

POLICY AND PRACTICE IMPACT CASE STUDY OF ESRC GRANTS AND FELLOWSHIPS IN PSYCHOLOGY

Report

**Laura R. Meagher, PhD
Technology Development Group
with Catherine Lyall, PhD, Information Browser Ltd**

June 2007

CONTENTS

OVERVIEW	1
EXECUTIVE SUMMARY	2
INTRODUCTION	4
BACKGROUND AND CONTEXT	5
APPROACH & METHODS	7
Working Model.....	7
Framework of Core Questions.....	8
Content/Discourse Analysis (End-of-Award Reports, Rapporteurs’ Evaluations).....	7
Survey of Awardholders	8
Survey of Heads of Departments of Psychology	9
Focus Group, Assoc Heads of Psychology Depts. (AHPD).....	9
Embedded Case Studies.....	9
Semi-structured Interviews	9
Grey Literature Searches	9
Media-related Searches	10
RESULTS	11
Level of engagement with users, orientation toward knowledge transfer	11
Impacts.....	11
Processes, activities & roles leading to impacts	15
Case Study 1: Language and development.....	18
Case Study 2: Gaze aversion behaviour in children	20
Case Study 3: Risks and resilience in childhood	22
Case Study 4: Detecting lies.....	24
Case Study 5: Psychology Department as an Impact-fostering Environment	26
CRITICAL REFLECTION ON APPROACH & METHODS	29
Strengths/advantages.....	29
Problems/disadvantages	29
CONCLUSIONS	30
Informed Version of Model	30
Summary & Recommendations	35
Specific Recommendations for Enhancing Likelihood of Impacts.....	37
REFERENCES.....	39

ANNEXES¹

- A. Framework of Core Questions
- B. Content/Discourse Analysis (End-of-Award Reports, Rapporteurs' Evaluations)
- C. Survey of Awardholders – copy of survey instrument
- D. Survey of Heads of Departments of Psychology – copy of survey instrument
- E. Template for Embedded Case Studies
- F. Profile of Interviewees
- G. Topic Guide for User Interviews
- H. Grey Literature Searches
- I. Media-related Searches
- J. Survey of Awardholders – results and analysis
- K. Survey of Heads of Departments of Psychology – results and analysis
- L. Lessons Learned, Good Practice for Processes leading to Impacts

¹ All main findings are included in the body of the report which is intended as a stand-alone document. However, supplementary material can be found in the following Annexes.

OVERVIEW

The purpose of this study has been to assist the ESRC in developing new approaches to assessing policy and practice impacts; its scope included identification of examples of impact and a critical reflection on methods used to assess them. Some ESRC responsive mode psychology awards in the cohorts ending in 1998, 2001 and 2004 have generated impacts on policy and practice. Even more appear to have led to less tangible, conceptual impacts, contributing to a changed awareness regarding particular issues. While most of the capacity-building impacts have been the education of undergraduates, postgraduates and postdoctoral fellows, many of these individuals will leave academia to act as “knowledge intermediaries” or to participate in policy and practice arenas, carrying research understanding with them. Forward tracking of impacts from responsive-mode awards is complicated by the diversity of: responsive mode topics; sub-disciplines of psychology (some 20 specialisms); potential users; and lengthy, multi-stage, impact-generating processes.

Policymakers who might be influenced by ESRC-funded research operate at multiple levels – local, national and international. Policymaking users cited by awardholders include: the Home Office, Downing Street, DfES, DETR, DoH, the Scottish Executive, the Welsh Assembly, EC, OECD, local health authorities and local LEAs. Practitioners cited include: educators, speech & language therapists, social workers, child welfare practitioners, special needs coordinators, employment recruiters, police officers, nurses and clinicians. Researchers also cite representative or lobbying groups as benefiting from their research, including the False Memory Society, Afasic, the UK Addicts Forum and the British Dyslexia Society.

Given this variety, capturing impacts and illustrating impact-generating processes through case studies may be the best way to illuminate contributions by individual awards although – significantly – most impacts are generated by a body of work, not just one, finite project.

Thus, we find that ESRC responsive mode grants have supported:

- collaborations with the European air traffic control policy body and contributions to a long-standing relationship with QinetiQ (formerly DERA) on effects of sound on the flight deck (the researcher received an OBE for Services to Military Science)
- research on children’s perception of inter-parent conflict which is cited in the Home Office National Domestic Violence Policy Framework and underpins the Welsh Assembly-funded development of a risk assessment toolkit, putting research directly into the hands of court officials and welfare professionals
- work on children with specific language impairment which is cited frequently by children’s charities, support groups, expert witnesses and practitioners’ periodicals and has led to a conceptual change among speech and language therapists who now recognise this as a very heterogeneous condition, frequently overlapping with other developmental disorders
- a surprise finding on children’s behaviour while being interviewed: subsequent research has established “gaze aversion behaviour” as a recognised phenomenon, with implications for effective teaching as well as interviewing
- work on risk and resilience in childhood and early adolescence which underpinned the YWCA’s advocacy of a more informed policy initiative for young mothers
- the testing of a particular instrument frequently used by police to detect deception which has demonstrated the limits of this instrument and will lead to protocols for interviewing that will be accessible to police and facilitate more effective interview analysis.

Importantly, in addition to capturing impacts per se, this study has led to an increased understanding of processes (including five key factors that can accelerate or enhance likelihood of impacts) through which research knowledge transfer can best work to generate impacts – through good practice on the part of researchers and institutional managers and, perhaps, through potential pro-active roles by ESRC itself.

EXECUTIVE SUMMARY

The underlying goal of this study has been to assist the ESRC in developing new approaches to assessing policy and practice impacts, complementing reviews of academic quality. The main aims and objectives of this study are:

- “to identify ways in which results from ESRC funded research projects and fellowships have been utilised and applied by policy makers and practitioners
- to identify how the research has influenced policy formation and development
- to identify how ESRC’s research has influenced changes in professional practice within the public and the private sector
- to identify examples of impact achieved
- to provide a critical reflection on the methods used to assess and identify impacts.”

The principal approach has been that of an overall case study focused on impacts of a group of responsive-mode ESRC projects and fellowships awarded in psychology, ending in years 1998 and 2001, and (beyond the original scope) 2004. An overall multi-method case analysis with embedded project case studies, surveys, focus group, document analysis and semi-structured interviews not only provided identification of types of impacts and processes of research impacts within various contexts, but also contributed to method development in this area.

Clearly, academic culture is shaped far more by pressures toward academic excellence such as the Research Assessment Exercise (RAE) than it is by aspirations toward knowledge transfer and impact beyond academia. Nonetheless, some ESRC responsive mode awards in the cohorts ending in 1998, 2001 and 2004 have generated impacts on policy and practice. Even more appear to have led to less tangible, conceptual impacts, contributing to a changed awareness regarding particular issues. While most of the capacity-building impacts have been the education of undergraduates, postgraduates and postdoctoral fellows, many of these individuals will leave academia to act as “knowledge intermediaries” or to participate in policy and practice arenas, carrying research understanding with them.

Policymaking users cited by awardholders include: the Home Office, Downing Street, DfES, DETR, DoH, the Scottish Executive, the Welsh Assembly, EC, OECD, local health authorities and local LEAs. Practitioners cited include: educators, speech & language therapists, social workers, child welfare practitioners, special needs coordinators, employment recruiters, police officers, nurses and clinicians. Researchers also cite representative or lobbying groups as benefiting from their research, including the False Memory Society, Afasic, the UK Addicts Forum and the British Dyslexia Society.

Heterogeneity is as vivid in a portrait of the discipline of psychology (with at least 20 specialisms receiving ESRC support) as it is in the picture of users making use of psychology research – and, indeed, in the diverse sorts of instrumental, conceptual or capacity-building impacts being generated, at various developmental stages. Given all this heterogeneity, along with the diffuse and long-term nature of impacts on policy and practice, attempts at quantification of some standardised unit of impact outcome would be impractical and would indeed constitute false rigour. Instead, findings of this study all point to the importance of understanding those *processes* through which research can lead to impacts.

Critical reflection upon the array of methods employed in this study leads to several conclusions:

- it is important to use multiple methods to triangulate findings
- seeking qualitative insights from key groups or individuals with overview perspectives can help to set impacts within a culture and context
- illuminating case studies (such as those developed in this Report) may be the most effective way to convey a concrete sense of otherwise elusive variability in impacts
- the extent to which impacts can be tied to specific research is usually very limited (and the ability to tie an impact to one particular research project is even more so)
- instead, processes toward impacts can be captured through identifying and understanding “proxy indicators” i.e. steps toward impact, instances of connectivity between researchers and users, and/or presence or effectiveness of the five key factors identified in this study as accelerating or enhancing the likelihood of impacts.

When considering the larger issue of ESRC’s role in meeting mandates for societal benefit such as that expressed in the Worry Report (2006), processes again come to the fore. Lessons learned, good practices shared, recommendations and insights gained (through surveys, focus group, and interviews) together underscore the conclusion that the components, factors and dynamics of processes connecting research and impacts can be understood sufficiently to influence them in ways that enhance the likelihood of impacts. Individual researchers and university managers such as Heads of Department have roles to play.

ESRC itself could play a crucial role in, effectively, creating a culture shift such that – in addition to basic research academically disseminated – processes generating impacts upon policymakers or practitioners are understood, valued and facilitated. As distilled in this report’s Summary & Recommendations, ESRC could develop more pro-active, practical tactics to increase impacts by:

- providing training or sharing of good practice to enhance individuals’ ability to transfer knowledge
- helping those individual researchers oriented toward application to follow through on that orientation
- encouraging the development of systems of research assessment that give due weight to academic and non-academic impacts
- helping prospective users learn about and access research and researchers
- bringing together researchers, knowledge intermediaries and users
- nurturing a cultural shift toward increased connectivity between (some) researchers, knowledge intermediaries and users.

The more that ESRC helps the process of knowledge transfer, the more indicators there will be to capture. ESRC could address intensifying pressures for knowledge transfer, while at the same time thus helping to protect basic research, by catalysing a broadening of psychology’s portfolio. A useful level of receptivity seems to exist; for example, this study’s survey, focus group and follow-up with heads of psychology department have led to their association putting the sharing of good practices in knowledge transfer on their national agenda.

It might be anticipated that Centre or programme grants (which were not included in this study’s remit) would have a greater potential for, and focus on, knowledge transfer. It is therefore heartening to see that even responsive mode grants on random topics – without theme, infrastructure or innovative aids to knowledge transfer – can achieve a measure of research impact. With deliberate and informed encouragement, more processes will link users with ESRC-funded researchers in the future, enhancing or even accelerating impacts. Of necessity, basic blue-skies research will need to continue as well, advancing the fundamental knowledge upon which future impacts will draw.

INTRODUCTION

ESRC has taken on the challenge of attempting to identify and assess often-elusive non-academic impacts of research that it has funded, in order to complement widely-understood reviews of academic quality. In the 2006 Warrar Report's encouragement of Research Councils to increase economic impact, public health and quality of life were included. In particular, there is on the part of ESRC a desire to develop new approaches to the assessment of impacts that may have been made by use of research results in the worlds of policy making and of practice. The importance of assessing the impact of social science research, along with the challenges inherent to that task, is captured by Davies et al. (2005). Informed by the deliberations and key messages of that ESRC-sponsored Symposium, the approaches adopted for this current study were designed to be "purposeful, pragmatic and cognisant of the complexities involved".

The underlying goal of this study has been to assist the ESRC in developing new approaches to assessing policy and practice impacts, complementing reviews of academic quality. As described in the tender document, the main aims and objectives of this study are:

- "to identify ways in which results from ESRC funded research projects and fellowships have been utilised and applied by policy makers and practitioners
- to identify how the research has influenced policy formation and development
- to identify how ESRC's research has influenced changes in professional practice within the public and the private sector
- to identify examples of impact achieved
- to provide a critical reflection on the methods used to assess and identify impacts."

Challenges run throughout this remit, not least because impacts of psychology research on policy and practice are: diffuse, subtle, diverse, long-term and with causality not readily ascribed.

The principal approach has been that of an overall case study focused on impacts of a group of responsive-mode ESRC projects and fellowships awarded in the field of psychology, ending in the years 1998 and 2001, and (beyond the original scope) 2004. An overall multi-method case analysis with embedded project case studies, surveys, focus group, document analysis and semi-structured interviews not only provided identification of types of impacts and processes of research impacts within various contexts, but also contributed to method development in this area.

Nutley et al. (2007) suggest that learning about research impact processes is a more attainable goal than assembling robust evidence of impact, and that any lack of evidence of research impact on policy and practice reflects more "an absence of evidence rather than evidence of absence". With this study, we have attempted to identify *both* specific examples of impacts resulting from particular grants *and* illuminate the various processes through which ESRC-funded research has been, and could be, utilised in policy and practice. This understanding of *how* ESRC-funded research has brought about changes should contribute insights into methods for assessing and identifying impacts in future studies, as well as offering pragmatic insights into key issues and implementation mechanisms that will enhance the likelihood of impacts.

BACKGROUND AND CONTEXT

The set of response-mode awards provided as a focus for this study by ESRC included 134 awards distributed across three ESRC themes:

Cohort	No. of awards
1998	38
2001	42
2004	54

Theme	Distribution of awards
Knowledge, Communication and Learning	70-85% each year
Lifecourse, Lifestyles and Health	10-25% each year
Social Stability and Exclusion or Non-themed	0-5% each year

Over the three cohorts, 81% of awards went to Psychology Departments with only a handful going to departments such as education, linguistics or allied health departments. Data provided by ESRC did not differentiate between grants and fellowships but 98% of survey respondents said they had held grants.

Rapporteur's evaluations of end of award reports ranked the completed projects as:

Ranking	Distribution
Good	60-75% each year
Outstanding	25-30% each year
Problematic	0-10% each year

(Only one received "unsatisfactory" ranking).

For the great majority (e.g. 88% of survey respondents) the particular project award was only one element of a wider, longer-term research programme, with additional funding received from ESRC and/or other sources including other Research Councils (EPSRC, MRC), UK government bodies, the EU, charities, overseas funders and in two cases, industry.

In order to appreciate the policy and practice context for psychology research, it is important first to understand the heterogeneity of psychology research itself. Psychology ranges from learning to social well-being, from cognition to forensics. In fact, ESRC awardholders responding to our survey affiliated themselves with 20 different sub-disciplines or specialisms².

There is a correspondingly diverse range of policymakers and practitioners who do and could utilise findings of psychology research. Even the three sub-disciplines claimed most frequently by awardholders who responded to our survey – cognition (18%), developmental psychology (16%) and human experimental psychology (15%) – could each provide insights useful to diverse users.

Survey respondents were able to cite a range of users whom they thought had benefited from this ESRC-funded research, across:

² Beyond the sorts of psychology funded by ESRC in responsive-mode grants, other specialisms exist, with ESRC itself funding organisational/management psychology primarily under other competitions, and with MRC, BBSRC, Wellcome Trust and others funding more biological and clinical aspects of the field.

- Central government
- Local government
- European Commission
- International bodies
- Practitioners
- Representative/lobby groups
- Wider public
- Knowledge brokers

with the largest group of beneficiaries being practitioners (cited by 27% of respondents).

As Davies et al. (2005) note, when demonstrating research impact the selection of case studies is key. If simply attempting to demonstrate value for money, then cases might focus more overtly on success stories but it may also be important to emphasise the value of social impacts and enlightenment changes. Some case studies should demonstrate the changing capacity, capability and culture that have been facilitated by research investment. Greater prominence may need to be given to mapping different forms of research impact process and what can be learnt from these in terms of supporting and enhancing future research impact.

We therefore identified a number of clusters of awards and developed a case study for each of these to illustrate sorts of users, impacts and impact generating processes³:

1. Learning (e.g. children's behaviour while thinking, cognitive change in autism, learning disabilities)
2. Language (e.g. specific language impairments, aphasia, linguistics)
3. Social Psychology (e.g. risks for young people, prejudice, parenting/family relationships)
4. Criminal Justice (e.g. deceit detection, identification, interviewing).

Because this study was given the remit of only responsive-mode awards, there was no opportunity to consider infrastructure promoting knowledge transfer processes, as might be provided by centres or programmes. However, the concept of an environment that fosters the generation of impacts is explored through a fifth case study, based on the Department of Psychology at Cardiff which was recommended as having a dual orientation toward excellent basic research and also application⁴.

³ Additional areas range from road safety, to health, to engagement with music, to ageing.

⁴ Cardiff University received five awards in the cohorts studied.

APPROACH & METHODS

Working Model

As our task was to identify the impact of a specific set of ESRC projects and fellowships, we adopted a forward tracking methodological approach – one which tracks forward from research to research use and on to research impacts. However, we sought to avoid assuming an overly linear pathway between research products and research impacts and we also aimed to recognise the wide variety of groups and individuals engaged in connecting research and policy/practice. Our conceptual framework thus drew on the growing body of literature on understanding and assessing research impact which highlights the importance of network interaction and multiple flows of knowledge (e.g. Davies et al 2005; Hanney et al 2002; Lavis et al 2003; Molas-Gallart et al 2000).

Working with advisor Professor Sandra Nutley, we developed the following working model (Figure 1) to underpin this study. Our working model aims to highlight the main categories of actors in the research impact process, their roles, and the likely flows of knowledge and influence between them. It takes its cue from the "linkage and exchange model" of the research-policy relationship developed by the Canadian Health Services Research Foundation (see CHSRF 2000; Lomas 2000). Throughout the project this model was used as a framework for viewing the various components of the study within an integrated whole. In using the model we recognised that research knowledge can take many forms (i.e. not just knowing 'what works' but also knowing 'how things work' and knowing 'why things happen') and that these different forms of knowledge are likely to impact in different ways (ranging on a spectrum from direct instrumental impact to indirect conceptual impact).

Framework of Core Questions

Using the working model with its delineation of components and processes, we developed a Framework of Core Questions, identifying for each question the method(s) most likely to generate information. This made it possible not only to ensure coverage of all key facets of a study, but also to integrate findings across methods in the final analysis. **ANNEX A**

Content/Discourse Analysis (End-of-Award Reports, Rapporteurs' Evaluations)

All the End-of-Award Reports for the three year-cohorts, along with accompanying Rapporteurs' evaluations, were read closely. On the premise that connectivity with users heightens the chances of impact, we looked for indications of connectivity or orientation toward users as "proxy indicators" as well as any indications of real or potential impacts. This involved paying particular attention to sections such as: Objectives, Achievements, Dissemination, Audiences, Impacts, Activities, and Outputs. Objectives were reviewed for orientation toward users and Achievements were reviewed for implementation of connection with users. Reported activities, outputs, impacts, dissemination and audience descriptions were scanned for stated relevance to, or connection, with users. Particular notice was taken of those reports which cited specific users, either organisations or individuals. Detailed notes were made and a database developed. Each project was given a ranking for user connectivity, generously capturing even the slightest mention of potential user relevance so that prospects for active follow-on activity post-project are unlikely to have been missed. Rankings included: Genuine engagement of users during the project; Dissemination; Planned Dissemination, Recognition of Possible Relevance, Exclusively Academic Approach. This information, along with that from the survey, helped us to identify potential embedded case studies. **ANNEX B**

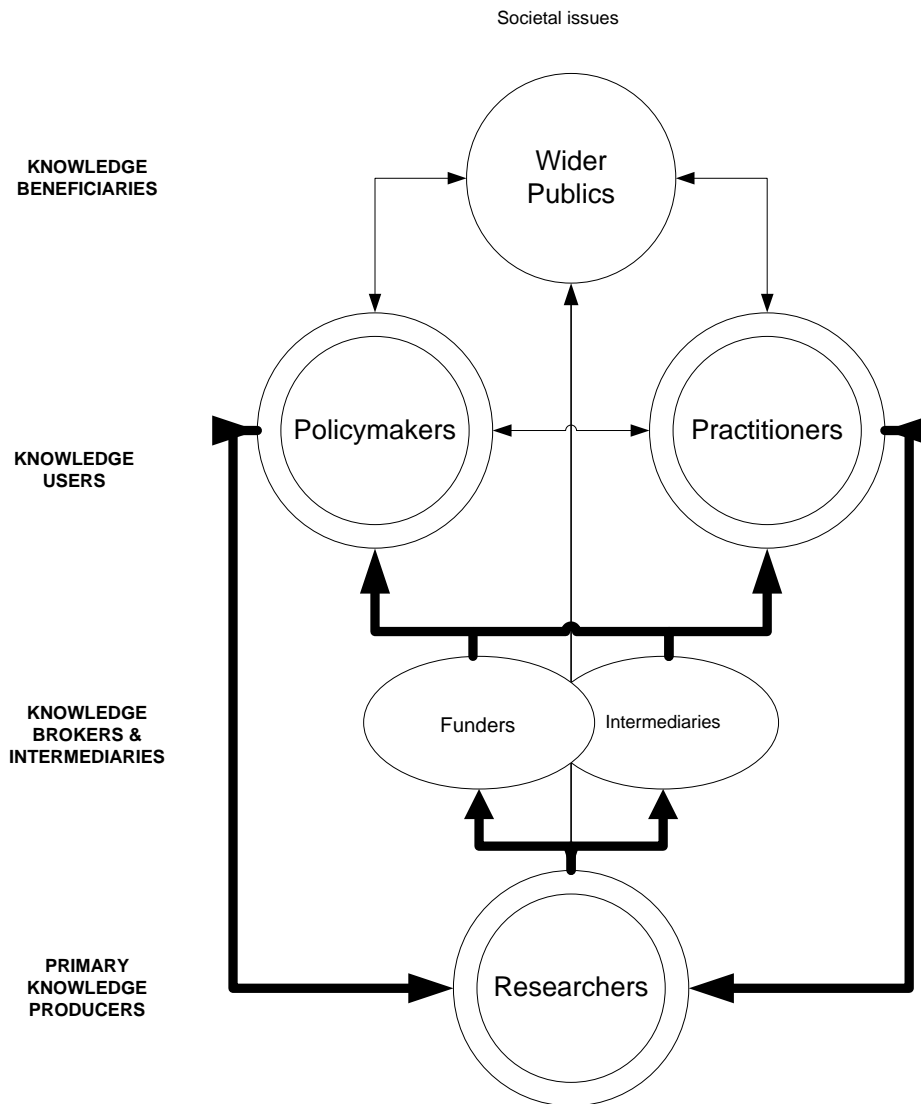


Figure 1: Working Model

Survey of Awardholders

A four-page awardholders' questionnaire comprising a mix of Lickert scale, pre-coded and free text response modes was designed, addressing the Framework of Core Questions, and piloted with advisor Professor Verity Brown. An email contacts database for this survey was provided by ESRC for the 3 cohorts (awards ending 1998, 2001 and – as an addition – 2004), with 109 surveys emailed. Surveys were distributed by email on 15 January, two reminders were issued and we closed the data collection on 9 February. Fifty-eight completed surveys were received, giving a response rate of 53%. Responses were entered into a database and histograms and percentage figures produced for each question.

ANNEXES C and J

Survey of Heads of Departments of Psychology

With the assistance of Advisor Professor Verity Brown, a senior figure within the Association of Heads of Psychology Departments (AHPD), a very short survey was circulated by the AHPD secretary to some 100 department heads, with two subsequent reminder emails until the survey was closed on 9 February. Between email returns and surveys completed at the 9 February AHPD meeting, we received 26 surveys, for a response rate of approximately 26%. Many returns were quite incomplete. **ANNEXES D and K**

Focus Group, Assoc Heads of Psychology Depts. (AHPD)

Taking advantage of the 9th of February meeting of the Association of Heads of Psychology Departments, Meagher, together with advisor Professor Verity Brown, designed and conducted a focus group of 20 Heads of Psychology departments divided into two breakout groups. We were able to gain important insights into the realities of the context within which researchers do or do not connect with users and how impacts might be generated; and also to gather input towards identification of key users. A subsequent AHPD meeting provided feedback on draft recommendations for enhancing impacts – and the group decided to explore KT further.

Embedded Case Studies

By aggregating information on examples provided via end-of-award reports and awardholder surveys, we identified several likely success stories as small-scale embedded case studies for illustration of impacts and analysis of impact-generating processes. We were able to identify individuals showing a high degree of connectivity with users and/or a willingness to reflect on knowledge transfer and impact generation. Follow-up interviews with project researchers and project users led to embedded case study narratives, each of which highlights a cluster or theme of research projects having relevance to users. These clusters or themes are: Learning, Language, Social Policy and Criminal Justice. We also developed a case study on good practice in how a psychology department can foster knowledge transfer.

ANNEX E

Semi-structured Interviews

We conducted 20 semi-structured interviews, each guided by an appropriate topic guide. These telephone interviews typically lasted between 45 – 60 minutes. Dictated notes were transcribed and coded for analysis. Seven “overview” interviews were conducted, four with users who had served on the Users SubPanel of the 2001 RAE Psychology Assessment, and one each with: a very senior researcher active in assessment across the field, a funder and a knowledge intermediary in a key representative organisation. For each case study, the ESRC-funded principal researcher was interviewed (two for the department study), as were one to two users. **ANNEXES F, G and L**

Grey Literature Searches

Beyond the original set of Methods envisioned, we piloted a variation on the Google search method presented at ESRC’s March 2007 Workshop by the Political Science Impacts study. This pilot focused on five individuals highlighted in research case studies. In the interest of efficiency, we made the decision to view the individual researcher, embodying all his or her research, as the “unit” to be considered, without attempting to attach a particular citation to a particular project, as that would be time-consuming and could even lead to artificial distinctions.

Our search strategy for Google was:

- first to search on author name/worldwide/webpages in English/excluding .ac.uk domains
- then to search the first 100 pages returned, excluding all academic citations (books, online journal articles, academic conference papers and academic abstracts online)
- the search was then repeated for UK pages only with additional search term “policy” and then again with “government”

In addition to Google, we searched a number of bibliographic databases (ASSIA, PsycINFO, UKOP Online, ZETOC) and the 2001 RAE submissions (esteem indicators). Although these particular databases were selected because they were thought more likely to contain applied articles or grey literature rather than academic papers they provided little additional material to the Google search. In all cases only items dated from 1998 onwards were selected.

Overall we found that this method worked reasonably well when searching on a unique name but had significant limitations when searching on a more common name. The results from these searches are included where appropriate in the embedded case studies. **ANNEX H**

Media-related Searches

Another additional method piloted was a scanning of press releases by key knowledge intermediaries. The British Psychological Society (BPS), among its many other functions, provides press releases on findings by psychologists that it (presumably) deems to be of potential interest to the media and thus the public. This may well be influenced by what press offices in individuals’ home institutions choose to put forward. While the scope of this Impacts study does not permit an in-depth analysis, archived entries (provided on the BPS website from 1999-2006) were reviewed specifically for stories that highlighted work by members of the awardholders’ cohorts being considered in this project. As with the grey literature search, there is no guarantee that the work cited is specifically that of a particular ESRC project; the supposition is that ESRC funding contributed to the individual’s overall knowledge/standing that led to the particular story.

Similarly, the ESRC is both a funder and, in some sense, a knowledge intermediary connecting research findings with the public. ESRC Press Archives were searched, as above, for the years 2001-2006. **ANNEX I**

RESULTS

Our analysis integrated data from multiple methods: analysis of end-of-award reports; a survey of awardholders (referred to here as “respondents”); embedded case studies with interviews of involved researchers and users; interviews of individuals with overview perspectives; a survey of heads of psychology departments and a focus group with heads of psychology departments.

Findings from this analysis fall into three main categories:

- Level of engagement with users, orientation toward knowledge transfer
- Impacts
- Processes, activities & roles leading to impacts.

For each category below, we capture in a brief summary statement those points which appeared repeatedly across methods. Each category is then fleshed out by telling indicators from particular methods which highlight the principal results uncovered by our integrative analysis.

Level of engagement with users, orientation toward knowledge transfer

Generally, our results found only a low level of engagement with users.

- Fewer than 10% of the 58 survey respondents identified research objectives that suggested achieving impact was a research priority.
- A similar figure (11%) is reflected in those end-of-award reports showing genuine engagement with users.
- Less than one-fifth of survey respondents claimed membership in practitioner groups.

Impacts

Not surprisingly, academic impacts were far more prevalent than impacts beyond academia.

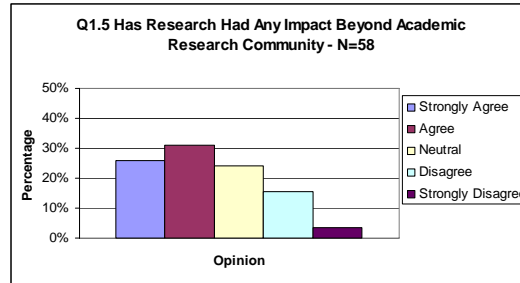
- Everyone in end-of-award reports underscored contributions to fundamental knowledge (as required by ESRC forms), yet even the most engaged researchers reported proxy indicators of connectivity or dissemination rather than full-fledged impacts.
- Only 57% of survey respondents saw research impact beyond academia. The largest group of users thought to have benefited were practitioners, cited by 27% of respondents. Although most heads of psychology departments did not respond to their survey, those heads of departments who did reply had a more optimistic view than the targeted awardholders as to impact beyond academia of their departments as a whole.
- In terms of *instrumental impacts*⁵, the majority of respondents disagreed or were neutral on whether research led to actual changes in policy or practice.

⁵ Although other definitions exist for types of impacts, in this study we use the following definitions (Nutley et al. 2007, p.36): “Broadly, *instrumental use* refers to the direct impact of research on policy

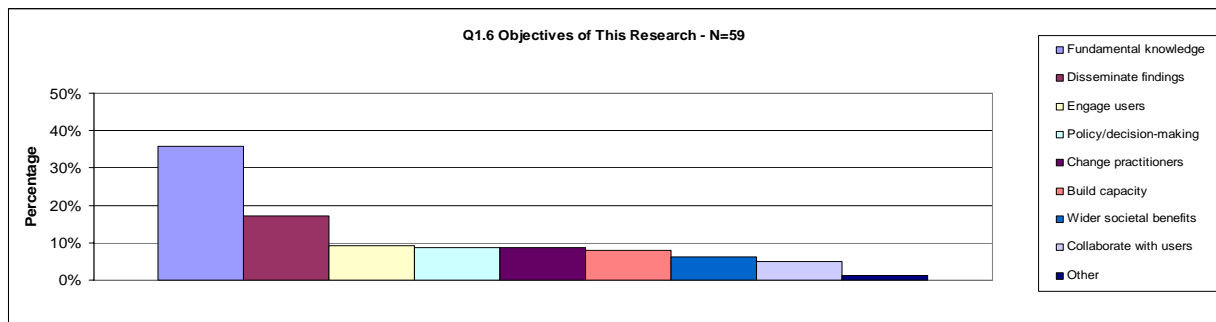
- *Capacity-building impacts* were reported by 58% of respondents but this was mainly within the academic sphere – mainly postgraduate training and researcher development. Only a couple pointed to training of clinical staff, police, social work and the judiciary.
- While two thirds of respondents felt their research led to *conceptual impacts* in terms of awareness raising or culture change, it was not strongly apparent from the examples many gave that these were impacts beyond the academic community.
- Impacts vary widely, project by project, so that the illustrative case studies following this section may be the best way to convey a sense of how some ESRC-funded research has in fact given rise to impacts.

and practice decisions. It identifies the influence of a specific piece of research in making a specific decision or in defining the solution to a specific problem, and represents a widely held view of what research use means. *Conceptual use* is a much more wide-ranging definition of research use, comprising the complex and often indirect ways in which research can have an impact on the knowledge, understanding and attitudes of policy makers and practitioners. It happens where research changes ways of thinking, alerting policy makers and practitioners to an issue or playing a more general 'consciousness-raising role'. Such uses of research may be less demonstrable but are not less important than more instrumental forms of use".

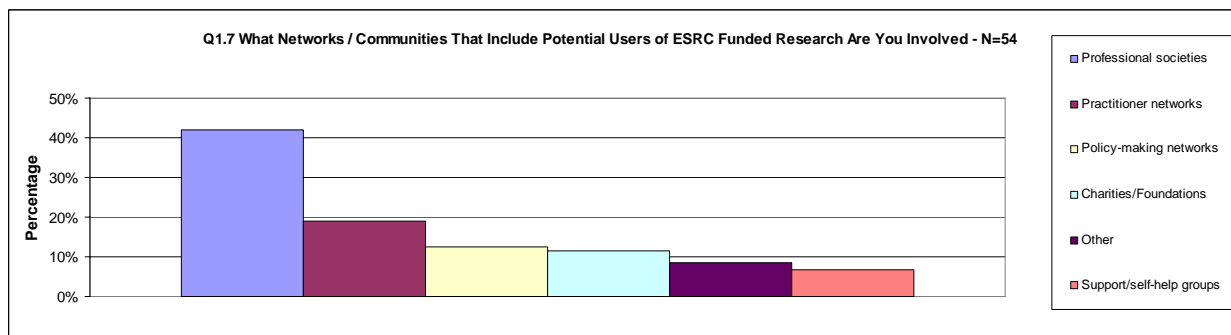
A small majority (57%) of awardholders who responded to the survey felt that the research had had an impact beyond the research community



When asked to identify the objectives of their research, over one third (36%) stated it was a contribution to fundamental knowledge



When asked what networks they belonged to that might also include potential users, 42% of respondents cited professional societies and less than one fifth (19%) cited practitioner groups

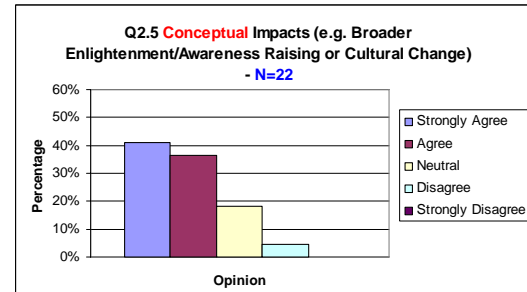
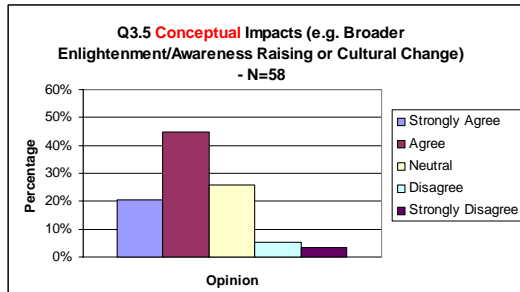
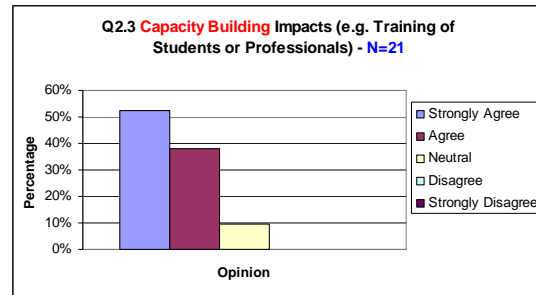
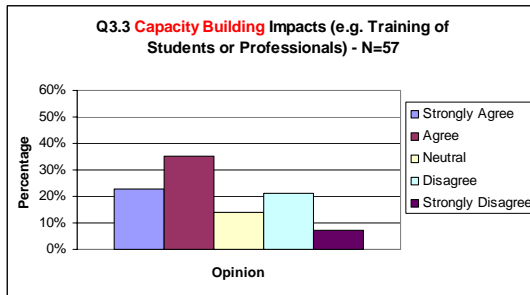
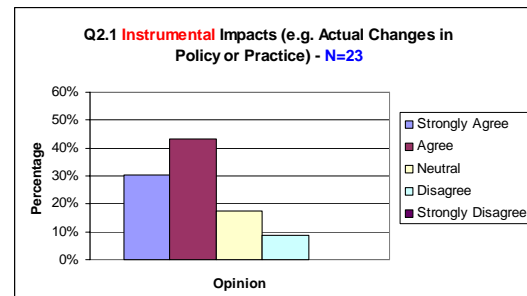
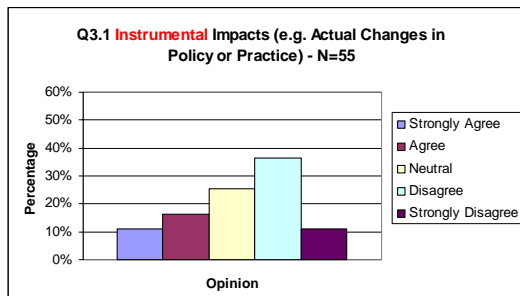


(NB: In all charts, x-axis labels read top to bottom on legend and left to right across bars.)

Has ESRC-funded research led to instrumental/capacity building/conceptual impacts?

Awardholders

Heads of Departments



Processes, activities & roles leading to impacts

Findings here are organised according to five key factors which the study has identified as having particularly strong influences on processes connecting research and impacts.

1) Value placed upon/incentives provided for generation of impacts

Generation of impacts by academic psychologists takes time and effort, but is not sufficiently recognised by current academic reward systems. If generation of impacts were viewed as valuable, as is the situation for example in the case study on a facilitative psychology department, it is likely that more effort would be put into processes leading to impacts.

- Barriers exist for academics trying to conduct knowledge transfer themselves – survey respondents, interviewees and participants in the Heads of Department focus group all make this point.
- Heads of Departments in their focus group clearly identified the RAE emphasis on publication in quality journals as an obstacle, noting a “misalignment” in goals, priorities and timescale between researchers and users.
- Survey respondents noted that academic institutions could do much more in incentivising and rewarding research.
- In both survey responses and interviews, researchers made it clear that knowledge transfer, and any resultant impacts, derive from the accumulation of evidence in a long-term research programme, often co-funded by multiple sources, rarely from one project alone. (Users interviewed were not generally aware of a particular ESRC grant’s findings, but rather of a researcher’s body of work.)

2) Two-way interactions between researchers and users

Repeatedly, when trails leading toward impacts are examined closely (for example in case studies), two-way interactions between researchers and users are seen.

- However, only 13% of respondents said they involved users in the design and/or conduct of the research.
- Interestingly, however, most interviewees (and several free text survey answers) recommended early involvement of users as a key to enhancing likelihood of impacts.
- In end-of-award reports only about a third cited any engagement (E) or dissemination (D) efforts⁶; even when *plans* for dissemination (PD) are included, the figure is 44% (Table 1).

Year	No.	E	E+D	E+D+D/PD	PD	E-PD
1998	37	5 (14%)	9 (24%)	11 (30%)	5 (14%)	16 (43%)
2001	41	2 (5%)	12 (29%)	15 (37%)	3 (7%)	18 (44%)
2004	55	6 (11%)	17 (31%)	21 (38%)	4 (7%)	25 (45%)
Total	133	14 (11%)	38 (29%)	47 (35%)	12 (9%)	59 (44%)

Table 1: Levels of Connectivity with Users

⁶ Our analysis counted any mention of knowledge transfer activities generously (e.g. even just sharing a short summary of findings for those practitioners directly involved in the research project).

- Respondents sometimes highlighted difficulties in persuading users to engage or take up research findings. They urged policymakers and practitioners to engage in dialogue with researchers, and practitioners were encouraged to keep up to date with research.
- The Heads of Department focus group also highlighted difficulties in perception and communication, and views as to appropriate roles of experts. For example, they saw a challenge in what is sometimes either naïveté or resistance among policy makers, who may select the “expert” who provides the message they want. Within the field of psychology in particular, the culture is often characterised by a concern that policy makers will see psychologists’ views, however research-based, as either too theoretical or simply trivial common sense. There is thus a tendency for psychologists to emphasise the rigorousness of their statistics and theory, which is not what policy makers want. Similarly, psychologists tend to be wary of working with the media and tend to be quite restrictive as to the area in which they will act as experts for outreach efforts.

3) **Injections of support, dedicated staff, infrastructure**

As with most activities requiring serious effort, generation of impacts can be enhanced by the (funded) contributions of staff who have expertise and time to promote it; infrastructure (such as convening events that make it easy for researchers and users to interact) can also make a difference.

- Respondents and interviewees suggest the need for team approaches and knowledge transfer specialists to help academics contribute toward impacts.

4) **Facilitating role(s) of knowledge intermediaries**

When knowledge intermediaries can play pro-active roles effectively, and are recognised as doing so, generation of impacts can be accelerated or made more likely.

- Less than half of the respondents saw intermediary organisations (such as professional societies which bring together researchers and users in joint events⁷) as facilitating and enhancing the likelihood of impacts.
- Interviews indicate many diverse *individuals* playing roles as knowledge intermediaries, not simply large organisations or the media. (Interviews revealed several examples including trainers of practitioners, consultants who integrate and distil research into formats accessible to users, authors of evidence-based manuals for practitioners, research directors of voluntary/other organisations, expert witnesses.)

5) **Communication/increasing accessibility of research**

“Dissemination” of results can be more or less effective in reaching non-academic audiences. To the extent that research findings are communicated clearly, and that they and researchers can be found readily by users and/or knowledge intermediaries (e.g. in

⁷ The British Psychological Society is a main player as a knowledge intermediary for psychology research, noting on its website that is “the representative body for psychology and psychologists in the UK” with “national responsibility for the development, promotion and application of psychology for the public good, and promotes the efficiency and usefulness of its members by maintaining a high standard of professional education and knowledge” (www.bps.org.uk). For example, it puts out press releases, coordinates responses to government consultations and sponsors conferences, which can be attended by a mix of academics and non-academics.

practitioner publications or on websites), the probability of connectivity between research and impact can be heightened.

- Users interviewed (those with overview perspectives and those involved in case studies) frequently expressed a wish that psychology research findings could be made more accessible, for example through targeted summaries or web databases searchable by “applied” key words.
- Respondents identified fairly standard academic activities as means of helping to encourage research impacts in policy and practice. So, for example, workshops involving users/potential users were cited by 18% of respondents, circulating articles to users/potential users (16%) and circulating short papers (14%).

Case Study 1: Language and development

Cluster: Language	
Researcher: Professor Gina Conti-Ramsden, University of Manchester	
ESRC-funded project(s):	
<ul style="list-style-type: none"> • Linguistic and Non-linguistic Markers for Pragmatic Language Impairment (ending 2001) • Contrasting Syntactic & Limited Scope Accounts of Early Grammar in Children with SLI (ending 2001) • The Acquisition of Verbs & Verb Morphology in Younger Children with Specific Language Impairment (ending 2004) 	
Research summary:	
<p>Gina Conti-Ramsden conducts research on Specific Language Impairment (SLI), with an emphasis on interrelationships between SLI and other dimensions of children; her work melds developmental psychology, psycholinguistics and social psychology. So, for example, she works on psycholinguistic development of children with SLI (and potential clinical markers for SLI), SLI genetics/familiarity, new media & SLI, and the life or education transitions of children and young people with SLI, such as psychosocial and educational outcomes of adolescents with SLI as they move out of secondary education.</p>	
Users & stakeholders:	
<ul style="list-style-type: none"> • teachers • speech & language therapists • educational psychologists • special needs coordinators • parents 	<ul style="list-style-type: none"> • AFASIC • ICAN • NAPLIC • NNELI • expert witnesses
Routes to KT:	
<p>The researcher has developed a rare longitudinal database, probably one of the largest evidence bases in this field; a user credits the researcher's commitment to informing parents and children of outcomes with the unusually high level of continuing participation – participants appreciated the respect with which they were treated, the value placed on their input and the clarity of communication by researchers. Relevant therapy staff were also provided with feedback and research findings.</p> <p>Research findings have appeared in practitioner-oriented periodicals such as <i>Child Language Teaching and Therapy</i> and presented at conferences involving professional practitioners, such as the Afasic International Symposium. In the eyes of a well-informed user, the researcher has made an impact on the level of provision for children with communication impairments. Educational authorities cite her work widely.</p> <p>As part of a Nuffield grant supporting knowledge dissemination, the researcher meets with an advisory committee that includes policymakers, with likely awareness raising, e.g. regarding post-compulsory education of these children.</p>	
Research impacts:	
<p>Conti-Ramsden describes her work as gathering basic, key evidence in a relatively young area of investigation, so that logically she qualifies her potential for impact to date as modest; yet as her research programme is funded further by ESRC and other funding bodies such as Wellcome and Nuffield, she sees that the accumulation of evidence (from multiple projects) is beginning to have more potential for KT and impact such as intervention tactics (her work has been building up since the 1990s and gathering momentum in 2001, with an important paper coming out in 2003). She now feels ready to send clear messages that can affect policy and thus wide-scale practice, and has begun to meet with people relevant to policymaking.</p> <p>However, she and her work are already well-known among practitioners (such as speech therapists, charities, teachers). There has already been an important conceptual change, or shift in awareness, as Specific Language Impairment is now recognised as being a very heterogeneous condition, with multiple sub-groups and, importantly, often overlap with other developmental disorders (such as, for example, autism). Speech and language therapists, and students training to become therapists, are more aware of this than they were ten years ago. The researcher has, for example, demonstrated that some children with these language impairments may later show significant psychological difficulties. Others' investigations focusing on forensic settings have established that there is a very high incidence of language-literacy impairments in offenders, many of whom have not received this sort of therapy. Thus together these findings point to a link between language impairments and potential antisocial behaviour. Users (e.g.</p>	

speech therapists, charities, teachers) find it very useful to have solid evidence as to why, where and how children should receive therapy interventions.

As one example of practical impact already occurring, a user who oversaw interaction between speech and language therapists with the researcher's team, now provides expert witness testimony at professional educational needs tribunals, supporting specialist provision for children with particular difficulties, drawing frequently upon the researcher's work. The researcher's work provides insight into the big picture of vulnerability and emotional stability, which is useful to cite both in such tribunals and in helping parents to understand their children's needs.

Ideally, in future development of instrumental impacts from these conceptual impacts, teachers, therapists and mental health services would check on possible connections between language and mental health problems when assessing a child, thus illuminating how to intervene with what services. This has implications for support needs in other aspects of social development, beyond – but connected to – language problems. In addition to contributions to well-being, cost of inappropriate or ineffective services (e.g., via oral-based delivery) would thus be reduced, as would the costs of young people not partaking fully of education and becoming functional members of society.

Her work is cited by support groups and children's charities, for example Afasic, Committee for Children UK review of research, Literacy Trust, Semantic Pragmatic Disorder support group, the National Autistic Society, and *I CAN Talk*, a series of papers on children's communication, reviewing research and offering practical evidence-based solutions to support practitioners, parents and policy makers.

Her work is also cited in professional associations' periodicals, such as the *Speech & Language Therapy in Practice* magazine, BMJ, or guidance document produced by the Royal College of Speech and Language Therapists.

Articles have been used by government departments and agencies, for example the Audit Commission - *Meeting the Needs of Children with Special Educational Needs* and DFES - the 2004 Research Report *Teaching Strategies and Approaches for Pupils with Special Educational Needs: A Scoping Study*.

Key knowledge transfer lessons from researchers & users⁸:

- Involve users/practitioners in the project from the start. (A senior user of the research agrees: users can also help and inform research; it is a two-way interaction.)
- Even those researchers who reach out to engage local users do not know how to move toward widespread change in practice, as this usually needs to be driven by a policy change, which is a large scale action that academics do not know how to implement. Teams and the help of non-academics is needed; this is where a step-change really needs to happen.
- Positive research-based interventions can be the flip side of wealth creation, by avoiding negative economic impacts.
- Individual projects can seem piecemeal relative to complex areas like behaviour; it is the full body of work that, cumulatively, is likely to give rise to impacts.
- There is a great deal of good will toward knowledge transfer, but researchers need to know that it will be valued, by ESRC and their own departments and universities. Ideally, ESRC could explicitly recognise the value of KT activities and pro-actively pull resources together to support them, perhaps specifically funding researchers to pursue KT, perhaps identifying and funding research themes likely to have impacts.
- Unusually, Nuffield provides some funding for a researcher to try to have impacts. It also convenes forums on complex areas like communication impairment, bringing people with diverse perspectives together to consider research and provide practical input. This allows research evidence to inform practice and professionals to inform research.

⁸ These 'lessons' are near quotes of interview statements from researchers and users, not the evaluators' commentary.

Case Study 2: Gaze aversion behaviour in children

Cluster: Learning	
Researcher: Dr Gwyneth Doherty-Sneddon, Stirling University	
ESRC-funded project(s):	
<ul style="list-style-type: none"> • “Impact of Communication Media on Children’s Dialogues” (ending 1998) • “Children’s Eye Gaze: Benefits of Averting Gaze and Cues to Comprehension” (ending 2004) 	
Research summary:	
<p>A key thrust of Doherty-Sneddon’s work is on visual cues as sources of information on children’s understanding and development. Early ESRC-funded work, ending in 1998, focused on comparative effectiveness of communication media technology versus face to face questioning in interviews of children. A surprising finding, that children sometimes did better when they could not see their questioner, led to a new line of research investigating components of behaviour. Later ESRC-funded work, with a grant ending in 2004, found that children will sometimes avert their gaze while reflecting carefully on a question. Doherty-Sneddon’s work has established “gaze aversion behaviour” as a recognised phenomenon, with implications for effective teaching as well as interviewing. The research into relationships between children’s gaze patterns and internal cognitive states like thinking or concentrating is still evolving. Current 2004-2007 ESRC funding is for “Children’s eye gaze: associated cognitive and physiological states”.</p>	
Users & stakeholders:	
<ul style="list-style-type: none"> • teachers • teacher trainees • educators of teachers 	<ul style="list-style-type: none"> • police • child support officers • social workers
Routes to KT:	
<p>The researcher sought out opportunities to disseminate research findings, in particular through offering sessions in a number of university teacher training courses. In addition, the research was published in education, in addition to academic psychology journals. Similarly, she contributed significantly to short courses run by a police officer for child protection officers on investigative interviewing. An early ESRC study ending in 1999 was deliberately published in a law practitioners’ journal, comparing media technology interviews versus face to face interviews of children. In 2003 she published a book, <i>Children’s Unspoken Language</i>, which she deliberately aimed to make accessible to non-psychologists. Child Protection Officers contacted her for some training in 2003 and lawyers are still contacting her.</p>	
Research impacts:	
<p>Trainee teachers have been exposed to the research findings at a formative stage in their career. As an involved stakeholder noted, the seminar led to the trainee teachers realising that although usually you tend to want children to look at you, other signs can be important, so that they ended up realising they could give children more time to answer a question. This new awareness ties in with gaze aversion research showing that sometimes children are reflecting upon a question (which is a good thing). The stakeholder, an educator of teachers, noted that research-based understanding seemed to “click into place” for the trainee teachers as they immediately saw the phenomenon occurring in their classrooms – so that it facilitated effective teaching. The research was perceived as beneficial in that it was practical and applicable to what teachers do. (The researcher was praised for being a good speaker and having well-prepared materials.) Not only were trainee teachers affected, but also the teaching college educator who will continue to teach new classes of prospective teachers, herself acting as a vector spreading potentially important, if intangible impacts.</p> <p>Furthermore, the subject of gaze aversion behaviours is now a recognised phenomenon, so there has been a change in awareness, noted by the researcher and users and reaffirmed by its widespread appearance in a range of publications. Articles have appeared in periodicals, magazines, newspapers oriented toward education professionals, including for example <i>Times Educational Supplement</i> and <i>5-11 Magazine</i>. There is thus potentially a widespread impact on teacher practices. (There may be increasing windows of opportunity for research to impact upon teaching as there is currently a strong emphasis on research-informed practice or professionalism, with student teachers expected to demonstrate understanding of research and connectivity to practice.)</p>	

Through the researcher's effective speaking and making of links between research and practical applications, police officers and social workers who took the course on investigative interviewing have been motivated to become aware of/interested in interpretation of non-verbal cues in children's behaviour (and interaction with the interviewer's own cues), towards more helpful, quality communication. Ironically, the Scottish national curriculum for investigative interviewing by police does not include nonverbal communication, so those listening to the researcher benefited from what the user (a police trainer) termed "an important add-on", beyond the required curriculum.

Awareness of the work is spreading among social care practitioners, as for example work is cited in the Social Care Institute for Excellence's e-learning resource for teaching and learning communication skills in social work. Also the Centre for the Use of Research and Evidence in Education (CUREE), commissioned by the National Centre for Excellence in Teaching Mathematics (NCETM) included the work in an 'evidence bulletin' for maths teachers in all sectors.

The work has been cited in government papers, including a study for the Scottish Parliament, "Improving Consultation with Children and Young People in Relevant Aspects of Policy-Making and Legislation in Scotland", as well as by Australia's pre-eminent national crime and criminal justice research agency.

There was a great deal of media coverage (tv, radio, newspaper, internet); for example the work was featured in BBC's "Child of Our Time". News items were then picked up on other websites, such as ones for: parenting, childcare professionals, a teachers' magazine, National Union of Teachers, US National Science Teachers Association, Literacy Trust.

Key knowledge transfer lessons from researchers & users:

- During dissemination of research, ideas and questions arose from the users' experiences that were helpful in framing the next iteration of the research. It is useful to think of a continuing two-way interaction with users as taking place iteratively across a body of work over time, rather than just one project. A block of research can be carried out with some interaction with users, followed by disseminating and getting more feedback, which then helps frame or fine-tune questions for the next block of research; then as later in turn that is disseminated, more feedback and insights are provided by users that help the researcher frame the next block of research, fine-tuning or adding questions, and so on. Not only can insights gained in this way be exciting, it is actually a good part of the scientific process to get feed back from users as you go along. You can help clarify the problem, you can benefit from peoples' experiences and insights that you simply would not come across in any other way. You learn from the interaction with users as part of your research.
- There is usually a 1-1.5 year time lag between the end of a grant and when findings get out to practitioners; usually one waits for a journal article to be published before alerting the media. However, in training practitioners it is possible to share the excitement of cutting-edge work with them.
- Since academic jargon can be an obstacle, a user recommendation for knowledge transfer is to be like Doherty-Sneddon and make research dissemination very user-friendly. This dovetails with the researcher's advice to other researchers: *produce* a clear and simple story that non-academics can understand; make it exciting and comprehensible by contextualising within real life and be creative in the expression of the message.
- Knowledge transfer just isn't for everybody. Some people resent being pushed to do it, without having time for it or seeing that it adds any value to careers. If knowledge transfer were to be valued as much as more scientific outcomes, academics would find the time.

Case Study 3: Risks and resilience in childhood

Cluster: Social Psychology (life span psychology)	
Researcher: Professor Ingrid Schoon, City University	
ESRC-funded project(s):	
Accumulation of risk in the life course from birth to young adulthood (ending 2001)	
Research summary:	
<p>Ingrid Schoon's research assesses risks and resilience in childhood and young adulthood, looking at aspirations and life plans and investigating multiple factors, including socio-economic risk, shaping individual development over time, with the aim to build up a knowledge base and to inform government initiatives directed at young people.</p> <p>She received later funding from ESRC as well. Along with blue sky work related to mapping change and plasticity of human development, she engages in applied psychology, viewing it as important to ask questions like "What can be done to improve life chances and the realisation of individual potential?"</p>	
Users & stakeholders:	
<ul style="list-style-type: none"> • Downing St • British Youth Council • DfES • Social Exclusion Unit • Children in Scotland 	<ul style="list-style-type: none"> • Dept of Health • DfWP • social workers • teachers • YWCA England & Wales
Routes to KT:	
<p>Schoon became a member of two ESRC networks (Human Capability and Resilience; Gender Inequality in Production and Reproduction) which organised events connecting researchers to users, sometimes for groups with particular interests such as parenting. Quite informal discussions made it possible to get feedback from users. She also spoke at conferences and contributed to <i>Youth and Society</i> and some practitioner-oriented publications.</p> <p>She wrote a book that was deliberately framed to be accessible beyond a particular academic field: <i>Risk and Resilience: Adaptations to changing times</i> (2006).</p> <p>She provided evidence as to accumulation of risk experiences in the life course to DfES, contributing (with others) toward initiatives recognising the importance of resources especially at critical transition periods in young people's lives. She has input into policy, as in her contributions as a member of the advisory group for the Learning and Skills Development Agency, an advisory panel for a scoping study for DFES (2000): "Scoping Study and Development Work for a New Cohort Study of Young People (14 To 25). Longitudinal Study of Young People in England" and a Joseph Rowntree Foundation Advisory Committee for a project on education, aspirations and employment of disabled young people.</p>	
Research impacts:	
<p>In broad terms, Schoon hopes that her findings have made a contribution to stimulating interest in life course transitions, parenting practices and expectations; teenage aspirations; the role of timing and duration in designing appropriate interventions; focus on synergy of service provision and delivery (a holistic approach); and support for an ecological approach in the planning of interventions involving individuals, families and the wider community.</p> <p>A specific example of her work's impact can be seen in the approach taken by the YWCA England & Wales, "the leading charity working with young women facing poverty, discrimination or abuse". The organisation's Research Director was formulating the organisation's approach to teen-age motherhood, suspecting that social class played a role, when she heard Schoon speak at a Family Parenting Institute conference aimed primarily at researchers but also including some policymakers and media. She spoke informally with Schoon after the conference, looked at more of her work and stayed in communication by phone and email thereafter, as when they started their Respect Young Mums campaign. As a co-author of the YWCA's report on young mothers, <i>Great Expectations</i>, the YWCA Research Director cited two presentations and one article by Schoon.</p>	

Schoon contributed to the YWCA initiative on several levels. Importantly, if intangibly, the user felt that Schoon's work provided a theoretical framework that offered a different way of thinking and a way of focusing efforts. In this case, Schoon's demonstration that social class has a profound effect confirmed the approach of advocating a focus on pregnant young women in disadvantaged groups, which has policy implications for government. The YWCA England & Wales could therefore argue that a previous strategy, by not grasping key issues like social class, had incorrectly applied resources. Using research like Schoon's secures actual knowledge and also credibility with policymakers.

As do many other researchers, Schoon contributes to capacity building through linking her research with her teaching, encouraging students, who themselves can become links to user organisations in the future.

Schoon's work is cited by government and agencies, such as the Equal Opportunities Commission, the Literacy Trust and the NHS Development Agency, and also by think tanks and knowledge brokers, such as the International Longevity Centre and the Research in Practice research project run by a consortium including the Association of Directors of Children's Services and a variety of agencies. An article in the BMJ was picked up by a US KidsHealth website and her findings were presented at a BA Festival, with press coverage and a website, Globalfamilydoctor.

Key knowledge transfer lessons from researchers & users:

- There should be two-way communication early in the process of framing questions for research that will be useful to a practitioner; it is stimulating to brainstorm with prospective users and find out about their concerns. Since practitioners have concrete problems, they can help a researcher reframe or specify research questions, so that communication is enriching on both sides. Targeted seminar series bringing people together around a table is one mechanism for this.
- A user of Schoon's research agrees, recommending strongly that potential users should be involved from the beginning of research that might help them, helping to frame it, and that you can't directly translate from research into recommendations for practice without involving users. There is a need for a space in which research users, practitioners and academics can work together.
- Informal personal contacts are important in disseminating research findings, although when contacts move away from an organisation it can be challenging to re-establish a relationship. Ideally, knowledge transfer can be aided by dedicated people who know how to reach users.
- For researchers: find ways try to boil down your message to 3 key points, take media training, and consider producing small flyers for audiences including potential users. Hope that your institution's press office is helpful with the media.
- Instrumental impacts may depend on getting the ear of people in high places, who can free up funding to implement programmes based on research understanding.
- The biggest obstacle in generating impact from funded research projects is the timing; naturally most of the impact would emerge long after you complete a project, yet there is no post-project dissemination funding provided toward creating impacts per se. (If you submit an article just after you finish a project, it could be two years' lag time before it appears in published form, during which time you will be working on other projects.)
- A user of Schoon's research welcomes social research, but notes that there is a real challenge for social science qualitative research making its way into policy, because government tends to cite quantitative work instead. She would suggest that most quantitative methods provide a start, indicating what factors might account for key variability, but when you really want to dig into what is happening and how, you need qualitative research, or even better a combination of qualitative and quantitative approaches.

Case Study 4: Detecting lies

Cluster: Criminal Justice	
Researcher: Professor Aldert Vrij,	
Project(s):	
"Will the truth come out? An investigation into the accuracy of criteria-based content analysis" (ending in 2001)	
Research summary:	
<p>Aldert Vrij is a Professor of Social Psychology whose main fields of interest are social and criminal psychology. Most of his body of research work deals with deception and its detection, both verbal and nonverbal correlates of deception. In this particular project, he tested several hypotheses about the Criteria-Based Content Analysis (CBCA) instrument frequently used to test written statements for veracity. His work found that various factors such as training the interviewee as to the basis of CBCA, cognitive limitations of the interviewee and characteristics of the interview can alter scores as to veracity versus deception. Thus practitioners are cautioned to recognise the limitations of the seemingly straightforward test and indeed to add social skills as a factor in the CBCA's Validity Checklist. His research also expanded to score and consider non-verbal responses.</p> <p>As usual for this researcher, the project's objectives were a combination of basic and applied; he thinks that you can only do good applied research if you take basic research into account; the two are not opposed to each other.</p>	
Users & stakeholders:	
<ul style="list-style-type: none"> • police officers/detectives 	<ul style="list-style-type: none"> • police trainers
Routes to KT:	
<p>The researcher got to know people over time. He engaged users from the beginning, talking with police, reading their manuals and considering how they went about detecting deception, and how they perceived themselves doing so; he finds that thinking about such things helps to shape research questions based on what people are actually doing so then one can try to improve that. He works with police trainers so that they understand the basis of deception of detection. In return, because the local police college runs interview training in very realistic settings, it can serve as a test bed to see if research-derived protocols can translate into the real world and if they lend themselves to effective training.</p> <p>He presents work at police investigation conferences which attract academics and police; he presents research findings including these in seminars for police professionals in several countries; he has written fairly applied book chapters that pull together his research; he tries to place articles in police journals and he gave a one-day lie detection workshop for 100 people. He also contributes research findings to academic courses such as an MSc in forensic psychology.</p> <p>He has worked on manuals and is revising a book published in 2000 to make accessible his findings on tests of different lie detection approaches. In order to offer positive alternatives rather than simply critiquing approaches that don't work, he will include useful guidelines or protocols for detection of deception. (<i>Detecting Lies and Deceit: Pitfalls and Opportunities</i>, to be published January 2008)</p> <p>He participated in a British Psychological Society report outlining problems with polygraph detectors, although this did not have the impact he hoped it would.</p>	
Research impacts:	
<p>Local police officer training is incorporating the results of the researcher's work. The research is seen as very useful, with no one else doing this sort of work directly on deceit in the UK. The new protocols to come from the researcher (building on his full programme of research) are anticipated as being able to inform police protocols directly, so that interviews are run differently.</p> <p>This willingness to take up research findings is enhanced by the proactive efforts of two colleagues who act as knowledge intermediaries: a university colleague who does forensic psychology research, trains police, runs a distance learning degree programme for police and serves as research liaison to the National Association of Chief Police Officers; and also a police detective/trainer of police who actively seeks out research findings in developing and delivering investigative interviewing training.</p> <p>There is a channel for this impact becoming national in scope at some time, since a senior person in the local police can disseminate research findings that have proved useful to the national level, through an</p>	

Association of Chief Police Officers working group on investigative interviewing.

As a user notes, it is important to remember that impacts of psychology research on police interviewing techniques actually go on to have impacts in terms of increasing justice for society and for individuals, by testing the veracity of accounts and contributing to robust presentations in court, showing that someone is guilty or not.

The researcher's work has appeared widely in the media, including the Guardian, the Observer, the Telegraph, Science News Online, New Scientist and BBC News.

He has been cited in a bibliography for Avon NHS and in a Home Office Police Research Series Paper.

He has presented at conferences on applied topics and has written articles accessible to practitioners, such as an article in a special forensics issue of *The Psychologist* in 2001, the year this project ended, three in the journal *Expert Evidence* and one in the *Police Quarterly*.

Key knowledge transfer lessons from researchers and users:

- It is harder to infiltrate practice with research understanding if policy is not founded on research. Policy does a lot of harm if it is the opposite of what research would say (since it can stand in the way of evidence-based implementation). Political pressure can be a real issue for uptake of applied work.
- Trying to double-check the basis for a policy decision or embedded practice, and if necessary articulating that it is a wrong decision, is not necessarily popular, even when conclusions are based on research. Typically people don't really want to change if you carry out experimental studies that show how much more complicated something is than they have always thought. Therefore it is a good idea to target a higher level management person rather than people who have a vested interest in continuing to work in a particular way.
- As an academic, you are under RAE pressure and you may not have the extra time that it takes to move something from a local to a national impact. There are some people who have a foot in both camps, research and application, who are particularly suited to bringing this about pro-actively. It is good practice to have someone who is keen go out and talk to users at conferences, encourage discussion at practitioner workshops, and so on. Funding for this sort of activity – grants, travel, salary – could help to bring about impacts.
- A user suggested that it is very important to have two-way interactions and streams of data connecting researchers and practitioners; practitioners can give feedback on real-life finding to researchers who can develop new hypotheses, experiments and research questions they wouldn't otherwise think of, so that the research expands and gives further feedback to practitioners. It is important to forge close and personal links, developing a culture where people interact, are interested in and take part in research, with a pay-off of research informing the practitioner organisation.
- The same user notes the importance of research informing training, specifically. Not only does this add credibility and confidence for trainers; also, if research-informed training leads to changed practices, that scale-up in behaviour can feed back into further analyses by researchers. Knowledge intermediaries can carefully inform training/trainers as to what research is actually saying, otherwise misperception of research can be turned into poor practice and consolidated, which can be harmful.
- A useful mechanism can be meetings which generate interactions between researchers and practitioners, in an atmosphere of mutual respect. This reiterates the message that research can be very useful to practice.

Case Study 5: Psychology Department as an Impact-fostering Environment

Project(s):	
<p>The work of two researchers funded by ESRC in the specified cohorts will be described briefly, as specifics highlighting more general points about the department as a home that fosters connectivity leading to impacts</p> <p>DM Jones “Auditory distraction and performance efficiency” (ending in 1998) Gordon Harold “Marital conflict, parenting and children’s adjustment: the role of children’s appraisals of parenting behaviour” (ending in 2001)</p>	
Research summary:	
<p>One key research theme for Jones lies in applied studies of cognitive tasks, including flying, and examining dual task performance in simulated environments (including virtual reality). In his ESRC project, he looked particularly at how irrelevant sounds can disrupt cognitive performance, a project bridging basic research and application, with later work having implications for effects of sound on a flight deck, for instance.</p> <p>While primarily interested in science, the bottom line for Harold’s research is transfer to practice and policy. A key research theme is the effect of inter-parental conflict on children’s well-being and development and how children’s perception of their parents’ management of conflicts impacts upon them. His ESRC small grant project found, for example, that if children attributed some fault to themselves, they did less well in various ways (emotionally, behaviourally and academically).</p>	
Users & stakeholders:	
<ul style="list-style-type: none"> • Qinetiq (formerly Defence Evaluation & Research Lab • SoundAlert • Eurocontrol (air traffic control policymaking body) • Welsh Assembly government • Child and Family Court Advisory and Support Service (CAFCASS CYMRU) 	<ul style="list-style-type: none"> • Home Office Domestic Violence Unit • DfES • One-Plus-One Marriage and Partnership Research Group • Department for Constitutional Affairs • child and family welfare practitioners • family policymakers • mental health professionals
Routes to KT:	
<p>QinetiQ: an array of interactions: An array of multiple interactions benefiting both parties take place between QinetiQ and the department, related to linkages between auditory perception and action, in particular the theory of cognitive streaming developed by Jones and applied to air traffic management and tasks in aviation. These routes to KT include: CASE studentships, studentships funded by the Haldane-Spearman Consortium of university & industry partners (led by QinetiQ, with Jones on advisory committee and another Cardiff researcher a team leader – Cardiff’s is the only academic psychology department member) linkages between academic and industrial supervisors, visiting posts at the department for key QinetiQ staff, PhD research being conducted by QinetiQ staff, research subcontracts (from QinetiQ to university and vv), joint proposals funded by non-MoD customers (e.g. EuroControl, a €450k project split between QinetiQ and Cardiff) and informal interactions such as attendance at seminars, discussions, some teaching by visiting QinetiQ researcher, visits by students exploring what work at a company might be like, as well as formal visiting fellows to the company.</p> <p>QinetiQ and the department have both benefited in multiple ways; for example, when the company felt it couldn’t move ahead without further theory, partnership dialogue with Jones and QinetiQ research funding led to development of an expanded model which addressed the company’s practical problems and which in turn led to a joint award from EuroControl, for Cardiff to do theory and QinetiQ to do the practical side.</p> <p>Inter-parental conflict and children: timely research addressing societal issues: The ESRC small grant ending in 2001 has implications for those concerned about impacts on children of a) separation and divorce and b) domestic violence. Harold’s follow-up work has linked inter-parental conflict to attainment at school, as well as to emotional and behavioural development. The timeliness of these areas, and likelihood of Harold’s research to be of interest, is illustrated by a recent change in the UN Convention and the Children and Adoption Act, such that children who witness conflict and violent behaviour are now deemed a child protection concern, at psychological risk. Recently, policymakers have been coming to him, although in the past he has made a point of communicating the results of his work, for example through invited presentations to the Inter-Ministerial Group (IMG) for child welfare at the Home Office, DfES, Welsh Assembly Government Children and Families Strategy Division, groups of welfare professionals and family</p>	

practitioners (e.g. health workers, social workers, school officials, family mediators, guardians ad litem). In 2001, he wrote a research review and practice handbook *Not in Front of the Children*, commissioned by the Department of Constitutional Affairs on behalf of the charity, One Plus One, Marriage and Partnership Research Group, to be used by welfare professionals working with children and families. As another form of knowledge transfer, currently he supervises an ESRC Government Collaborative Research PhD student working on a problem for the Welsh Assembly.

The Department: The Psychology Department at Cardiff University – 5*A in 2001 RAE, meeting HEFCE 6* criteria – was recommended by a well-informed “overview” interviewee as fostering impacts from research. This assessment was reinforced by a company which deals with many universities: compared with most of the UK psychology departments it deals with, QinetiQ sees Cardiff’s Psychology Department as far more proactive, citing its own continuous, iterative dialogue, sharing ideas back and forth as to possible collaboration with various academic staff in the department, as well as a number of specific mechanisms cited above as routes to knowledge transfer.

The Psychology Department at Cardiff, while driven like all departments by RAE pressures toward academic excellence, has a culture in which there is real interest in research-led practice and policy. No one is forced in that direction, but it is understood that such ends are important, that moving research out into application is a valid aspiration. There is an historical dimension to this attitude, as in the mid-80s the department was formed from the merger of an applied psychology department at a technological institution with the more academic psychology department of a traditional redbrick university. More recently, the previous head of school and Deputy Vice Chancellor did a great deal to instil this culture, encouraging “world-class research, world-class practice and policy”, encouraging translational research. The current head of department (Jones) carries on in this vein, giving the department’s tag line as “from synapse to society”. Features that seem to contribute to the department’s culture as conducive to processes generating impacts from research:

- full breadth of sub-disciplines, making possible interdisciplinary combinations that may have relevance to users
- similarly, the university makes it fairly straightforward to collaborate across departments, making it easier to promote interdisciplinary research for users
- use of financial arrangements such as favourable split of monies from industry partners (perhaps more useful as a differential before FEC)
- embedding of applied dimension in teaching, e.g. with applied undergraduate courses involving placements such that academics need to stay connected to real world placement hosts - existence of 3 applied postgraduate degrees (clinical, educational, occupational)
- familiarity of academics with the idea of themselves as individual “mixed economies”, which can include working with people/funding from outside academia
- academic staff are encouraged to do consultancies
- to increase awareness of applied problems among next-generation as well as current researchers, the department held an industry day event, “Beyond the Concrete Towers of Academe”, which brought together researchers and non-academics, including post docs and postgraduates
- there is a flow of people coming in and out, between department and non-academia
- the department offers visiting honorary fellowships to some individuals from industry
- visible signals from the head of department, e.g. freeing up an academic’s time for a government funded research translation project on the grounds that “research into practice and practice back into research” is a valid way of testing and learning more about research findings.

Research impacts:

Jones received an OBE for Services to Military Science. As part of a longstanding relationship with then-Defence Evaluation and Research Agency (later, QinetiQ), the ESRC project was followed up with joint work to examine the effect and consequences of irrelevant sound on the flight deck. Subsequent work with QinetiQ has led to various uses of his research, including €450k in funding by the European air traffic management policy body (in formal competition with projects drawn from the full range of applied science).

Harold’s work is cited in the Executive Summary of the National Domestic Violence Policy Framework (Home Office, April 2007). In the 2005 Parenting Action Plan published by the Welsh Assembly government, a one page summary of his research and findings was taken verbatim from his meeting with a senior official. Stemming from the ESRC small grant, he has received follow-on funding, some from users, e.g. the Welsh Assembly Government’s (on behalf of CAF/CASS Cymru) current funding of a risk assessment toolkit regarding the risk to children of witnessing inter-parental conflict and violence. The express purpose is to put research directly into the hands of court officials and welfare professionals working with children and

families. Research showing impacts of parental interactions on children, both in terms of emotional well-being and school attainment, has attracted a great deal of national and international media attention.

Key knowledge transfer lessons from researchers and users:

- Departments could utilise a variety of approaches (such as those used by Cardiff's Psychology department) to develop deliberately a culture that expressly values connectivity with users and eventual impacts, along with excellent basic research. An outward-looking ethos is important.
- A variety of approaches exist for furthering the translation of research into application. For example, in Iowa State, a US land-grant university, a Family Research Center is founded on the idea that high quality research is directed toward bottom line practice, and socialises those working with the center accordingly. In New Zealand, an intermediary commission (The Families Commission) brings together research on welfare on children and families.
- Even when researchers and their departments value application, however, for careers, income and departmental sustainability, many/most publications must be of a standard to appear in mainstream journals, not only applied journals. Generally, too, in activity you don't want to tip the balance so that dissemination dominates basic research.
- Help people to see the value of applying research early on; for example, provide experiences at which postgraduates and post docs meet with users.
- Research must be high quality and watertight, with clear questions, methods, conclusions and interpretation. Without this, you don't stand a chance in delivering take-home messages. Even though users are interested in taking away a bottom line, you cannot just tell a good story without robust research.
- Policymaking can seem impenetrable; it can be quite random as to how one gets to talk meaningfully with the appropriate decision-maker who can or will make a change in policy.
- When you do talk to government officials, be very clear as to what you want to say, in a short time, and make your language accessible. You have to take the perspective of the other party to understand what you need to give them and how in literally translating your research – although sometimes people want to hear things that will fit with their pre-conceptions. Make your case by telling a story as a neutral representative of the research findings. And don't sound holier than thou!
- Ideally, work with users can establish a congenial and mutually interesting dialogue. In addition to building long-term relationships with user associates, participation of academics at applied conferences can be mutually beneficial, sharing research findings and applied advances.
- ESRC should be aware that impacts can't really happen within a grant per se; at the end of a grant researchers have to move on to the next grant so dissemination is not seen as pressing. Many impacts come from very long term series of studies, in any event. It is more likely to be possible to capture indicators of impacts-in-the-making, rather than impacts as such.
- ESRC could, like the Society for Research in Child Development, generate "policy spotlight reports", informing readers about research related to policy issues or themes in well-written short reports that objectively convey lessons learned from the research.
- ESRC could generate a set of case studies to disseminate regarding impacts of its research on users, describing the actual processes toward impacts.
- ESRC could showcase examples of putting research into practice at a national event, involving various agencies that the research relates to, so that people can see at this forum how research has informed the policy or practice arenas, with examples of impacts and successful research transfer processes helping researchers to see how research questions can be conducted and translated into practice.
- ESRC could hire broker specialists who work on engagement and support of particular groups of users, helping users and research teams to meet up – bringing human beings together. Even targeting some of the ESRC seminar series at certain groups of stakeholders could help achieve this end.

CRITICAL REFLECTION ON APPROACH & METHODS

In reflecting on the effectiveness of the approach and methods we have utilised in this particular study, we have identified the following strengths or advantages and problems or disadvantages. We believe that these points would pertain more generally to a mechanism that could be applied to other impact studies of ESRC research in fields beyond psychology.

Strengths/advantages

- A key strength of this approach was the use of multiple methods, as this made possible triangulation of findings across methods and thus enhanced confidence in findings. The Framework of Core Questions facilitated synthesis across methods.
- The survey worked well – with a 53% response rate, reflecting generally the numbers per cohort year – and was able to describe good practice as well as “tangible” points of information.
- The analysis of end-of-award reports provided a rich understanding of research undertaken and also specific points of information as to knowledge transfer activity and degree of orientation toward connectivity with users.
- Semi-structured interviews with awardholders provided a more nuanced understanding of issues, KT dynamics and the nature of research and users of the discipline, while interviews with users and research-related individuals gave helpful insights and overview perspectives.
- The constituent case studies illuminated the nature of impacts and good practice in KT; researchers & users were very cooperative in development of these. (Given the diversity of the discipline and its users, these can by necessity be only illustrative, not comprehensive.)
- The focus Group of HoDs, although not directly related to the particular awards studied, provided a broader perspective, thus helping to develop an understanding of the discipline’s culture and drivers as the context within which the awardholders operate.

Problems/disadvantages

- The ESRC-imposed focus on responsive mode awards (rather than themes, programmes or centres) meant there was no special orientation toward users or “relevant themes”; also, there was no infrastructure (such as centre or programme director’s staff or outreach activities) to promote and facilitate Knowledge Transfer.
- The timeframe for impacts on policy and practice is often protracted, so there is no guarantee that these would have arisen from these cohorts by the time of this study.
- Impacts appear to stem from a researcher’s body of work as a whole, not usually from only one award, making it difficult to definitively pin survey or interview responses, or bibliographic searches, to a specific award.
- There was a low response rate to even brief surveys from HoDs, suggesting that KT/impacts on users may not be “tip of the tongue” knowledge or, perhaps, priority (although nearly three quarters of those who did respond thought that research in their department overall had led to actual changes in policy or practice – much higher than the 27% of awardholders responding in this way when asked the same question).
- The variability in the way in which “impact” was addressed in end-of-award reports meant that extremely close reading was necessary with clues showing up in different parts of different reports: requiring a standardised KT section would make such information-gathering much easier. However, the timing of such reports inevitably means that actual impacts are seldom, if ever, evident: indirect clues/steps such as connectivity with users or targeted dissemination are a necessary proxy.

CONCLUSIONS

Informed Version of Model

The results discussed above can be used to extend the working model (**Figure 1**) formulated at the beginning of this study and refine it as shown in the informed model (**Figure 2**), which illustrates the study's findings as to Flows of Knowledge, Expertise and Influences.

Context: Importance of culture of discipline, attitudes toward value of knowledge transfer

A picture has emerged which underscores the importance of capturing idiosyncratic context in an informed model. Research culture and attitudes, as discussed below, shape the encompassing context as shown in the informed model, along with societal issues, external influences and attitudes among users toward research uptake at local or national scales.

Overall, researchers face challenges as they operate in an academic psychology culture that seems not to place particular emphasis upon connectivity with users, application or seeking media attention. This became clear particularly through document analysis, the survey of awardholders and the focus group with heads of department. In interviews, overview users and others highlight as a challenge what is frequently perceived as a chasm between the interests of academic psychologists and the needs of users. Indeed, many users expect academic psychologists to be more interested in academic publications than in directly fostering productive change.

Certainly, as with all other academic disciplines, the RAE and related pressures clearly promote academic impacts, which are of necessity a primary concern for heads of departments as well as the researchers they influence. The pervasive influence(s) of the RAE should be reflected somewhere in the model, as it shifts value away from impact generation.

Perhaps more than researchers in some other disciplines, department heads and some overview users would characterise psychology as facing particular challenges. For example, even research-based knowledge can be trivialised by the media into appearing to be simply "common sense". The perceived danger of dumbing down may limit connectivity with the media. "Spokespeople" willing to speak about current issues may worry that they will not always be respected by their colleagues, many of whom would prefer to speak to the press, if at all, solely about their own focussed slice of research experience. A consequent uptake-related challenge lies in constraints upon media accounts accessible to policymakers and practitioners.

Nature/structure of discipline: Heterogeneity of sub-disciplines & of users

A distinctive feature of psychology as a discipline is that it is actually a compendium of numerous sub-disciplines, each of which might have the potential to contribute to several diverse sets of users in policymaking and practice. We have added conspicuous heterogeneity to Researchers, Policymakers and Practitioners in the informed model. (Interestingly, very few indeed of the projects studied appeared to link to private sector users, whether due to the sorts of research funded and/or to difficulty even for knowledge intermediaries in penetrating that sector with psychology research findings.)

Role of diffuse knowledge intermediaries

Our initial working model showed two major categories of "knowledge brokers and intermediaries": funders, such as ESRC itself and organisational "knowledge intermediaries", exemplified by professional associations such as the British Psychological Society or the media. In the survey only 43% of respondents thought that intermediary organisations facilitated impacts. Interestingly, we have found that knowledge intermediary functions are in

many cases delivered by independent individuals rather than institutions. Trained usually to PhD level in psychology, such individuals have defined or grown into career niches in which they use their expertise to scan or analyse research findings, then translate it for particular types of users. Examples include:

- a parole board member who advises on research related to interpretation of policies;
- developing research-based short courses for executives on promoting adherence to health and safety rules;
- planning evacuation routes for public transit systems based on understanding of behaviour in dangerous situations;
- translating research results and acting as a gatekeeper for research that will receive the imprimatur of a police officers' association.

Others, not necessarily PhDs in psychology, will use their credibility within an area of practice to disseminate psychology research findings to peers; examples include taking a leadership role in sharing academics' research results with fellow speech and language practitioners, developing policy-oriented documents citing research, or incorporating recent research results into formal curricular training and/or short courses for practitioners.

The wide range of *individual* knowledge intermediaries reflects once again the heterogeneity of psychology as a discipline and the diversity of its prospective users, as well as a perhaps hitherto unrecognised route through which findings are translated to users. (These roles are thus now represented in the informed model.) Understanding the diffuse nature of the knowledge intermediary function in psychology may be a useful first step in developing tactics to improve knowledge transfer through such routes.

Influences on processes leading toward impacts

If there is a desire to promote more impacts more quickly from psychology research, then it makes sense to take a close look at deliberately influencing those processes which connect researchers with users. It may at times be possible to jumpstart or accelerate impacts, or to make research findings more likely to be internalised or incorporated into users' decision-making and behaviour. Recommendations for ways to accelerate or enhance the likelihood of impacts are captured below (and expanded upon in Annex L), but for purposes of refining the model, the following 5 key factors can be seen as affecting the process, perhaps, for example, making the process "lines" shorter rather than longer. Furthermore, existence/effectiveness of these factors could be looked for in evaluations as proxy indicators of processes occurring that could connect research to potential impacts.

1) Value placed upon/incentives provided for generation of impacts

Recognition of value can help to balance conventional pressures for academic achievements, fostering a culture in which more (but not all) researchers feel that it is valid to be oriented toward potential application.

2) Two-way interactions between researchers and users

Repeatedly researchers who are generating impacts and users who would like to see impacts generated send the same central message: impacts are most likely to arise as a result of two-way interactions, characterised by mutual respect, iterative dialogue, long-term relationships and reciprocal benefits to users and researchers. Interactions early on can help to frame research questions that are both academically sound and potentially of interest to users; later iterations can help to test preliminary findings; continuing interactions as a body of work accrues can make it more likely that research understanding will make its way into policy or practice.

3) Injections of support, dedicated staff, infrastructure

Even those researchers inclined to connect with users find that little or no funding exists to support the necessary activities. Time and/or expertise may be lacking, as well. Impact generating processes can be helped significantly by provision of financial or logistical support, dedicated liaison staff and/or infrastructure such as organisation of interactive events.

4) Facilitating role(s) of knowledge intermediaries

The level and effectiveness of knowledge intermediaries can influence the process. Professional organisations can play a role as knowledge intermediaries (e.g. the British Psychological Society convening academic/user meetings or compiling responses to government consultations). ESRC, in addition to funding, can also play this role. In the field of psychology and its many applications, numerous diverse lone-actor individuals play knowledge intermediary roles in a variety of application niches.

5) Communication/increasing accessibility of research.

Communication in the form of clear translation of robust findings can help to increase user awareness and possible uptake of findings into policy or practice. More broadly, activities or channels which make useful research readily accessible can encourage uptake.

Dynamics

While we have discussed the context, the nature and role of knowledge intermediaries, the heterogeneity of researchers and users, and five key factors that seem to influence processes, it is important to remember that these components are not static; rather, they interact over time. We can begin to articulate ways in which dynamics over time form an important dimension of the model. Diffusion of findings to potential users is a complex process as practitioners operate at multiple levels, from “big picture” to operational. Also numerous, and placed in diverse areas of government, policymakers may operate to political agendas, different timeframes for action, and broader picture considerations, relative to any one research project’s findings. Reaching all potential users, even within one area of application, even within one country, is impossible; even reaching many is difficult and can take a long time, particularly if changes in behaviour are looked for, beyond exposure to new findings and concepts. One “short-cutting” recommendation offered by some is to try to influence someone at a high enough level that they can simply tell middle managers, practitioners or policy implementers to change what they are doing, rather than expecting people on the ground to change behaviours that they have always believed to work.

For most of the cases observed in this study, most impacts are incremental and, at least in the short-term, more of a step in a process moving toward impact rather than a full-fledged impact. (Such steps can be viewed as one type of “proxy indicators”.) Impacts are often localised, at least in the first instance, rather than being high-level national impacts. Case studies, for example, include changes in what is taught in a particular teacher training curriculum or a specific police college. In a sense, for such a localised impact, one of the process “lines” connecting Knowledge Producer to Knowledge User in the model might be depicted as shorter – taking place more rapidly – than other lines leading to broader scope of impacts. As an example of scaling up impacts, the existence of multiple national working groups within the Association of Chief Police Officers makes it possible for positive local impacts of research to be shared nationally, potentially accelerating the diffusion. However, not all arenas of psychology application are served by this sort of national structure. The more usual picture may be that broader impacts are more dependent upon conceptual change and awareness-raising coming before instrumental change. There is likely to be further variability in the degree or speed with which particular localised impacts transform into broader impacts (or if they do so at all); this can vary with different spheres of activity, different channels for diffusion and different individual cases, in different situations (such as

perceived timeliness of the topic). There can be totally external forces, such as governmental or political pressures, which open windows of opportunity for uptake of research findings. One researcher who has been sought after by policymakers, for example, observed that he was sure he benefited from current interest in the issue he was addressing.

When considering the time dimension of processes in the model, time lags till impacts can be significant (certainly well beyond the simple dissemination that might just occur by the date of an end-of-award report). Although some experienced researchers do stress the importance of two-way dialogue and feedback loops, many academics still see impacts taking place via a (protracted) linear pipeline of: academic research conducted for primarily academic objectives, peer reviewed then published in academic journals, then perhaps picked up by a few enterprising knowledge intermediaries, policymakers or practitioners in leadership positions, and then perhaps proving itself so visibly useful as to be picked up on a broader scale. If this is a widespread perception among academics, behaviours may follow accordingly; this makes it particularly important to foster sharing of good practice that can enhance or accelerate impacts.

Difficulty of attribution of specific cases of impact to specific project's research and dissemination activities

However, even with all these refinements to the model, it must be recognised that this is a distilled schematic of phenomena which are in actuality complex, diffuse and fuzzy. Complex and contingent processes are involved. In most cases it will be extremely difficult if not impossible to attribute with certainty a particular impact to a particular project's research findings, even when knowledge transfer activities are conducted. It will sometimes be feasible to attach an impact to a particular researcher's full body of research, as it would seem that it is the depth and credibility of a research programme that is likely to register with users. Many times, however, changes in practice or policy will appear to stem from a general "awareness raising" or conceptual shift, the causality of which will be impossible to pin down. Precise measurement of impact of research upon a particular change in policy or practice is likely to be an unattainable goal, although understanding of the framework within which such impacts could happen may well make illustrative examples easier to spot. The model's primary contribution may in fact be to illuminate how processes generating impacts from research might be enhanced through identification and implementation of good practice for researchers, institutions and funding bodies.

FIVE KEY FACTORS to enhance or accelerate impacts

- ① Value placed on /incentives provided for impact generation
- ② Two-way interactions between researcher & users
- ③ Injections of support, staff, infrastructure
- ④ Facilitating role(s) of knowledge intermediaries
- ⑤ Communication / accessibility of research

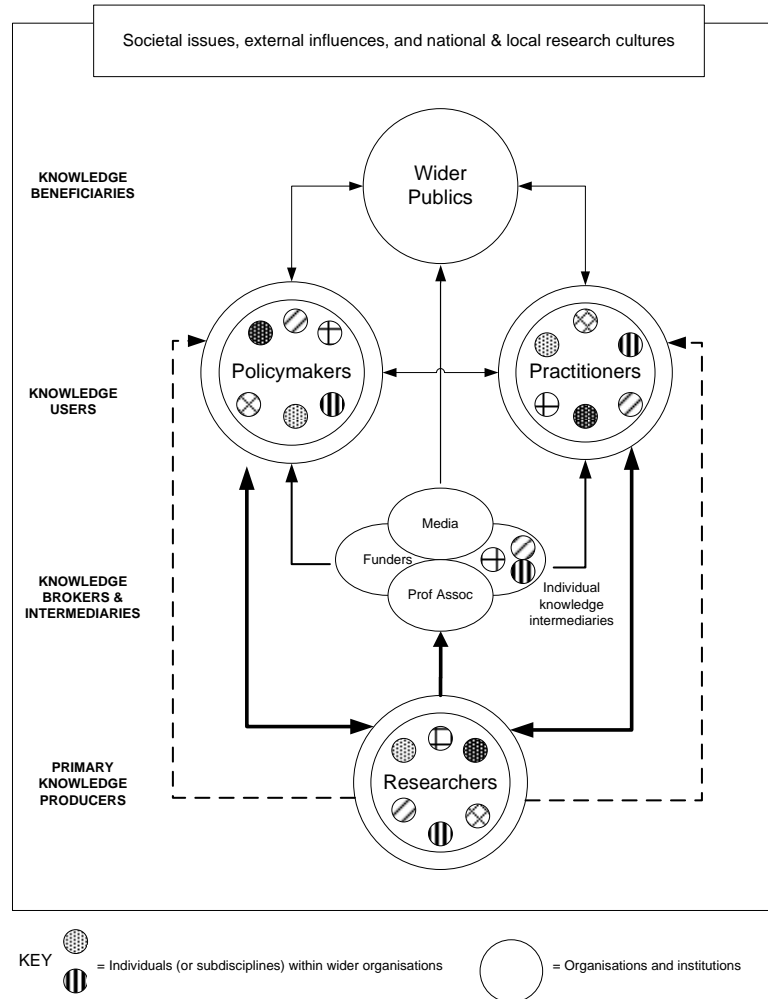


Figure 2:

Informed Model showing Flows of Knowledge, Expertise and Influences

Summary & Recommendations

In our view, while funding of basic research is essential, we commend ESRC's willingness to explore generation of impacts as a complementary – not contradictory – mandate. As ESRC considers its future roles, we would offer a caveat regarding goals of “measuring” impacts and one final, key recommendation, fleshed out by a series of specific suggestions.

First, ESRC-funded research does have impacts on policymakers and practitioners. Yet, for all the reasons discussed above, ***capturing specific impacts and attributing them to individual research projects is at best difficult and usually impossible.*** Goals of precise quantitative metrics would seem, therefore, to be inappropriate. In the interests of accountability, it is however possible to find proxy indicators of connectivity with users in the form of steps toward impacts and indeed even full case studies that illuminate impacts. It is further possible to come to a deeper understanding of what factors shape the processes that bring about impacts.

Indeed, the ESRC-sponsored workshop on impacts (Davies et al., 2005) made a point that we would like to reiterate here, as it questioned the value of tracking impacts either forward or backward from research, "in the absence of effective strategies that facilitate knowledge transfer and uptake". In other words, it might be impractical to attempt to measure something which one has not deliberately tried to bring about. In particular, it may be that ESRC needs to modify expectations as to what impact can be achieved with responsive mode grants, which do not have the infrastructure of programmes and centres, unless it does more to facilitate knowledge transfer by those diverse and highly individual efforts.

This study has shown that, through qualitative questioning, the processes connecting research with user impacts can be interrogated, examined and improved, so as to deliberately bring about enhanced likelihood of impacts. Interviewees, focus group participants and survey respondents offered lessons learned, examples of good practice and suggestions for enhancing the likelihood that ESRC-funded research in psychology would lead toward impacts⁹. Distilled highlights are captured below and in the recommendations. Indeed, such catalysts can also be regarded as proxy indicators; if they are present, the likelihood of research leading to impacts will be increased (although not assured, given the many external variables shaping policies and practices).

Our central recommendation is that ***ESRC should raise awareness of the possibilities for impact generation and even enhance processes of implementation,*** thus bringing about its own capacity-building, conceptual and instrumental impacts. In doing this, ESRC could develop more pro-active, practical tactics. We have distilled our integrated analyses of all the data gathered in order to summarise in Box 1 some steps that ESRC could take to increase or perhaps accelerate impacts. We suggest steps that would address five factors identified and discussed above (page 30) as key to successful impact generation¹⁰.

⁹ A more detailed summary of lessons learned from interviews is included as **ANNEX M**.

¹⁰ We are aware that the ESRC is already developing a number of initiatives aimed at promoting knowledge transfer, some of which are outlined below. However, some of these initiatives are more recent developments, for which the respondents involved in the study may not have had an opportunity to benefit, and certainly none was mentioned by the study informants.

- The Follow-on Grants scheme is designed to provide social scientists in HEIs with an opportunity to undertake knowledge transfer activities that are likely to have an impact on policy and practice.
- The Communications Team commissions "plain English summaries" of a selection of grants and awards, which are then available on the ESRC Society Today awards and outputs database. The ESRC publication *The Edge* is also aimed at policy makers and practitioners.

1. Value placed upon/incentives provided for generation of impacts
Encouraging development of systems of research assessment that give due weight to academic and non-academic impacts Offering incentives, such as funding
2. Two-way interactions between researchers and users
Nurturing a cultural shift toward increased connectivity between (some) researchers, knowledge intermediaries and users Conducting/sponsoring activities that bring together researchers and users
3. Injections of support, dedicated staff, infrastructure
Providing training or sharing of good practice to enhance individuals' ability to transfer knowledge Helping those individual researchers oriented toward application to follow through on that orientation by providing support such as liaison staff, KT funding
4. Facilitating role(s) of knowledge intermediaries
Acting as a knowledge intermediary through communication Reaching out to and including both organisational and diverse individual knowledge intermediaries, assisting them in their roles
5. Communication/increasing accessibility of research
Helping prospective users learn about and access research and researchers

Box 1: Five Key Factors – Some Steps to Enhance or Accelerate Impacts

More specific highlights of suggested changes in behaviours for researchers and heads of departments, as well as ESRC, follow.

-
- A recent "impacts flyer" detailing some examples of where ESRC funded research has achieved an impact has been produced; a DVD to showcase some of these examples will be available soon.
 - ESRC has recently begun to appoint "Research Brokers" in specific areas where social science research results are likely to be applied. For example, a ESRC Research Broker for Public Services has been appointed.
 - The ESRC Society Today website provides a portal for social science research. Recent developments include a section for "Public Services" for those working in this field who need to access relevant social science research. This site will extend to other sectors in due course.

Specific Recommendations for Enhancing Likelihood of Impacts

Recommendations for Researchers

Value/incentives

1. Introduce students to potential uses and users of psychology research, instilling these dimensions early in their world view

Two-way interactions

2. Think about “relevance”/potential application/users at an early stage
3. Participate in activities with users, especially early in the research
4. Seek/share good practice in knowledge transfer

Communication/Increasing accessibility

5. Get training in communication with policymakers, practitioners, media

Recommendations for Heads of Departments, University Managers

Value/incentives

6. Give the message to colleagues that generation of impacts for users is valued, e.g. incorporate it into workload models, incentives and reward structures
7. Make generation of impacts a more explicitly valued activity (funding and RAE “credit”); consider including generation of impacts among criteria for promotion and “professional standing”

Two-way interactions

8. Encourage activities which bring users together with academics
9. Make it easier for interdisciplinary/interdepartmental work (which often leads to findings of interest to users) to be conducted

Knowledge Intermediary

10. Ensure that a “knowledge broker” role is recognised as needing to be played by a member of departmental/university staff; also involve University’s Communication Office to engage media

Recommendations for ESRC

Value/incentives

11. Examine the timing and structure of the research and reporting process, as it does not currently encourage devoting time for dissemination to users¹¹.
12. Adapt forms to allow description of impact potential in proposals and steps toward impacts in end-of-award reports (recognising that this will/should not pertain to all awards)
13. Offer fellowships and prizes for knowledge transfer, such as the Michael Young prize

Two-way interactions

14. Convene activities such as targeted meetings bringing together a type of user with relevant researchers; encourage dialogue
15. Provide opportunities for researchers oriented toward impact generation to share good practice.

Support

16. Make special post-project add-on small grants available for researchers with specific knowledge transfer plans, perhaps requiring any such bids to appear within end-of-award reports – a useful metric in itself.
17. Pro-actively scope individual project grants and spot clusters or themes likely to be of interest to users. When several projects are found that share a topic or theme, help them communicate informally, offer KT staff support or even fund a formal network, with users and knowledge intermediaries
18. Share successes in knowledge transfer to build a wider awareness of value and of good practices within the psychology research community.

Communication

19. Provide website information such as a database of research findings/research/researchers that is searchable by applied terms, not academic jargon, that will be useful to knowledge intermediaries, users and media
20. Communicate with the media/public in ways that highlight usefulness of psychology research

¹¹ESRC is currently reviewing the research reporting process. It is envisaged that a new streamlined version of the final report will be introduced. The timescales for the evaluation are also likely to move from 3 months post award to one year post award, when the impacts and outputs of the research will be assessed.

REFERENCES

Caplan, N. (1979), 'The two-communities theory and knowledge utilization', *American Behavioral Scientist*, vol 22, no 3, pp 459-470.

CHSRF (2000), *Health services research and evidence-based decision making*, Ottawa: Canadian Health Services Research Foundation (CHSRF).

Davies, H., Nutley, S. and Walter, I (2005), *Approaches to assessing the non-academic impact of social science research*, report of ESRC Symposium, on assessing the non-academic impact of research, 12-13 May 2005, Research Unit for Research Utilisation, University of St Andrews.

Hanney SR, Gonzalez-Block MA, Buxton MJ and Kogan, M. (2002), *The utilisation of health research in policy-making: concepts, examples and methods of assessment*. A report to the World Health Organisation, Health Economics Research Group, Uxbridge: Brunel University.

Lavis, J., Ross, S., McLeod, C. and Gildiner, A. (2003), 'Measuring the impact of health research', *Journal of Health Services Research and Policy*, vol 8, no 3, pp 165-170.

Lomas, J. (2000), 'Using 'Linkage and Exchange' to move research into policy at a Canadian foundation', *Health Affairs*, vol 19, no 3, pp 236-240.

Molas-Gallart, J., Tang, P. and Morrow, S. (2000), 'Assessing the non-academic impact of grant-funded socio-economic research: results from a pilot study', *Research Evaluation*, vol 9, no 3, pp 171-182.

Nutley, S., Walter, I. and Davies, H. (2007), *Using Evidence. How Research can Inform Public Services*, (Bristol: Policy Press).

Research Councils' Economic Impact Group report ("the Warry Report"). July, 2006. *Increasing the Economic Impact of Research Councils*.