

# Voices and values: Linking values with participation in OR/MS in public policy making<sup>☆</sup>

Leroy White\*, Humphrey Bourne

*Department of Management, University of Bristol, Wills Memorial Building, Lewis Wing, Queens Road, Bristol, BS8 1RJ, UK*

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## Abstract

It is now widely accepted that public policy development requires both an appreciation of public values and an ability to involve insights from local people. Operational research (OR) has made some contributions to public policy development, and there has been a call to use problem-structuring methods (PSM) in this environment. This growing need for greater use of OR/management science (MS) in policy making is due to its ability to work with insights that are sometimes hard to pin down. This paper presents some research about values and local people's voices in public policy making, which the authors believe present a challenge to OR/MS and to the use of PSM. The paper will describe a framework for understanding values and exploring insights into including local voices in policy making using PSMs. Key to the framework is in the emphasis on differences, rather than similarities, in value priorities. A case study in which local people as well as decisions makers and politicians were engaged in a process to decide the future of a local hospital will be described.

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## 1. Introduction

Today, there is a growing demand for management science in the area of public policy making in the UK [1]. This is due to a greater awareness of the complex nature public policy initiatives (referred to as 'wicked' problems [2–4]). Arguments put forward by researchers [5,6] in support of this include the view that the management science processes may offer the possibility of better quality decision making, or that better analysis and application is possible through adopting an approach which ensures that practice is reflective about boundaries and values [7].

Social and public policy in the UK have focused on partnership as the mechanism for tackling difficult issues [8–10], recognising that the 'wicked' problems confronting policy makers require action across what have previously been separate domains in order to achieve 'joined-up' solutions [11]. This has led to a plethora of initiatives intended to address community regeneration, community safety, and so on [12]. It requires collective action through the involvement of agencies ranging from the community to the agencies of government. This view, although not necessarily novel (e.g. [13]), adds to the complexity of situations where it is unlikely that members of partnerships share the same objectives. There may well be conflict, not only about the policy but also about the nature of the problem, presenting dilemmas concerning the course of action to take.

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\* Corresponding author. Tel.: +44 1179 545 683.

E-mail address: [leroy.white@bris.ac.uk](mailto:leroy.white@bris.ac.uk) (L. White).

One dilemma—called here the dilemma of *voice*—concerns the involvement of the public in policy making, which is widely held to be beneficial in improving the impact of policy decisions [14]. The consensus around the value of public involvement and the commitment to listening to the public's concern in making policy decisions has probably never been stronger [15,16]. But there is a significant gap in our knowledge about how to ensure effective participation [17]. Furthermore, making a public policy decision frequently involves giving more weight to one value than to another. For example, reducing risk is often achieved only by restricting freedom of choice. This gives us our second dilemma—the dilemma of *values*. Such value conflicts arising from public involvement are a pervasive feature of public policy making [18].

Management scientists are interested in the dilemma of voice (e.g. [19]) and occasionally the dilemma of values [20], but seldom the two together. This paper presents some reflections on the issue of thinking about values and people's participation in public policy making, which the authors believe presents a challenge to operational research (OR)/management science (MS). As its focus, this paper will use a case study in which local people as well as policy makers and politicians were engaged in a process to decide the future of a local hospital. The policy making project took the form of deliberative workshops and large group processes using a range of problem-structuring methods (PSM) and participatory approaches. As might be expected, the debate around values proved highly contentious and difficult to resolve. The use of the approach emphasised a focus on differences, rather than similarities, in value priorities. This paper will focus on how a wide variety of stakeholders were included in the process and how value conflicts were resolved in relation to a 'live' issue.

## 2. The dilemma of (public) values

In a pluralistic society such as the UK, the climate for policy making is becoming increasingly uncertain [16,21,22]. One response is New Public Management (NPM), which represents a complex set of ideas from which a number of themes have evolved [23,24]. In its most common form, NPM introduces market-like disciplines, based on a critique of public services for failing to be efficient either in saving public money or in responding to consumer needs. In turn, the critics of NPM argue that the public realm is different to the commercial: governing is not shopping [25]. The debate has raised awareness of the tensions between efficiency and

democracy, and it is believed that no resolution will be achieved without some recognition of the concept of 'public value' [26] in terms of the goals and performance of public policy. At the root of the public value concept lie the tensions resulting from a pluralistic society's acceptance of multiple perspectives and agencies, which makes the issue of incorporating values in public policy making inevitable [22].

What values should be the concern of policy makers? Rokeach [27, p. 5] defines a value as 'an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence'. Values are social constructions and, while personal values relate to individual preferences and cultural values reflect the range of these held within a culture [28], social values are socially desirable phenomena [29]. Public values can be considered a subset of social values and this, in effect, puts no limit on which, within a *universe of values*, might be desirable for any particular public group. New [30], for example, suggests that public values might include any of those concerned with equity, altruism, security, efficiency, choice, autonomy and democracy. Meanwhile, Kernaghan [18] claims that public sector values can be divided into four categories: ethical values, such as integrity and fairness; democratic values, such as rule of law, loyalty, openness, and representation; professional values, such as efficiency and innovation; and people values, such as caring and compassion. Kernaghan's categories have some similarities with other attempts at organising a universe of values into meaningful categories of relevance. Rokeach [27], for example, in exploring personal and social values, suggests they may be self-centred or society-centred types in one dimension, and moral or competence in another. Later, Quinn and Rohrbaugh [31] developed a theoretical model of competing values in organisations, which has been extended by the work of Schwartz [28,32,33], who investigated extensively the relationships of value priorities in different populations. He found that "the structure of relationships among value types is based on oppositions between motivational goals that tend to be mutually exclusive" [33, p. 22]. Polarity leads to competing values.

The potential for conflict among public values is high, and it is common for situations to arise where satisfying one particular value, for example equity, necessarily means dissatisfying an opposing value such as autonomy. In such situations, trade-offs are usually required if groups of people with diverse value priorities are to reach common solutions. Schwartz [33] indicates that

the extent to which values can be traded-off in a negotiated settlement is likely to be related to how centrally individuals hold such values. More centrally held values carry a greater emotional significance, so the cost of trading-off is higher than situations where less centrally held values are concerned. Baron and Spranca [34] argue that for some people, certain ‘protected’ values may be so centrally and certainly held that they resist trade-offs altogether. In such situations, agreement may only come about if interested parties are able to interpret the decision in such a way that the protected value is not contravened.

### 3. The dilemma of voices

In recent years there has been growing concern about the effectiveness and legitimacy of public decision making or policy making [35]. Many, often inconsistent, criticisms have been aimed at the processes of policy making. In particular some say that decision making is insufficiently precautionary, others that it stifles innovation. Some argue that standards need to be tightened; others that they need to be made more consistent [36,37].

One view is that the legitimacy and sustainability of policy decisions increasingly depend on how well they reflect the underlying values of the public [38]. Experts and stakeholders provide essential technical input but their role is distinct from that of the public and cannot replace it. However, while it is recognised that the public needs to be more effectively engaged in the process of policy making [39], there is little understanding of how best to do this. It could be argued that a rational approach is appropriate, but scientific findings cannot substitute for the value judgements that need to be made [20]. Furthermore, policy may need to be informed by ordinary citizens as well as by organised interest groups.

Given the above, the case for public involvement in public policy making is difficult to challenge [39]. From the literature (e.g. [40]), public involvement in policy making is often supported on the grounds that it can provide a better understanding of the public’s concern, promote renewed interest in civic responsibility, offer power to otherwise disenfranchised people, and ensure that debates are conducted in an accessible way. On the other hand, there are many recognized pitfalls and concerns: lay people lack knowledge, especially about complex or difficult policy issues; they are likely to be subjective and self-interested, so unlikely to see the ‘bigger picture’; they might be biased or prejudiced; and they

might be too emotive and incapable of rational analysis. Nevertheless, on balance, the case for greater public involvement holds sway and attention is now centred on overcoming obstacles to greater involvement, rather than on the merits of the principle itself. A common thread weaving through current debate is the need for new approaches that emphasize two-way communication between policy makers and the public as well as deliberation among participants.

The expression ‘public involvement’ is vague in that it could refer to either the involvement of *individual* members of the public (as citizens) or the public as a *community* (a collective body). The first conception usually refers to the individuals as consumers and/or users and gives rise to the problem of aggregation. This has emerged, in part, from the neo-liberal consumerist and customer-centred public sector management philosophy that has dominated the 1980s and 1990s [41,42], and from a governance philosophy that fosters an obligation between individuals as citizens and government, and is closely associated with rights [43]. The second conception gives rise to the questions of representation: if it is not possible for all people to participate, who should represent them and how? Or do we hope that the people will participate as communities? This could be seen as a communitarian view which emphasizes participation for the collective rather than for individual purposes [44,45].

### 4. Towards an appreciation of (public) values in decision making

We now turn to linking the discussion on voices with the debate on values in public policy decision making. The link can be fruitfully developed by cross-classifying ideas derived from the literature discussed above according to two dimensions: voices and values. In the following pages we explain the dimensions and construct a values graph.

*Voices dimension: individual vs. community.* Public organisations can no longer sustain the ideal of being solely professionally focused as they have before, because users demand choices and the recognition that their views matter. However, if user opinions are to be given formal authority or weight (i.e. to ensure genuine participation) then value conflicts become unavoidable. Representation as individual members of the public places self-centred values, such as rights, choice and freedom in the frame, while representation in the form of the public as community does the same for society-centred values such as equity, cooperation and social

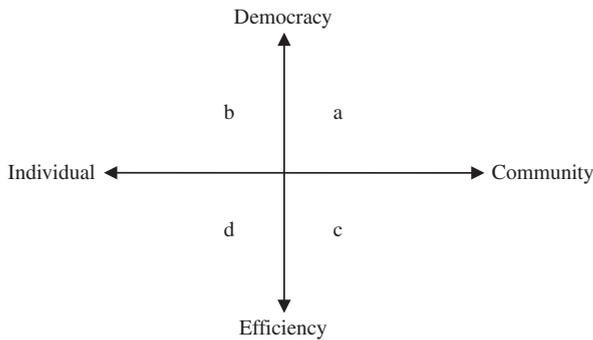


Fig. 1. Values graph.

justice. One area of conflict, therefore, occurs between the poles of individual vs. community values.

*Values dimension: democratic vs. efficiency.* A second dimension of conflict occurs between those values concerned with the democratic process, and those concerned with organizational efficiency. Values associated with the democratic process include openness and consensus, while those associated with efficiency include autonomy, control and accountability. For example, a highly democratic process that involves several rounds of consultation with representatives from all parts of the community may be viewed as ‘too expensive’ or as ‘not efficient’ at getting things done by those who value efficiency. Alternatively, and conflictingly, a democratically made decision, one that paid attention to the process of openness and consensus, may mean that different decision-making bodies varied in their conclusions, or may mean that a morally indefensible decision is made.

Together, the dimensions of individual vs. community and democracy vs. efficiency can be combined to form the values graph, as shown in Fig. 1. This sketches out four types of values, which for convenience will be labelled here (a) community-based democratic values, (b) individual-based democratic values, (c) community-based efficiency values and (d) individual-based efficiency values.

To summarise the discussion so far: associated with the need for more effective public policy making (or governance) is the need to handle public values (particularly the tension between democracy and efficiency) and bring in local voices (whether as individuals or as a community). This gives rise to a challenge on the conventional understanding of the inter-relationship between efficiency and democracy. The formulation of what constitutes the way forward will raise new dilemmas, which can only be resolved through deliberation involving a wide range of stakeholders, and actions that

depend on mixing in a reflexive manner a range of intervention options. The question is how to elicit these values.

## 5. Developing OR/MS approaches to tackle voices and values

The OR/MS community has not ignored the issues of values and voices. In an indirect way, these issues have played an important part in the development of the discipline (see [46–51]).

In a recent report, Butler and Williams [52] discussed the problem of reconciling fairness and equity with efficiency in attempting to split costs for shared facilities. The problem was formulated as a Linear Programme with an objective function minimising the maximum inequity. This way of handling the values trade-off has been discussed and criticised at length by Ackoff [46]. In relation to public policy making, he states that values should be incorporated in the theories of decision making. He also states that public policy strategy must not only identify conflicting values, but must also delineate those values that are important.

Ackoff’s views on voices was seminal in that he claimed that decision makers should seek to involve stakeholders as participants rather than treating them as constraints. In the same way, many management scientists (e.g. [53]) have drawn on the insights of Vickers who states that ‘many who have been affected by the choices of the few have become increasingly able and ready to insist that their manifold interests be taken into account’ [48, p. 31]. This has led to a call for processes to be more democratic and participative.

In linking voices and values, Ackoff, through his concept of an idealised design, states that the incorporation of stakeholder’s values in planning is crucial [20,46,47]. It provides an opportunity for participants to express their own preferences and values, removing the need for others to do so for them. Further, participation is crucial to generate consensus by allowing the stakeholders to focus on values rather than short-run objectives. He claims that here is usually more agreement about values than there is about short-run objectives and means. He also claims that when agreement is reached over values, differences over objectives are more easily resolved. However, this version of stakeholder involvement has been criticised by Eden and Ackermann [63] as ignoring the complexity of values within a multi-stakeholder policy-making environment. In particular, they state that stakeholders have varying degrees of power and interest which will place them in conflict with one another.

They argue for a managed response aided by stakeholder analysis.

In the UK, problem-structuring methods (PSM) emerged in recognition of the fact that many problems are ill-defined, have many stakeholders, and exhibit complexity and uncertainties [54]. Although taking a number of different forms, PSMs involve the building of visual models to help understanding, and operate in group settings to encourage participation and learning. Some years ago, Rosenhead made the case for the use of PSMs in the public policy arena. There may, however, be some doubts to whether PSMs have lived up to their promise. There are very few reported applications of PSMs in the policy arena (with exceptions—[19,55–57]) and there is the difficulty in distinguishing success and failure in relation to policy-making problems [58]. However, it is claimed that PSMs were designed to assist policy makers in agreeing the nature and limits of the complex problems they faced, and to secure shared commitment to action [59].

A central feature of PSMs is their emphasis on the participation of a wide range of stakeholders [9]. Indeed, for practitioners of PSMs, decision making and participation are linked in such a way as to render the idea of consensus or accommodation of decisions unachievable without processes of participation to reinforce and develop a collective sense of identity, interest and place. The argument is that participation is good both for individuals and society. Eden and Ackermann [63] argue that the justification for participation is so that procedural justice and rationality are assured in the decision-making process. Participation, however, can mean different things to different people or groups.

Thus, in OR, the issue of voices cannot be overlooked in developing the decision makers' 'ownership' of the process outputs. It has been claimed that through their transparent tools and participative process, PSMs have the capacity to build trust and understanding between culturally diverse parties [9,59,60]. However, there is a limited discussion on voices in the OR literature where a much wider group must be considered or where decision making involves the wider public. Of the few that have addressed this issue, it is claimed that as the groups get larger the whole question of voices becomes more complex and more critical [19,61]. There is still much more research needed in this area.

Regarding values, it is often claimed in the OR literature that differences are embraced and complexity is managed through careful facilitation. Values are explicitly addressed in OR methodologies such as the Strategic Choice Approach (SCA) [62], JOURNEY [63] and Soft Systems Methodology (SSM) [64].

In SCA, one of the three major 'uncertainty categories' is the *uncertainty due to related values* (or UV for short). This is recognised as a political response to conflicting objectives and interests where there is no clear enough view of the direction to take [62]. In SCA it is assumed that decision makers continually face practical choices about how far to invest in different levels of response to uncertainty. The benefits are conceived in terms of more confident decision making, whereas the costs may be the delay in taking the decisions.

Differences in values will normally surface in the 'comparing mode' of the methodology, where decision makers address concerns about the ways in which consequences or courses of action should be compared. Any differences of opinion are indicative of competing values and a need to manage uncertainties due to values. In the methodology, facilitation and pair-wise comparison (i.e. comparing pairs of different options, and eliciting reasons why the choices were made) may surface these values, but in general they are deduced through attention to the views and artefacts produced from the intervention process. The facilitator seeks to understand values through an indirect approach of interpreting the words and actions emerging out of the intervention [65].

With JOURNEY, values of individuals are elicited by means of a process of laddering [63,66], which allows for the development of cognitive maps representing 'that part of a person's construct system which they are able and willing to make explicit' [63, p. 97]. The maps seek to represent the beliefs and values of the individual. The method relies on identifying elements, then finding a point of entry into an individual's personal construct system, typically by means of a triadic sort of the elements [66,67] and tracing the hierarchy of evaluative constructs to the most superordinate level. The method is most effective in making explicit parts of individuals' construct systems and eliciting the values that are found at the top. It is stated that 'the most fundamental property of the map is the value systems embedded within it' [63, p. 95]. The map should reveal the value system of the individual.

For work in a group setting, a composite map can be constructed from the individual maps. It is claimed that the group map formed will contain the core belief statements and an emergent aspiration system. If individual interviews are not possible, it is suggested that group interviews could be guided by the same laddering principles as for individual mapping, although it is acknowledged that in a group setting it will not be possible to collect the richness of individual maps. The process is described as using a combination of 'nominal group technique' and oval maps called Oval mapping

technique [63]. This will produce ‘cause maps’ which can be explored to detect clusters of constructs, and organisational values and beliefs [63, p. 101]. However, there are potential weaknesses in using the method for eliciting value priorities in a group situation. The development of a shared cognitive map or ‘cause map’ means that the sense of the idiographic can become lost [68], and the process of aggregation may involve discarding certain values not shared by enough of the group, regardless of the intensity with which they are held. This last point is particularly important where the values concerned may be of central importance to those who hold them.

The pair-wise comparison in SCA and laddering in JOURNEY are two approaches for surfacing values. They are essentially indirect methods which attempt to identify value priorities through interpreting implicit symbols and actions, which are often salient as artefacts. It appears, however, that in a large group setting, some value differences that are surfaced may be lost. For example with JOURNEY, the authors state that ‘the group map... [or] cause map act as a model of *some* of the aspects of both individual beliefs... , and group beliefs’ [63, p. 101]. As the group gets bigger or desire to have local people, losing some aspects of individual beliefs could be critical and could increase anxiety or tension within the group.

In conclusion, we have explored the importance of voices and values in public policy making. The values graph links two concepts as dimensions of the graph. The first relates to the tension between individual and community voices. The second demonstrates the dilemma represented in the NPM literature of the tension between democracy and efficiency values. This graph is a new way of being able to explore the concepts of voices and values together. In particular, in a (large) group setting it explicitly addresses the need to hold onto minority value differences. We then explored how OR/MS has dealt with the problem of voice and values, in particular the development in the UK of PSMs. The next section of the paper will be a case study describing how the issue of voices and values were dealt with in a ‘live’ public policy study.

The case study presented below serves two purposes. The first is to describe how the values graph was used to deal with a difficult public policy decision. In the case, differing values between the groups involved in the decision, and amongst individuals within these groups were explored by using the value map to identify differences, and by encouraging differences to be voiced. Rather than focus on those values that appeared to be shared by all parties and individuals, the approach here

was to permit those that differed to remain visible. In this way, the decision-making process revolved around, and sought to incorporate, different value priorities.

The second purpose is to further develop an understanding of the relationship between voices and values. The case is a piece of action research [69], and thus derives insights from naturally occurring data. The researcher actually intervenes in the issues studied, working with the participants on matters of genuine concern to them. The data has the potential to provide both new and unexpected insights so theorising prospect is high, leading to emergent theory. Rigour is ensured through triangulation and the data (i.e. reports, outputs from the workshops and reflections) were held in Atlas/ti [70], a qualitative analysis software package. The software was used for storing and coding the data. The analysis involved looking for patterns about the intervention, as well as the facilitator’s own learning from the intervention. It is felt that this approach is important in that although we started with concepts derived from a review of the literature, we were interested in building up an understanding of what worked during the intervention.

## 6. Case study: community hospital project

The case study described here relates to a proposed development of a hospital site in South London. Plans were being drawn up for the site to be developed into a community hospital, bringing together a wide range of intermediate and primary care services. A key element in developing the plans for the hospital was the inclusion of the views of the local community. The Community Hospital Project (CHP) was established to develop the plans. Three groups were set up to deliver the project, these were

- Strategy Group (SG) made up of board directors from local statutory agencies including the primary care trust, the hospital and the local authority,
- Service Delivery Group (SDG) made up of representatives from the local health and social care services and voluntary organisations delivering services on behalf of the statutory agencies, and
- Community Involvement Planning Group (CIPG) made up of representatives from local groups including carers organisations, older people groups, black and minority ethnic community groups and the local Community Health Council.

A CHP committee was formed from representatives of the three groups. The one of the purposes of the committee was to develop a strategic outline case (SOC) to

present to the government to review for funding, with the particular aim of ensuring that all voices were represented. A public meeting was organised shortly after the committee was formed. It was held at the site of the current hospital and the detail of the meeting was advertised in the local newspaper. The meeting was introduced as a preliminary consultation on the future of the hospital. It was stressed that it was important to have the local community’s backing. However, the meeting was poorly attended and most of the attendees belonged to a pressure group formed to resist the closure of the hospital. They were highly suspicious of the plans (which were expressed vaguely to them) and threatened to exercise a veto, should the plans go ahead. Some of the participants feared that changes would be made without the involvement of the community. It was clear to the committee that any accommodation or consensus on the way forward was likely to be very difficult.

In recognition of the need for a process to take things forward, one of the authors (LW) was asked by the committee to provide advice and support to the project. His remit was to support the three groups by working with each other and helping them to take on board the views of the community in the development of the plans for the hospital. Some members of the committee already knew him. He was invited to a couple of committee meetings and sent documentations on the project. Initially, the committee thought that it would be best to employ the author to introduce some processes and techniques for exploring how the groups could work together in developing the SOC. It was envisaged that the three groups involved in the project would use PSM workshops in order to assess how the community views could be taken on board. The particular challenge faced was how best the use of PSM was in conjunction with other processes in order to support the practice of policy development.

It was later decided that there needed to be at least two phases of workshops: first, to explore the values that each group brings to the project, and then to identify the ways to involve the community in the development of the plans. The terms of reference agreed for the first phase of workshops included reviewing common and different values of the different parties, and identifying how the views and options could be incorporated in the SOC for the hospital. The second phase of workshops included improving mutual understanding of the positions and views of the participating stakeholders, and the outputs included the preparation of a list of plausible options for the hospital together with a set of criteria for evaluating them. The options would then be presented at the public meeting, the findings from which would inform the SOC.

**7. Methodology**

The premise of the approach adopted was that a focus on values in a group setting provides the actors with both a cognitive and affective appreciation of the issues that they confront. In a group setting they would gain an appreciation of those values that are shared, and those values that are fundamentally different. However, it was felt necessary to bring the three groups together carefully in order to encourage them to understand the similarities and differences of interest of the other groups. For the earlier stages of the project, it was seen by the committee that the management of the process was far more significant than management of the substantive content. However, although the focus of the brief was the production of the SOC, the content would also need addressing. Thus, the project required a careful, phased approach with firm outcomes for each phase. The approach was represented in the following three phases:

	Phase 1: dealing with values	Phase 2: dealing with different voices	Phase 3: developing the SOC
Event	Individual interviews 3 independent workshops 1st inter-group workshop 2nd inter-group workshop	Community workshop	Public meeting
Process	Semi-structured interviews Values surfaced through pair-wise comparison and use of values graph Elements of SCA	Modified form of open space technology SCA	Modified open space
Outputs and outcomes	Concept map Values graphs Matrix of options Progress package	Modified matrix	Reports SOC
Involvement	Professionals from the 3 planning groups	Members of the public, members from community groups and members from the 3 planning groups	Local MP, members of the public and members from the 3 planning groups

## 8. Phase 1: dealing with values

### 8.1. Interviews

A period for holding interview meetings allowed the process for the interventions to be developed. It was felt that interviews provided added value to the design of the process, making a better informed and hence more inclusive use of process facilitation possible. They allowed a considerable degree of access and openness to be gained resulting in an amplified understanding of the issues. Interviews were conducted with a purposive sample from the three planning groups and included senior managers, community sector representatives and local activists. In total ten interviews were undertaken. A lot of information was gathered on what services should be provided in the new hospital and what could be the main issues in blocking any proposals developed by the CHP committee. It also led to the identification of four other stakeholders to be interviewed.

### 8.2. Initial workshops with the three planning groups

The interviews were summarised in report form and distributed to the three groups. A further summary in the form of a concept map [66] was developed for the workshop. The concept map was a graphical representation of the report which organised the ideas into a commonsensical and flexible structure, which allowed the connections to be visible. The map highlighted that there were two clear differences of opinions. The SDG wanted autonomy over the final decisions and they mistrusted the views of those who claimed to represent the community. The CIPG wanted a transparent, inclusive process and the widest representation possible of the community's interest. Given these differences the committee agreed that initially, separate workshops with the three groups were the best way forward.

The workshop design aimed to provide an opportunity to discuss what principles and values the project shared or did not share. The process used was a 'dialogue' approach; small group work and action planning. The small group work involved the 'comparison' and 'action-planning' sessions used in the SCA. In particular, pair-wise comparisons of certain options for the hospital were used to elicit opinions and values held by the groups. The method works by comparing pairs of different options, and by eliciting reasons stated for the choices made. In the workshops a list of options were developed from debates among the participants focusing on the concept map. The options were generally a mixture of needs and problems. The pair-wise comparison

was explained with examples, i.e. people must choose between two options with respect to which is the greatest need or greatest value and why. Once the idea of pair-wise comparisons was grasped, the process worked very well and efficiently and people provided very rational reasons for their choices. In one of the groups (CIPG), the list of needs and issues was too long and so the exercise took quite a long time to complete. Although a long list is not recommended, as the number of comparisons would be vast, it seemed that the method was effective for identifying needs and eliciting values statements within a common interest group. Problems may arise with this technique if the participants have conflicting interests. In each of the three workshops, a list of values was drawn up as well as a tentative list of options.

### 8.3. First inter-group workshop

The groups were brought together for the first inter-group workshop in this phase. In total 35 people attended the workshop. It was necessary, at this stage, to design the process in order to bring the three planning groups together to convey their views of the project and the values. The first part of the workshop involved sharing the findings from the previous workshops. The key concern here was to ensure that the three groups shared and absorbed the perspectives of the other groups. In order to support the sharing of perspectives it was important to manage the circulation of participants. This was done via three simultaneous discussion sessions whereby each planning group was allocated a space within the workshop room, a spokesperson from one of the other groups provided feedback, then the group were allowed to ask questions or challenge premises. The process was repeated and each spokesperson rotated to the group they had not yet fed back to. In the final rotation, the spokesperson returned to their original group to provide feedback from the discussions. This form of rotation allowed and supported non-conflictual sharing of information that is particularly useful when there is a large group of people with varying perspectives, issues, values and power.

The next part of the session involved exploring the values that emerged. The values graph (see Fig. 1) was introduced to facilitate this part of the session. It was used in a similar way to the uncertainty graph in SCA for work on community involvement conducted for an area-based initiative [71]. Along one dimension are the competing organisational public values of democracy vs. efficiency, and along the other dimension are the public values, with individual and community as polar

opposites. At this stage, the values graph served primarily as a map; later it became a sense-making device and a learning system. Each of the values (as statements) was explored and the group was asked to place them in a quadrant and highlight how they were important to the project.

There were differences found between the statements produced by the CIPG and the SDG, but as will be shown below, there were also differences found within each of the groups. Most of the value statements produced by the CIPG were placed in the democracy/community quadrant. The members of the group called for a need for greater emphasis on openness and transparent decision making and a process that could be trusted. Here, the CIPG saw these values, and saw them as most important, as also contentious, protected and difficult to shift. They feared that the SDG would want autonomy over the decisions on what should be included in the SOC. In fact, many of the values statements produced by the SDG were also placed in the democracy/community quadrant. The statements produced by some members of this group indicated the need to have transparency and a process that people could trust. However, other members of the SDG were worried that any attempt at openness might be hijacked by a minority, through an individual interest which would not be in the interest of the community or the project. Therefore, these members of the SDG posted values in the efficiency/individual quadrant, wishing the group to maintain autonomy over the decision-making process.

It emerged through discussion that the groups were willing to hold the values of openness, democracy and trust as central, and that there was a fragile consensus or accommodation in accepting that these were common values to the project. This accommodation, however, was tested by a minority interest which threatened the whole project. The issue of how the land would be used was, for two representatives of the CIPG, a pertinent issue, although the majority at the workshop perceived this as relatively unimportant. However, the two members of the CIPG felt very strongly about this issue. For them, it was about who would own the land and how it would be used (e.g. would it be sold off to private developers). It was difficult to discuss this issue, which was placed in the democracy/individual quadrant and was referred to as rights. As the majority of the group did not support it, any trade-off here appeared difficult.

If one imagines the values graph as a compass, it would appear to be pointing towards the democracy/community quadrant, indicating that the dominant value in the group was openness. During the discussion

of the values graph a number of principles were surfaced. For example, the participants accepted the need both to justify decisions publicly and to explain how the public's concerns had been addressed. It was here that the participants began to explore where the trade-offs in values were going to occur. One, in particular, concerned the trade-off between including planned components and offering choice for the community, i.e. between organisation autonomy and public preference. The groups agreed that this needed to be done so as not to raise expectations too high. Another trade-off discussed was between the public's perceived view that the decision makers should make the decisions, usually heard as, "you know the answers so get on with it", which needed to be balanced with a demonstration that the public had been involved in the decision-making process. Overall, however, it was accepted by all groups that there was a clear need to acknowledge the different values between and within the groups, and to explore how they could collectively make decisions while pulling all the views together. There was a clear recognition that the acknowledgement meant that protected values were not actually being compromised, leading to a sense of a group value and a re-interpretation of the outputs and outcomes of the project.

At the start of the process the groups were concerned about how they would work more together. By the end, the groups decided that the way forward would be building on those values they shared, deciding on the principles and determining how to priorities the proposals. It was a situation where some values were shared and others were not. Yet, this would not impede progress provided they were acknowledged and given voice. It was clear that the participants shared values relating to openness, trust and equity, and that trade-offs between autonomy and choice, and accountability and authority were needed. The specific roles for each group in the development of the SOC were also clarified and agreed. Thus, it was felt that the integrity of each group was maintained. Finally, it was felt that the project was gaining momentum and that trust between most of the participants was developing.

#### 8.4. *Second inter-group workshop*

The material produced from the first inter-group workshop was distributed to participants and comments were requested. This led to a paper on values and principles for the project being produced. It was reported back to the CHP committee that the groups were less fearful of each other and that the key players were won over (particularly from the SG). It was observed that

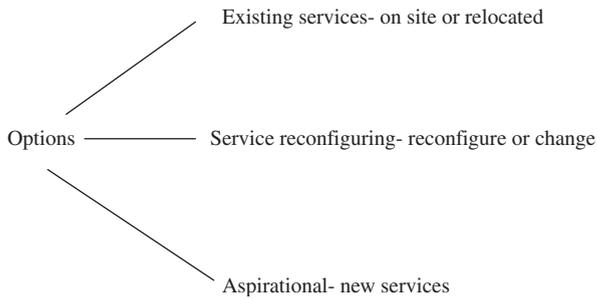


Fig. 2. Service options.

certain minority views were beginning to take root, and some options that were not considered before were being discussed (e.g. complementary medicine and a birthing centre). Given this, it was expected that the second inter-group workshop would be important and the committee wanted it to involve a wider membership.

Thus, the second series workshop had strong representation from each of the planning groups. In total 45 people were involved in the workshop. In order to bring everyone up to speed, the paper on values and principles was sent out prior to the workshop, and the facilitator (LW) encouraged the CIPG to begin the day by responding to the principles produced, followed by the SDG presenting a list of possible services for the hospital. Thereafter the format for the day was as follows:

- discussion on the list of principles,
- discussion of the service options and the values/principles in small groups,
- consolidation of the day's outcomes using the SCA.

The principles were discussed at length and there was a great deal of agreement among the participants with only minor amendments made to the list. Many people from the CIPG commented on how close their principles were to the SDG.

The participants were organised into two groups comprising representation from each of the planning groups. One of the groups worked on the services list, which was discussed using pair-wise comparison, and the other groups discussed the values/principles using the values graph. In the service-list group there was an engaged discussion about the options which illuminated some of the issues confronting the choice of services. In terms of options for the hospital they saw that there were three groups of choices (Fig. 2). These were: to keep the existing services (on-site or relocated); to reconfigure the services; and to identify new services (bring in services that do not exist yet). From the discussion it

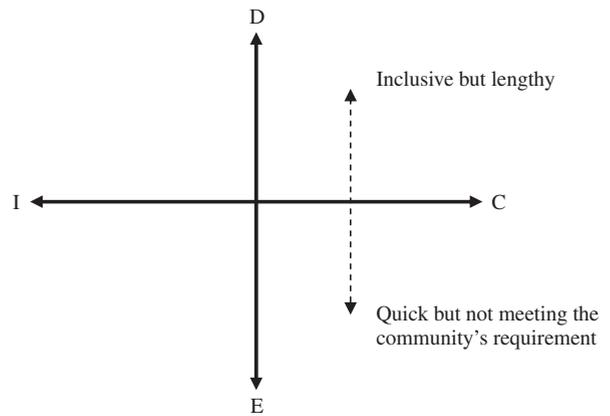


Fig. 3. A values graph produced in the small-group session.

was possible to draw up a list of tentative criteria (in SCA these would be comparison areas). Some of these were: whether the choice(s) would meet local needs or have local support; whether they would likely to be successful; and whether they would be affordable. These were recorded on a flip chart and it was stated that they could prove relevant to the choice between alternatives.

The values/principles group discussion led to topics with aspects that seemed relevant but not currently possible to resolve. These aspects were captured on the values graph. In particular, there was pressure on the service providers to be democratic and to have an inclusive process while at the same time needing to be efficient (see Fig. 3). The group discussed the need for a trade-off between being open and inclusive, and minimising the length of time for conducting the process of consultation and producing the SOC. There was a strong feeling that the sooner the decisions were made for the hospital the better this would be for the planners and the community. However, the process should not be rushed to ensure that there was proper consultation.

During the break between the small group sessions and the plenary, the facilitators produced an option graph of the three main areas of discussion from the small group sessions (Fig. 4). A matrix was also produced with a list of possible services along one dimension and the criteria (comparison areas) along the other.

In the plenary session held after the break, the facilitators started with a short feedback from each of the groups. The option graph was then presented and the participants discussed it and agreed that it was a useful representation of the current problem focus. There were options available within each of the decisions, though no attempt was made to identify which combinations were infeasible. The option graph served its purpose by ensuring that the decision area—land use—was still in

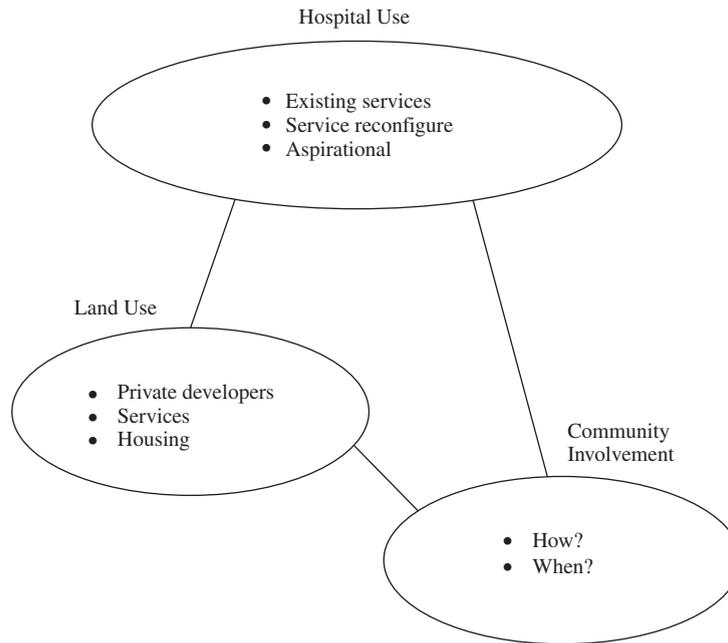


Fig. 4. Option graph.

focus. During the discussion of the option graph, a few more comparison areas (criteria) were identified. The matrix was then introduced and the discussion that followed made no attempt to evaluate the services against criteria, because it was felt that there was a need to get the community's input on the options. An action plan was produced (in SCA terms—a commitment or progress package) and the participants agreed that the 'matrix' should be an on-going (living) tool. The matrix became the means for collaboration.

## 9. Phase 2: dealing with voices

### 9.1. Community workshop—a modified open space

Working with large groups, particularly those that involve the public and/or the community is non-trivial and problematic [19]. There are normally two fears that go with large group work: anxiety of individuals in the group and the loss of individuality. Experience has shown that, with regard to public involvement, those working with large groups need to pay attention to the social processes in order to ensure that there is an equitable sharing of information and openness for social negotiation. This is key for the participants to learn about the problem situation and understand the values and perspectives of the other stakeholders [19,61].

It was clear that the process used up to this point had worked with the widest representatives possible and included professional interests (SG, SDG and voluntary sector) and non-professionals views (through the CIPG which had members from group which were under-represented). Local peoples' interests were also represented in the discussion and indicated in the principles and values paper produced and in the comparison area of the matrix, i.e. local acceptability, and inclusiveness. The next phase was to incorporate more community views. Through the work on values and principles, the issue of involving local people did not appear to be a problem with the CHP group members. There was a clear shift in attitude of the group members and the committee. Also, the committee acknowledged that a trade-off was needed between inclusivity and openness, and the need for a fully engaged dialogue, which may not be possible in a large group. Thus, a modified Open Space was suggested, for which some members of the committee were trained by LW to be facilitators. This was a process used by LW in a previous study [72]. The event was advertised locally, in community centres and local shops and also by the members of the CIPG through the networks of their members.

The event itself presented an opportunity to share information and discuss options in small groups. It took place a few weeks after the previous workshop and over 100 people attended, representing over 30 interest

groups ranging from the elderly, people with chronic illnesses, people with mental health problems, black and minority ethnic groups and local members of the communities. The matrix was circulated to the known interest groups before the event. They were also given an opportunity to present their views in what was designed as a 'market place' of ideas. The market place gave any participants who wished space in the hall of the event to set out their ideas (like a market stall) for what should be included in the hospital. The other participants, including the members of the planning groups, would be free to make choices about which issues they wish to engage with and work on. During the event, the market place was simulated and the participants were allowed to roam around and join any debate they wanted. They were encouraged to circulate and learn and comment on the ideas that were presented by different groups. The participants were free to visit whichever stall they wanted and could even set one up themselves if they felt that a particular issue or option was not represented. Overall, there were over 30 different issues and options discussed in the market place. Following this, small groups were arranged to discuss the merits of the ideas presented. The groups were self-facilitating, thus they used different logic in arriving at the recommendations. The plenary session that followed discussed the options to put forward in a matrix.

Key to the success of the workshop was that the process was open and transparent. There was a clear and explicit sharing of the principles and values and the design of the workshop endorsed these principles by giving voice to a number of different groups. It was clear by the end of the workshop that the principles were fully endorsed by the participants.

### 10. Phase 3: the public conference

The public conference was organised in order to discuss the options and to gain the views of the local people. The aim was to arrange an event different to a public meeting, where typically the public is invited to hear about something that has already been decided. The details of the options and the project had been publicised and circulated via the stakeholders. The format of the day involved presentations by the three working groups followed by small group work and a subsequent plenary session. Over 200 people attended the conference including the local MP and the statutory commissioners. The conference, and indeed the process, had been characterised by a high degree of anxiety in that there had been doubts as to whether an outcome would emerge.

As might be expected, a great many issues and differences in options and values were being debated. However, without underestimating the degree of difficulty associated with the process, a large number of positive suggestions were made and differences acknowledged. There was a strong support for many of the options presented while others emerged through the course of discussion and reflection, and particularly through the attention paid to those voices that might normally be ignored. The issue of land use, which threatened to undermine the whole project, was well-handled by the participants, who demanded that any decision about the use of land be transparent and morally defended. Many minority interests were taken on board.

### 11. Impact of the project

Two reports of the study were produced, a short version, for general distribution to the public, and a longer version for the CHP committee. The latter was used by the committee to draw up the SOC, which was sent to the Department of Health within a month of the final public meeting. The CIPG commissioned nine community development workers to outreach local community groups and discuss the findings of the study and its recommendations. The project committee decided to disband shortly after the production of the SOC. The CIPG became the steering group for the Patient and Public Involvement initiative (PPI) for the local primary care trust. The results from the study were fed into Patient and Public Involvement Strategy. In fact, the new manager for the PPI initiative was drawn from the CIPG. Although public involvement was stressed as key in the plans for the Primary Care Trust (PCT) [73], the idea of a public and patient involvement initiative was accepted with relative ease as a direct result of the study, and the newly appointed manager had a direct link to the board of the PCT. Finally, the SOC was approved in 2004.

### 12. Discussion and conclusion

Greater involvement of stakeholders in public policy making adds further complexity to the process of decision making by increasing the potential for conflict about the nature of the problem. This give rise to dilemmas concerning the extent of public involvement in the process and the weight given to inevitable differences in values resulting from greater involvement, here called the dilemmas of voice and values. The case study describes a situation involving a large number of stake-

holders in a process that makes use of the values graph in order to manage the many voices and values throughout the decision-making process, and allows differences in value priorities to be kept visible.

A key objective of the approach was to ensure that all voices were heard and the full range of values explored. At the start of the work there was concern that, because there was a heavy weighting of representatives from statutory agencies, alternative views may not be considered. In fact, alternative and minority interests did come to the fore and even the ones that might have threatened the process were addressed. Although it may be difficult to make conclusions in the absence of a full evaluation, it was observed that a great deal of the success of the process was in part due to the flexible and adaptable nature of the mechanisms introduced, and to the attention given to different voices and values which was explicit from the outset. The experience points to the need to approach the process of working with large and diverse groups of people in an inventive manner.

The case study indicated that the stakeholders have different power bases yet at the same time share an interest in the process. While other researchers [63,64,74] adopt a more formal analysis of power and interest in order to prevent the decision-making process being blocked by stakeholders exercising a veto, in this study a more implicit approach was adopted. From discussions with the committee a three-phase approach was developed for the decision-making process, which helped retain inclusion while keeping the issues focused and allowing for some process management. This process ensured that policy was informed by the community as well as by organised interest groups. In the workshops it was found that power and interest were contained. It would be interesting to compare this outcome to the kinds produced by stakeholder analysis used in other processes [74].

In feedback about the processes, many of the members of the three groups found the work stimulating and encouraging, as well as wholly appropriate to the project's aims. In particular, they found that the method of continually developing the process—to reflect developments in learning—a more useful approach than one which would have been prescribed and inflexible from the beginning. Although the use of post-its and the matrix were perhaps a little simplistic, many agreed these devices provoked good inclusive dialogues.

Pair-wise comparisons of options proved effective in allowing the different values held in the group to surface. In larger groups, the number of issues raised for comparison can be huge, requiring so many comparisons that the process can become tedious; facilitators

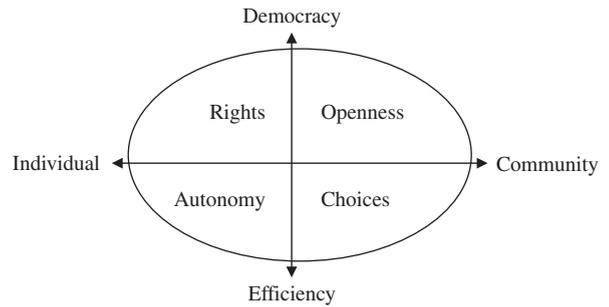


Fig. 5. A modified values graph.

may need to manage the initial lists to avoid this situation. The process does help ensure, however, that a full range of values is elicited and, as none are discarded, minority values are given voice.

Significantly, the values graph provided a framework that aided thinking about values. The values graph sets out the key dimensions of democracy vs. efficiency values, and individual vs. community values, which are critical in conceptualising public policy making. It was found that the values graph provided the means for the groups to keep in mind all values while exploring areas of conflict and congruence. In turn, the process of using the graph allowed for a refinement of the framework to emerge, as it became clear through the process that each quadrant focussed on a key public value. In quadrant (a) (from Fig. 1), the dimensions of democracy and community emphasise involvement and society orientation, so focus on the public value of *openness*. Quadrant (b), on the other hand, emphasises the individual and democracy and focuses on *rights*, while quadrant (c) gives rise to *autonomy* out of the dimensions of individual and efficiency. Finally, quadrant (d) reveals the tension between community and efficiency, which results in the need for *choices* to be made. This revised framework is shown in Fig. 5. It was found in the case study that when this framework was used as a values graph, the service providers tended to focus their values on autonomy and control, whereas the community-based group focused on openness and equity. It could be seen that the different participants were able to position themselves in relation to the graph. This was possible because, in surfacing the values held, space and time were allowed for each group to review their own ones among themselves. When they used the framework/graph to review the values held they were able to articulate what needs to be shared by making it about action that needed to be taken.

In involving stakeholders as participants, Ackoff [20,46] favours focusing on values in idealised design,

because that helps stakeholders to find agreement on objectives. Eden and Ackermann [63] are concerned that this ignores the complexity of values in multi-stakeholder policy-making environments. The decision-making process employed in this case study follows Ackoff's principle while at the same time acknowledges Eden and Ackermann's concerns. By ensuring that competing values and those held by only a minority were kept in the frame throughout the process, this approach accommodates both perspectives.

A key to the process is in the emphasis on differences, rather than similarities, in value priorities. This contrasts to those processes that focus entirely upon shared values from an early stage, and which therefore discard those values not obviously shared by other groups or individuals involved in the decision making. There are dangers in ignoring values that may only be held by one or two individuals. First, although only a small minority of those may hold such values, they can actually represent the voice of a minority who need to be heard if public policy making in a pluralistic society is to be representative. Secondly, as was apparent in this case, such values may be held with great intensity such that they are not open to trade-offs [34], which may result in the decision-making process being blocked through a refusal to cooperate. Furthermore, if they are ignored there is potential for continuing resentment, which may have future repercussions for the implementation of the decision, and for future decision-making processes involving the community.

The advantages in keeping differences in value priorities visible through the process are plentiful. This approach gives permission to individuals and groups involved to hold different values, so validating alternative perspectives. This is particularly important in ensuring that minority voices are heard in public policy making. When differences are explicit and acknowledged, the process of decision making may at times be uncomfortable and time consuming, but equally, it is likely to be more honest, with fewer hidden emotions and agendas. Importantly, keeping differences visible allows a process of adjustment to take place. Individuals and groups do not change their core values easily, but are more open to changing the association of a particular phenomenon from one value to another [75]. Open dialogue, therefore, can result in individuals or groups reinterpreting the concept of, for example, the issue of choice in public service provision so that it becomes associated with democratic, rather than individualistic, values. It is through such transformation that attitudes alter and consensus is achieved amongst diverse groups in pluralistic societies.

The case demonstrates, however, the need for adequate time to be made available so that the groups are able to work with value differences. As was seen, the extended process of discussion during which conflicting values were kept to the fore meant that the values were acknowledged, and then became accepted so that they were eventually incorporated into the decisions. This was, however, a slow process, and one that may be considered expensive or inefficient. We argue that, when the whole process is considered, the time invested at this stage can mean that the decision-making process is no less efficient while being much more democratic, as demonstrated by the relative ease that final approval has gained.

In terms of policy and decision making, the process was a powerful experience for those taking part and it created an atmosphere where constructive dialogue could take place and was actively encouraged. The emphasis on exploring different values and public involvement proved to be key in providing a situation where participants held effective decision-making power, particularly around options for the site. The outcome in the case described here provides encouraging support for a 'voices and values' approach in public decision making, and it promises a way forward in engaging the public in the process of policy making while enhancing the dialogue amongst different stakeholder groups.

## References

- [1] Cabinet Office. Adding it up: improving analysis and modelling in Central Government. London: HMSO; 2000.
- [2] Rittel H, Webber M. Dilemmas in a general theory of planning. *Policy Sciences* 1973;4:155–9.
- [3] Mason R, Mitroff R. Challenging strategic assumptions. Chichester: Wiley; 1981.
- [4] Clarke M, Stewart J. Handling the wicked issues: a challenge for government. Working Paper INLOGOV, University of Birmingham, 1997.
- [5] Dyson R. Strategy, performance and OR. *Journal of the Operational Research Society* 2000;51(1):5–11.
- [6] Pidd M. Contemporary OR/MS in strategy development and policy making. *Journal of the Operational Research Society* 2004;55(8):791–800.
- [7] Jackson M. Critical systems thinking and practice. *European Journal of Operational Research* 2001;128(2):233–44.
- [8] Huxham C. Creating collaborative advantage. London: Sage; 1990.
- [9] Taket A, White L. Partnerships and participation. Chichester: Wiley; 2000.
- [10] Gregory W, Midgley G. Planning for disaster: developing a multi-agency counselling service. *Journal of the Operational Research Society* 2000;51(3):278–90.

- [11] Asthama S, Richardson S, Halliday J. Partnership working in public policy provision. *Social Policy and Administration* 2002;36(7):780.
- [12] Cabinet Office. *Modernising government*. London: HMSO; 1998.
- [13] Friend J, Norris M, Stringer J. The institute of operational research: an institution to extend the scope of OR. *Journal of the Operational Research Society* 1988;39(8):705–14.
- [14] Lowndes V, Skelcher C. The dynamics of multi-organisational partnerships. *Public Administration* 1998;76(2):313–33.
- [15] Corrigan P, Joyce P. Reconnecting the public. *Urban Studies* 2000;37(10):1771–9.
- [16] Fisher F. Citizen participation and the democratisation of policy expertise. *Policy Science* 1993;26(3):165–82.
- [17] White L. Size matters: large group interventions and the process of OR. *Journal of the Operational Research Society* 2002;53(2):149–60.
- [18] Kernaghan K. Integrating values into public service. *Public Administration Review* 2003;63(6):711–9.
- [19] White L. The role of systems research and operational research in community involvement. *Systems Research and Behavioural Science* 2003;20:133–45.
- [20] Ackoff R. *The democratic organisation*. New York: OUP; 1994.
- [21] Giddens A. *The third way: the renewal of social democracy*. Cambridge: Polity Press; 1998.
- [22] Osborne S. *Public management: a critical perspective*. London: Routledge; 2002.
- [23] Hood C. *Contemporary management*. *Public Policy and Administration* 1995;10(2):104–17.
- [24] Politt C, Boucheart G. *Public management reform*. Oxford: OUP; 2000.
- [25] Rhodes R. From marketization to diplomacy: it's the mix that matters. *Public Policy and Administration* 1997;12:31–50.
- [26] Moore M. *Creating public value*. Harvard, MA: CUP; 1995.
- [27] Rokeach M. *The nature of human values*. New York: Free Press; 1973.
- [28] Schwartz S. A theory of cultural values and some implications for work. *Applied Psychology: An International Review* 1999;48:23–47.
- [29] Ravlin EC, Meglino BM. Effect of values on perception and decision-making: a study of alternative work values measures. *Journal of Applied Psychology* 1987;72(4):666–73.
- [30] New B. *A good enough service: values trade-off and the NHS*. London: IPPR; 1999.
- [31] Quinn R, Rohrbaugh J. A spatial model of effectiveness criteria: towards a competing values approach to organizational analysis. *Management Science* 1983;29:363–77.
- [32] Schwartz S. Universals in the content and structure of values: theoretical advances and empirical tests in 20 countries. In: Zanna MP, editor. *Advances in experimental social psychology*. London: Academic Press; 1992. p. 1–65.
- [33] Schwartz S. Value priorities and behavior: applying a theory of integrated value systems. In: Seligman C, Olson JM, Zanna MP, editors. *The psychology of values: The Ontario symposium*. Mahwah, NJ: Lawrence Erlbaum Associates; 1996. p. 1–24.
- [34] Baron J, Spranca M. Protected values. *Organizational Behavior and Human Decision Making Processes* 1997;70(1):1–16.
- [35] Goss S. *Managing working with the public*. London: Kogan Page; 1999.
- [36] Lowndes V, Pratchett L, Stoker G. Trends in public participation: Part 1—local government perspectives. *Public Administration* 2001;79(1):205–22.
- [37] Lowndes V, Pratchett L, Stoker G. Trends in public participation: Part 2—Citizen's perspectives. *Public Administration* 2001;79(2):445–55.
- [38] Rosell S. *Renewing governance*. Oxford: OUP; 1991.
- [39] Barnes M. Users as citizens: collective action and local government of welfare. *Social Policy and Administration* 1999;33(1):73–90.
- [40] Lupton C, Peckham S, Taylor P. *Managing public involvement in healthcare purchasing*. Oxfordshire: OUP; 1998.
- [41] Hoggett P. *A new management in the public sector?*. *Policy and Politics* 1991;19(4):243–56.
- [42] Pratchett L. *New fashions in public participation: towards greater democracy?*. *Parliamentary Affairs* 1999;52(4):617–33.
- [43] Beresford P, Croft S. *Citizen involvement: a practical guide for change*. London: Macmillan; 1993.
- [44] Putman R. *Making democracy work*. NJ: Princeton University Press; 1993.
- [45] Etzioni A. *The spirit of community. Rights responsibilities and the communitarian agenda*. London: Fontana Press; 1995.
- [46] Ackoff R. *Redesigning the future: a systems approach to societal problems*. New York: Wiley; 1974.
- [47] Ackoff R. The future of operational research is past. *Journal of the Operational Research Society* 1979;30:93–104.
- [48] Vickers G. *The art of judgment: a study of policy making*. London: Chapman Hall; 1965.
- [49] Tait J. The role of values in quantitative decision-making. *Journal of the Operational Research Society* 1988;39(7):669–74.
- [50] Taket A. Undercover agency—ethics, responsibility and the Practice of OR. *Journal of the Operational Research Society* 1994;45(2):123–32.
- [51] Eden C, Jones S. OR in the Community. *Journal of Operational Research Society* 1981;32:335–45.
- [52] Butler N, Williams H. Fairness versus efficiency in charging for the use of common facilities. *Journal of Operational Research Society* 2002;53:1324–9.
- [53] Checkland P. *Systems thinking: systems practice*. Chichester: Wiley; 1980.
- [54] Rosenhead J. Into the swamp—the analysis of social-issues. *Journal of the Operational Research Society* 1992;43(4):293–305.
- [55] Hickling A. Gambling with frozen fire. In: Rosenhead J, Mingers J, editors. *Rational analysis for a problematic world revisited*. Chichester: Wiley; 2001.
- [56] Midgley G, Rennolls M. *OR and environmental management: a new agenda*. Birmingham: OR Society; 2001.
- [57] Eden C, Ackermann F. Cognitive mapping expert views for policy analysis in the public sector. *European Journal of Operational Research* 2004;152(3).
- [58] Mingers J, Rosenhead J. Problem structuring methods revisited. *European Journal of Operational Research* 2004;102:530–54.
- [59] Rosenhead J, Mingers J. *Rational analysis for a problematic world revisited*. Chichester: Wiley; 2001.
- [60] Rosenhead J, White L. Nuclear fusion: some linked case-studies in community OR. *Journal of the Operational Research Society* 1996;47(4):479–89.
- [61] Shaw D, Westcombe M, Hodgkin J, Montibeller G. Problem structuring methods for large group interventions. *Journal of the Operational Research Society* 2004;55:453–63.
- [62] Friend J, Hickling A. *Planning under pressure: the strategic choice approach*. London: Butterworths, Heineman; 1997.
- [63] Eden C, Ackermann F. *Making strategy: the journey of strategic management*. London: Sage Publications Ltd; 1998.

- [64] Checkland P, Scholes J. *Soft systems methodology in action*. Chichester: Wiley; 1990.
- [65] Hickling A. Gambling with frozen fire?. In: Rosenhead J, editor. *Rational analysis for a problematic world*. Chichester: Wiley; 1989. p. 159–92.
- [66] Eden C, Jones S, Sims D. *Messing about in problems*. Oxford: Pergamon; 1983.
- [67] Kelly G. *The psychology of personal constructs*. New York: Norton; 1955.
- [68] Eden C, Ackermann F. Analyzing and comparing idiographic causal maps. In: Eden C, Spender J, editors. *Managerial and organizational cognition: theory, methods and research*. London: Sage Publications; 1998. p. 192–209.
- [69] Eden C, Huxham C. Action research for management research. *British Journal of Management* 1996;7(1):75–86.
- [70] Muhr T. *Atlas/ti: short user manual*. Berlin: Scientific Software Development; 1997.
- [71] White L. *Community matters: manual for community involvement*. Camden and Islington HAZ, 2000.
- [72] White L. Changing the whole system in the public sector. *Journal of Organisational Change Management* 2000;13(2): 162–77.
- [73] Department of Health. *The NHS plan*. London: HMSO; 2000.
- [74] Bryson J. *Strategic planning for public and nonprofit organizations*. San Francisco: Jossey-Bass; 2004.
- [75] Rokeach M. *Understanding human values*. New York: Free Press; 1979.