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INDIVIDUAL SELF-REPORT VS. GROUP CONSENSUS IN SMALL DECISION-MAKING GROUPS

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ABSTRACT

Many business games involve small groups of participants who work as teams to solve business-related problems. The assumption is frequently made that (1) group solutions will be different (better?) and (2) group interaction will have an effect on or be affected by individual activity. This study attempted to obtain data of value in considering aspects of both assumptions.

Members of a BA class in management were required to choose five best performance measures for a profit-making organization. The task was performed first as individuals then as members of a group. Comparison was made between the two conditions and implications for simulation and games discussed.

INTRODUCTION

One of the most popular means of demonstrating the superiority of groups over individuals is the use of the Lost on the Moon task, developed by Jay Hall (2), which requires ranking a list of items critical to the survival of space ship crew wrecked on the moon. Items are ranked first by individuals, then by groups composed of the same individuals. Scores are compared to a solution given by members of the NASA staff, so that a reasonably clear basis exists for judging solutions.

The present study was inspired in part by the NASA problem, but differs from it in certain important respects. For example, 1) a task more directly related to business was used, 2) less clear criterion for evaluation of solutions was accepted, and 3) a simpler method of individual vs. group comparison was used. (The method used does allow creation of a ranking of items for further comparison.)

In the present situation, a list of 15 possible performance measures for a profit-making organization was presented. Instead of ranking items on the list, subjects were required only to choose the best five measures. Choices were made first by individual and then by groups composed of the same individuals.

Since no obvious solution criterion existed, some constructed method of scoring was necessary. In this case it was based on the assumption of group superiority. This follows from the consistent demonstration in the NASA problem that the group solution will be closer to the correct answer than separate individual solutions. If this is so, then it appears reasonable to argue in a similar situation (but where no definite answer exists) that the group solution at least provides a reasonable alternate criterion. Where individual solutions are markedly different from the group solution, the point can be made that the group is closer to the true solution based on past evidence. On the other hand, if no difference is shown between the individual and group performance, other interpretations may apply.

METHOD

Members of a graduate level class in management were individually given a list of phrases describing possible performance measures that apply to a profit making organization (e.g., Greater ROI Fewer Accidents, etc.), and were required to choose five best items from the list. Later the same individuals in small groups (2-5 persons) completed a group decision involving the same task. Each group score was assumed to reflect the best choices and provided the basis for the "correct" answers. For comparisons, individual scores were determined by an artificial assembly of individual answers into a composite "individual" score which gave credit if a correct choice appeared anywhere in the collection of individual scores. In other words, if any individual member of the group had previously chosen one of the correct items, it was counted in the "individual" score. (This method of compiling individual scores into an artificial or "nominal" group for comparison with actual groups has been discussed by Faust (1) and others.) One week later individual subjects working alone were again presented with the same task.

RESULTS

The results of the experiment are shown in Table 1. Scores are given for individual (composite) and comparable groups. Seven of eleven individual composite scores were the same as actual group scores. Later individual scores were not significantly different from original scores although a very slight drift (i.e. 8 of 11) toward the group pattern of scores did occur. None of the comparisons made were significantly different at the .05 level.

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Table 1
Group vs. Individual
Choices

Groups		Individuals (Before)	
No.	Score	Score	Diff.
1	5	5	0
2	5	5	0
3	5	3	2
4	5	5	0
5	5	5	0
6	5	4	1
7	5	4	1
8	5	4	1
9	5	5	0
10	5	5	0
11	5	5	0
Total	55	50	5

DISCUSSION

One reason for the lack of demonstrated difference between individuals and groups in this study may be related to the type of task used. In the NASA problem a clear solution exists which can be developed from factual information (e.g., no air on the moon). No such solution was readily available for the performance measures task presented to the business students. The latter task was rationalized on the argument that many, if not most, management problems do not have clear solutions. While the clear solution type task may be better suited to the group, with its greater pool of facts, the unclear situation may require other capabilities. This may also be a factor in the data showing that later choices did not appear to change from the original ones where it could be argued that the consideration of additional facts (as in the NASA problem) could have more effect on subsequent performance by individuals in the structured situation (as in the NASA problem), but this may not occur in the less structured task. The results of the study might also raise the possibility that the individual could do as well or better in the role of structuring material before a decision is made, while the group (e.g., committee, staff, etc.) may be more effective in the actual decision or choice situation.

An obvious area for debate in this study is the comparison scores used. It is very likely that the use of a simple average score could result in a difference in favor of the group. Another view of the results may be that while the observed output of the group was not different from the group, in fact the interaction of the group members could result in an exchange of information such that each member profited from new information, but the group total is not changed. This has obvious implications for teaching (or learning) situations, where the improvement of the individual is of

primary concern. If factual information was exchanged we might expect a greater change in individual behavior after exposure to the NASA situation than in the present one.

Still another view may be that whatever the outcome, the individual profits from his group experience to the extent that he learns something of the conditions under which groups operate most effectively and, specifically, some greater understanding of how to operate as an effective member of a human group.

The application of these ideas to simulation and gaming would appear to be very much related to the type of simulation involved. If little or no structure is present, individual (one brain) activity may provide a better means of ordering the situation. Where reasonable clarity of the situation exists and facts are available to produce a satisfactory solution, the extra memory power and facts pool of the group may provide a better answer. In any case, it appears likely that individual members gain in a number of ways from the group experience.

REFERENCES

- (1) Faust, W. L. (1959) Group vs. Individual Problem Solving, Journal of Abnormal and Social Psychology, 58, 257-266.
- (2) Hall, Jay (1971) Decisions, Decisions, Decisions, Psychology Today, November, 51-54, 84-88.