There is a growing interest in ‘evidence-based policy making’ in the UK. However, there remains some confusion about what evidence-based policy making actually means. This paper outlines some of the models used to understand how evidence is thought to shape or inform policy in order to explore the assumptions underlying ‘evidence-based policy making.’ By way of example, it considers the process of evidence seeking and in particular the systematic review as a presumed ‘gold standard’ of the EBP movement. It highlights some of the opportunities and challenges represented in this approach for policy research. The final part of the paper outlines some questions of capacity that need to be addressed if the social sciences are to make a more effective contribution to policy debate in Britain.

There can be no doubt that today a new mood characterises the funding and execution of social research. Solesbury terms it a ‘utilitarian turn’, even a return to an expectation that social science should be useful: ‘To a large extent’, he comments:

this has been driven by the funders of social science. Government departments have come to be the dominant funders; the research charities – like the Joseph Rowntree Foundation and the Nuffield Foundation – have increasingly adopted an instrumental view of research, gearing it to their social priorities. And the Economic and Social Research Council (ESRC) has been subjected to the demands of government science policy that views academic research as a means to economic and social development much more than as a cultural end in itself. (Solesbury, 2001: 4)

This new instrumentalism was baldly expressed in a speech to the ESRC in February 2000 by the then Education Secretary, David Blunkett, in which he invited the research community to accept an enhanced role in the policy-making process: ‘Social science research evidence’ he said, ‘is central to development and evaluation of policy . . . We need to be able to rely on social science and social scientists to tell us what works and why and what types of policy initiatives are likely to be most effective.’ (Blunkett, 2000).

Even if this sometimes feels like new terrain, it remains true that the debate about the extent to which policy can – and should – be constructed around the best social science evidence is a perennial one, in which every so often the pendulum swings toward crude utilitarianism. Social policy researchers may be tempted to give it a push, as the instrumentalist mood promises at least a temporary elevation of their status. But can the contemporary ‘evidence-based’ movement in social policy live up to its promise as an idea whose time has come?

There can be no simple answer. The term ‘evidence-based policy’ (EBP) contains
two terms, one referring to the way in which policy is made, the other to the evidential nature of social science itself. The use of both terms is characterised by highly problematic assumptions. We at the ESRC UK Centre for Evidence Based Policy and Practice, established at Queen Mary, University of London, in December 2000, are charged with advancing debate on these necessarily contentious issues (for more detail see http://www.evidencenetwork.org). To begin, it is worth scrutinising more closely some of the many assumptions underlying the ‘evidence-based policy’ couplet, and the next part of this paper reviews some of the ways in which evidence is thought to shape or inform policy. It then goes on to consider the process of evidence seeking and in particular the systematic review as the presumed ‘gold standard’ of the EBP movement. The final part of the paper outlines some questions of capacity that need to be addressed if the social sciences are to make a more effective contribution to policy debate in Britain.

Competing models of research–policy relations

It is useful to distinguish between five sets of assumptions (or models) about the way in which the policy process handles the input of knowledge. We term these the knowledge-driven model, the problem-solving model, the interactive model, the political/tactical model, and the enlightenment model. Each bears some kind of relationship to reality and the advocates of each can readily summon up examples to demonstrate its correspondence with that reality. Yet they do differ, in both plausibility and sophistication.

In the first, the knowledge-driven model, it is assumed that research leads policy. It is a process captured in the old adage that ‘if it can be done it will be done’, an observation seemingly well suited to high-technology projects. The Anglo-French Concord(e) is a good example. The initial impetus came from scientists at the Royal Aircraft Establishment, Farnborough, where the expectation was that it was only a matter of time before a supersonic commercial aircraft became an object of desire; meanwhile government investment would be necessary to bring it into being (Hayward, 1983).

There is an element of scientific inevitability in this model, of the expert ‘on top’ (in Laski’s phrase). In its more extreme form, knowledge-driven (really expert-driven) policy exemplifies the abdication of political choice. In the problem-solving model, in contrast, research follows policy, and policy issues shape research priorities. From the point of view of government, the expert is (Laski again) ‘on tap’, but not on top.

These two models both assume a simple linear relationship between research and policy decision, differing only in the posited direction of influence. Only recently have we come to see their limitations, which may result from the uncertainty of scientific evidence (BSE, for example) or its lack of correspondence with lay knowledge as in the case of genetically modified crops. The fall-out from failed or unpersuasive policies has in turn damaged the public reputations not just of ministers and civil servants (as one might expect) but the producers of knowledge/evidence. These risks are something that social scientists would be well-advised to keep in mind as the EBP movement gathers momentum.

The interactive model contrasts sharply with both of these in positing a much more subtle and complex series of relationships between decision makers and researchers. It portrays research and policy as mutually influential, with the agenda for both research and policy decision shaped within ‘policy communities’ which contain a range of actors...
located across the whole spectrum from central policy making to the laboratory and research team. On this model, it is recognised that (some) researchers will themselves be influential. The archetype is the academic or think tank policy analysts whose grasp and understanding of a policy problem enable them to propose new solutions. Professor Sir Peter Hall comes to mind: a long-time urbanist who has advised a succession of governments, defining fundamental problems and initiating new policies and institutions – most notably the Enterprise Zones. So too does the late Sir Colin Buchanan, who moved easily between the worlds of the civil service, academic life, and consultancy, and whose seminal report on *Traffic in Towns* still shapes much of the way in which we think about that problem. The boundaries, in this instance, are blurred. It is hard so see where academic duties end and public service begins, and futile to expect to do so. More important, it is impossible to discern who really influences whom.

Also distinguished by its realism is the *political/tactical model*, which sees policy as the outcome of a *political* process. Although of less than universal applicability, this model sees the research agenda as politically driven, with studies commissioned and/or used to support the position adopted by the government of the day, the relevant minister, or perhaps the civil servants most closely concerned. Setting up research on the effectiveness of industrial development locational incentives and controls, the extent of burdens upon SMEs, or the sensitivity of location decisions and profitability to local tax rates are all examples, from a single field, of research commissioned to establish a point, rather than in the spirit of disinterested enquiry. In extreme cases, research – and the researchers – can become vulnerable to political attack from quarters in which the basic value premise underpinning the research commission is contested. Clearly, researchers need political awareness to navigate their way around the obstacles that arise. Many have it, and find little discomfort in the role. Beyond the margin, however, lies the spectre of the politicisation of social science, which would be in the interest neither of government, of social scientists, nor of the public at large.

The *enlightenment model* is one that portrays research as standing if not aloof, then certainly a little distant from the hothouse of immediate policy concerns. Rather than research serving policy agendas in a direct fashion, the benefits are indirect. It is often addressed not to the decision problem itself, but to the context within which that decision will be taken, providing a frame for thinking about it. Research conducted within this model seeks to illuminate the landscape for decision makers. For example, the Pensions Provision Group’s report, *We All Need Pensions*, published in April 1998, covered a wide range of basic issues in pension provision, ranging from ‘incomes in old age’ to ‘the labour market context’ to ‘risk and efficiency in pension provision. This work helped set the context for subsequent policy development. None of the information was new to policy makers, but the publication ‘provided chapter and verse for the stylised mental map of the pensions world with which policy makers in the Department of Social Security (DSS) must equip themselves’, and a helpful assembly of different data sources in a single place. (Cabinet Office, 2000, para. 5.10.)

Similarly, research on organisational processes or intergovernmental relations might not indicate action to be taken, but can offer a deeper understanding of the conditions under which various interventions might be effective – or not. It corresponds with what might be termed ‘evidence informed’, rather than ‘evidence-based’, policy making.

It may seem odd to indicate a preference for the enlightenment model. Our reason for doing so is two-fold. First, much of the best social research is inspired by an urge to
understand, illuminate and explain, rather than by a compulsion to provide policy solutions. Secondly, the idea that research can be problem solving is based on a misconception of the nature of the policy process, which is rarely characterised by rational decisions made on the basis of the best information. Indeed, information may be complicating and inconvenient, obscuring the clarity of choices most easily made under conditions of relative ignorance. As Keynes reportedly said, ‘there is nothing a government hates more than to be well informed; for it makes the process of arriving at decisions much more complicated and difficult’ (quoted in Solesbury, 2001: 7). The core beliefs of policy makers are unaffected by information, as policy change is driven by external factors, not by ideas and analysis.

The rush of enthusiasm for evidence-based policy making overlooks the fact that a great deal of research has already been carried out on a wide range of social problems, providing policy makers with pointers that they rarely follow. Nancy Shulock (1999) has termed this ‘the paradox of policy analysis’. The paradox arises from a mismatch between notions of how the policy process should work and its actual messy, uncertain, unstable and essentially political realities. We commit substantial funds to policy research without it appearing to play much of a role in solving policy problems. Decision makers appear to demand more analysis than they can digest while confessing that they find other sources of information more valuable. Interest groups, think tanks and research institutes direct a stream of reports to government that largely remain unread.

The roots of this paradox are to be found in misconceptions about how the policy process typically works. In the traditional or ideal type of policy process, policy research is used as an instrument of the problem-solving process, to aid the making of choices. Decision makers set goals and engage in systematic thinking and research to identify the best means of achieving them. Information is supplied which is objective, and possibly conclusive, reducing uncertainties about the relationship between policies and outcomes. Public opinions and preferences are neither focused nor articulated, with the interests of a passive public communicated by professionals. The policy process itself is linear, stable, and incremental, reflecting the capture of the process by established political, bureaucratic, and professional interests.

The realities are very different, and may be characterised in the following way. Goals are ambiguous, and the means of achieving them uncertain. Decisions are less about projected consequences and more about process and legitimation. Politics is about shaping interpretations and expressing preferences. Information is never conclusive but reflects the indeterminacy of cause and effect relationships; it is infused with values. Public opinion can be highly attentive and mobilised by activists who seek to frame issues. The policy process is characterised by competition over agenda setting, over jurisdictions, and over interpretations. The positions that contesting parties adopt rest on underlying, and generally tacit, structures of appreciation and belief, giving rise to what Schön and Rein (1994) term ‘frame conflicts’.

This does not mean that policy research is without a role. But that role is less one of problem solving than of clarifying issues and informing the wider public debate. It serves best ‘not as a comprehensive, problem-solving, scientific enterprise, but as a contributor to an informed discourse’ (Shulock, 1999: 241). On this reckoning, policy research can be more effective as an instrument of the democratic process than of the decision-making process. Here then is a clue to a possible reorientation of focus, away from the narrow instrumentalism of ‘evidence-based policy’ towards what Smith (1996) termed ‘an...
evidence-based society’, in which debate is reasoned and takes due account of (contested) evidence which is available to the many, not the few. Given that there are many complex issues on which opposing public views are expressed with vigour there is much to be said for living in a society which is more, rather than less evidence based’. The accumulation and presentation of evidence itself, however, is no straightforward matter, and it would be foolhardy to suppose that the democratisation of evidence-based debate will be easy to achieve. At the very least, it demands a wider grasp of the specific techniques by which evidence is acquired, evaluated, and compared.

Evidence seeking: the review process

The several models of research–policy relations are founded on different assumptions about how knowledge is used and have, therefore, implications for how it is to be sought and, in due course, granted ‘evidential’ status. Social scientists have been all but overwhelmed by the information explosion of recent years (Badger et al., 2000). Reviewing the relevant publications (often uncritically) has often been accepted as a sufficient genuflection in the direction of the ‘evidence base’. The coming of evidence-based medicine – the precursor of the broader EBP movement – changed all that by placing emphasis on systematic reviews of research. This approach acknowledges the large body of existing research and seeks to identify, select from, and synthesise the findings from all relevant studies.

There has been some debate about the appropriateness of the systematic review as a tool for policy research (Boaz, Ashby, and Young, 2002). However, the key issue here is not the increasingly tired debate about the extent to which medical and social knowledge differ, rather it is the attachment to different models of the research–policy relationship, and the contrast of research styles inherent within them. The systematic review as it is currently conceived sits comfortably with the knowledge-driven and problems-solving models, and less well with the notion that research is a more political, interactive, and, at best, illuminating process.

Systematic and other reviews

All social scientists review their material. Indeed, the ‘literature review’ is customarily the opening chapter or part of the doctoral dissertation and often the first to be written. Yet, while some may start with clear questions to be answered, they more often involve general discussion of the subject with no clear focus. Formal search strategies are rarely devised and, as a result, such reviews often fail to locate all the relevant literature or take account of publication biases. Lacking clear selection criteria, these reviewers often fail to explain why certain studies are included, and others excluded. In some cases, the exercise is a self-confessed ‘trawl’ in the uncharted seas of knowledge. Crucially, many such reviews are essentially non-evaluative. Performed in order to reassure the reader (or the examiner) that the author is acquainted with the field, the literature is described rather than assessed, chronicled rather than evaluated. And, because study quality is not seen as a relevant issue, there is often no differentiation between methodologically sound and unsound studies.

One distinctive quality of the systematic review is that it starts with a clear question to be answered or hypothesis to be tested. The reviewer strives to locate all relevant
published and unpublished studies to limit the impact of publication and other biases. Where it is not possible to locate all the research in a given area, the review should explain how studies were identified and obtained, and highlight any known gaps. In deciding which studies to include and which to exclude the reviewer confronts the issue of selection bias. The quality of these studies is then assessed by examining, in a systematic manner, the methods used in primary studies, investigating potential biases in those studies and identifying the sources of any heterogeneity among the study results. The results are then synthesised, with conclusions based only on those studies that are methodologically sound. Thus, the systematic review takes a wide-ranging and comprehensive approach to searching for relevant research. It uses the technology now available to carry out global searches of the research databases. It aims to identify all the relevant research, not just the best known, well promoted and successful.

The term ‘systematic’ is principally justified by the manner in which the reviewer proceeds, stage by stage, with full transparency and explicitness about what is (and what is not) done, typically using a protocol to guide the process. The NHS Centre for Reviews and Dissemination (CRD) at York University describes a protocol as ‘a plan giving details of all the steps that will be followed in a scientific investigation’ (NHS, 1996). The main strength of developing a protocol is that it encourages the reviewer to be explicit about how the review will be carried out. Rather like action plans and other project management tools (Gregory, 1998), the protocol helps the reviewer to think through the different stages of the process at the beginning of the review, to anticipate problems and plan for them. A protocol is also a useful tool for promoting transparency, transferability and replicability. It outlines what the reviewer intended to do and makes it possible for the review to be repeated at a later date by others. These disciplines of systematic review ‘provide a robust challenge to anyone using different criteria for evaluating research studies to articulate their approach and defend their criteria’ (Badger et al., 2000). In theory at least, systematic reviews aim to follow the principle that the research design should be determined by the research question (Sackett and Wennberg, 1997).

There are many different approaches to reviewing evidence including rapid reviews carried out to meet pressing policy demands or to lay the ground for a more comprehensive, systematic review, or scoping studies and briefing papers specially commissioned to inform policy developments (Petticrew, 2001). So broad a range of approaches is inherently appropriate to the processing of social knowledge, with all the openness, contention, and indeterminacy that is the stuff of the more subtle models discussed above. Nevertheless, making social science more relevant by whatever means calls for the acceptance of a greater degree of discipline in identifying and handling published material. In particular, moving from the traditional mode of research catalogue or narrative review to the properly designed and systematically executed evaluative review calls for something like a revolution in social research practice. The systematic review, while not universally appropriate, provides a powerful driver (and established quality standards) for more rigorous research review practices.

**Future developments**

The new initiatives in evidence-based policy are constantly evolving and are open about the need to develop and refine the systematic review. For example, a key principle on which the Cochrane Collaboration is based is ‘ensuring quality, by being open and
responsive to criticism, applying advances in methodology, and developing systems for quality improvement.’ (see http://www.cochrane.dk). Similarly, these principles have been adopted by the Campbell Collaboration.

One notable challenge for the future is to develop ways of involving users in defining the problems and questions addressed by systematic reviews. Ann Oakley notes that there has been a tendency within Cochrane to prioritise the views and perspectives of professionals. She suggests, for example, that very different issues and research questions could be identified in the field of maternal care by drawing on the perspectives of mothers rather than doctors (Oakley, 1999). The recent development of the Cochrane Consumers Network may begin to address some of these issues. However, this is one example where there is considerable scope for strengthening the systematic review through dialogue between researchers from a wide variety of disciplines. Some areas of research, including the field of social care, have made significant progress in involving both the users of research and those affected by the public services in question, notably the service users. User involvement in research review is likely to be a priority issue for the new Social Care Institute for Excellence (SCIE) whose ‘emancipatory’ perspective adds a further layer of subtlety to our notions of the policy–research linkage.

At present, techniques for incorporating non-quantitative evidence, mixed-method studies and multiple perspectives lag behind the need to develop the evidence base. According to Oxman:

> While the Cochrane Collaboration should continue to focus on systematic reviews of RCTs and non-randomised controlled trials, coherent and transparent decision rules are needed for deciding when only to include RCT’s, when to include non-randomised controlled trials and when to include other types of evidence. (Oxman, 2000: 468)

The Cochrane Collaboration has a number of working groups dealing with specific issues of methodology, including the Qualitative Methods Network which focuses on developing standards for identifying, critically appraising, and synthesising qualitative research to complement the existing evidence included in Cochrane reviews (see http://www.salford.ac.uk/iphrp/cochrane/homepage.htm). Ultimately, though, the limitations faced by the evidence-based policy movement in attempting to gear up for the enhanced role demanded of it are practical rather than technical: they are questions of capacity.

### The capacity questions

Several kinds of capacity constraint have been encountered in these early stages of the evidence-based movement. These include constraints upon effective information searching and retrieval that impede the identification and location of the appropriate literature. A further important limitation is the absence of an adequate body of properly trained analysts.

### Information retrieval for evidence-based policy

Evidence-based policy builds upon comprehensive literature searching in order to identify what is most relevant to a given policy or practice issue. There are several barriers to the achievement of this objective, some technical, some arising from the
complexity of information needs, and some from the absence of consensus as to evidentiality (Ford, Miller, and Booth, 1999). Social science publishing is considerably more fragmented than in some of the scientific disciplines, where peer reviewed journal literature is the norm. It also includes practitioner journal literature, books, report (‘grey’) literature from a range of public, private, and voluntary sector bodies, and official publications. Fragmentation is getting worse rather than better as the social science literature expands and as new media develop. Key problems for those seeking comprehensive information include the rapid growth of internet-based sources and the increasing difficulties associated with ‘official’ documentation since the privatisation of HMSO.

The proliferation of information sources means that academic researchers are unlikely to find all they need close to hand. This is particularly true of grey literature which – while often containing studies of evidential value – has traditionally been given a low priority by university libraries and is not always available online. A growing proportion may be found in the British Library’s National Reports Collection but researchers are also likely to need knowledge of, and access to, specialist libraries and, often, the organisations that produce report literature.

Searching the social science literature is also more difficult than, for example, the medical literature, which has a relatively limited number of very large, high-quality bibliographic databases that are well indexed and thesaurus controlled. In the social sciences there is a proliferation of databases, including small-scale specialist services and relatively expensive commercial services, and their quality is highly variable. Many may well not be known to, or available in, universities. The better-known services (Social Science Citation Index, for example) tend to focus on the peer-reviewed journal literature, giving only part of the picture. Grey literature is particularly poorly served by these databases.

In addition, social science terminology is far more fluid and diffuse than is the case in the natural sciences. Some databases employ natural language indexing which reflects changes in terminology but requires considerable effort on the part of the user to conduct effective searches. Others use thesaurus control but this carries with it the danger that emerging concepts will be inappropriately indexed until they reach the attention of thesaurus editors. Those who doubt the importance of information skills to evidence-based social policy and practice – or to social science research in general – would do well to take account of experience in the longer established field of evidence-based medicine. The medical literature is less fragmented, more comprehensively covered by sophisticated bibliographic databases, has more exact terminology, and is better indexed. It is also widely recognised that systematic review and meta-analysis in medicine and public health require experienced information and library support. CRD, for example, provides such support with a high degree of professionalism and yet its information staff acknowledge considerable difficulty in searching social science databases effectively.

New professional standards for EBP

Behind these technical limitations lie deeper questions about what may be rightly counted as acceptable evidence. Professional consensus, received wisdom and the judgements of authorities play an important role on the lower slopes of evidence-based
medicine. By contrast, in the social sciences, agreed criteria for evaluating evidential quality are as far away as ever. Concepts are contested, and theoretical controversy generally welcomed as an indication of intellectual health. The notion of professional consensus is foreign to the practice of social science. Nevertheless, there is much that can be done to establish more robust professional practice.

The Cochrane Collaboration and others have stressed that training is necessary in order to enable researchers to use systematic review tools to their fullest potential. Cochrane spent ten years developing these tools in the field of clinical medicine and a similar, if not greater, challenge faces the Campbell Collaboration and other organisations seeking to promote systematic review methodologies in other fields. Training will be needed in both the short term, through professional development, and the long term through undergraduate and postgraduate courses. The training that is currently available has been developed largely in the medical field and is consequently primarily health focused.

Dedicated training provision is, however, beginning to appear at least for research and information professionals, even if the need to orient and equip the policy clients lag far behind. A far more serious issue, and one which will be less easily remedied, is the lack of an infrastructure for establishing professional standards for evidence-based policy research. However laudable the recent changes in ESRC funding for research training, the requirements have been framed within the closed communities of the established disciplines. There is little emphasis on the particular skills and techniques required by the evidence-based movement. Importantly, the Research Assessment Exercise places – at least for some Units of Assessment – heavy emphasis on traditional publication outlets and audiences, to the extent that the disincentives to working with users and reaching out to the wider community have become, if anything, more stringent.

Conclusion

New thinking will be required if the social sciences are to respond to the challenge set out in the opening paragraphs of this paper. In our view, that will require challenging some near-sacred assumptions about the value of established practices, from modes of research training to lines of accountability, from funding practices to assumed professional omniscience, from the relative value of different publication modes to the inviolability of peer review. It will require more of a partnership between research producers and the user community. Bridges need to be built between the two, bridges capable of carrying the weight of traffic in both directions. Established to play a leading role in taking forward the development of social science evidence for policy debate, the ESRC UK Centre for Evidence Based Policy and Practice will position itself to open up these discussions while developing appropriate methods and capacities to meet the needs of the moment.

It should not be thought, however, that the challenge is for social scientists to respond to an agenda set by government. Narrow instrumentalism not only curbs imagination, insight and creativity but is based, as we have argued, on flawed conceptions of the research-action relationship. Research can serve the public good just as effectively when it seeks to enlighten and inform in the interests of generating a wider public debate. Not evidence-based policy, but a broader evidence-informed society is the appropriate aim.
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