making these texts digitally available to the wider public, the project contributes to their physical conservation and to raising interest in these materials among a wide audience. The more the website is used for learning and research purposes, the more this impact will increase. The project has digitised these texts for the first time and, importantly, taken precautions to make sure the files are safeguarded by dark archiving them in DSpace@Cambridge. Libraries that have collaborated with the project team and allowed their resources to be digitised have enabled a larger audience to access these public goods.

4.3.13 **Concluding remarks**

Scriptorium: Medieval and Early Modern Manuscripts Online has had a number of research outputs and potential impacts. Some of the impacts are at an early stage.

The project team set out to produce a widely accessible resource for a wide range of users, including those who are already familiar with reading and studying old handwriting as well as beginners. By developing an approach to digitisation and organising three events on the subject, the project team has aided the digitisation of materials in the discipline.

4.4 The history of the Third Reich

4.4.1 Introduction

Between 2003 and 2009, Richard Evans, Regius professor of modern history at the University of Cambridge, published a three-volume series on Nazi Germany. They cover Nazi Germany thematically, from the origins of Nazism, through the Nazis' seizure of power in 1933 and World War II, to the legacies of Nazism since World War II. This case explores the development and impacts of Evans' research on Nazi Germany by following it through four interlocking phases of research, defined by the following publications:

- *Rituals of Retribution: Capital Punishment in Germany, 1600-1987*, published by Oxford University Press, 1996
- *In Defence of History*, published by Granta Books, 1997
- *Lying about Hitler: History, Holocaust and the David Irving Trial*, published by Basic Books, New York, 2001
- *The Coming of the Third Reich*, *The Third Reich in Power 1933-1939* and *The Third Reich at War 1939-1945*, published by Penguin Books, 2003, 2005 and 2008.

The focus of this analysis will be how these pieces of research have contributed and shaped the impacts of the last piece of research to be analysed, the three volumes on Nazi Germany.

4.4.2 Stage 0: Identifying topics and issues

Evans' interest in 19th and 20th-century German history developed in the 1960s from a combination of personal interest, public debates and knowledge of accessible but unanalysed primary documents. Evans' expertise as a researcher is clearly defined by his initial research on capital punishment in Germany during the 1970s and 1980s. Impact was not necessarily the primary concern for Evans in identifying a research question:

> As always with historians, you start off with a general interest and you go to the documents and then hopefully something excites you and that concretises the whole process. It's […] never been a planned process.

4.4.3 Project specification and selection

Evans decided to write a three-volume history of Nazi Germany while engaged in a piece of research for the David Irving Trial. While researching and assessing Irving's analysis of the Holocaust during the trial, Evans determined that existing research and knowledge of the Third Reich was limited by the lack of a broad, comprehensive and analytically sound overview of existing research on the Third Reich:

> [I wrote] the three volumes […] in order to really bring before the wider public the results of the last 30 years of research in the history of the Third Reich because it seemed [that] there wasn't another book that did that, in detail.

4.4.4 Stage 1: Inputs to research

Funding

Evans has relied on funding at specific points in his career. In particular, he applied for funding when he needed to carry out archival research and analysis of original documents. In the 1980s he applied for and received enough funding from sources such as the British Academy and the Alexander von Humboldt Foundation in Germany to allow him to review comprehensively West and East German archives on the death penalty. Later, in his primary research for the Irving Trial, Evans received funding from the defence to cover the costs of research assistants and searching through Irving's research notes.

Time

Evans suggests that time is important when conducting historical research, as there is a lengthy process involving searching through, reading and analysing original documents. While also interspersing his research on capital punishment with other pieces of research, such as research on the cholera outbreak in Hamburg, Evans took 17 years to research capital punishment in Germany, accessing archives in the US, the UK, and East and West Germany.

Previous knowledge

With each subsequent piece of research, Evans drew on his experience of conducting history research and his knowledge of modern European history. His research into capital punishment laid the foundation for his understanding of modern German history, encompassing four centuries of German history, which included Nazi Germany. Evans suggests that this understanding of Nazi Germany enabled him to conduct research later about Irving's work on the Holocaust and for the three-volume history of Nazi Germany.

4.4.5 Stage 2: The research process

Evans began his research as an academic with a 17-year research project on capital punishment, comprised almost entirely of analysis of archival and primary sources. According to Evans, "research in history is defined very clearly as work on primary sources, […] material used at the time about which you are writing". Evans' primary source research on capital punishment informed and shaped his later research projects. Following his research on capital punishment, Evans embarked on subsequent research projects by responding to emerging opportunities, and to self- and peer-identified gaps in the existing knowledge.

For instance, Evans became involved in the research for the David Irving Trial, a High Court defamation action brought by Irving against Deborah Lipstadt and Penguin Books. The defence lawyers asked Evans to study Irving's research on the Holocaust in order to assess if it involved illegitimate interpretations of documents. During the trial, Evans analysed Irving's writings and research notes as primary sources. Following on from this work, he embarked on the three-volume work on Nazi Germany. In this, Evans took a different approach to conducting research. Rather than focusing primarily on analysing original sources, Evans combined primary source research with a synthesis of secondary sources so as to provide a comprehensive picture of all aspects of Nazi Germany. He built on his past research, such as his earlier research into capital punishment and work carried out during the Irving trial, and incorporated new research and secondary source analysis.

4.4.6 Teaching and research

Teaching was a fundamental part of Evans' research process and the paths through which his work has had impact. The interaction between teaching and research started at the beginning of Evans' career as a lecturer in the 1970s. Evans has taught subjects based on documents on the Third Reich since 1982 in three different universities and continues to supervise students at the University of Cambridge. As of 2010, Evans was supervising five MPhil students and ten PhD students.

For Evans, teaching has been important to research by providing him with the impetus and space to develop a general understanding of the context surrounding his specific research:

> Teaching is a part of it in the sense that in any piece of research in history you need to know the more general context. [...] It's important that you interpret specific piece of research to original documents by relating it to the wider context and so you bounce the meanings off each other and hopefully you end up by changing our perceptions of that context.

According to Evans, the process of teaching has also encouraged him to improve and refine his ability to communicate research to an undergraduate audience: "Constant questioning by students forces you to think straight, and clearly, the process of exhibition often [makes you] revise your ideas."

Thus, Evans determines that conducting research and communicating research findings cannot be separated from the activities and interactions involved in teaching students.

4.4.7 Stage 3a: Primary outputs from research

The primary academic outputs from Evans' research has been publication of books. Each piece of research has led to specific publications. The accessibility of his publications vary, from the 1000+ page *Rituals of Retribution*, to the 740 page defence document for the Irving trial (which can be found online), to paperback versions of the three-volume work on Nazi Germany sold commercially.

Evans also received grants from bodies such as the British Academy, British Council, Goethe Institute and Anglo-German Society for lectures and conferences in the UK and overseas throughout the 1980s and 1990s. The primary outputs of his research therefore include written publications, mainly in the form of books, and are accompanied by lectures and talks.

4.4.8 Stage 3b: Academic impact

Evans researched and wrote the three-volume work with a definite plan to assist and influence younger historians and researchers. His aim was to produce a publication that could help younger researchers to gain an understanding of the existing body of knowledge, as he had done through his previous research and teaching:

> I think at the moment my three volumes on Nazi Germany will be the starting point for researchers who are beginning to work in this field. That's where they will go to first to get the overview and then they will move on.

The academic impact of Evans' three-volume work on the Third Reich is linked to the nature of the publication as predominantly a reinterpretation of knowledge. Evans states:

> Essentially the change to a given field can happen not simply to establish new knowledge but also through the reinterpretation of old knowledge, existing knowledge and that's

> very, very important in the humanities […] it's a disorderly process in which very often a huge impact can be made […] within the field of knowledge by reinterpretation of existing knowledge.

4.4.9 Dissemination and communication

Evans' three volumes on Nazi Germany have been disseminated through direct book sales, lectures and the media. As of July 2009, the first volume, *The Coming of the Third Reich*, had sold 135,000 copies in English and American hardback editions; the second volume had sold 81,000; and the third, 51,000 copies.[10] The third volume, *The Third Reich at War 1939-1945*, was on the *New York Times*' best seller list, was listed as one of the *New York Times*' best books of 2009 and was one of the *Atlantic Monthly*'s five best books of 2009. Sales have been highest in the US and are almost double the sales in the UK. In addition to sales in English, the three volumes are also being translated. All three volumes already have been translated into Dutch, French and German, the second volume also into Italian, and the first volume is to be released in Romanian.

Evans has actively promoted his research through public lectures. In 2006 and 2008 Evans was visiting professor of history at Gresham College, London. In 2009 he became the Gresham professor of rhetoric, disseminating his research through a series of six lectures in 2009 and 2010 entitled, "War and Peace in Europe: From Napoleon to the Kaiser", communicating his current research for the Penguin History of Europe, 1815-1914. These lectures continue to be available as free podcasts through the Gresham College website. Evans has lectured on the Holocaust to groups such as the heads of history departments at independent schools in the UK, and at the inaugural Lord Merlyn-Rees Memorial Lecture at the House of Lords, hosted by the Holocaust Educational Trust in January 2010.

Evans has also used the media to communicate his research to a wider public. He has been a guest on *In Our Time* on BBC Radio 4 (Bragg et al., 2001), reviewed and quoted in UK newspapers, and lectured at the Hay Festival on German Society in World War II to an audience of approximately 800 individuals. Together with some other academics, including McGill University historian Professor Peter Hoffmann and University of North Carolina Professor Emeritus Gerhard Weinberg, Evans also appeared in the supplementary features on the DVD version of *Valkyrie* (2009), a film about Nazi Germany starring Tom Cruise.

Publicity has led to additional opportunities to communicate his research outside the academic community. For example outside contacts made as Vice Master and Acting Master at Birkbeck College, University of London between 1993 and 1997, led to invitations to lecture on German history at Forest School, London. In addition, Evans lectures regularly at sixth-form conferences organised by Keynote Education and at history-live conferences.

Finally, Evans disseminates his research findings to specific communities through his involvement in the Spoliation Advisory Panel, under the UK Department for Culture, Media and Sport. This panel advises the Secretary of State on claims to objects that were

[10] A research monograph sells approximately 500 copies; anything over 1000 copies sold penetrates the commercial market as a research book. In contrast, UK and American versions of Evans' first volume on Nazi Germany sold 135,000 copies alone.

lost during Nazi Germany and are now held in UK national collections. Evans has been appointed (and re-appointed) to the Panel as a non-partisan and independent historian; the Panel engages in research returning to original German documents. Evans' work on the Panel involves new research, analysing primary documents concerned with ownership of cultural objects, and disseminating previous research. These activities demonstrate some of the complex intersections between the impact and the process of research. Though in one sense Evans' participation on the Panel facilitates dissemination of his existing research and knowledge, he is also required to carry out new research and develop new knowledge.

4.4.10 Stage 4: Secondary outputs (other than researcher)

Evans' research has informed a variety of outputs produced by a third party, specifically in the areas of school curriculum and political policies. His research has been incorporated into teaching curricula materials and study guides. An extract from *The Third Reich in Power* is included in a sample paper developed by Edexcel, an awarding body offering qualifications and testing to schools, colleges and other places of learning. At Forest School, London, Evans' work has informed history teachers' reading preparations and notes for students.

Evans' research has informed policy through his participation on the Spoliation Advisory Panel. The Panel decided in one case that the morally just option was to return artwork to the original owners, but this decision was found to be in conflict with the statutes governing the National Gallery. The Panel asked a private member of parliament to put forward the Holocaust (Return of Cultural Objects) Bill 2008-2009[11] to allow for the return of objects under the advice of a panel designated by the Secretary of State relating to the period between 1933 and 1945 and events during the Nazi era; this bill has been passed and is now a public act, the Holocaust (Return of Cultural Objects) Act 2009. Indirectly, through his input on the Spoliation Advisory Panel, Evans' research into Nazi Germany has contributed to legislation on the return of cultural objects.

4.4.11 Stage 5: Use and adoption of research outputs

Although it is possible to assess the scale of dissemination of research outputs from Evans' work on Nazi Germany, it is more difficult to determine how these outputs are being used. Widespread book sales suggest that Evans' research is reaching a general public; however, it gives no evidence for the influence of Evans' research on public knowledge.

It is slightly easier to illustrate the ways in which Evans' research has been adopted in policy and practice. Input from history teachers at Forest School, London, provides evidence that teachers have used primary and secondary outputs of Evans' research. In policy, Evans has been involved in analysing and translating historical German documents, which in 2009 were part of the sources informing the Panel's recommendation that two pieces of porcelain at the British Museum and the Fitzwilliam Museum, acquired in good faith, had been looted during the Nazi era.

[11] Formerly known as the Holocaust (Stolen Art) Restitution Bill.

4.4.12 Stage 6: Final impact

4.4.13 Impacts on policy

The Spoliation Advisory Panel publishes reports on approximately two case rulings per year. Since the Holocaust (Return of Cultural Objects) Act was adopted, in one case the Panel ordered the British Library to return a manuscript to owners in Italy. Evans determines that the British Library will find it difficult to resist this requirement. Evans believes that his greatest impact was through the implementation of the Holocaust (Return of Cultural Objects) Act, and that this was possible through his work conducting research, disseminating research findings, and building an academic reputation in modern German history and historical epistemology.

4.4.14 Impacts on practice

There is particular evidence of the impact of Evans' research in secondary schools. His books are included in teaching and study resources, and his research has been found useful by teachers of Nazi Germany history and historical methodologies at the secondary school level. A history teacher at Forest School states: "Evans' books are very readable […] and are obviously a big step up for 5ths in terms of analysis and detail." Another teacher at the school said: "For the sixth form in particular, Evans' style is very good as he is massively detailed and really works the examples to explain wider issues."

Evans' research outputs have been recommended to candidates at Forest School applying to the University of Oxford and the University of Cambridge as examples of how to handle sources, and to demonstrate the need to interrogate sources with questions when conducting historical analysis. This influence of Evans' work on teaching at Forest School provides anecdotal evidence of how Evans' research affects how students are taught about the history of Nazi Germany and taught to conduct historical research.

4.4.15 Public knowledge creation

As described above, Evans' work on Nazi Germany is sold widely to a general readership. From this, it is reasonable to assume that his research and reinterpretations of the history of Nazi Germany are being recognised and, to an extent, adopted and absorbed by this readership. Though difficult to validate or quantify, the continued book sales of all three volumes provides evidence of public interest in Evans' research on Nazi Germany.

4.4.16 Economic Impacts

Evans' research on Nazi Germany has had a direct and a wider economic impact. The commercial sales have allowed Evans to benefit directly from his research. More widely, book sales have had an economic impact through sales and economic activity and foreign exchange through international sales.

4.4.17 Concluding remarks

Evans states that "impact is taking the sort of package as a whole as it were and there is a number of different pieces, interrelated, interlocking research". The three-volume work on Nazi Germany developed through a cumulative process of doing research, disseminating research outputs, and responding to opportunities and knowledge gaps. Evans has found that as he builds his knowledge of modern German history, and publishes and disseminates his research to a wider audience, the impact of his research also becomes greater.

4.5 The law on children's evidence

4.5.1 Introduction

Professor J. R. Spencer, QC, is a professor of law at the University of Cambridge and a fellow of Selwyn College. His research, which has achieved far-reaching social, legislative and professional impacts, has been carried out largely as part of his main HEFCE-funded post. Spencer's research interests are typically determined by legal questions that he uncovers while following current affairs or high profile cases in the media.

Spencer suggests that one of his most significant research contributions has been in the area of children's evidence, and his research process on this subject – which began with a small op-ed contribution to *The Times* on a current legal issue and led eventually to changes in the law on child witnesses – is representative of his wider research impulses and demonstrates how his often ad hoc choices of research topic can lead to wide impacts beyond academia. The impact of Spencer's research is also related to his use of particular platforms, such as the media, for dissemination of his ideas and to his active campaigns to bring certain issues to light through the organisation of international conferences.

4.5.2 Stage 0: Identifying topics and issues (development of research idea, identification of research gap)

In the 1980s the subject of child abuse was considered as important by the media as it is today. In the early 1980s there were a number of high profile cases of child abuse and child murders, most notably the abduction, sexual abuse and murder of Marie Payne by Colin Evans. After Evans' arrest it emerged that shortly before he murdered Marie he had been prosecuted for sexually abusing other young children. These prosecutions had failed because the law of evidence as it then was made it impossible to put the evidence of these children before the court. There was little doubt about Evans' guilt in these cases because pornographic photographs later came to light that showed him in the act of abuse. Professor Spencer, following this media coverage and recognising the problems with the existing law on child witnesses, thus used this case as a conduit through which to criticise the existing law on children's evidence.

Spencer's first piece of writing on children's evidence was published in *The Times*, following the sentencing of Colin Evans. Spencer's association with *The Times*, to which he regularly contributed op-ed pieces, helped to bring issues such as the problems with the law on children's evidence to wider public attention. Spencer's connection with the newspaper began in 1983 when he submitted an unsolicited op-ed piece about the mandatory life sentence for murder. Once this was published, Spencer followed it up with other op-ed pieces, which were also published. According to Spencer, he demonstrated a skill for writing short pieces that were accessible and conveyed the key points of a legal issue in a way that could be understand by the general public. As a result, Spencer built a relationship with *The Times*, whose staff often contacted him when they needed a piece of writing on a legal issue.

Spencer's role as an op-ed writer for *The Times* ended gradually in 1991 when Spencer moved to France for a year (although he submitted an op-ed piece to *Le Monde* while in

France). He since wrote occasional pieces for newspapers, but has now ceased to contribute to newspapers partly because since the broadsheets became much bigger, they have special law sections to which law articles get relegated. Spencer is not motivated to contribute to these law sections as he feels that they are only read by a small community of lawyers and do not reach the same audience or achieve the same impact that his earlier op-ed pieces in *The Times* did.

4.5.3 Project specification and selection

In 1985 Professor Spencer submitted an op-ed piece to *The Times* discussing the problems with the way that children gave evidence in court. At the time there had been great public concern about child abuse as a result of various scandals and high-profile murder cases. Psychologists and paediatricians were questioning the efficacy of the law, arguing that the existing law undermined the value of the evidence of children. Spencer's own children were young at this time and he began to think about them in relation to the law. He felt that the law relating to the inadmissibility of their evidence was completely out of line with their obvious intellectual abilities and other children's abilities. An additional influence was the experience of Spencer's sister, a social worker who dealt with abused children, who discussed with him the many difficulties involved in bringing a child's testimony before the court. Spencer's ideas on the subject also developed following discussions with colleagues in other disciplines at various conferences.

After the op-ed was published in *The Times*, Spencer was contacted by people from the Criminological Division of the British Psychological Society asking him to give a paper at a conference they were organising for December 1986. His paper attacked the existing law on children's evidence as irrational and leading to injustices. It was published as two separate papers in the *Criminal Law Review*, in February and April 1987, and as part of the conference proceedings. Following all of this, Spencer collaborated with a psychologist colleague, Rhona Flin, to write a book on children's evidence, *The Evidence of Children: The Law and the Psychology*, which was published in 1990. His articles in the *Criminal Law Review*, which is read by judges and practitioners, brought Spencer's views on the subject of children's evidence to the attention of the law community and resulted in his giving lectures on the issue. He is still contacted by people who want to speak to him about aspects of the law relating to children's evidence.

4.5.4 Stage 1: Inputs to research (researcher time, funding, previous research)

Professor Spencer does not normally seek funding to do his research. As a consequence of the kind of research he does and the kind of sources he uses, he carries out nearly all his legal research without external funding or the assistance of research students. On occasion he has hired students to help him look at cases or check quantities of material when he has been paid fees to do some work that involves looking at a large number of cases, but this type of thing is very ad hoc and casual.

Traditionally, this solitary research, financed through quality-related funding, is typical of the research carried out in the Faculty of Law. Most of Spencer's older colleagues work along these lines although his younger colleagues are more likely to seek grants and employ assistants for research projects. Spencer is usually dissuaded from applying for research grants because of the paperwork involved, but he has been involved in some collaborative

work over the years, which has had grant funding. This funding has usually been secured by Spencer's collaborative partners, their university or an external body.

Most commonly, Spencer finds a question or legal issue that he is interested in and carries out research financed by quality-related funding. Spencer and Rhona Flin wrote *The Evidence of Children: The Law and the Psychology* in their spare time and then found a publisher for it. This work, however, built on grant-funded research that Flin had done in previous years, as well as information that Spencer had collected on the subject of children's evidence.

4.5.5 Stage 2: The research process (desk-based, archives, etc.)

Professor Spencer describes the research process as follows:

> Finding something that I'm very interested in, usually where I think the law is wrong. Having an idea to say how it could be better. Writing something about it which then attracts attention. Probably then getting swept up with writing to governments/agencies of the government and campaigning about it.

As previously stated, his research is not normally grant-funded and he usually works on projects individually, working from sources held in libraries and archives. However, Spencer's research has often involved interaction with other academics and practitioners, through conferences, lectures or collaborative projects.

4.5.6 Teaching and research

The process of preparing a lecture usually requires the lecturer to spend time breaking down a subject in order to be able to explain it to students in simple, clear terms. It is by doing this that Spencer says he has sometimes realised flaws in a law or legal matter. This leads him to investigate further and potentially write a paper about the subject.

4.5.7 Stage 3a: Primary outputs to research (academic publications, research resources)

Spencer's main research outputs are:

- articles in journals
- books
- lectures (to the Judicial Studies Board, gatherings of practitioners etc.)
- op-ed pieces in *The Times* and other broadsheets.

For his research on children's evidence, his primary outputs were:

- the initial article in *The Times*
- conference papers
- published conference proceedings
- papers published in the *Criminal Law Review*
- contributions to the Pigot Committee on child witnesses.

4.5.8 Stage 3b: Academic impact (change in approach, new trends, challenging existing knowledge etc.)

Spencer's research on children's evidence had affected academics both within law and in other disciplines, such as psychology. In 1989 Spencer, along with his co-author Rhona Flin, Ray Bull (a psychologist) and the Scottish Law Commissioner, organised a conference on children's law at Selwyn College in Cambridge, which involved international academics and researchers from a range of disciplines and fields. It was the catalyst for a dialogue on

children's evidence in government, the media and academia. By providing this platform for discussion on the subject of child witnesses, and by writing about it in a wide variety of publications, academic and media-related, Spencer brought the issue to the attention of academics and researchers in many different disciplines. The impact of his research in academia was to make a key contribution to new lines of enquiry across disciplines that questioned the foundations for this legal position.

4.5.9 **Dissemination and communication (public lectures, publications for general public, conferences, presentations, briefing notes, professional and personal networks)**

The conference at Selwyn College, Cambridge was a key factor in Spencer's effective dissemination and communication of his research findings on children's evidence law. At this time there was a Home Office Committee (the Judge Pigot Committee) dealing with children's evidence and members of this committee were invited to attend, along with Baroness Faithfull, a member of the House of Lords. Speakers from other legal systems were also invited to discuss how the issue of child witnesses was dealt with in other nations. Following the conference, a morning session was held during which the Home Office Committee questioned the foreign participants about the laws on children's evidence in their countries. Much of what was discussed at this conference influenced the final report of the Pigot Committee. The conference proceedings, published in 1990, and the Pigot Committee recommendations were subsequently implemented in legislation. This conference, which was initiated and organised entirely by Spencer and a small number of colleagues, was funded by two small grants from the government and from the University of Cambridge.

4.5.10 **Stage 4: Secondary outputs [other than researcher (curricula, policy papers, practice guidance, legislation)]**

Spencer's research has led to changes in the law on children's evidence and has influenced judgments on a range of criminal justice topics, including bad character, public nuisance and sexual offences. Specifically, his research is reflected in changes to sections of the Criminal Justice Act 1988, the Criminal Justice Act 1991, and the Youth Justice and Criminal Evidence Act 1999. His publications and other research outputs have been adopted and used by judges, legal practitioners, the House of Lords and the government.

4.5.11 **Stage 5: Use and adoption of research outputs (in policy, in practice, by public, by students)**

Spencer's research into the history of the criminal offence of public nuisance has been widely used and adopted within the legal profession. Having identified various problems with the definition and categorisation of the centuries-old offence, Spencer wrote an article tracing the history of public nuisance law and looking at its implications, which was published in the *Cambridge Law Journal* (Spencer, 1989). Although Spencer did not expect this article to have much influence, it was noticed by the profession and was and is repeatedly referred to and quoted from in cases before the courts. In particular, it was used and adopted by members of the House of Lords (R v Goldstein and Rimmington, 2005) who were motivated to try and define the offence narrowly rather than broadly, partly as a result of what Spencer had argued in the article. Of Spencer's research outputs, this is the article that has been referred to most often in court judgments, often forming part of the background to a judgment.

Spencer's research on the subject of bad character has also been influential in judgements by the Court of Appeal (R v Hanson, 2005). In 2003, the government caused parliament to enact a major change in the law of criminal evidence. Contrary to long-standing tradition, this made evidence of the defendant's bad character admissible against him as part of the prosecution case. According to Spencer, this development was viewed as very worrying by many barristers and judges. The Judicial Studies Board asked Spencer to write a commentary on the new provisions as part of a programme of judicial training. In doing so, Spencer was able to influence the interpretation of these new provisions, essentially advising that the court could and should prevent the provisions being used in cases where the main body of evidence was otherwise weak. This commentary was later extended into a book – Evidence of Bad Character – which was published by Hart and is now in its second edition. Spencer's original commentary and the resulting book have, he says, been cited and quoted by the Court of Appeal in a number of cases: "In retrospect, I think that helping to 'put the brakes on' this piece of potentially disastrous legislation is one of the most significant contributions that I have made."

4.5.12 **Stage 6: Final (non-academic) impacts**

Spencer's most far-reaching impacts have been through his contributions to changes to the law, perhaps most notably with children's evidence and to individual judgments in court cases. As a result of his research, individually and in collaboration with other colleagues, Spencer has contributed to concrete changes to how children give evidence in court today, including the introduction of video evidence and the protection of children from seeing the defendant in open court. His book on children's evidence was cited most recently by the Lord Chief Justice when dismissing the appeal by Stephen Barker who, in a high profile case, was convicted of the rape of the sister of "Baby P" (R v Barker, 2010).

4.5.13 **Policy and practice**

Spencer's impacts on policy and practice are most clearly manifested by his association with the Judicial Studies Board and his ongoing work with judges. He has influenced policy and practice in the judiciary, with whom he works in an advisory capacity, and through his many published articles, which are read by the judiciary and legal professions. He was recruited by the Judicial Studies Board, the body responsible for the training and professional development of full-time and part-time judges, in the 1980s, and has since been regarded as a key source of expertise and authority on legal matters and points of law by the judiciary and the wider profession. From time to time he is informally consulted by judges, including sometimes by members of the senior judiciary, in relation to difficult legal problems that confront them.

Spencer's standing within the legal profession is evidenced by the fact that he was made an honorary Queen's Council. He is also an honorary member of the chambers at 15 New Bridge Street, London, and has lectured there to gatherings of barristers, solicitors and others.

According to the presiding judge at Snaresbrook Crown Court, Spencer has contributed to a growing closeness between law academics, practitioners and the judiciary, because of his legal expertise and skill at communicating points of law:

> He is authoritative and clear-thinking. And he expresses his analysis of the law and his opinions upon it in a way that is easily understood and attractive to listen to. He has been

> cited a number of times in the highest courts, including the House of Lords and the Court of Appeal, on topics of importance. So, he is a very influential academic. He is an honorary Queen's Council and I think very few academics have had that honour bestowed upon them.

Spencer has also lectured to the Crown Prosecution Service and the Judicial Studies Board for Northern Ireland. As a result of his research into children's evidence law, he was also recruited to assist Baroness Faithfull in drafting amendments on the law to the House of Lords and was subsequently involved with the Pigot Committee, whose final recommendations informed the changes made to the ways children give evidence.

4.5.14 International impacts

Spencer's research has had a range of international impacts, largely as a result of his willingness to travel to other nations, and his fluency in French and Dutch. Spencer has travelled extensively, particularly throughout Europe, dealing with comparative law matters concerning criminal justice. He has lectured frequently in France, Italy and elsewhere, spreading knowledge of the English legal system overseas. In 1998 he lectured to the Italian Judiciary about how the English criminal justice system operates and in 2003 he was invited to a conference in Rotterdam to discuss with Dutch lawyers proposed reforms to Dutch criminal procedure. He also played an important role organising a conference which brought English judges, academics, barristers and lawyers to Rome to meet academics and judges from the Italian judicial system.

Spencer's work has been influential in France where he published a book in French about the English criminal justice system. A judge from Snaresbrook Crown Court said that when the French Minister of Justice visited the then Home Secretary in England he had Spencer's book with him. This judge also suggested that Spencer had contributed to the French Minister's understanding of the English system of justice, which is important when discussing mutual assistance and understanding with the British government.

4.5.15 Social and cultural (public knowledge creation)

As an op-ed writer for *The Times* and other broadsheets, and by sharing his views on radio programmes and other mainstream media outlets, Spencer has shaped and informed public debate on a range of legal issues to do with law reform. As a result of his media profile, Spencer has informed public knowledge about legal matters and has opened up debates on issues such as the age of consent (Spencer, 2003), the admissibility of evidence of bad character in court (Spencer, 2004) and sexual offences (BBC, 2005).

4.5.16 Economic impacts (direct economic impacts and wider economic impacts)

Sometimes Spencer has been approached by external individuals or organisations and asked to carry out research on a particular issue. For example:

- There was a move in Brussels to try to find a better means of dealing with fraud in the European community budget and Spencer was invited to join a transnational group set up to consider this issue. He was involved because he spoke French – not for his knowledge of European law. This project (Corpus Juris Project) was financed by Brussels out of one of its funds and Spencer was paid fees for helping with it.

- When Lord Justice Auld reviewed the criminal courts (he was commissioned to produce a scheme for overhauling criminal procedure in England), he recruited Spencer as an advisor. Spencer was paid for this work.

4.5.17 Concluding remarks

This case has looked at some of the impacts emerging particularly from Spencer's work on children's evidence. Spencer's research has led to a wide range of impacts, most visibly on policy, law, academia, professional practice and public knowledge.

A key feature of Spencer's research impacts is their unplanned nature. This is not to say that the impacts are *unintended* as Spencer is demonstrably proactive in communicating his ideas and in campaigning for change on legal matters that he is interested in. However, at the outset of his research on children's evidence law, for example, there was little foresight that his research would be instrumental in the eventual changes to the law. Typically, Spencer has written about a subject that interests him, usually a paper, article or letter that is published in a journal or newspaper, and from there a number of impacts have followed. However, the trajectory from the initial op-ed piece on children's evidence that Spencer published in *The Times* to the final changes that were made in the law on child witnesses did not happen on its own. Though Spencer did not create a detailed plan for how his research could have an impact, he was committed to raising the profile of children's evidence and highlighting the problems with the existing law as he saw it; this commitment was instrumental in galvanising support and contributing to subsequent reforms in this area. The international conference that he organised at Selwyn College in Cambridge was particularly important in bringing the issue of children's evidence to the attention of the Home Office and in making the links with colleagues in other disciplines, especially psychology, which eventually led to the publication of his influential work on children's evidence.

Spencer's work also has had impact as a result of his personal skills in communicating complex legal points to non-specialist audiences. Similarly, according to Spencer and a presiding judge, Spencer's recruitment by the Judicial Studies Board and his invitations to lecture to other legal professional groups has been based not just on his legal expertise but also on his skills at lecturing and communicating points of law outside academia. By the same measure, Spencer's language skills and personal interest in European law has enabled him to have a range of international impacts, and to influence legal policy and practice in countries such as France, Italy and Portugal.

4.6 Summary

These four cases show how the modified Payback Framework can be applied to the arts and humanities in order to illustrate the research process from initial topic selection to final impacts. Each of these cases is distinct, and so this chapter demonstrates how the Payback Framework can be used to capture the very different ways in which research can be undertaken and achieve impact. The case on the Goethe biography provides evidence of the role of teaching and active departmental management in achieving impact. The fact that Boyle's research on Goethe was conducted primarily in his own quality-related research time is also typical of how the majority of research in the arts and humanities is carried out. Scriptorium: Medieval and Early Modern Manuscripts Online provides

evidence of a collaborative research initiative in which three co-investigators embarked on a research project with the explicit intention to influence academic study and wider public knowledge by creating a research resource. By contrast, looking at Evans' research on Nazi Germany, the Payback Framework highlights how impact can occur cumulatively, through the development of subsequent pieces of research, and can be aided by academic reputation. Finally, Spencer's research on children's evidence provides an example of how ad hoc choices of research topics, financed through quality-related funding, can have wide-reaching national and international effects on policy and practice. This final case also highlights the role of the researcher in bringing his or her research findings to light through active engagement with public platforms for dissemination. Across very different impacts, academic disciplines and research designs, these four cases thus show the usefulness of the adapted Payback Framework as a means by which to identify, assess, and evaluate research processes and impacts.

CHAPTER 5 Shared responsibilities and next steps

This study has investigated empirically the reported impacts of arts and humanities research at the University of Cambridge. In this final chapter we outline some practical next steps for the University of Cambridge and AHRC to consider as they continue to develop ways to increase the breadth and depth of impacts that arts and humanities research can achieve. In addition, arising from this study we also suggest some ways in which approaches to assessing research impacts could be improved.

The University of Cambridge and AHRC recognise that increasing the impact of arts and humanities research is a shared responsibility, both between those two organisations and within the University. The study has demonstrated not only that a wide range of potential impacts exists, but that more impacts could be achieved by more research if there was more extensive awareness of the routes and methods for achieving those impacts. For the University, this is a shared responsibility between the University centrally, the School of Arts and Humanities, the School of Humanities and Social Sciences, and the faculties, departments and centres within them, and individual researchers. Together they are responsible for enabling more of their research to achieve greater breadth and depth of impacts. Likewise, the AHRC's continuing efforts to explore and communicate the breadth, depth and range of impacts of arts and humanities research are essential, not least where individual researchers may be unaware of the potential impacts of their own research that would be valuable.

The study found that many academics had not considered some types of academic and non-academic impact that their research could feasibly obtain, or had not yet found ways to develop those impacts far enough. Continuing efforts by the University of Cambridge and AHRC in this regard would therefore be likely to help to address the current gaps in awareness among academic researchers, and to encourage the researchers to be more ambitious and more confident in seeking broader and deeper impacts for their research.

Alongside the academic benefits that research can create, this study specifically highlights related but distinct benefits to a range of non-academic interests, which academic research can provide through many forms of knowledge creation and enrichment. Creating opportunities and incentives for all researchers, regardless of level or tenure, to expand these types of impacts could help to strengthen this vital public benefit.

The remit of this study was to investigate the circumstances of impacts associated with arts and humanities research at the University of Cambridge. The study has demonstrated the benefits of using the adapted Payback Framework as a basis for assessing arts and humanities research impact. Next, using the solid foundations developed here and

widening the inquiry to other arts and humanities research at other universities, it would be possible to assess how typical or atypical the evidence from the University of Cambridge is. That would also enable the development of a larger pool of evidence, and thereby support comparisons across institutions. The AHRC may therefore want to consider using the adapted Payback Framework further with other universities where the impacts of arts and humanities research could be assessed. We would recommend that the Framework informs the design and analysis of such assessments, and that it would be important to include all four of the methods of data gathering employed in this study: internal scoping interviews with senior arts and humanities academics, a survey of all arts and humanities research staff, interviews with external users of arts and humanities research, and in-depth case studies. This combination of methods reflects the need to be alert to the diverse and often complex nature of the factors involved in research, and the need to use a robust analytical framework to underpin interpretations of these factors.

There would be great value in comparing and corroborating reported evidence of impacts by building a larger base of evidence about the impacts that non-academic informants use and need. Even with a small sample of external informants, this study was able to discover instances of research impacts that many researchers may not yet be aware of or may not have considered to be relevant to their own work. With evidence from a larger and more diverse sample of external informants, it would be possible to strengthen the definitions of categories of impact to underpin any weighting or other quantification that research funders may be considering.

Further work could also usefully be done to delineate more precisely the similarities and differences (in terms of impacts), not only between fields of research within arts and humanities but also between the arts and humanities and the sciences and social sciences. For example:

- Are age and/or reputation of researchers significantly different between these types of disciplines?
- Are research impacts more instrumental in some fields than others?
- Are the time lags between research and its impact correlated with types of inquiry?
- Is the public knowledge creation element of research impact evenly or unevenly distributed between fields, and why?
- What is known about the differences between primary research and secondary synthesis of existing research, in relation to impacts?

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APPENDICES

Appendix A List of interviewees

Interviewees from the University of Cambridge

Faculty of Archaeology and Anthropology

Professor G.W.W. Barker

Faculty of Architecture and History of Art

Professor Paul Binski

Dr Nick Bullock

Professor Deborah Howard

Dr Frank Salmon

Professor Koen Steemers

Faculty of Asian and Middle Eastern Studies

Professor Hans van der Ven

Faculty of Classics

Professor Mary Beard

Professor Martin Millett

Professor Robin Osborne

Faculty of Divinity

Professor Nicholas de Lange

Faculty of English

Professor Helen Cooper

Professor Mary Jacobus

Dr Judy Quinn

Dr Paul Russell

Professor David Trotter

Professor Barry Windeatt

Dr Andrew Zurcher

Faculty of History

Professor Richard Evans

Department of History and Philosophy of Science

Professor Nick Jardine

Dr Sachiko Kusukawa

Faculty of Law

Professor Eilis Ferran

Professor John Spencer

Faculty of Modern and Medieval Languages

Dr Nicholas White

Faculty of Music

Professor Nicholas Cook

Faculty of Philosophy

Professor Simon Blackburn

Dr Alex Oliver

External interviewees

Rt Hon Lady Justice Mary Arden	Court of Appeal
Christopher Brant	Head of History, Forest School, Snaresbrook, London
Nicola Buckley	Co-ordinator, Cambridge Festival of Ideas
James Cook	former editor, *In Our Time* ,BBC Radio 4
Peter Florence	Director, Hay Festival of Literature and the Arts
Richard Harper	Principal Researcher Microsoft Research, Cambridge
Charlotte Higgins	Arts Correspondent, The Guardian
Dr Jeremy Hill	Research Manager, British Museum
Tony Jones	Director, Cambridge Film Festival
Laura Lugg	Head of Evaluation, Arts and Humanities Research Council
Michael Mallinson	Mallinson Architects and Engineers
Luciana O'Flaherty	Editor, Very Short Introductions, Oxford University Press
John Pullinger	Librarian, House of Commons Library
David Radford	Presiding Judge, Snaresbrook Crown Court
Adam Shatz	Senior Editor, London Review of Books
Meb Somani	Director, Natural Resources Investments, Barclay's Capital
Sarah Stanton	Commissioning Editor, Cambridge University Press

Appendix B Interview protocol for University of Cambridge interviewees

1. Interviewee name, discipline/department, date of interview and names of interviewers

2. Checking understanding: What do you understand by the term "impact" in the context of arts and humanities research activity? (Check: economic, social, aesthetic, interdisciplinary, wider benefits/contributions, etc)

a. Activities: what does "research" include in this context?

b. Fashions: are A&H research impacts "fashion" driven?

3. Most important impacts: What are the most important "impacts" of CU A&H research that you know about? Please explain:

(Check: your own research at CU; research by your faculty/subject/discipline at CU; impacts for users/beneficiaries of the research)

a. Who are the beneficiaries: (Check for: researchers at CU, researchers elsewhere, specific business people, specific industry people, specific government/policy people, school kids and teachers, press/media/publisher people, etc.)

b. Attribution of impact: how direct? How easy is it to trace the impact back to the original research?

4. Impact process: How do these "impacts" occur, step by step? Please explain:

a. What works/does not work? Identify specific "impact" examples. Why did each example work/not work? Planned/designed by the researchers vs unintended impacts? (Check whether any differences).

b. Duration: over what time period(s) does the impact occur? (Check: nature of time lags? Do those amounts of time matter?) How long does impact last?

c. Evidence: how are you (researcher) and they (beneficiaries of the research) aware that these impacts occur? (Check: tracers, e.g. written citations in policy papers? Other? When are impacts found out about by accident?)

d. Measurable impacts: (Check: does it matter if impacts are measurable? To whom does it matter/not matter? If impacts are measurable, what kinds of measures are used? If impacts are not measurable or not measured: why not? Consequences of impacts not being measured?)

e. Support for impact tasks: what will the funder pay for or support in other ways? (Check: AHRC, QR, other)

5. Impact factors: What factors most help A&H research at CU to have significant impacts? What factors hinder such impacts and why?

(Check: reasons why each factor mentioned matters, e.g. subject of research, relevance of research, interest of intermediaries, CU reputation, publication opportunities, seminars, networking, research skills, advocacy skills, etc.)?

a. Do you consider potential impact when deciding on a course of research or research topic? (Check: difference funded versus non funded research)

6. The counterfactual: What would have happened if the research had not been done? (Check: consequences for researcher(s)? faculty/dept? potential beneficiaries?)

7. Other comments?

Appendix C Interview protocol for external interviews

In addition to the generic questions below, each interviewee was asked bespoke follow-up questions in order to reveal more detail about the processes through which research can be enabled to have impact beyond the academic sphere.

1. **In your work, in what ways do you come into contact with arts and humanities research? Examples?**

2. **What specific impacts do you think specific arts and humanities research has through your work, on whom, and how do those impacts happen?**

3. **What wider, more diffuse impacts do you think arts and humanities research has, on whom and how do those impacts happen?**

4. **In your work what do you need from arts and humanities research but do not (often/readily) find?**

5. **Have you studied arts and humanities subjects yourself? If so, did research (by others and/or your own) in those subjects influence you? How?**

Appendix D Survey questions

Thank you for taking part in this survey. The survey is part of a wider study to examine how arts and humanities research has 'impact' and informs, inspires and contributes, within and beyond the academic sphere. This project was commissioned jointly by the University of Cambridge and the Arts and Humanities Research Council (AHRC), and is being conducted by RAND Europe. The study will report in March 2010.

There are 30 questions, divided into seven headings as follows:

- **Information about you (so that we can analyse whether different groups of researchers have different views)**
- **Influences of research in the academic sphere**
- **Influences on policy**
- **Influences on school teaching and professional and business practice**
- **Social and cultural influences**
- **Economic influences**
- **Additional comments**

The survey takes about 20 minutes to complete. The survey is anonymous.

Whenever a question asks about 'your research' please consider all the research in arts and humanities that you have conducted since you joined the University of Cambridge or one of the Colleges. Please do answer all the questions to the best of your knowledge, whatever the extent of your research experience.

Information about you

1. What is your position at the University of Cambridge? If more than one job title is applicable please select the one that covers the majority of your research time.
    - Professor
    - Assistant Professor
    - Reader
    - Senior Lecturer

- Lecturer
- Senior Research Associate
- Senior Research Fellow
- Junior Research Fellow
- Research Fellow
- Postdoctoral Research Assistant
- Postdoctoral Research Associate
- Visiting Researcher
- Other (please specify)

2. Are you?
    - Male
    - Female
    - Prefer not to disclose

3. Which age range do you belong to?
    - 20-29
    - 30-39
    - 40-49
    - 50-59
    - 60-69
    - 70+
    - Prefer not to disclose

4. How would you identify your nationality?
    - UK national
    - Non-UK EU national
    - Non EU national, please specify:
    - Prefer not to disclose

5. Which faculty and/or department do you belong to? *Select all that apply.*
    - Department of Anglo-Saxon, Norse and Celtic
    - Department of Archaeology
    - Department of Architecture
    - Department of East Asian Studies
    - Department of French
    - Department of German and Dutch
    - Department of History and Philosophy of Science
    - Department of History of Art
    - Department of Italian
    - Department of Linguistics
    - Department of Middle Eastern Studies

- Department of Slavonic Studies
- Department of Spanish and Portuguese
- Faculty of Classics
- Faculty of Divinity
- Faculty of English
- Faculty of History
- Faculty of Law
- Faculty of Modern and Medieval Languages (including Modern Greek and Neo-Latin)
- Faculty of Music
- Faculty of Philosophy
- Leverhulme Centre for Human Evolutionary Studies
- McDonald Institute for Archaeological Research
- Mongolian and Inner Asian Studies Unit
- Museum of Archaeology and Anthropology
- Research Centre for English and Applied Linguistics
- Whipple Museum of the History of Science
- Other

6. How long have you been doing research at the University of Cambridge within arts and humanities (*not* including Master's degree but including PhD research)?
   - 0 to 4 years
   - 5 to 9 years
   - 10 to 20 years
   - 21 to 30 years
   - 31 years or more

7. While working at the University of Cambridge, have you or a team you belonged to received an AHRC grant and/or another grant for research (*not* including Master's degree funding, but including PhD funding)?
   - AHRC grant Yes
   - AHRC grant No
   - Other grant Yes
   - Other grant No

8. Are you currently working on an AHRC-funded project (*not* including Master's degree funding)?
   - Yes
   - No

Influence of research in the academic sphere

Please answer all the following questions with reference to all your research in arts and humanities since you joined the University of Cambridge or one of the Colleges (excluding undergraduate and Master's research).

9. Has your research informed subsequent research in your area?
   - Yes
   - No

10. If yes, how has your research informed subsequent research? *Select all that apply*
    - Created interest in a new or previously unexplored aspect of your area
    - Revived interest in an area of research that had been dormant
    - Maintained existing approaches within your area
    - Contributed to a change in approach within your area
    - Informed supervision of research students
    - Generated invitation(s) to present your work at academic lectures, conferences and/or seminars
    - Other, please specify:

11. Have you done any of the following as single or co-author:
    - Published articles in peer-reviewed academic journals (print or online)
    - Developed or contributed to online research resources (e.g. public lectures, conference papers, web pages, etc)
    - Reviewed of someone else's work
    - Monographs
    - Textbooks
    - Chapters in edited volumes/books
    - Introductions to a textual edition of books
    - Entries in reference books (encyclopaedias, dictionaries, etc)
    - Other (please specify)

12. Among researchers, who uses these resources indicated in the previous question? *Select all that apply*
    - Academics within your research group
    - Academics within your area(s) of research
    - Academics within your faculty/department at Cambridge
    - Academics within your discipline beyond Cambridge
    - Academics within other arts and humanities disciplines
    - Outside arts and humanities disciplines, please specify:
    - Not aware of an influence in this area

13. Have there been published reviews of your work?
    - Yes
    - No
    - Don't know

14. Who, among the following groups, would you say your research has influenced? *Select all that apply*
    - Undergraduate students
    - Postgraduate researchers in your area
    - Researchers in other areas in arts and humanities
    - Researchers outside arts and humanities
    - Not aware of an influence

15. In what ways has your research at the University of Cambridge influenced the direction of research trends in your subject area? *Select all that apply*
    - Reinforced current research in the area
    - Opened up a new area of research
    - Other (please specify)
    - Not aware of this influence

Influences on policy

16. Has your research been used to inform policy making among any of the following? *Select all that apply*
    - National government
    - Local government
    - European Union/Commission/Parliament
    - Industry
    - Political parties
    - Other national bodies
    - Other international bodies
    - Professional organizations
    - Charities as campaigning organizations
    - Other (please specify)
    - Not aware of an influence in this area

17. If applicable, in what ways has your research been communicated to policy makers? *Select all that apply*
    - Written research papers or oral briefings for government departments/agencies

- Written or oral evidence to parliamentary select committees
- Other written or oral briefings to parliamentarians
- Written or oral briefings to other policy bodies (think tanks, trade unions, etc.)
- Other, please specify:

18. If applicable, how has your research influenced policy making? *Select all that apply*

- Provided relevant facts for policy analysis
- Confirmed existing policy
- Led to an incremental change to policy
- Changed policy direction
- Contributed to creating a new policy focus
- Challenged policy
- Other, please specify:
- Not aware that it has been communicated

Influences on school teaching and business and professional practice

19. In what ways has your research influenced teaching and curricula in primary or secondary schools? *Select all that apply*

- Written/contributed to school textbooks
- Research-related written work(s) are on school students' reading lists
- Research informed school curriculum content
- Research contributed to online resources used by schools
- Research informed school teaching methods/approaches in your subject area
- Not aware of an influence in this area
- Other, please specify:

20. Have you ever organised or participated in activities that exposed businesses and professionals to your research?

- Yes
- No

21. In what ways has your research influenced business or professional practice? *Select all that apply*

- Improved effectiveness of business practice (e.g. cross-cultural business relations, etc)
- Used in training practitioners (e.g. judges, diplomats, architects, etc.)

- Contributed to the creation of new technologies that are used professionally (e.g. carbon dating, voice recognition technology, etc.)
- Other, please specify:
- Not aware of an influence in this area

22. Have you ever acted as an expert witness in a legal case?

- Yes
- No

Social and cultural influences

23. How have you communicated your research to the public? *Select all that apply*

- Article in general circulation publication (newspapers, magazines, website, etc)
- Public lectures
- Blogs
- Podcasts
- TV programmes
- Radio programmes
- Authoring or co-authoring mass market books/chapters in books
- Other, please specify:
- Not aware of communications that apply

24. At what level would you say that this communication has taken place? *Select all that apply*

- Local
- Regional
- National
- International
- Don't know

25. What activities and events has your research contributed to?

- Arts festivals
- Museum and art exhibitions
- Museum or building design or re-design
- Life performances (theatre, music, poetry etc)
- Others (please specify)
- Not aware that it has contributed

26. Has your research contributed to preserving cultural heritage? *Select all that apply*

- Preserving a language
- Preserving a document (e.g. musical score, text, photograph)
- Preserving an artefact
- Preserving a building or archaeological/historical site
- Preserving intangible heritage (e.g. traditions and rituals)
- Other, please specify:
- Not aware of an influence in this area

Economic influences

27. In what way have you personally benefitted financially from your research (not including a university/college salary)?

- Income from publications
- Income from participation in events and conferences
- Income from consultancy work
- Other (please specify)
- No financial benefit
- Prefer not to answer

28. In what ways has your research brought wider economic impacts (other than for yourself)? *Select all that apply*

- Generated revenue from publications
- Generated revenue for the university/college and community by attracting students to study at Cambridge
- Securing external funding (grants, scholarships, etc)
- Generated revenue from events (e.g. conferences, museum exhibitions, arts festivals, etc) for the university/college and community
- Other, please specify:
- Not aware of economic benefits

AND FINALLY….

29. The RAND Europe team would like to hear about specific projects that demonstrate the kinds of impacts discussed in this survey. If you are able to recommend a particular project or piece of research that has had impact and influence, please describe it below and provide the relevant contact person's details and their department/faculty:

30. If you wish to make any additional comments on any issues raised by the survey questions, please do so here:

THANK YOU