

## Work Group Decisions

### Quality

Norman Maier (1963, 1967) suggested that effective decisions are decisions that produce results. Effective decisions need to satisfy two criteria. The first criterion is that they need to be of high quality. Maier further suggested that the appraisal of decisions is made somewhat easier when consideration is given to what he believed are the two major elements of any decision: quality and acceptance.

For Maier (1963, 1967), the quality dimension has to do primarily with a decision's technical merit and with the facts or realities of the external world. In order to make a quality decision, it would seem to make some sense that one of the key essentials would be good information. Unfortunately, research seems to suggest that individuals often use *accessible* information, rather than seeking *useful* information (O'Reilley, 1982). Perhaps one justification for bringing together people to make decisions is the pooling of information that results as members move through the problem-solving process. The ability of the group members to evaluate alternatives proposed in the discussion may be impaired if members have incomplete information on the background of the problem, the parties involved in the problem situation, the resources the organisation can bring to bear, or the existence of similar or related problems. Such a case may exist if various personnel are assembled for the decision task; each might understand some factors well, but others poorly or not at all (Bennett & Huxham, 1982).

Research seems to indicate that groups can often propose better solutions than the best individual solution (Snieszek & Henry, 1989; Kernaghan & Cooke, 1987; Watson, Michaelson & Sharp, 1991). This increased performance could arise from the enhanced abilities of group members to detect one another's misinformation, and to identify assumptions or lapses in logic, as compared to their abilities to detect such foibles individually. This increase in vigilance could decrease the risk that low-quality choices will be made. Could a group decision that is better than the best individual solution provide a measure of "actual" decision quality?

Michaelson, Watson and Black (1989) found that, for real problems with intact project teams, 97% of groups outperformed their best group member. Watson, Michaelson and Sharp (1991) studied classroom problem-solving groups composed of members assigned purposefully so that they were demographically heterogeneous groups. Five - and six-member groups, stable over four months, received group marks for their problem-solving tasks. Watson and Michaelson (1988) found that groups generally performed better than their best members did. Group performance, relative to the best member performance, improved over time, and no single member was consistently the best member for all problem-solving tasks, despite similarity of the tasks. Further, even if a single individual was capable of doing as well as the group as a whole, the group member with the best, or highest quality solution was difficult to identify ahead of time (Kernaghan & Cooke, 1990). If the "best member" is not identifiable, how could a group access the information the "best member" possesses that may be needed to produce high quality results? Perhaps there are certain group features, or behaviours that are necessary, if the individual group members are to access all information available.

Contrary to the findings above, Henry (1993) found that individual members could reliably identify the most accurate member on a group judgement task, after discussion and

joint choice, at a rate far beyond chance. She suggests that group members may make such identifications during discussion in order to evaluate the weight and persuasiveness they will attribute to the statements and arguments of other members.

Interestingly, Henry (1995) also studied group judgement accuracy in 70 groups of three introductory psychology students. For a quantitative judgement task, one third of the groups were asked to ensure that they shared task information, one third of the groups were asked to ensure that they identified the most able member, and the final one third were given no direction. The first two interventions increased group judgement accuracy roughly equivalently. Curiously though, members of the groups asked to ensure that they shared information were not accurate afterwards in identifying the “best member.”

Stasson and Bradshaw (1995) found that, although the “best member” solution typically scored better than the group solution on an item-by-item basis in mathematical problem-solving, groups’ outperformed “best members” as far as the total scores were concerned. They interpret this result as being, in part, the result of groups being significantly more able to find the correct solution when no individual members had found it, compared to the ability of individuals to find the correct solution to problems they had previously answered incorrectly.

It would appear that decision quality is affected by the pooling of information of the various members. The belief that the quality of the group decision can be better than the “best member” solution is supported in several studies. It might be interesting to know what a group does that an individual does not. At this point, it would appear that none of these authors has examined the interactive process. Is there, within this interactive process, something, perhaps a behaviour, or behaviours, that might be linked to high quality decisions?

The whole seems greater than the sum of the individual parts. This is a concept that could be named *synergy*. Perhaps the group could be said to be synergistic if the group quality performance dimension is better than the quality performance dimension of its best member (or best members). Are there more elements, than simply quality that are necessary before a group could be called a “*synergistic group*”?

### **Acceptance**

For Maier (1963), the second, and equally important, criterion for effective decision-making is acceptance. The acceptance dimension would appear to link primarily with a decision’s motivational merit, which in turn seems to link to the way the people who have to implement the decision feel about it. It would appear that acceptance is related to social considerations, such as the effects of the decision on employee morale, as well as the motivation and co-operation of the people who have to carry it out. Perhaps the interactions that occur between and among group members during the problem-solving process play a role in individual and group acceptance of the decision.

It might seem plausible that the interactions of group members could proceed as a dynamic process that could either seamlessly support the group decision-making process or interfere with it in a number of ways. Perhaps the degree to which group members are committed to the decision task they are performing might have an effect on group decision-making performance (Zaccaro & Lowe, 1988; Zaccaro & McCoy, 1988; Berenthal & Insko, 1993; Leana, 1985). Apparently, the importance, or validity, of the problem for a given

member has an effect on how effectively that person will deal with the decision-making process relating to it. Are acceptance and commitment interchangeable terms to describe the same thing? With this in mind, is there perhaps a link between the commitment of the group to the decision and groups' acceptance of the decision?

Perhaps there are certain circumstances or interchanges that affect decision acceptance. In some cases, particularly if several interconnected issues come to the fore at once, it may be difficult to understand the decision problem without working partially through a decision and then returning to a situational analysis (Witte, 1972; Mintzberg, Raisinghani & Theoret, 1976). There may also be conflict based on differing interests or on differing perspectives and roles (Brehmer, 1976; Cannon-Bowers, Salas, & Converse, cited in Castellan, 1993; Astley, Axelsson, Butler, Hickson, & Wilson, 1982). Perhaps this conflict could hamper the development or recognition of objectives and criteria. Decision makers may work within familiar conceptual territory and fail to recognise novel aspects of a decision problem or changes in their objectives. Creating fresh sets of alternatives to evaluate could be neglected if decision makers believe that they can easily match an older plan to the current decision problem (Nutt, 1984b).

Nemeth and Kwan (1987) found that early acceptance of solutions can reduce effective group decision-making performance. This result could be expected if the group settles too often on apparently plausible alternatives as their final choice, rather than continuing to search for better alternatives and challenging assumptions presented by individual members (Schwenk & Cosier, 1993).

Astley, Axelsson, Butler, Hickson, and Wilson (1982) found that both problem complexity and cleavage of interests, or interpersonal conflict, could increase scrutiny and negotiation within decision-making processes. Decision situations incorporating much complexity or cleavage seem to create more difficulties for decision-makers as they attempt to reach a choice, and might both require and generate different decision processes than would be the case if the decision problem is both straightforward and uncontentious (Koopman & Pool, 1990). It would seem that decisions involving both complexity and cleavage of interests might be even more difficult, and that groups addressing such decisions could be subjected to pressures from other organisational members and outsiders, and to interruptions and disruptions. Such outcomes perhaps lead Wilson, Butler, Cray, Hickson, and Mallory (1986) to label the resulting decision processes "sporadic."

Fandt (1991) studied accountability, inter-dependence, commitment, satisfaction and performance of groups of supervisors in a skills training program. He found that the more accountable groups were, the more inter-dependence they demonstrated, the higher their commitment and satisfaction with the group, and the higher they rated their own performance. Fandt suggested that cohesiveness was unrelated to inter-dependent behaviour. He suggests instead that the goal of strengthening accountability to improve working relationships and performance might be more useful than struggling with cohesiveness.

Mullen and Copper (1994) conducted a meta-analysis of the relationship between group cohesiveness and performance. The overall effect was small, positive and highly significant. The effect was stronger in smaller groups and in continuing real groups. Mullen and Copper conclude that the effect is primarily related to commitment to task rather than interpersonal attraction or group pride. They suggest that performance may have a stronger

effect on cohesiveness than vice versa. It might be interesting to know if performance has an impact on acceptance.

Contrary to Mullen and Copper, Evans and Dion (1991) conducted a meta-analysis into research on cohesion and found that cohesion was generally positive in its effects on group performance in experimental studies. Evans and Dion recommended that the cohesion of a group be enhanced to promote the best possible work. While some believe that cohesion is a very difficult concept to define (Keyton, 1992; Dion & Evans, 1992), Dailey (1977) described it as related to the desire of group members to be part of the group, engage in the activities of the group, and contribute to the welfare of the group.

Mudrack (1989a, b) is openly critical of research linking cohesion and group performance. He suggests that insufficient attention has been paid to defining what is meant by cohesion for the purposes of research. Mudrack suggests that the most useful definition of cohesion may be the commitment of members to the group task and the decision. For the purposes of the present study acceptance and commitment will be treated the same.

Is there, then, perhaps a link here between quality and acceptance (or commitment) and effective decision-making, as Maier (1963, 1967) proposes, rather than a link between effective decision-making and group cohesion?

The studies above seem to suggest that members of problem-solving groups face two types of problems in achieving an effective decision. It would appear that there is pressure on each member to contribute unique, and possibly controversial, information to maximise the group's resources (Hoffman, 1979). How the group "handles" the pressures of working with unique and controversial information could be important to the group process and its impact on decision acceptance. What might this "handling" look like? For example, group members might tend to believe that closure to group problem-solving and strong solution acceptance are best achieved through conformity of opinions (Festinger, 1950; Hoffman, 1979; McGrath, 1984). However, does closure suggest that the controversial information has been handled well, or simply set aside? Does it mean that alternatives been dismissed without thorough examination? Has it prevented all available information from being pooled? Perhaps these are issues for further study.

### **Theoretical Framework for the Group Styles Inventory**

Through an extensive analysis of the typologies of group interaction styles, Cooke and Szumal (1994) identify a three-dimensional typology that represents the three important dimensions of behaviour that have been identified in the context of research specifically designed to explain group **problem-solving effectiveness**. These dimensions of interaction behaviour are described as a *constructive style*, *an aggressive style* and *a passive style*.

Fouriezos, Hutt and Guetzkow (1950) examined the effects of a **defensive group style** representing both passive and aggressive group styles (**self-oriented need behaviour**) on group performance and member satisfaction with the decision. Their findings suggested that the level of self-oriented behaviour displayed by members was negatively related to the effectiveness of their group's decisions (i.e. the more self-oriented behaviour was shown by members, the less effective was the group's decision). Hoffman, Harburg, and Maier (1962) found that groups whose interaction was characterised by mutual influence and the expression

and consideration of conflicting viewpoints (a constructive style) developed solutions of higher quality and with greater acceptance than did groups that were characterised by a more passive style. Smith, Peterson, Johnson and Johnson (1986), comparing the effects of styles that are described as constructive and passive, found that groups with constructive styles developed higher quality solutions that had greater acceptance by members. Kernaghan and Cooke (1987) used observers to obtain independent ratings of the extent to which problem-solving groups exhibited constructive behaviours; they found the prevalence of such behaviours to be positively related to both solution quality and acceptance. Finally, Watson and Michaelson (1988), using measures paralleling the constructive style and a combination of passive and aggressive group styles ("fight or flight"), found the constructive style to be more positively related, and the aggressive styles negatively related, to solution quality.

Although the results of these empirical studies seem to suggest that the constructive group style leads to relatively effective solutions (in terms of quality and acceptance), none of these studies appear to consider the effects of specific behaviours of group members that result from the interaction of the problem-solving process, nor do they seem to consider possible differences in the effects certain behaviours have on quality and acceptance. Further study that examines specific behaviours and their influence on effective decision-making seems needed.

From a theoretical point of view, Hoffman (1979) suggests that a *passive style will likely reduce solution quality because members withhold resources* that might contradict the prevailing viewpoint. As minority dissent is minimised, the information available to the group and ways of thinking about that information become limited (Nemeth, cited in Worchel, Wood & Simpson, 1992) and the group's ability to perform the critical functions identified by Hirokawa (1985) seems reduced. Thus it might follow that effectiveness could be reduced because of a passive individual's inability (or a group's reluctance) to communicate (or accept) critical information. Perhaps it would be useful to attempt to identify individual behaviours and the interactions that might be linked to improved decision effectiveness. When pressures to conform, the reluctance to contribute deviant perspectives (Hoffman, 1979), and misperceptions of strong agreement among other members occur simultaneously in passive groups (Harvey, 1974), it seems to lead to compliance rather than personal commitment (Maier & Hoffman, 1965) and to low-solution acceptance.

In contrast, an *aggressive group style seems likely to have a negative impact on overall solution acceptance, but may not necessarily contribute to, or detract from, solution quality*. Various "discussion formats" have been shown to lead to the fulfilment of requisite conditions for quality solutions (Hirokawa, 1985). Some of these formats (devil's advocate method, dialectic method) seem to encourage aggressive behaviours (criticism, close examination of even minor points, overconfident presentation of positions) which ensure that groups complete such critical functions as understanding the problem, generating alternatives, and assessing the consequences associated with alternatives (Cosier & Schwenk, 1990). Although such discussion formats may be effective in terms of identifying a "good" solution, it appears unclear as to whether these discussion style behaviours promote the development of integrated or innovative solutions. If a connection could be established between what Maier (1963, 1967) described as "persuasive" behaviours and solution quality and acceptance, there might be linkages between these behaviours and decision effectiveness. Is it possible to measure, and then to predict, the success of a variety of groups involved in a task to help classify groups as "good" – effective, or "bad" – ineffective decision makers? Perhaps if the interaction style of a group were known, then the group's decision-making effectiveness could be predicted.

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