The issue of how research informs government policy is a thorny one. There is much debate about the extent to which policy-making is genuinely evidence led, or whether policy-makers simply use evidence to support their existing policy goals. In our experience, evidence is indeed used to inform policy-making but is equally ignored when it does not support existing policies. We at ADMIN (Administrative data: methods inference & network) have been working to ensure that our research findings feed directly into policy-makers and influence their decisions.

To some extent, we are pushing on an open door. In the education context, quantitative research, and particularly economic evidence, has had increasing influence, partly because it expresses the impact of a policy in quantifiable (money) terms, enabling comparisons of different policy options to be made. Quantitative methods are also perceived to be more methodologically robust. One example where we can see quite clearly the impact of quantitative research on policy is in the area of early education interventions. Researchers such as Janet Currie and James Heckman, amongst others, have shown that cognitive skills are developed in early childhood, that socio-economic gaps in skills emerge very early and that there is a strong family and inter-generational component to the development of cognitive skills. This research has certainly produced an obvious policy response. In the US and UK at least, there has been increased investment in the early years and the introduction of parenting programmes. Work by Machin, McNally and Meghir found, for example, that the 40% increase in primary school expenditure between 1997 and 2007 in the UK has had a positive impact on children’s achievement.

Of course for every positive example where academic research has usefully informed policy, there are examples where the messages from research are misinterpreted or ignored. For instance, it has been known for a long time that the UK had a poor record in terms of the basic skills of its adult population. A report into this problem by Moser1 cited evidence that the incidence of poor basic skills was higher in the UK than in many other countries and that such skills were in relatively short supply and hence highly valued. The policy response was to introduce public targets to improve the basic skills of adults and the introduction of policies such as the Skills for Life programme. However, when subsequent research by the Institute for Fiscal Studies suggested that one of the government’s flagship policies, Train to Gain, was not very effective, this more unpalatable message was largely ignored. It was not until a change of government occurred that this particular programme was abandoned.

With these challenges in mind, ADMIN is undoubtedly at an early stage of influencing policy. Results produced by ADMIN on how to measure school effectiveness and the problems associated with school league tables have, however, been discussed with senior politicians, including Secretary of State Michael Gove and Lord Hill, Parliamentary Under-Secretary of State for Schools. The issues covered included how to measure properly the socio-economic background of children and how schools may be differentially effective for children of differing abilities. These results have also been disseminated to officials from the Departments for Education and Business Innovation and Skills. It is, however, too early to determine the influence of this work on key policies, but watch this space.

Reference

CAQDAS - Contributor to social scientific knowledge?

Sarah Bulloch and Christine Rivers, QUIC node, University of Surrey

**The focus of extensive debate in the late nineties**, this question benefits from reconsideration in the light of advances in CAQDAS software. In evaluating affordances and limitations of CAQDAS software and its potential contributions to social scientific knowledge, we must contextualise feedback from critics and users within methodological understandings.

Recent improvements in CAQDAS software allow increasingly sophisticated qualitative data exploration, yet there are still technical limitations. Image and video data analysis tools in particular are still in their infancy, providing less finely grained coding, referencing, linking and extracting possibilities than found for textual data. Interestingly, discussions of affordances of CAQDAS are often both package-related and methodologically driven, whereas discussions its limitations are primarily methodologically driven.

**The importance of methodology**

In evaluating the role of CAQDAS in the creation of social scientific knowledge, appreciation of current understandings of what constitutes such knowledge, as well as dissent regarding the role of social sciences, are crucial. Generalisability, reproducibility, contextual understanding, underlying dynamics, macro and micro-level explanations for phenomena are prioritised differently according to methodological practices.

This importance of methodological orientation is reflected in findings from a longitudinal study focusing on user experience of learning CAQDAS. A user analysing textual data by means of discourse analysis said: "I have become worried about becoming too reductionist and losing the effect of holism." This user is approaching the analysis from a consciously methodological perspective rather than assuming that using the software itself constitutes a method. However, the concern expressed by the user is clearly methodologically contextualised: data fragmentation through coding can be seen as an analytical goal, but also as a threat.

**The importance of skilled use**

Knowledge of the available CAQDAS packages accommodates different methodological approaches. For example, linking tools facilitate various representations of discourse, quotations or clips can be produced and extracted to exemplify different phenomena, and annotated text segments can retain their embeddedness within context. It is, therefore, not necessary to code data in order to gain insights and each analytical task has the potential to be more or less appropriate, depending on the methodological aims and, ultimately, the research area to which one wants to contribute.

Regardless of methodological standpoint, moving from early stages of annotating, coding and linking to more explicitly analytical stages is both crucial and challenging in qualitative research, and not exclusively in CAQDAS. For example, in a code-based project, going beyond coding requires both analytical skill and methodological clarity. A lack of either requirement results in a danger of overcoding, especially in CAQDAS packages due to ease of code creation. Yet CAQDAS packages offer bespoke interpretive tools that facilitate moving beyond this analysis stage, such as retrieval and query functions, graphics, and maps/models. These tools help in examining data from different angles, identifying patterns and relationships and developing insights. Thus, hypotheses are tested, theories emerge, and new understandings are gained. This process is significantly facilitated within the framework of CAQDAS due to the flexibility of the interpretive tools.

**Conclusions**

Whilst CAQDAS itself cannot contribute to social scientific knowledge, because it is not actually a method, the skilful and thoughtful use of its tools within any methodological framework can make such contributions. Additionally, its automatic logging of analytical processes strongly supports rigour and transparency, strengthening the credibility of qualitative research as a whole. Where CAQDAS software is still perceived to be falling short, the challenge for the research community is to express its needs in terms of the functions required to satisfy its methodological aims.

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**About CAQDAS software and QUIC**

Computer Assisted Qualitative Data Analysis (CAQDAS) software facilitates the storage, management, transcription and analysis of data, outputting of findings and logging of analytical processes. Significant recent improvements include integration of multi-media data, synchronisation and linking of data (e.g. Geo-Referencing), advanced team-working facilities and presentation of findings in qualitative and quantitative forms.

The NCRM Qualitative Innovations in CAQDAS (QUIC) node provides practical support, training and information in the use of a range of software programs designed to assist qualitative data analysis. QUIC builds on the work of the CAQDAS Networking Project, commenced in 1994 to further explore technological and methodological developments in qualitative software. For further information about CAQDAS and QUIC see http://caqdas.soc.surrey.ac.uk

The challenge for the CAQDAS community, on the other hand, is to contextualise feedback within methodological orientations and translate this into software functionality. If both communities rise to these challenges, it should become clearer that CAQDAS packages can play a significant role in the furthering of social scientific knowledge.

**References**

How can we find relevant research more quickly?

James Thomas and Alison O’Mara, MRS node, EPPI-Centre, Institute of Education

Systematic reviews are a widely recognised way of pulling research on a particular research question together in a reliable way and are usually conducted to inform a given policy or practice decision1. One challenge is common to all reviews: identifying relevant research as quickly as possible.

Searching electronic sources (databases, websites etc) is an essential part of any strategy to find research. Systematic reviews usually aim to find as much relevant research as possible and so highly sensitive searches are conducted. By their nature, sensitive searches retrieve more irrelevant material than relevant, but this is unavoidable if the aim is to be as comprehensive as possible. As more research is published and more journals are established (a phenomenon known as the ‘information explosion’), the number of irrelevant studies that electronic searches retrieve has increased.

It is becoming common for reviewers to ‘screen’ through thousands of titles and abstracts manually in order to identify the few tens (or hundreds) of studies that are relevant to the review. This means that it is difficult for reviews to be conducted quickly enough to meet some urgent policy timescales. It is therefore important that we develop methods to expedite the identification of relevant research.

The Methods for Research Synthesis Node, in conjunction with the National Centre for Text Mining in Manchester (NaCTeM), has been developing and testing text mining technologies to speed up the screening process. Broadly speaking, text mining is defined as the process of discovering knowledge and structure from unstructured data (text). In the context of finding research for inclusion in a review, the knowledge and structure we are interested in uncovering is whether a given study (described by a title and abstract) is relevant to our review.

**Prioritising screening – a test case**

We had time to look at only about a quarter of these manually, so used automatic term recognition2 to help focus our efforts on those studies most likely to be relevant. Term recognition technology is able to identify the most important terms from within a document, or a set of documents, and allocate each term a ‘score’ which quantifies its importance (See Table 1 for an example of such terms).

### Table 1: The top 5 terms identified using NaCTeM’s Termine software

<table>
<thead>
<tr>
<th>Term</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>high school student</td>
<td>121.96</td>
</tr>
<tr>
<td>school student</td>
<td>116.79</td>
</tr>
<tr>
<td>high school</td>
<td>97.55</td>
</tr>
<tr>
<td>tobacco use</td>
<td>96.79</td>
</tr>
<tr>
<td>tobacco control</td>
<td>68.16</td>
</tr>
</tbody>
</table>

In our case, we identified the set of terms that were most important from within the titles and abstracts of studies that we had already identified as being relevant. We used these terms and associated scores to carry out a detailed search of our database to identify studies which were similar in terms of the language they use. Used iteratively, as we identified more and more relevant studies, this technique aimed to ‘bubble’ other relevant studies up to the top of our list from within the large dataset of mostly irrelevant research. We refer to this as prioritised screening.

**Does it work?**

We evaluated the effectiveness of the prioritised screening by considering the inclusion rate i.e. the proportion of studies that are relevant to the research question in the full database. We established a ‘baseline inclusion rate’ of 1.81% based on a random sample of 661 titles and abstracts that we screened manually. We calculated that this would be an appropriate sample size using standard power calculation methods. We therefore expected that 1.81%, or about 652, of our 36,000 studies would be relevant. After using the prioritisation method described above to screen a little over 9,100 titles and abstracts manually, we had marked 656 as being potentially relevant: a rate of 7.16%.

### References


### Conclusions

While the study is currently ongoing and we are still checking our results, we have drawn some tentative conclusions. If our initial results are confirmed, this method has enabled us to identify the expected number of relevant studies with only 25% of the usual manual work; a potentially extremely useful finding.

Prioritised screening also allows the full-text document retrieval process to begin sooner, which can help prevent disruptions to workflow caused by delays in accessing copies of documents e.g. waiting for interlibrary loans. One possible limitation is that it is impossible to know whether everything that was relevant has been found -- short of reading all 36,000 titles and abstracts. Further evaluative work is needed before we are able to be more definitive. This method is highly promising and may save significant time and money in the future, enabling research to be made available to policy and practice in a more timely way than can be achieved currently.

**EPPI-Reviewer 4: software for research synthesis**

Designed for systematic reviews, and useable in any type of review, this software incorporates the text mining technologies described above, and manages references, stores PDF files, and facilitates qualitative and quantitative analyses such as meta-analysis and thematic synthesis. Visit the EPPI-Centre website to set up a trial account and also to read material on different types of review.

Further information:

EPPI-Centre http://eppi.ioe.ac.uk
National Centre for Text Mining http://www.nactem.ac.uk
Using paradata to explain interviewer effect

Gosia Turner, NCRM Hub, University of Southampton

In face-to-face surveys the interviewer can be a source of error in many ways. Certain interviewers' characteristics may affect replies given by the respondent; he or she can read the question in a wrong way and note down the incorrect answer. Even the mere presence of the interviewer may lead to the phenomenon called 'social desirability' when respondents give socially desirable answers. All these lead to the interviewer effect that I am trying to explain by using paradata.

There is no clear definition of paradata. The term was coined by Mick Couper to describe data automatically generated by the software used for Computer Assisted Personal Interviews (CAPI) such as time spent on each item in the questionnaire, keystrokes, number of times the help window was displayed etc. More recently, paradata have been described as data about the data collection process, hence also including interviewers' observations e.g. to describe the neighbourhood to which the household belongs, reports on number of calls to each household, information about the outcome of each call, and administrative information on interviewers e.g. age, gender and grade.

How are paradata used?

The more common use of paradata and their further investigation was triggered by greater attention being paid to survey data quality. In general, response rates to social surveys are declining and it is more important than ever to understand the phenomenon of non-response as well as make sure that data obtained are of the highest possible quality, as the measurement error is small. This is why the biggest development of the use of paradata can be seen in the area of non-response. The analyses of call times (days of the week and times of the day) and call outcomes provide more insight into the best time to call in order to obtain an interview, and hence decrease the non-response. Monitoring of the response propensities can allow identification of difficult cases and assigning them to more experienced interviewers. In the responsive design paradata are analysed during the fieldwork and then used to adjust data collection procedures.

Paradata are also used to adjust the survey estimates to compensate for non-response at the post-survey adjustment stage. The biggest advantage of paradata is the fact they are already there, usually automatically collected or collected at small additional cost e.g. interviewers' observations. The biggest problems that researchers face when using paradata are 'messiness' of the data, complicated file structure (esp. keystroke files, time stamps, response latencies), and access to the paradata themselves, as they are rarely made available along with the survey data.

Understanding the interviewer effect

The focus of my research is on the interviewer contribution to measurement error and, more precisely, on the variability of survey estimates that is introduced by the interviewer – the interviewer effect. Face-to-face interview surveys generally employ a clustered sample design, in which geographical clusters are selected first and then individuals or households are selected within clusters. This design can lead to inflation of the variance of survey estimates, relative to a simple random sample, due to the greater similarity between respondents in the same cluster than is evident in the population as a whole. This phenomenon is referred to as the design effect. Usually there is only one interviewer working in each geographical cluster, which makes it difficult to separate the design effect due to areas from the interviewer effect.

I am using the National Travel Survey (NTS) data in my research. The NTS employs cluster sampling and a rolling design with monthly interview quotas conducted over a 12 month period, which is why NTS interviewers are likely to work in more than one area, and one area is likely to be served by more than one interviewer. This set-up allows the use of cross-classified multilevel models to separate the interviewer effect and the area effect. The sparse current research in this area uses very limited information on interviewers - age, gender, years of experience - when explaining the interviewer effect.

The paradata I am using in my research is the extensive information on interviewers. Data come from the ‘Who is behind the NatCen ID card?’ methodological survey of interviewers working for the National Centre for Social Research (NatCen), conducted in 2008. The questionnaire includes questions on motivation, experience, attitudes towards interviewers' tasks and personality traits. Once the interviewer effect is isolated in the model I will be able to use the paradata to try to explain it. I am seeking to understand how variance in a range of survey outcomes is related to the characteristics of individual interviewers. For example, we know that attitudinal items suffer from a larger interviewer effect, but is it equally large for all interviewers or is it larger for more motivated interviewers than for less motivated interviewers? Answers to questions like this will have practical implications for research institutes. It may possibly increase the accuracy of survey estimates by making assignments dependent on interviewer characteristics or compensating for interviewer assignment at the post-survey adjustment stage.

Gosia Turner is a research student attached to the NCRM Hub at the University of Southampton

References

Working with archived qualitative data

Rosalind Edwards, NCRM Hub, University of Southampton

In recent years, in-depth research addressing social and generational change has flourished. This includes studies where original data and other material from a past study are reanalyzed. Researchers have been conducting secondary analysis of material from classic, pioneering studies stored in archives such as ESDS Qualidata and Mass Observation. Examples include explorations of class identities, attitudes to sexuality, parenting, and youth transitions.

There may be several reasons for this ‘historical turn’. Perhaps it is a sociological resonance of a broader sense that people can understand who they are now only through knowing about their family genealogy and recovering their roots. Thus sociology has also been reflecting on its social research past, and the creation of that past through pioneering studies, such as the community studies of the 1960s. Such reflections may be a reaction to theorizing about social change that has tended towards grand rather than grounded statements.

Working with archived material from classic sociological studies can provide insights into the nature and extent of social change in people’s lived experiences across decades. It is, though, not a straightforward process. Rather than the neatly ordered verbatim interview transcripts and separate fieldnotes that archived contemporary studies often comprise, the originators of the classic archived studies in the 1960s tended to work with extensive observational fieldnotes including snippets of remembered speech and reconstructed interview conversations, and survey formats with handwritten comments and the odd quote written in the margins.

Blurred boundaries

Working with such an order of materials calls into question understandings of the position of the generators of the data as somehow separable from those data. All research can be regarded as a co-construction between researchers and researched, and thus as challenging fixed ideas about the distinctions between the two.

This has been the root of a recurring debate about working with archived data, as to whether a ‘second hand’ view limits understanding of such crucial context, or whether reanalysis involves a reconstruction of data that amounts to a primary analysis. Working with the mix of observations, remembered quotes and marginal annotations from classic studies, however, can mean that the researchers of the original study undergo a shift, to become the researched in the reanalysis. It becomes important to understand the knowledge production process of the original researchers, their stances towards particular sets of problems and their articulation of them in certain styles. They become positioned in time and space as part of their topic.

Further, the original researcher’s observations and annotations that are part of the data sets reflect particular sets of values prevalent at the time. For example, judgments on participants’ appearance, accent and intelligence were a common aspect of fieldnotes, and sexist and racist assumptions often pervade material. Such comments, however, go beyond the value interpretations of the original researchers to provide useful insights into the sensitivities and insensitivities of the time. In some ways, boundaries between good and bad research practice are challenged. Contemporary researchers may now consider it unethical to make value-laden comments about their participants, but such ‘good’ practice may not be helpful for any secondary analysts of their data in the future.

Key concepts

The breaking down of the boundary between original researchers and research topic in secondary analysis of archived classic sociological data sets described above is captured in two overlapping concepts. ‘Investigative biography’ considers the ontological and epistemological approach of the researcher/s producing the original study or studies – and reflexively, that of those conducting the reanalysis. ‘Empirical moment’ addresses the societal context for the generation of the archived material – and again, reflexively, that of the reanalysis. As a guiding methodological framework for working with such classic archived data, these concepts enable an account of context as primary data, rather than added-on informative background.

Rosalind Edwards is Professor of Sociology at the University of Southampton and a Co-director of NCRM.
Journal special issues and methodological debates

Melanie Nind and Rosalind Edwards, NCRM Hub, University of Southampton

Journals with a primary focus on methods in social research play an important role in debates about what is happening methodologically in the social sciences. Two Co-directors of the NCRM Hub are at the heart of this activity through their roles as journal editors.

Rosalind Edwards is editor (with Julia Brown) of International Journal of Social Research Methodology (IJSRM) and Melanie Nind is editor (with Liz Todd) of International Journal of Research and Method in Education (IJRME). The journals share an interest in new and unusual methods and provide international fora for discussions of both qualitative and quantitative methodologies.

Methods-focused journals such as these invite researchers to share and debate emergent, adaptive and established research practices, and to reflect on the increasing variety of methods and where ongoing challenges lie. To some extent they address issues of transformation and of regulation in research including what can be said and how it is said. They include, and facilitate, powerful narratives about the impact of research choices on us as researchers as well as on the topics and social groups we research. Two recent special issues of these journals provide good examples of how methods journals serve as a forum for the consideration of research governance, and of the possibilities and challenges of particular methods of data collection.

The journal papers reflect on the lived experience of the ethics review process and the impact on what is (and is not) seen to be ethical or potentially risky research and how research is conducted.

A consideration of the potential of video for social science research data collection is the focus of the latest special issue of IJSRM. The issue addresses the key advantages, disadvantages and challenges raised by the use of video as a rich multi-modal form of data that runs the risk of researcher ‘sensory overload’. Contributors to the issue reflect on and suggest ways of dealing with these questions, ranging across researcher-produced, participant-produced, and ‘naturally-occurring’ recordings, and debating the relationship between representation and social ‘reality’, and subjectivity and objectivity.

Upcoming special issues of the two journals address the use of secondary sources in educational and social research. IJRME also has plans for a special issue on critical issues in visual methodology, complementary to the IJSRM issue on video-based methods. The fact that – quite separately – these are special issue themes for both journals is an indicator of the immediacy of interest in these topics among the social science research community. It is often when methods are coming into regular usage that a call goes out for a pause for reflection. This is so for visual methodology where, after rapid expansion of the field, a need is seen to theorise the use of video, and to critically debate the questions that visual data are being used to address and those they are not, how research identified as visual is located in the wider field and the contribution it makes. This call for dialogue, particularly about how quality, trustworthiness and rigour are conceptualised in visual methodology, and about the role of visual methods in the creation and translation of knowledge, will have resonance for many researchers in NCRM.

Reference

Research methods at the University of Southampton

Patrick Sturgis, NCRM Hub, University of Southampton

During a recent fire alarm test exercise I witnessed two colleagues from different departments and very different methodological traditions deep in discussion about the research interests that they had in common, while they waited outside for the all-clear to re-enter the building. Not only did they find a great deal in common across their apparently divergent approaches, they both went back into the building with new ideas and references to follow-up.

This chance encounter perfectly illustrates the value of an institution having breadth as well as depth of expertise (and, of course, a robust health and safety policy!). Having a diversity of methodological approaches provides a basis for bringing people together to reflect on the strengths and limitations of different approaches, and to discuss the potential complementarity and synergies across what are sometimes presented as methodological divides.

The brief for the NCRM is to promote methodological innovation across the range of the social science disciplines, and the hub team at Southampton is to co-ordinate the activities and to facilitate collaboration between the various specialised parts. To make this happen the hub team needs to span disciplines and methodological traditions, and to develop common ground between them. Our backgrounds in the hub span education, geography, politics, psychology, social statistics, economics, social policy, and sociology, while our methodological expertise ranges from survey and statistical methodology to qualitative longitudinal research, from spatial modelling to participatory research, and from working with archived material to research ethics.

In many ways the NCRM hub team is a microcosm of research methods at the University of Southampton. The university is, of course, famous for its strength in depth in social statistics, with a longstanding tradition of research, short-course provision and consultancy in advanced statistical methods. For the past ten years and more, our short course programme has been delivered through the ESRC funded Courses in Applied Social Surveys (CASS), which trains in excess of 300 people a year in a broad range of quantitative methodological approaches.

On the more qualitative side of research methods, I have been pleased to notice that there is a considerable and growing profile of expertise at Southampton. This ranges from ethnography and meta-ethnography to qualitative comparative analysis, from visual methods to discourse analysis, from mobile methods to narrative analysis, and from internet research to evaluation. The preparations for the teaching of qualitative research methods in the new ESRC Doctoral Training Centre have, along with growing recognition of shared methodological challenges in research, spurred the formation of a new grouping, ‘QUEST’ (Qualitative Expertise at Southampton), with members drawn from across the University.

We are very fortunate at Southampton to have four major ESRC Centres located within the same faculty – the National Centre for Research Methods (NCRM), the Census Programme, the Third Sector Research Centre (TSRC) and the Centre for Population Change (CPC). Apart from NCRM, these centres are not focused specifically on the development of new methodologies, but the skills and knowledge of the staff in these centres brings an additional dimension to the cadre of methodological experts within the university.

Thinking forward

In addition to these established methodological groupings, new opportunities for methodological innovation are opening up all the time – witness the research being undertaken using freedom of information legislation to gain access to data, the linking of census and other forms of administrative records with survey data, as well as the various ways in which the participatory research agenda is changing the nature of fieldwork in many areas. Such innovation and synergy comes about thanks to an environment that promotes genuine breadth and depth in methodological approaches and, of course, the odd serendipitous fire alarm!

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Professor Patrick Sturgis is the Director of NCRM and Chair in Research Methods

For further information about research at the Faculty of Social and Human Sciences at the University of Southampton, please see http://www.soton.ac.uk/about/faculties/faculty_social_human_sciences.html
The ESRC National Centre for Research Methods (NCRM) is a network of research groups, each conducting research and training in an area of social science research methods. The Centre is coordinated by the Hub at the University of Southampton.

The Centre brings together researchers from across the UK with a wide range of research methods expertise, at the frontiers of developments in research methodology.

NCRM disseminates innovations and developments in research methods through training courses and events and through other direct engagement with researchers, but also by cooperating with other organisations and initiatives with an interest in social science research methods.

NCRM was established in 2004 as part of the Economic and Social Research Council's (ESRC) strategy to improve the standards of research methods across the UK social science community. The Centre acts as a strategic focal point for developments in research, training and capacity building related to research methods, both at the national level and cutting across social science disciplines.

For more information about NCRM and its activities please see our website http://www.ncrm.ac.uk

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