

Facilitated Work Groups: Theory and Practice

LAWRENCE D. PHILLIPS¹ and MARYANN C. PHILLIPS²

¹London School of Economics and Political Science, ²private consultant

This paper concerns the facilitation of working groups whose general aims are to achieve a shared understanding of issues, a sense of common purpose and a mutual commitment to action. We see the main role of the facilitator in such a group as contributing to process and structure, not content. This view is coloured by our assumptions about groups and how their work can be facilitated: that groups have an emotional life which influences and is influenced by each participant who experiences a tension between what is best for the group and what is personally desired, and that the facilitator's main tasks are to see and understand the group life, intervening only to help the group maintain a task orientation to its work. To understand the group the facilitator observes verbal and non-verbal behaviour, attends to relationships between participants and maintains awareness of his or her own feelings. For some work groups, the facilitator can be helped by computers, which provide an effective means externalizing many aspects of group work. By assigning to the computer the information manipulation and communication tasks, group members can concentrate their attention on the judgmental tasks, and the facilitator can attend better to group processes. Effectively used, computers can help a group maximize the creative and minimize the destructive aspects of its life.

Key words: group processes, work groups, facilitation, group decision support systems, decision conferencing

INTRODUCTION

Over 30 years ago, Thibaut and Kelley¹ wondered whether,

'it may not be possible for a rather small, intimate group to establish a problem solving process that capitalizes upon the total pool of information and provides for great interstimulation of ideas without any loss of innovative creativity due to social restraints'. (p. 268).

Later, Maier² argued that achievement of this order could only be accomplished if the group's leader served as an integrator, focusing on process rather than group products. He explained that the leader must

'listen in order to understand rather than to appraise or refute, assume responsibility for accurate communication between members, be sensitive to unexpressed feelings, protect minority points of view, keep the discussion moving, and develop skills in summarizing'. (p. 247).

The vision of these early investigators is now being realized in several forms: high-technology group decision support systems,^{3,4} medium-technology approaches such as decision conferencing⁵ or SODA⁶, and low-technology sessions characteristic of strategic choice⁷ and soft systems analysis.⁸ A key feature of all these approaches is that one or more individuals facilitates the work of the group, as Maier² had suggested.

This paper raises issues about the role and function of that individual, the facilitator of a work group. By a facilitated work group we mean a small collection of people who share a goal and perform various tasks, with the help of a facilitator, to accomplish their objectives. The general aims of a work group, as we see it, are to achieve a shared understanding of the issues facing the group, a sense of common purpose and a mutual commitment to action. This includes many types of groups, task forces, focus groups, and many working groups; whatever the group, the key is that the three general aims should be acceptable. Excepted are some working groups such as overtly adversarial groups or any meeting whose main purpose is communication.

The concepts and issues in this paper derive from our experiences of work groups and training groups. Research on groups (summarized in chapters 1 and 2 of Reference 9) has provided part of

Correspondence: L. D. Phillips, Room B515, London School of Economics and Political Science, Houghton Street, London WC2A 2AE, UK.

our conceptual framework, but we have not found the research literature on leadership particularly relevant, for facilitating a group is not the same as leading it.

To understand the difference between leading and facilitating, it is necessary to distinguish between *what* a group is doing, from *how* it is doing it; that is, the content of the group's tasks from the processes brought to bear in dealing with those tasks¹⁰. A leader would typically be concerned with both the 'what' and the 'how'. A facilitator, on the other hand, would refrain from contributing to the content of the group's discussions because involvement in content may interfere with the effective facilitation of the process. The facilitator attends to content, for content and process interact¹¹, but active involvement in the content of discussions makes observation of process difficult.

Example A

A trainee was role-playing a facilitator on the second day of a workshop session. He began with his overnight reflections on the group's lack of progress the previous day. He presented his views to the group of why it had not done as well as it might. He suggested topics that needed further airing and provided a new direction for the group. Subsequent discussion was fragmented, squabbles arose within the group, and the facilitator experienced increasing difficulty with a few participants. Finally, he gave up in a fit of temper, saying that the group was so uncooperative he could no longer work with it.

At this point we, as trainers, felt alarmed about the level of aggression in the group and were anxious to reduce the temperature. We were reluctant to take over the facilitator's task ourselves, and suggested instead that the trainee try a different approach, role playing a facilitator concerned only to help the group with the structure of its task but without contributing to content. Instead of leading with his ideas of what the group should be addressing, he might only seek clarification of content, summarize, reflect back, and suggest procedures, letting the group decide what it wanted to do. He did this, and within two minutes the atmosphere in the group had changed completely: the group was working, individuals were co-operating, and the facilitator felt he was genuinely helping. He later said that he had great difficulty in staying away from comments on content, but he could see that this different style had been much more effective from the group's perspective.

A problem can arise if the facilitator contributes content. It is difficult to think deeply about content *and* process at the same time, just as it is difficult to write and talk at the same time. When contributing to content, the facilitator loses some ability to reflect on process, may become drawn into the group's deliberations and may soon be treated as another participant.

Example B

An experienced facilitator listened with increasing frustration to the group's discussion. He felt they were muddled and as he knew quite a bit about their area of concern, he decided to enter temporarily into the group's discussion. After about an hour, when he thought the group was back on track, he attempted to move back into his role as facilitator – without success. Since this was a training session for prospective facilitators, a break was called to reflect on this experience. Participants said they felt that the facilitator had taken over the group's task, was interfering in the application of their own skills in working on the issues, and had also damaged his integrity as a neutral outsider.

If the facilitator is seen by the group as having special expertise in the content, this, plus his or her special status, can cause group members to feel de-skilled. They may then find it difficult to mobilize their own expertise, and group work on the task may suffer. If the final results include content that reflects the views of the facilitator, ownership by the group may be partial and implementation may suffer.

Another important distinction between leading and facilitating a group is in the locus of decision making. To develop this point, we would like to make a brief point about the organizational context of decisions. More than 90% of employed people in western nations work in accountability hierarchies, that is, organizations which hold managers accountable for their own work and that of their subordinates. In these employment hierarchies, it is individual managers who are given authority to commit resources, and it is individual managers who are held accountable for the deployment of the resources. In decision theory a decision is defined as an irrevocable commitment

of a resource (although a decision will often be preceded by the exercise of judgement and the making of a mental choice). Thus, in accountability hierarchies, groups do not take decisions, individual managers do. (However, in other types of organizations, such as community groups, clubs, partnerships, and collegial groups, groups may take decisions.)

For groups drawn from accountability hierarchies, we see the facilitator's role in relation to the lead manager, who in turn is accountable for the work of individuals in the group. The facilitator works *with* the group, but *for* the leader. The group, helped by the facilitator, creates and explores options, formulates preferences and generates judgements, but it is the leader who ultimately chooses and commits resources. The facilitator who encourages and supports a group to take a decision is in danger of undermining and precluding the satisfactory development of really effective managerial leadership.

Examples A and B were drawn from training workshops for decision conference facilitators. These workshops permit experimentation with different styles of facilitation and provide opportunities for reflecting on events and experiences during the training. Many of the subsequent examples in this paper are drawn from experiences in decision conferences, so it may be helpful at this point to give a brief description of this approach.

A decision conference is a two-or three-day event involving a work group of key players who wish to address important issues of concern to their organization, with the help of an outside facilitator and some computer modelling of participant's judgements about the issues. Decision conferencing was created in the late 1970s by Dr Cameron Peterson, a decision analyst, who applied decision theory when working with groups of people, aided by on-the-spot computer modelling. The service is now offered by about 15 organizations world-wide, including the London School of Economics (LSE). The main contribution of the LSE has been to integrate into decision conferencing much of the work on group processes that has emanated from the Tavistock Institute of Human Relations (see Reference 12, especially the nine papers in the section entitled *Varieties of Group Processes*). In so doing, and in training prospective facilitators, we were encouraged to think explicitly about the role and functions of the facilitator. This paper is the result of that thinking.

It is important to recognize that we are concerned here with the facilitation of work groups in general, not just decision conferences. We believe that our observations have wide applicability, and raise issues that concern all facilitated work groups as well as the design of group decision support systems, a topic we will discuss in the last section.

Before we consider issues of facilitation, we want to summarize our views on the nature of groups, for it is these assumptions about groups that strongly colour our selection and discussion of issues about facilitation.

GROUPS

In contrasting rewarding and unrewarding group experiences, people often report that they feel personally involved in rewarding groups which tap, even enhance, their personal capabilities. New things come out of rewarding groups, and the group performs better than the sum of the individuals in it. Unrewarding groups, on the other hand, are lifeless, not happening in the here-and-now, and personal involvement is minimal or absent.

What accounts for these differences? We believe that the following assertions about groups provide a minimal set of concepts that are needed to understand the differences. Most concepts in the social sciences are developed with the aim of explaining and predicting behaviour. However, Gergen¹³ has pointed out that such concepts may not provide the kind of understanding that is required to change behaviour, that is, the concepts are not 'generative'. The concepts we wish to invoke are generative in that they can help a facilitator to understand a group in such a way that he or she can make potentially-effective interventions.

Group life

Groups meet for a purpose, so have one or more tasks to perform. While together, the group has a character or personality as well as an emotional life.

Example C

Many years ago, while employed as an instructor, I (the first author) lectured over a three-month period to three classes of 30 men each. From the first meeting with each group, its personality became evident, and all instructors came to like or dislike certain classes. We followed exactly the same syllabus, using the same audio-visual material, often uttering the same words to each class, yet test results differed markedly from one group to the next. The instructors often referred to the groups as if they were individuals with distinct personalities, a recognition that forces influencing the efficacy of teaching were afoot in each group.

This emotional life of the group is considered by some¹⁴ to be instinctual, and can be likened to a creature, or powerful beast, unpredictable and difficult to describe. However, by recognizing and understanding the emotional life, a facilitator can help a group to carry out its task more effectively.

Influence of the group life

The emotional life of the group affects how the task gets done. The group's power is pervasive, yet we are often barely aware of it.

Example D

In a study of decision conferencing¹⁵ 12 groups were chosen and classified according to the degree of external threat that was expressed by members in the initial, unstructured phase of a decision conference in which issues were freely discussed. High-threat groups indicated that they were failing to meet goals, or were experiencing unexpected and severe competition in the market, or were suffering from other difficulties. Low-threat groups were usually seeking ways to exploit the many opportunities open to them, or were concerned to focus their energies and limited resources on only the most promising projects.

A major finding was that in the subsequent model-building-and-exploration phase of their work, the high-threat groups considered fewer options and judged these on fewer criteria than the low-threat groups. Although the facilitator had not been aware of it, the degree of threat felt by the group affected problem solving, with low-threat groups exploring the issues in greater depth and breadth than the high-threat groups.

Although the group life works its effect through individuals, they often do not recognize it. The facilitator has the advantage of being a neutral outsider, so may be able to see the effect of the group life on performance of the task. For example, this research finding has alerted facilitators to note the degree of threat expressed by the group, and actively to encourage exploration of the issues in high-threat groups.

Interplay between individuals and the group life

While the group life can affect individuals, so each participant can influence the group life. If one person leaves the group, for example, it can have a profound effect on the group life.

Example E

The most senior participant in a decision conference was called out of the meeting for a brief spell about two hours after the session began. On his return, he said that he might have to leave again. He disappeared after lunch without explanation, and returned in the middle of the afternoon, asking the group to carry on. Discussion was fragmented, and after another 20 minute absence by the boss, the facilitator observed that work on the task was becoming fragmented. The facilitator could feel the group's anger and suggested suspending work on the task to review progress. Members expressed their frustration with the task, and their anger at the boss's unexplained absences. It became apparent that overt work on the task was being subverted by a covert unwillingness to progress with the task he had set.

Thus, an individual influenced this powerful beast, with the result that the group and the individuals in it were hindered in carrying out their work. That, in turn, caused frustration and anger to mount, and the group work ground to a halt. Although the group continued, its task

became a covert one of subverting the boss's expressed wishes. After the boss returned, the group openly discussed this problem, and then work resumed on the original task.

There is an interplay between the group and the participants that often makes it difficult to attribute cause and effect. Then, the best a facilitator can do is note the mutual effect, without attributing any causal sequence. Thus, by thinking about the group and the individuals in it as a mutual shaping system, where context lends meaning to what is occurring in the group¹⁶, the facilitator can intervene at the level of the group rather than the individual. (This is illustrated by Example G, in the next section.)

Often the interaction between the individual and the group can be better understood by recognizing that the individual's behaviour may be substantially influenced by a role that he or she has assumed, knowingly or unknowingly.

Example F

Dennis Buede¹⁷ reports that in his decision conferences he often encounters 'one opinionated member of the group who feels that the idea of a quantitative model utilizing subjective judgments is rubbish. This sentiment usually gets expressed just as we begin the quantitative assessment [on the first day]. I point out that the structure is used to ensure that all aspects of the problem are being considered, and that the numbers are being used to help the group think hard about these aspects so that solid definitions of the options and criteria are achieved. In addition, I tell the group that the numbers help us identify areas of critical importance and disagreement. My discussion has always convinced the group to continue with the process, but the outspoken antagonist warns the group of their folly and the waste of time that the group is undertaking. Invariably, this outspoken antagonist is one of the most articulate and knowledgeable members of the group; and by the end of the conference has become the most outspokenly supportive member of the conclusions and process of the conference.'

'The first time I encountered this situation, I was hoping the antagonist would get so upset he would leave so that we could finish the process in an orderly manner. However, after seeing the positive effect that he had upon the group at the end, I have since welcomed (inwardly) the antagonist every time he shows up because I know that the conference results are likely to be strongly supported when we are finished. This antagonist can affect the group's feeling toward the conference product far more directly than the facilitator can.'

We might understand that in playing the antagonist's role, this individual is expressing a sentiment held by other group members. Having doubts articulated so clearly can help the group members to evaluate the process they are experiencing. The person in this role of antagonist might be both leading and reflecting group opinion, as well as expressing his own feelings. In Buede's description, the group life shifts as members experience the useful effect of making the subjective judgements. The individual in the antagonist role becomes the spokesman for that part of the group life, but now in a supportive role.

Individuals may enact many different roles: the expert, the sceptic, the clown, the saviour, the prophet, the critic, the mother, the protector, the warrior, the leader. It will help if the facilitator can understand how these roles contribute to the life of the group, and how they affect the group's tasks.

The effective component in group life

Emotions and feelings constitute the driving force for the group life. Understanding the emotional life of the group is the key to working effectively in a group.

Emotions expressed by the group run the full range of feelings experienced by individuals. However, the emotions observable in a group and those experienced simultaneously by the individuals in it are not necessarily the same. It is common for some members to demur privately from a group's activity while publicly acquiescing. For example, a group might engage in discussing an agenda item that members had earlier agreed to consider even though everyone now feels the subject is no longer very relevant. If no one raises a challenge, and if the disjunction between individual feelings and the group life is profound, then the work of the group will likely be impaired.

Indeed, if a group is marching ahead, with everyone seemingly in unison, this may be a signal

that individuality is lost. The interplay between individual and group-expressed feelings needs to remain evident. Although group cohesion is important, acknowledging and exploring individual divergences helps the group to maintain a creative tension in its work.

Example G

At the start of the third day of a small working conference, participants were reviewing progress and generally expressing satisfaction. However, one participant said that the previous two days had not been of much use to him and he felt a vague sense of discomfort and irritation about the ways things were going. Participants rushed to disagree, pointing out the considerable progress that had been achieved. He demurred, saying it was probably just his problem. One participant felt uneasy about this interchange, and suggested that the group might hear him out. Before very long, the climate in the group changed quite substantially as awareness grew of real differences between participants' viewpoints, which had hardly surfaced on the previous two days. The group then began to engage in serious work exploring these differences and coming to a new understanding of the issues.

The tension that arises in the interplay between individuals and the group is the main source of one of the most commonly-experienced feelings by a participant: anxiety. Members wish to be accepted by the group, to feel liked and part of the group, and they want the group work to go well. But to be accepted and liked, to 'fit in' to the group culture, means sacrificing much of the uniqueness that is one's self. If this anxiety is not acknowledged, tolerated and held by participants, it may be dealt with in a variety of ways: projecting it into other members, initiating a fight with others or with the facilitator, forming coalitions with other participants or becoming dependent on the facilitator¹⁴. All of these reduce anxiety by diverting the group from the task at hand. If the facilitator can maintain his or her awareness of these processes as they occur in the group, then he or she can intervene in the process in ways that will help the group to regain its task orientation.

Participants may also experience intense feelings of 'belongingness' to the group, a sense of satisfaction with the group work, and real joy in accomplishing the group's tasks. While these feelings can serve the group well, there is also the possibility that the task will get lost while the group does only what it considers is achievable so as to sustain the joy and maintain the sense of belonging.

If all this sounds as though we consider that a group requires anxiety and frustration for effective and creative performance of the task, then you have read us right. Part of the task of the facilitator is to help the group manage its anxiety and frustration. In short, if a group is working well, it is to some extent uncomfortable. However, it is not necessarily working well just because it is uncomfortable.

The potential of groups

Experience in groups shows that under the right circumstances, the whole can be greater than the sum of its parts (although it has been difficult to demonstrate this in controlled research). The group has the power to enhance the capability of individuals, and to bring about a result that is in some sense better than could have been achieved by any one individual. But the potential for destructiveness is always present, too.

Example H

In the play 'To Kill a Mockingbird' a lynch mob arrives at the jail to take a black prisoner charged with rape. They pause when confronted by the town's respected lawyer, but it is his daughter's direct address to the mob's leader that puts him back in touch with his feelings of humanity, and changes the emotional life of the group. Although an undifferentiated lynch mob arrived, individual fathers and sons, citizens of the town, turn to leave the jail.

The facilitator, by attending to process, can help a group manage its creative and destructive forces. In some ways, the facilitator is like an athletic coach, bringing the best out of the individual athletes without necessarily being personally able to play the game well, or like the conductor of a symphony orchestra who creates a satisfying whole out of individual contributions.

The threat of group life

Characteristic of every group is an enduring tension between what is desirable for the group and what is personally desired by each individual. The omelette poses a threat to the individual egg.

Example I

Country managers from seven sales territories in Europe met to reconsider their strategies, for growth had eluded them. Each manager explained the strategy he had adopted to maximize the benefits from the limited resource available to him. Alternative strategies were also considered and evaluated. It was discovered that the collection of those individual strategies was not itself the best plan, overall, for the Company. Substantial improvements could be made by cutting back in three countries with more limited opportunities, and devoting more resource to the four countries where opportunities were greater. Agreement to this new plan was obtained in the group of country managers only after they had exhaustively discussed the trade-offs amongst them.

Here the threat to the three losing country managers was real, and it was interesting to observe the other managers rallying to the aid of the losers by helping them to devise better strategies for their countries. (A detailed discussion of this case in the context of group decision support systems is in Phillips¹⁸)

By recognizing the threat to individuals, the facilitator can help the group to deal with the conflict in constructive ways. For example, situations in which one participant's loss is another's gain can often be transformed into win-win situations if the facilitator helps the group to devise new options that work to everyone's advantage. Sometimes this is not possible; then, the facilitator may be able to help the group tolerate the frustration. Otherwise, the group is in danger of fragmenting, with each person attempting to pull in his or her own direction.

Shifts in the group life

The life of the group can take sudden and dramatic turns. Once the territory managers realize they are all following strategies that fall far short of the collective best plan, they cease acting like independent 'robber barons' and start acting as an effective team. The little girl helps an ugly mob to become a responsible group.

Example J

Participants in a group attempting to start a new business were constantly seeking advice from outside experts. In a decision conference, they attempted to assemble the collective advice they had received, and tried to engage the facilitator as yet another outside expert in the content of the meeting. The facilitator felt that members were expecting to find a solution outside themselves and more advice from him would not help.

He suggested that members might try looking inward, using their own competencies to create a solution. This had an electric effect on the group; they immediately realized that they had not felt competent to deal with the issues themselves, but they decided to try. Within a short time, they had generated for themselves several options, looked at their advantages and disadvantages, and created a new plan that capitalized on their strengths.

This shift in the group's life followed after participants became aware of the 'group-think'¹⁹ that was limiting their exploration of the issues. But a shift can occur without warning and without any apparent reason²⁰.

Example K

A senior executive was unable to attend a decision conference so he sent a subordinate in his place. At one point, the man suggested that development of a new product could be speeded up for a modest increase in resource. The Managing Director disagreed, saying that much more resource would be needed to meet the time-scale. The man tried to defend his view, but his explanations were not persuasive and created more agitation in the Managing Director. The facilitator felt concern for the man because he was in a difficult position and was receiving a hammering from the MD, but the facilitator also felt that the MD's criticisms were correct. The facilitator's rising alarm signalled that an intervention was needed, but he was not sure what to do.

Suddenly the MD rose to his feet and shouted 'Bullshit!'. The facilitator's uncertainty had led him to wait too long, and now it was too late. He felt even more unsure what to do next, sensing that any intervention at this point might result in his dismissal. Realizing that he had not been adequately in touch with the group life, he did nothing. The group struggled for some time to regain a semblance of normal functioning, but the event was not a success.

Even if the facilitator understands some of the influences on the group life, he or she cannot always intervene to change the climate in constructive ways.

Group size

A major influence on the balance between individuality and group life is the number of participants. We consider a group of 2 to 6 people to be an 'intimate group', with maximum individuality, like a jazz combo that alternates from one soloist to another. Seven to 15 people constitute a 'small group', in which individuality is preserved, yet true group processes emerge and exert considerable influence. Eye-to-eye contact can be maintained, and it is difficult for any participant to become anonymous. When the number of participants exceeds 15, a 'large group', group processes dominate, and individuality is submerged.

Example L

Fiona Maddocks, writing in *The Independent* on 16 February, 1990, reported: The London Symphony Orchestra's Clive Gillinson remembers, as a young cellist, playing in Klemperer's last Beethoven cycle with the Philharmonia. 'I simply had no idea where on earth his beat was. Yet everyone else, as if by some strange group psychology, knew exactly, and played perfectly on time. It was terrifying.'

Sometimes, the submerging of individual identity in large groups can have dire consequences. Since guilt, conscience and morality reside in individuals, not groups, the dominance of group processes in large groups can lead to destructive behaviours which are out of control, as in a rioting mob. But it is worth noting that in large groups one can also experience emotions of a very positive sort, as in sports crowds, or religious and political rallies.

We prefer to facilitate small work groups of 7 to 15, for individuality and group processes are in just the right balance for creative work by the group to be accomplished in a short time. The group is small enough to be able to work to consensus on the issues, but large enough to represent all major perspectives. All participants have ample opportunities to express their views, and differences of opinion can be used by the group in constructive ways to generate new perspectives. Ownership of the group work is then high because all participants have worked toward the group's shared understanding of the issues.

The group's environment

The environment in which the group works can have a critical influence on how the group functions^{21,22}. Most meeting rooms are woefully inadequate for effective group work. They are often too long and narrow, with lines of rectangular tables that prevent easy eye-to-eye contact. The rooms are usually lit with fluorescent lights, which buzz or flicker and cannot be controlled for brightness. Overhead projectors or other visual aids are not routine equipment for the room, and have to be ordered ahead of time (so they usually are not). Board space and flip charts are inadequate, and clear sight lines from all participants are prevented by the shape of the room and the arrangement of chairs and tables. Chairs feel uncomfortable after an hour sitting in them, noises and other distractions interrupt the flow of work, and refreshments are not readily available.

Example M

Seven experts from different countries were assembled by an organization that wanted to initiate a new world-wide research programme on a particular topic. Participants were seated around long, rectangular tables placed end-to-end, and three observers from the organization popped in and out of the meeting. The overhead projector and screen were placed so that the body of the presenter, when he pointed to items on a transparency, blocked the view of the screen

by participants on one side of the room. Drinks were available one floor down with the result that coffee breaks lasted up to a half hour.

Progress on the first day was difficult as the group struggled to understand its tasks and carry them out. Eventually, one participant suggested rearranging the tables into a square, seating no more than two people on a side, removing extra chairs and other non-essential furniture, and placing the overhead projector and screen in a more convenient location. The casual dropping in and out by observers was discouraged by the experts, and control was exercised by the chairman over the length of coffee breaks. The group quickly became more focused in its work.

When a room is untidy and ill-arranged, and no limits are imposed on participant observers, breaks, or start and stop times, groups may find it difficult to attend to the task at hand. When the environment and the arrangements for using it are focused, the group focuses more readily.

Structure

This discussion of group size and the group's environment raises a more fundamental issue: the role of structure in facilitating the work of the group. In part, structure is a matter of limits and boundaries. The physical setting for the meeting imposes limits on what the group can do; prior preparation establishes expectations about the group's task and provides a purpose for the group's work; meeting and break times delimit the period of collective work; task boundaries prevent the group from following non-constructive paths and protect individuals from inappropriate actions by the group. By managing the limits and boundaries of the group's work, the facilitator provides a structure that contains and focuses the group without inhibiting the creative exploration of issues.

Another aspect of structure is the sequencing and connectedness of the group's activities. Breaking a big task into smaller, more manageable pieces can ease the group's work. In decision conferencing, the creation of a model of participants' judgements lends structure to thinking, making it easier to deal effectively with complex content.

What we are here calling structure is considered by others, e.g. Eden¹¹, as a part of process. We wish to emphasize structural aspects of facilitated work groups (FWGs) because they are easily ignored, or are considered unimportant. Our experience suggests that structure, process and content are all important to the effective functioning of a group.

Summary

We have argued that it is necessary to distinguish between content, process and structure in the work of groups, and that the facilitator can best help a group to manage its own tasks by dealing with process and structure, not by contributing to content. From the moment participants assemble, the group has a character or personality as well as a strong emotional life which affects the way tasks get done. This group life develops and changes over time, sometimes abruptly, influencing and being influenced by each participant. The group has the power to enhance the capability of individuals, who experience a tension between what is personally desirable and what is best for the group. In groups of 7 to 15 people, individuality and the group life are in the right balance for creative work to occur. The environment in which the group works, including the room and its facilities, can have a powerful influence on how well the group functions. The groups' limits and boundaries have the effect of containing and focusing the work of the group.

From these statements about groups, which we consider to be a plausible set of working hypotheses, we can now put forward our views of facilitation skills.

ISSUES OF FACILITATION

We consider that one of the facilitator's main tasks is to see and understand the group life. Group members will be actively involved in their group life without being consciously aware of it because their attention is focused on the task. Understanding what is going on in the group enables the facilitator to guide the group in more productive ways of working. This is accomplished in several

ways: by summarizing and seeking clarification of content, which helps the group to be clear; by asking questions about task purpose, thereby stimulating the group to address its task, think through implications, make judgements and plan for action; and by intervening, thus changing or stopping some aspect of the group's work, or protecting one or more individuals, particularly when unpopular views or minority perspectives are in danger of being suppressed by the group. However, the facilitator's authority is no greater than that conferred by the group. Thus, the power, skills and understanding of the facilitator are limited, with the result that only sometimes can he or she influence the group.

Interventions that maintain a task orientation help the group to achieve its goals. Normally, these goals would be established by the group's leader, who influences others willingly 'to accept the leader's purpose and goals and all to move in the direction set by the leader'²³. The facilitator's influence is limited to helping the group achieve those goals; that is why a facilitator is not strictly a leader, as we mentioned before.

As a consequence of this more limited role, the facilitator will find occasions when intervening is inappropriate. Leaving the group alone may facilitate a work-orientated flow of activity which an intervention would have dysfunctionally interrupted. Another way to leave the group alone is to refrain from evaluating the group's performance, even if asked. Group members often ask the facilitator, 'How are we doing?' A direct evaluation takes away from the group their task of evaluating themselves in light of their own goals and objectives and places the reward structure outside the group. In addition, it can encourage dependency on the facilitator, which does not help the group to function in a mature manner. Instead of evaluating, the facilitator can provide reassurance without rewarding or punishing, or can redirect the question, encouraging members to reflect on how well they feel they are progressing toward their goals.

Although many groups strive to achieve feelings of conviviality in the group, it can help if the facilitator bears in mind that this is rarely the group's primary task, nor is it the facilitator's. Congenial relations and feelings of comfort and happiness may facilitate group work, but sometimes the task may require uncongeniality for its accomplishment. The facilitator may have to help the group tolerate feelings of disagreeableness and the accompanying anxiety.

Returning to the facilitator's task of understanding the group life, we propose that there are three main avenues to gaining this understanding: observing roles and relationships, making inferences based on symbolic content, and monitoring feelings. In the next three sections, we would like to elaborate these, and then discuss the implications for the kinds of interjections and interventions the facilitator might make.

Observing the group

The basis for understanding the group lies in observing both verbal and non-verbal behaviour. However, it is the meaning that the facilitator makes of the behaviour which provides the link between observation and understanding. Meaning can often be given in terms of the roles participants are fulfilling, the relationships between people, and the emotional life of the group.

Example N

The new manager of a data processing division brought his department managers together (for the first time) to discuss ways of improving the service. New ideas were slow to come from the group, and were frequently dismissed as impractical or unworkable. As the manager became more concerned at the lack of progress, he made more and more suggestions, and, increasingly, one participant became more agitated and resistant to any suggestions. The facilitator surmised that a pervasive but unexpressed scepticism in the group was being voiced by this one person. Acting on his hunch, the facilitator asked how others felt about the proposed changes, and this helped to legitimize the expression of participants' feelings. As the doubts of other members were voiced, this one person was relieved of his group role as 'sceptic', and the whole group began to discuss more constructive ideas.

Relationships between individuals, and between roles, are the means by which a collection of individuals becomes a group. Observing these relationships, which are affected by and can influence the emotional life of the group, can help the facilitator to intervene in useful ways.

Example O

Senior managers of a business centre were discussing the difficulties they had in running their centre. They complained that the production division was not supplying them with good products, and the sales outlets were too driven by short-term considerations. The facilitator asked them what things were under their control, but the group continued to complain about other parts of the organization as causing their troubles. The facilitator felt that the group was denying responsibility for their own difficulties, and on the basis of this he asked in several different ways what, if anything, was under the control of *their* centre.

The group agreed that much was under their control, and they set about generating possible plans for putting things right. But every time someone made a constructive suggestion, someone else shot it down. Appeals by the facilitator to try brain-storming, suspending evaluation, worked for a few minutes but soon the group returned to critical mode. The facilitator reflected this back to the group, saying he noticed that every time someone proposed a new idea, someone else criticized it. He wondered aloud if this was the way the group worked back in the organization, for if it did, it was no wonder the group found it difficult to move ahead and take hold of its own affairs.

This proved to be a turning point for the group. They admitted they adopted this critical attitude all the time, but had never realized it. They thought they were being down-to-earth and practical, rejecting 'airy-fairy' solutions. They now saw what they were doing as destructive, and set to work to develop a new plan for the business centre.

By attending to relationships and group climate, the facilitator reflected back his observations of what he saw the group doing. However, in looking back on this experience, we feel uncomfortable about the intervention because it was too interpretive. Direct interpretation of a group's work is not part of the contract between the facilitator and the work group. We will discuss this issue further in the section on intervening.

Attending to overt and symbolic content

A second route to understanding for the facilitator is through inferences based on the overt and the symbolic content of the group's discussions.

Example P

At the start of a decision conference, a facilitator observed that an aggressive deputy managing director 'held court' and demolished the arguments made by some participants. The group persisted in spite of this, and continued its discussion about how the business centre should become less reactive and instead take the initiative to gain control of its own affairs. This overt issue seemed to be a genuine concern, but the facilitator felt that participants were not just talking about the business centre, they were also talking about their own group at that moment. The business centre had been chosen as a symbol for the difficulties they were experiencing in the here-and-now with their own group: they wanted to take control of the meeting themselves and not be dependent on the managing director and his deputy. The facilitator encouraged contributions from all participants, thus helping to legitimize the voicing of dissenting perspectives. Eventually, this enabled the group to become more proactive in its planning.

Sometimes, as here, a group will be concerned with content that is difficult for participants to confront directly. Then, issues may be raised whose overt content seems to be not directly relevant, but which may give symbolic clues to the real issues.

Occasionally, the facilitator can gain understanding by considering what is *not* said in the group. This may be difficult for inexperienced facilitators who have not yet built up a repertory of expectations from observing many different groups at work on a variety of topics. Even so, the facilitator can inwardly compare the current group with others he or she has experienced, or can reflect on the group's progress towards its goals.

Example P

A group considering possible new strategies for their business centre kept assessing each suggested strategy against criteria of what was possible within limited bounds: whether it would be acceptable to senior management, whether it would be feasible within the structure of the

organization, etc. After a list of plans had been written on the board, the facilitator felt that the group was not enthusiastic about any of the plans. She then realized that no mention had been made of what the group *wished* they could do, of what they *really* wanted. She felt that they were using perceived external constraints to control their excitement at the possibilities they hoped for. Their confidence was too low, and their fear of failure too high, to permit exploration of where they might go.

The facilitator suggested that the group momentarily suspend practical considerations and external views, and 'just spend a little time dreaming about the Best of All Possible Worlds'. This immediately allowed the excitement and enthusiasm to burst through and the group was on its way. The eventual reintroduction of practical considerations and limitations was appropriate and no longer used as a pre-emptive damper.

When the facilitator ascribes symbolic content or tries to read between the lines, he or she may well be far from the mark. A puzzled reaction may come from the group, who may then ignore the intervention, or tell the facilitator he or she is wrong. Unfortunately, these same reactions can occur when the facilitator has hit the mark squarely. Usually, when a shift in the emotional life of the group follows an intervention the facilitator may then feel some confidence that the intervention was appropriate and helpful to the group task.

Monitoring feelings

The facilitator's own feelings are the third major source of understanding; they provide a clue to what the group is feeling.

Example R

Early in a decision conference, a group was struggling to discuss the difficult issues it faced in considering a new strategy for the group. The facilitator began to feel dreary and tired, and anxious that he was not competent to deal with this group. Observing that many participants also seemed inattentive and distracted, the facilitator reflected back to the group that there seemed to be a mood of dreariness about. This initiated a discussion that enabled individual participants to admit they felt they were not competent to do the job that had been set, for they had never before considered issues of strategy.

Keeping in touch with those feelings may be easier when the facilitator is quiet and observant. Often it will be necessary for the facilitator to hold and tolerate his or her own anxiety and uncertainty. These feelings might be aroused by the group, or they may arise from the facilitator's own concerns about his or her ability to help the group when time is limited and the issues are complex. The facilitator who fails to acknowledge his or her own anxiety will find it difficult to observe others.

Example S

Six students being trained for field work were reporting their observations of different families at mealtime. The seminar leader noted that none of the students had reported the accents used in their families and asked that these be noted at the next observation. When the students assembled the next week to report their new observations, no mention was made of accents. After he raised the issue, the seminar leader was assured that it was unimportant, that all the families had ordinary accents. 'Like a BBC newscaster's accent?', the seminar leader asked. 'No', the group replied. 'Then describe them in next week's report'.

Two of the six students managed to report the accents the following week, so the seminar leader asked why this was so difficult to report if it was so unimportant. Discussion revealed that all students considered accent to be an indicator of social class, and that this was a taboo topic. In particular, a student from the north of England was worried that his accent would change at University to sound 'southern' and 'posh', and he would be laughed at by his friends at home and rebuffed by his family. Deep emotions about this topic were revealed, and eventually the group recognized that these intense feelings had remained hidden, making their observation task difficult.

A facilitator who attempts to maintain an objective position in a group by keeping away feelings and being detached from the group may find it difficult to help the group operate in its work on

the task. The facilitator is a participant in the group, though in a particular role, and may better serve the group by maintaining awareness of his or her own anxieties, fears, regrets, joy and other feelings, inwardly reflecting on these to see how they might be used in the service of the task. In a group, the self-aware, impartial observer is more achievable than the detached, scientific observer.

The facilitator can, to some extent, contain the group's anxieties by establishing boundaries within which the group work can progress. Prior preparation—setting objectives, indicating how participants should prepare for the FWG, sending a calling note that covers these items and the administrative arrangements—establishes the scope of discussions for the group. Another aspect of boundaries is setting time limits: starting and finishing time, and timing and duration of breaks and meals. When time limits are specified, it is not uncommon for serious issues to be raised shortly before a scheduled break. Limits provide a sense of security that helps a group to focus on the task, as well as address its own limitations. Without clear limits it is easier to be distracted, and it will be more difficult to confront issues associated with endings, such as members' regret about work left undone, which sometimes provokes a group to try to destroy work that has been completed successfully.

Intervening

Finally, the facilitator will find that interventions at appropriate times may help a group in its work. One result of an effective intervention is to bring a group back into working in the here-and-now. When anxieties mount in a group, members may escape from the task by giving formal presentations, reading from reports or constructing agendas, any one of which can deaden work on the task. An intervention that brings the group back to the present helps to put members in touch with their feelings, and can encourage constructive work on difficult issues.

Without giving advice, evaluating progress or contributing to content, the facilitator can intervene in at least six different ways: pacing the task, directing, 'handing back in changed form', reflecting, questioning and summarizing.

Pacing the task is a process intervention that influences the timing of the group's work. The facilitator may speed or slow the group work to ensure that activities are given adequate time to accomplish the task, but also to achieve the objectives within the time limits. *Directing* the group by introducing a new activity, or engaging the group in evaluating its progress may help to accomplish the task. The facilitator who asked the group to dream about the 'Best of all Possible Worlds' (Example Q) was directing the group by introducing a new activity. The group whose boss kept leaving the meeting (Example E) is another example. There, the facilitator invited the group to evaluate how they were getting on with the work, and this helped members to recognize they were not progressing.

Of much use, we feel, is the mode of facilitation captured by the phrase '*handing back in changed form*'. The idea here is to reflect back what has been observed, but from a different perspective. That enables participants to hear it, since much is familiar, but the addition of a new perspective provides new meaning for them, and helps the task to go forward.

Example T

A company's executive directors were complaining about the strong personality of their (absent) managing director, whose tight control over all major decisions left them with little discretion. The group felt that the company needed to grow if it was to survive in an increasingly competitive market, but that the level of investment required would be rejected by the managing director. 'So there is no point in considering plans that require more investment?', the facilitator asked. 'Let's, then, think only about what is feasible with the current level of resource.' Immediately the group disagreed, and subsequent discussion revealed that nobody could think of an instance when the managing director had actually rejected a plan put forward by this group. This led participants to realize it was themselves, not the managing director, who were resisting growth and the change that implied.

The facilitator had reflected back to the group only what they had already been saying, but he said it from the pessimistic perspective that seemed to characterize the group life. By responding

to the overt message but changing it and reflecting it back in pessimistic form, the group could recognize the real source of difficulty and so resolve the dilemma. In a sense, reflecting back in changed form is a dialectical technique to help a group recognize and resolve differences and contradictions.

Often, just *reflecting* back is all that is required. 'You seem to be saying . . .' will encourage further exploration of a topic when discussion has stopped. Example R provides an illustration: the facilitator reflected back the group's dreariness, enabling participants to recognize their feelings of inadequacy for the task. Finally, *questioning* and *summarizing*, especially when a group is using jargon that the facilitator does not understand, can help group members as well as the facilitator to understand the content of discussions. When conflicting or confused answers are received from the group, exploration may reveal that members have taken for granted the meaning of words that, in fact, have been understood differently. Summarizing a discussion, whether verbally or with a written drawing, phrase or sentence, can help a group to test consensus. More importantly, it can mark an important milestone, 'erasing' the group's history and freeing them to move on to the next stage of their work.

One form of intervention, *interpreting* the group's behaviour, is not, in our view, appropriate in facilitating work groups. An interpretation is essentially an inference from observed behaviour about deeper processes. In Example N the facilitator guessed that the group's scepticism was being expressed by one individual. Instead of reporting this to the group, the facilitator then thought about what intervention might be appropriate in light of the interpretation. By asking the rest of the group how they felt about the proposed changes, he encouraged members to express their individual and shared doubts and anxieties. Example O provides an instance of an observational interpretation that, in hindsight, we feel was inappropriate to give directly to the group.

Directly-reported interpretations are often experienced by work groups as provocative. The group then has to deal with the resultant feelings, and may feel that the facilitator has gone beyond the appropriate bounds of his or her role as helper. Interpreting back to a group possible reasons for their behaviour is, in our view, more appropriate for groups involved in group process training and for therapy groups than the work groups that are the subject of this paper. We feel it is better for the facilitator to keep his or her interpretations private, and use these in deciding what to do next. When a facilitator feels the need to report his or her interpretation to the group, this may be a signal that the facilitator is colluding in a group process that would put him or her in the role of 'seer', not a useful role for the support of a group's task. Turning an interpretation in thought into an appropriate intervention that will help the group calls for a degree of wisdom and tact by the facilitator.

Summary

It should by now be clear that we consider the facilitator can play an important role in working groups. By understanding group processes, the facilitator can intervene to help the group maintain a task orientation to its work. Understanding the group is based on observation of both verbal and non-verbal behaviour. The facilitator can observe participants' roles, relationships between people, and the emotional life of the group. By attending to overt and symbolic content, and by considering what is not said in the group, the facilitator may be able to make inferences about issues that are not being addressed directly. Maintaining awareness of his or her own feelings allows the facilitator to adopt a more impartial role, to attend to relationships among participants and to be sensitive to group climate. By attending to structure and managing limits and boundaries, the facilitator can provide a background of safety and security that minimizes distractions and helps the group to focus on the task.

Various forms of intervention are available to the facilitator; in particular, 'handing back in changed form' is a relatively non-intrusive way of helping a group to resolve differences and contradictions. It is apparent that the facilitator's role is not the same as leader or chairperson, but it is adopted by many chaired or led groups as a way of improving their effectiveness through working in the here-and-now.

ROLES FOR COMPUTERS

Recent work with group decision support systems shows that computers can perform functions that are helpful to groups. Computers have been used by groups in two different configurations: a single computer present in the room, not accessed directly by the participants, but available to the facilitator; or, a computer for each participant, who has hands-on access, with the computers networked together. In the latter case, participants may all be gathered in one room, or they may be distributed at different locations, sometimes even in different countries.

Some of the functions for the computers are obvious, and derive from their excellent data-handling capabilities. For example, information that might be useful to the group can be called up and displayed on individual screens or projected onto a large screen in front of all the participants. By probing a base of data on performance of their organization, participants might be able to discover problem areas; the group can then set about discussing what is to be done about the difficulties they have found.

Another function is to provide a means of communication. For a dispersed group, the computer may be the only means of communication. But even for a group whose participants are gathered in one room, using the computer for activities such as brain-storming, idea generation, rating and voting, can reduce the dominance of strong personalities, and enhance creative functioning of the group.

One reason why the group can be helped by computers is that they do not have many of the qualities that can be destructive of group life: they do not fight, take sides, dominate the conversation, bully or provoke. They can, however, distract, allowing a group to flee from the task at hand, or to be diverted from the real issues. They can also intrude on the group life, or even destroy it, by isolating individuals from face-to-face contact. Positive aspects of computers, along with their superior ability to handle information, can be used to enhance the capabilities of both facilitator and group.

The key functions of the facilitator, observing, attending, maintaining awareness of feelings, and intervening, cannot, of course, be carried out by computers, yet we believe that computers can help some aspects of group work. In particular, there are some roles the computer can play, in tandem with the facilitation we have been discussing, which powerfully complement some of the facilitator's roles, and help a group to deal with differences of perspective and opinion. For example, computers can help to minimize the threat to individuality posed by the group life. In decision conferencing, modelling the issues accomplishes this in two different ways: by creating higher-level perspectives that can resolve differences in individual perspectives, and through sensitivity analyses that show agreement about actions in spite of differences of opinion about details.

How are higher-level perspectives created? A model created in a decision conference always includes options, such as possible courses of action or business needs or projects, and the output of the model scales the options from overall best to worst. An important input to the model is judgement in the form of evaluations of the options on criteria of interest to the group. These judgements are sometimes provided by knowledgeable individuals in the group, but more often are the consensus evaluations of the group. Only when these separate assessments are combined by the model, according to the calculus of decision theory, are new features revealed. These often lead a group to develop new, higher-level perspectives on the issues, allowing individuals to agree at this level, even though they disagree at a more disaggregated level.

As for the role of sensitivity analysis, it is a feature of these models that the overall ordering of the options is often insensitive to considerable variations in many of the judgements²⁴. For example, two people in the group may differ over whether short-term criteria are more or less important than long-term ones. Trying out these different judgements in the model can be achieved by changing the relative weights on the short-term and long-term criteria, a form of sensitivity analysis. If the same overall results are obtained throughout the range of disagreement about the relative weights, then these two people can agree about what to do even though they disagree about matters of judgement. In this way, the collectively-best solution can be agreed while preserving individual viewpoints that differ from each other. Such insensitivities are exceedingly difficult to detect with words alone, and it is this feature of decision models that helps a group to achieve a shared

understanding of the issues (which does not necessarily mean that everyone agrees), a sense of common purpose and a commitment to action.

Computer models help to take the heat out of disagreements. The model allows participants to try different judgements without commitment, to see the results, and then to change their views. Instant play-back of results that can be seen by all participants helps to generate new perspectives, and often stimulates the development of insights about the issues. Participants usually find it easier to argue with one another than with a computer model.

However, while computers are good at storing, retrieving, manipulating and communicating information, they cannot exercise judgement. The facilitator and members of the group must perform that function: formulating problems, identifying key issues, considering risk and uncertainty about the future, forming preferences, making judgements of subjective value, establishing goals and objectives, and assessing trade-offs among objectives. Nor can the computer deal with the group's emotional needs. In short, information, judgement and emotion are all ingredients of group work, and should be accommodated by effective group decision support systems. How this accommodation should be realized is still the subject of considerable exploration.

We believe that computer-based tools, which are external to the group and not a part of it, can provide the facilitator with powerful means to help some work groups maximize creative and minimize destructive aspects of group life. The computer helps the facilitator and the group to externalize aspects of their debates and discussions, allowing the facilitator to attend to group processes. In appropriate work groups, an integration of good computer tools with effective facilitation can provide a more effective group decision support system than either by itself.

CONCLUSIONS

Perhaps the most exciting aspect of FWGs is the considerable potential that can be realized in the group. We have seen 'robber barons' turn into effective working teams, adversarial sub-groups create new options that resolved their differences, managers agree to substantial re-distribution of resources, groups facing great uncertainty develop strategies that were robust to the turbulence in the environment, and teams presented with numerous opportunities agree a focused set of priorities.

These groups were able to mobilize skills, knowledge, judgements and wisdom that were resident in the group members, and the participants achieved full ownership of their work. This sense of ownership, coupled with a releasing of individual capability, is what can make a FWG so effective. We believe the key to that effectiveness is the facilitator who, through an understanding of the group life, enables that group to discover within itself the ability to resolve the issues confronting the organization.

Above all, FWGs help to resolve a pervasive dilemma facing all organizations: how to achieve what is best for both the organization and the individual. The organization and the individual are often seen to be in conflict, as in a zero-sum game: what one gains the other loses. We believe that through the creative potential of FWGs, it is often possible to transform conflict into win-win situations. Without compromise, both organizational and individual objectives can be achieved. But even when this is not possible, effective organizational solutions can often be found in FWGs that are more satisfactory than anything proposed by an individual working alone.

Individualism versus collectivism continues to be a major unresolved issue for organizations, leading many of them to swing between decentralization and centralization every few years. As we progress through the 1990s, with increased demand for effectiveness and efficiency in both the private and public sectors, organizations will find that the FWG provides one means for promoting creative and constructive work that enhances both the organization and the individual.

Acknowledgements—The preparation of this paper was made possible in part through the financial support of Executive Education in International Computers Ltd. Their support is gratefully acknowledged. We would also like to thank the many people who contributed helpful comments on earlier versions of this paper, in particular Dennis Buede, Steve Cropper, Colin Eden, Elliott Jaques and Jonathan Rosenhead.

REFERENCES

1. J. W. THIBAUT and H. H. KELLEY (1959) *Social Psychology of Groups*. Wiley, New York.
2. N. R. F. MAIER (1967) Assets and liabilities in group problem solving: the need for an integrative function. *Psychol. Rev.* 74(4), 239-249.
3. P. GRAY and L. OLDFAN (1990) Group decision support systems. In *Proceedings of the Twenty-third Annual Hawaii International Conference on System Sciences, Vol III*. (J. F. Nunamaker, Ed) pp 1-2. IEEE Computer Society Press, Los Alamos, California.
4. D. VOGEL, Z. LAGAMDZIJIA and J. NUNAMAKER (1989) Session management for collaborative work. In *DSS-89 Transactions: Ninth International Conference on Decision Support Systems*. (G. WIDMEYER, Ed.) The Institute of Management Sciences, Providence Rhode Island.
5. L. D. PHILLIPS (1988) People-centred group decision support. In *Knowledge Based Management Support Systems*. (G. DOUKIDIS, F. LAND and G. MILLER, Eds) pp 208-221. Ellis Horwood, Chichester.
6. C. EDEN and F. Ackermann (1989) Strategic options development and analysis (SODA)—using a computer to help with the management of strategic vision. In *Knowledge Based Management Support Systems*. (G. I. DOULEIDIS, F. LAND, and G. MILLER, Eds) pp 198-207. Ellis Horwood, Chichester and Wiley, New York.
7. J. FRIEND and A. HICKLING (1987) *Planning Under Pressure: the Strategic Choice Approach*. Pergamon, Oxford.
8. P. CHECKLAND (1981) *Systems Thinking, Systems Practice*. Wiley, Chichester.
9. J. D. TURNER (1987) *Rediscovering the Social Group: A Self-categorization Theory*. Basil Blackwell, Oxford.
10. E. SCHEIN (1987) *Process Consultation, Volume II; Lessons for Managers and Consultants*. Addison-Wesley, Reading, Massachusetts.
11. C. EDEN (1990) The unfolding nature of group decision support—two dimensions of skill. In *Tackling Strategic Problems: The Role of Group Decision Support*. (C. EDEN and J. RADFORD, Eds) pp 48-52. Sage, London.
12. E. TRIST and H. MURRAY (1990) *The Social Engagement of Social Science, Volume 1: The Socio-Psychological Perspective*. Free Association Books, London.
13. K. J. GERGEN (1982) *Toward Transformation in Social Knowledge*. Springer-Verlag, New York.
14. W. R. BION (1961) *Experiences in Groups*. Tavistock, London.
15. K. J. CHUN (1989) Analysis of decision conferences: The impact of the group's cognitive pressures in problem recognition stage on their problem formulation (model building) activities during a decision conference. Working Paper 88-2, Decision Analysis Unit, London School of Economics.
16. I. L. MANGHAM (1987) A matter of context. In *Organization Analysis and Development: A Social Construction of Organizational Behaviour* (C. L. COOPER and I. L. MANGHAM, Eds) John Wiley, Chichester.
17. D. BUEDE Personal communication.
18. L. O. PHILLIPS (1988) Requisite decision modelling for technological projects. In *Social Decision Methodology for Technological Projects*. (C. VLEK and G. CVETKOVICH, Eds) pp 95-110. Kluwer, Dordrecht.
19. I. L. JANIS and L. MANN (1977) *Decision Making: A Psychological Analysis of Conflict, Choice, and Commitment*. Free Press, New York.
20. G. HIGGIN and H. BRIDGER (1965) *The Psychodynamics of an Inter-Group Experience*. Tavistock Publications, London.
21. C. EDEN (1990) Managing the environment as a means to managing complexity. In *Tackling Strategic Problems: The Role of Group Decision Support*. (C. EDEN and J. RADFORD, Eds) pp 154-161. Sage, London.
22. A. HICKLING (1990) Decision spaces: A scenario about designing appropriate rooms for 'activity-based' decision management. In *Tackling Strategic Problems: The Role of Group Decision Support*. (C. EDEN and J. RADFORD, Eds) pp 167-177. Sage, London.
23. E. JAQUES (1989) *Requisite Organization: The CEO's Guide to Creative Structure and Leadership*. Cason Hall, Arlington, Virginia.
24. D. VON WINTERFELDT and W. EDWARDS (1986) *Decision Analysis and Behavioral Research*. Cambridge University Press, Cambridge.