Variables of Group Composition, Group Size, and

Decision Importance in Decision Sustainment Behavior

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Abstract

Group decision-making behavior in relation to the factors of group size, group composition, and decision importance was the object of this research. Subjects were required to discuss and decide their level of agreement with a previously reached decision and so indicate on a numbered scale. It was hypothesized that the heterogeneous groups composed of younger and older Ss would be more inclined to deviate from a previously reached decision than would the homogeneous groups or younger individuals, and that they would be more inclined to do so the larger the group and less less important the decision situation. The results of the experiment revealed a statistically significant three-way interaction as well as significant main effects for the group composition and group size variables. Examination of the interaction revealed that the six men homogeneous and older individuals were significantly riskier than the heterogeneous and homogeneous three men groups in the case of the critical decision. In the case of the unimportant decisions, the variables of group size and composition failed to have a statistically significant differentiating effect. It was concluded that decision sustainment behavior may be qualitatively different from the construction of decision behavior and that decision importance is of primary importance in the prediction of group influences on risk taking.

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Considerable experimentation and study in the area of
group problem-solving and group risk-taking has revealed
the consistent finding that individuals in a group are af-
fected in some way by that group. Early reasearch by All-
port (1924) and Farnsworth and Behner (1931) showed that
subjects tend to give more moderate judgments of weight and
odors when in the "together" situation as opposed to when
alone. In relation to this phenomenon Allport says that in
working with others we answer in a way as if we are react-
ing to the others. The simple presence of others tends ei-
ther to increase a person's attention to important cues
when their presence points up the importance of paying at-
tention or to distract his attention and draw it towards
irrelevant clues. Bergum and Lehr (1963) give this exam-
ple: National Guard trainees missed few relevant cues in
a 135 min. vigilance task when subject to occasional visits
by observers whereas they did miss some such cues when not
visited at all.

Some responses are manifested more vigorously, quick-
ly, and accurately under "together" than "alone" conditions,
and other responses are performed more poorly and with more

errors. O'Brien and Owens (1968) found that group produc-
tivity is a function of the interaction between member
ability, interpersonal relations, position structure, and
kind of task. Zajone (1965) refers to the presence of
others as "a source of arousal". It is stated that learn-
ing experiments have shown that high drive (or arousal or
activation) favors the emission of dominant (well-learned)
responses. During early stages of learning, when the dom-
inant responses are often the wrong ones, their enhance-
ment by high drive level impairs learning.

With certain types of tasks, subjects report that the
presence of others makes them more cautious and constrained.
As a result, responses are given with more delay and are of
a more common nature. Wapner and Alper (1952) tell of evi-
dence of longer response latencies under audience condi-
tions and Allport (1924) cites evidence that word associa-
tions of a personal nature are produced in together situa-
tions. The evidence given by Allport may be an indication
not of social inhibition but of heightened task motivation
which produces a tendency to respond more quickly. From
his and other studies Allport (1924) deduces that reponses
that are overt, such as writing, are facilitated through
the stimulus of co-workers. However, the intellectual or
implied responses of thought are hampered rather than facil-
itated.

In studying group sizes which varied in size from two

to seven, Bales and Borgatta (1955) found that an individual subject's behavior varies more when performing in large groups than when in small size groups. Despite expectations from his laboratory findings, Freidlander (1966) found when studying 12 work groups in a research organization that group effectiveness was correlated negatively with occupational and educational levels, heterogeneity, and group size. Tuckman (1967) attempted to show the interactive and additive effects of group heterogeneity on task structure. Groups of intermediate heterogeneity (in cognitive styles) displayed less of a tendency to structure their tasks and performed more effectively than did homogeneous groups. Naylor and Dickinson (1969) studied the relationship between task structure and task organization on a task performance and found that task structure was the more powerful in influencing achievement, consistency, and matching. The importance of variation in task structure alone was the topic of several multivariate studies, Hackman and Porter (1968) and Altman (1966) and Morris (1966).

Susceptibility to influence is high with little social support (Asch, 1951), with poor or ambiguous information (Asch, 1951), with problems difficult beyond the person's capabilities, and with previous experiences which have engendered low self-confidence (Boomer, 1959; Houchbaum, 1954; Kelley and Lamb, 1957). One person's influence over another greatly increases if he can increase the stability of

other members of the group. This is contingent upon at least four factors: the influencer's style, i.e., the signs he gives that his own abilities are stable, including such cues as his own confidence, definiteness, short latency of response and the strength of his assertion (DiVesta, Meyer, and Mills, 1964; Shaw, 1961; Shaw and Penrod, 1962); the influencer's content, i.e., the information he makes available, the appropriateness of his solutions, and their comprehensibility and utility in the hands of the person being influenced (Hovland, Janis, and Kelley, 1953); the information the influencer provides about social consensus and the number of influencers involved (Asch, 1951; Mausner and Bloch, 1957; L.A. Rosenberg, 1963); and the influencer's demonstrated success or expertise (Hollanden, 1960; Lanzetta and Kanareff, 1959; Mausner, 1954; Rosenbaum and Tucker, 1962).

The correlation between correctness of an answer and majority support was studied by Thorndike (1938). He found that there were very strong tendencies for subjects to shift toward majority positions, although this effect was not such as to override completely the "pull" of the correct answer. The group decision moved toward a majority at first more often if it happened to correspond to the correct answer than if it was wrong, 79% of the time as compared with 55%. Thorndike notes that the existence of shared misapprehensions occasionally resulted in the group decision con-

taining more error than the original distribution of individual votes. More recently Thomas and Fink (1961) demonstrated a considerable degree of pressure toward uniformity despite the fact that members of the two-to-five-man groups were under no external pressure to come to a unanimous decision. All of this is regardless of the rightness or wrongness of the decision.

Osborn (1957) discovered that persons can generate many more creative ideas when working together under brainstorming rules than when working alone although Taylor, Berry, and Block (1958) and Dunnette, Campbell, and Jaastad (1963) have more recently found evidence to the contrary. Meadow, Parnes, and Resse (1959) discovered that brainstorming instructions yielded more good ideas in individual problem solving than did non-brainstorming instructions. Cohen, Whitmyre, and Funk (1960) found that pairs with prior training in creative thinking, and cohesive pairs whose members preferred each other as partners for brainstorming were more effective than pairs without these attributes (are more effective than nominal pairs).

Of specific relevance to the current experiment are the data referred to as group risk-taking. Stoner did some very interesting work in this area and his work was reported by Brown in 1965. The Stoner paradigm insisted of individuals' first responding to the problems, and then groups discussing each problem until consensus was reached. With

considerable regularity, the groups reached agreement on a level of risk substantially greater than that acceptable to the average member prior to discussion. As in its subsequent replications, the effect was manifested both by a displacement of the modal judgment toward the risky end of the continuum and by homogenization or reduction in variability around the new mode.

Wallach, Kogan, and Bem (1962) performed an experiment very much like Stoner's but using liberal arts undergraduates as subjects. Subjects were assigned small groups of all males or all females. The results show a highly significant shift toward risk in both the male and female groups. The shift was shown in consensual decisions and was upheld in subsequent private judgments made by group members.

The risky shift paradigm is regarded as a carefully controlled, standardized method of viewing the essence of a group's effects upon individual ways of thinking. Marquis (1962) saw it resulting from leadership as did Wallach, Kogan, and Burt (1965). Pruitt and Teger (1967), Secord and Backman (1964), and Wallach, Kogan and Bem (1964) viewed it as resulting from diffusion of responsibility whereas Bateson (1966) saw it in light of familiarization amoung Ss as did Flanders and Thislethivaite (1967). Dion, Miller, and Magnam (1970) and Vidmar (1970) found that the less cohesive, more heterogeneous groups exhibited a greater risky shift than did cohesive and homogeneous groups.

According to Brown, risk is a value of our culture as he discussed in a book dealing with social psychology. Levinger and Schneider (1969) and Pilkonis and Zanna (1969) reported that individuals typically select a level of risk taking which they most admire. The two mechanisms which Brown proposed are: a) individuals perceive themselves as relatively risky (b) given information concerning others' risk level, shift to positions of greater risk. Indications that individuals perceive themselves as relatively risky has been presented by Hinds as reported by Brown, Williams (1969), Dion, Baron P., Miller, Baron R. et. al. (1970), and Levinger and Schneider (1967).

In addition to the demonstration of risky shift in the presence of varying sex composition of groups, the reliability of the risky shift phenomenon has been revealed in the presence of many reinforcement manipulations. For example, Wallach, Kogan, and Bem, 1964, demonstrated the risky shift when the risks entailed possible monetary losses for failing old College Entrance Examination Board items. It is even upheld when the possible negative consequences of risk-taking are emphasized. In one experiment (Bem, Wallach, and Kogan, 1965), the shift was again shown when the decisions involved risking painful side-effects as well as monetary losses. However, situations can be invented in which the shift would not be expected to take place. If the value of the prize is equal to the value of the stake, only odds of

50-50 or better would even be entertained. As the value of
the prize is progressively exceeded by that of the stake,
acceptable odds are further and further restricted to the
conservative end of the risk continuum. As a result, little
room would exist for shifts in whatever direction. It could
be that the discovery of "life dilemma" problems which do
not produce the risky shift is attributable to this great
restriction of possibilities to the extremely conservative
end of the scale.

According to Wallach and Kogan (1965), those events
which are critical in producing the risky shift are taking
place during the process of group discussion. It is the
discussion itself, and not the requirement that the group
reach a unanimous decision, that seems to be the condition
for producing the shift. In his 1965 publication, Brown
suggested that, at least in America, there is a cultural
value attached to moderate risk taking. One should be "ven-
turesome" without being "foolhardy". But it is difficult
in any concrete situation for individuals to know how to
realize or "specify" the precise level of risk that entails
moderate risk taking. It is the function of group discus-
sion to inform the members about the level of risk that con-
stitutes moderate riskiness in a specific situation. Brown
says that the make-up of the discussion, the various argu-
ments for and against, are not important according to this
theory, and that it is what is known about the answers of

others that causes individuals to initiate greater risk after group discussion.

Hinds performed this experiment, as reported by Brown, 1965, in which he asked subjects to estimate how others like themselves would respond to certain "life dilemma" problems. The subjects consistently estimated that others would select more conservative alternatives than they had themselves selected. This "pluralistic ignorance" represented by the conservative bias in understanding group opinion is shattered as the group begins to discuss the issue. It was seen by the group member that he could indeed adopt alternatives riskier than his initial ones, which were calculated so as to be an excessively conservative view of other people's opinions. Again, in this interpretation, the presumed function of the group discussion is to provide information about the distribution of judgments in the group.

In an experiment by Teger and Pruitt (1967), group members merely exchanged without discussion their private decisions about the same "life dilemma" pproblems previously mentioned as being used in some of the other experiments. The subjects were not required in this experiment to reach a consensus decision. The results show a significant shift to risk. Though the risky shift was significantly larger when Teger and Pruitt permitted other groups to discuss the problems, these results suggest that at least part of the risky shift may be attributable to the processes of informa-

tion exchange.

Nordhoy in a experiment reported by Brown, 1965, found that there were consistently more argument advanced in favor of risk than of caution. There seems to be relatively s stronger influence attempts to move the group toward the risky rather than the conservative end of the continuum. Wallach, Kogan, and Bem, (1962) did find a low positive but significant correlations for both male and female groups, between the riskiness of initial individual judgments and retrospective judgments by the subjects of the amount of influence exerted by various group members.

In his analysis, Nordhoy states that the influence process is weighted in the direction of the shift. The correlations between initial riskiness and influence may simply reflect what has occurred: subjects see the shift occur and conclude from it that the initially risky persons must have been more influential. Another plausible interpretation is that the initially risky persons are personally very persuasive and influential.

Rim (1963, 1964), is one writer who has demonstrated that initially risky Ss are more influential. Rim obtained the risky shift and found that Ss scoring high in "extraversion" (Rim, 1964) and high on a measure of "need achievement" (Rim, 1963) were atypically risky in their initial judgments. Because the group decision shifted toward these Ss, Rim argues that they must have been influential, and he

surmises that their extraversive personalities were the bas-
is of their influence.

Because decision making behavior has become so vital in
today's organizations there is considerable value in re-
search done in that area which says that participative man-
agement is advisable. Brown (1965) found that groups tend
to choose selections with higher payoffs but with lower pro-
babilities of attainment than do individuals. McGregor
(1960) and Leavitt (1958) have shown that participation in
decision making improves performance and Vroom (1960) shows
specific areas in which it can be facilitated.

While several of the factors involved in decision be-
havior have been studied rather extensively, the present re-
searcher thought a factorial combination of variables could
add a vluable insight to the already considerable research
pertaining to decision behavior. The present experiment was
designed to look in particular at the factors of group com-
position and group size as they affect decisions of varying
importance or vitalness. The hypothesis being tested was
that heterogeneous groups tend to be riskier in their deci-
sions, and similar larger groups are also predicted to be
riskier. Additionally, it was predicted that the tendency
to be risky would vary with the criticalness of the deci-
sion.

The uniqueness of this experiment rested not only in
the combination of variables alone with the consequent exam-

ination of variable interaction, but it also furnished a

different decision problem as well. The decision problem

differed from many experimental decision problems in that the

Ss were required to rate their support for previously reached

decisions dictated to them by the experimenter, instead of

making the decisions themselves. In this sense the experi-

ment concerned itself with those variables which contribute

to sustainment behavior and not decision-making behavior it-

self. It may be that sustainment behavior has more external

validity than problem solving decisions because of the lim-

ited opportunity for actual participation in making the de-

cisions made by private and public organizations.

Method

Subjects.

Eight differenttgroups made up of a total of 144 $\underline{Ss}$ were used in the course of this experiment. The $\underline{Ss}$ were assigned two different categories with 72 $\underline{Ss}$ in each category. One category washhomogeneous in that all $\underline{Ss}$ that made up the category were in the age bracket of 18 to 21. The other category was heterogeneous in that it was composed of $\underline{Ss}$ in the former age bracket and of subjects in the age bracket of 23 to 30. There were 36 $\underline{Ss}$ of each age bracket in this category. All $\underline{Ss}$ were males in college or graduate school.

Procedure.

In each group composition condition eighteen "groups" of one were used, along with nine groups of two $\underline{Ss}$, six groups of three $\underline{Ss}$, and three groups of 6 $\underline{Ss}$. This was done so that there would be 18 $\underline{Ss}$ in each size group. The heterogeneous category was so arranged so that one half of each group was of each age bracket. In this heterogeneous category nine groups of each age bracket were used in forming the 18=S groups. All $\underline{Ss}$ were chosen and placed in their group at random with the only restriction being that they had to meet the age specifications of a particular age bracket.

Each group was given three problems and told of the solution that had been decided upon for each problem and each subject was to rate on a scale of one to six how much he

agreed with the decision that had been reached. Each subject did this after the group he was in discussed for five minutes what they thought of the decision that had been reached with the S taking part in the discussion. All groups did this with the exception of the one-S groups who were used as controls. These control Ss discussed the problem with no one but merely rated their amount of agreement with the decision that had been reached after thinking over the problem alone for five minutes.

The three problems appearing in Appendix A varied in importance. One problem (what movie to see) served as an unimportant problem. The second problem (which needy family was to get an important financial grant) served as the important problem. The third problem (which one of the five was to receive life-saving medical treatment) served as the critical problem. The three problems were counterbalanced in presentation to the Ss.

Apparatus.

This experiment was conducted in a quiet room which was 30x15 ft. All Ss sat at a wooden student desk throughout the experiment. The experiment was conducted between the hours of one and four p.m. and seven and nine-thirty p.m. Each subject was given three sheets of paper, each on which was writted one of the three problems, and three score sheets for recording the S's amount of agreement. The Ss were instructed to read each situation as a recording read

along with them. Three cassette tapes, each with a different situation recorded on it were used for this purpose.

Results

Since this experiment was designed to guarantee minimum
levels of power for tests of both the main and interaction
effects, Cohen's (1969) a priori power analysis was employed
to provide this through the determination of sample size.
The a priori power analysis indicated that the experiment
maintained a minimum power of .95, and thus protection at
the .05 (Beta) level for a type II error, in testing the
three main effects. The power estimate of .95 was founded
upon the application of the analysis of variance design and
it allowed for the detection of an experimental effect of
$f = .20$ or less than the usual medium effect of .25 speci-
fied by Cohen. Additionally, the design provided for a min-
imum power of .80 for detection of an interaction of the AB
effect of $f = .15$. Ultimately, a minimum power of .80 was
given for the detection of three-way interaction in the mag-
nitude of $f = .35$ or slightly smaller than a large effect
(.40) as delineated by Cohen.

The statistical design used in analyzing was the split
plot factorial design of the analysis of variance (Kirk,
1968). Two between-group variables with levels of two and
four were used, in addition to one repeated measures varia-
ble with three levels. The dependent variable consisted of
ratings of agreement or lack of agreement for the decisions
on a response scale. The scale consisted of the numbers
one through six with one indicating complete agreement with

the decision and six indicating complete disagreement.
Scale was selected because of its professed value in measuring evaluative or connatative responses (Nunnally, 1964).

As shown in Table 1, the analysis of variance indicated significant main effects for the variables of group size and decision importance. These results were significant at the .06 and .01 levels of probability, respectively. There was also a statistically significant three-way interaction (p is less than .01) among the variables of group size, group composition, and decision importance.

As shown in Table 2 and Figures 1 and 2, the three-way interaction revealed the greatest difference in risk taking to exist between the critical decisions made by the six men homogeneous groups and the critical decisions of the three men heterogeneous groups. Further examination of these simple-simple main effects, exposed significant differences between the "homogeneous one man groups" (young individuals) and the heterogeneous three men when both of these group size conditions were in the critical decision situation.

TABLE 1

Table of cell means

		b1	b2	b3
A_1	C_1	2.77	4.55	3.83
	C_2	2.94	3.83	2.83
	C_3	2.88	3.50	3.83
	C_4	3.05	5.05	5.00
A_2	C_1	2.44	3.66	4.33
	C_2	3.55	4.31	4.44
	C_3	3.11	5.11	3.11
	C_4	3.66	4.50	4.55

TABLE 2

Analysis of Variance

Source	df	MS	F
Group Composition (A)	1	5.33	1.580
Group Size (C)	3	12.96	3.840
AXC	3	3.34	.099
subj. w. groups	136	3.37	
within subjects	288	2.20	
Decision Importance (B)	2	61.46	**32.234
AXB	2	.145	.763
BXC	6	3.19	1.670
AXBXC	276	29.68	**15.620
B x subj. w. groups	272	1.90	
Total	431	103.575	

*p is less than .06

**p is less than .01

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Figure 1

C1 ——Individual
C2 ⎯ ⎯Two men group
C3   Three men group
C4   Six men group

Mean Risk Taking Scores

6

5

4

3

2

1

A2
A1
A1
A2

A2

A1
A1

A2

b1
(unimportant)

b2
(medium)

b3
(critical)
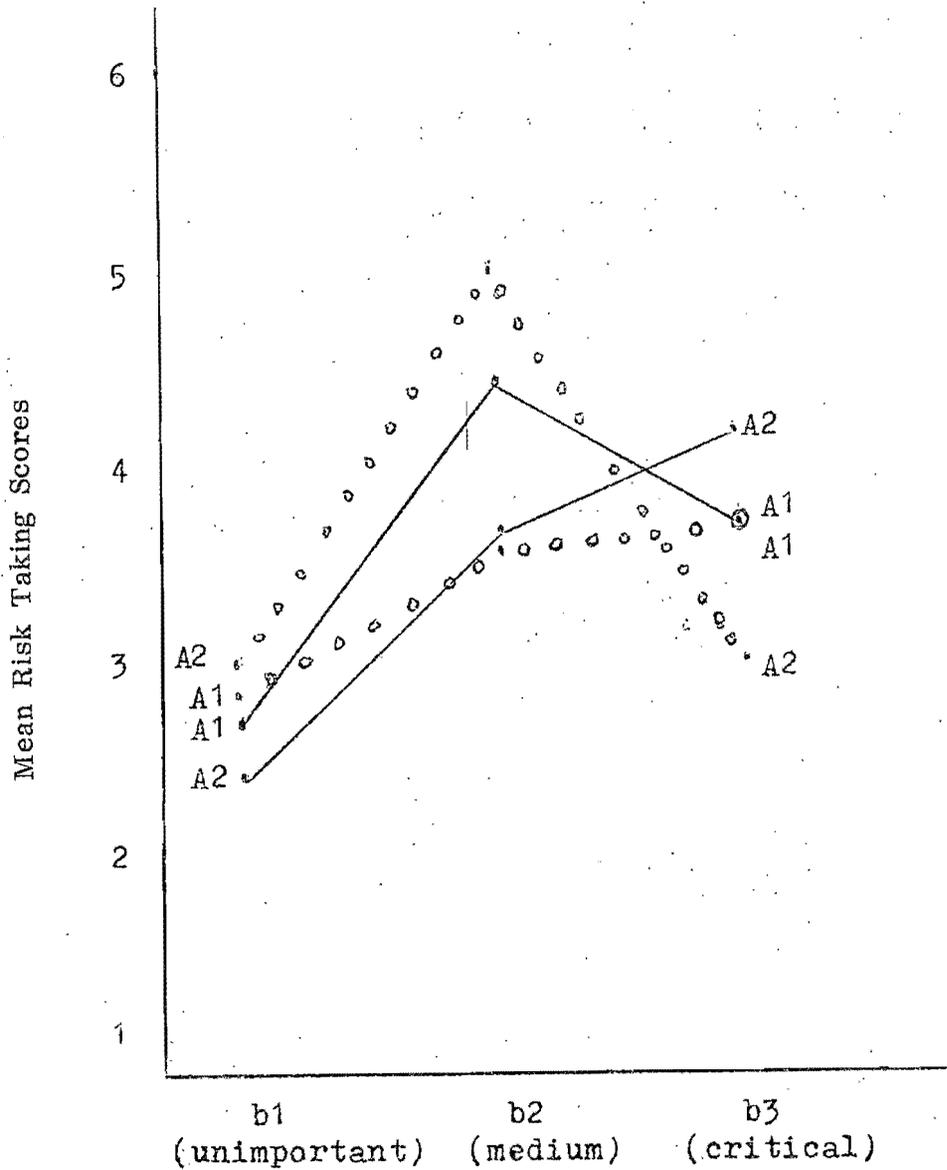
A1 = Homogeneous

A2 = Heterogeneous

Figure 2

C1 ——— Individual
C2 — — Two men group
C3 ··· Three men group
C4 Six men group

Mean Risk Taking Scores

6

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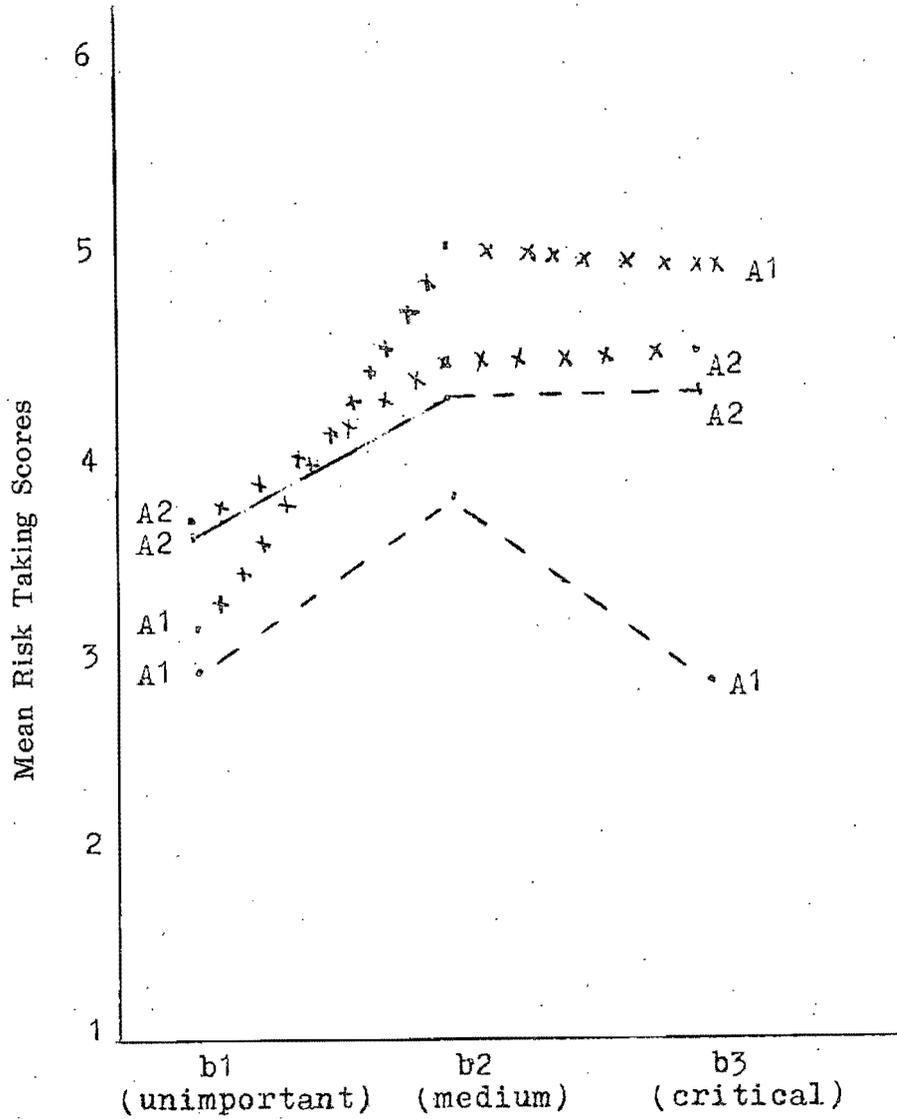
A1 = Homogeneous

A2 = Heterogeneous

Discussion

The results revealed a positive correlation between risk taking, or failure to sustain preconceived decisions, and decision criticalness. It was apparent that these Ss were more inclined to agree with the experimenter's decision only if the decision could be considered relatively unimportant. When the decision became critical, as operationally defined, there were tendencies for the Ss to exhibit greater independence from "authority". Of course, the "authority" in this experiment was the experimenter who was a fellow student known to all the Ss. One would of necessity question how authoritative the experimenter was perceived by his colleagues.

Another significant main effect consisted of the variable of group size. In general, these results demonstrated that the largest group (six men) and the smallest group, the individuals, had tendencies to be riskier than the two middle size groups which were composed of two and three men.

Unlike much of the earlier research the risky shift in the present experiment occured only as a group factor. That is, the shift toward riskiness was not an individual versus group phenomenon but rather a smaller group versus larger group phenomenon.

Perhaps the relatively unique similarity exhibited between six men groups and individuals might be explained on the basis of group cohesion. In the larger group, group

members may perceive themselves as simply a collection of
individuals who must rely on their own initiative when mak-
ing decisions. The smaller groups may have fostered more
espirit de corp in their membership and this cohesiveness
may have been generalized to the experimenter thus rendering
these groups more inclined to agree with the experimenter's
decision. Whatever the explanation, it is apparent that the
functional relationship between risk taking and group size
is nonmonotonic in form.

Although the examination of the main effects provides
some insight into group processes, the fact that the results
revealed a three-way interaction render the main effects
less interesting. The interaction not only spelled out the
specifics of risk taking for the variables of group size and
decision importance but it also revealed the group composi-
tion variable which had failed to materialize as a main ef-
fect.

Very specifically, the interaction demonstrated that
the riskiest group was the homogeneous six man group in the
critical decision case. The most conservative groups were
the homogeneous two men and the heterogeneous three men
groups also in the critical decision case.

Similarly in the above discussion, the fact that the
group was composed of Ss of the same age may have resulted
in a competitive or individualistic action on the part of
the membership. It appears reasonable to assume that col-

lege students may demonstrate cooperative behavior when con-
fronted with groups of smaller sizes because of the similar-
ities between these groups and friendship groups. However,
as groups grow larger one would expect the student S to ap-
ply his more competitive responses because of the similarity
between the decision making group and the classroom.situa-
tion. The similarity with the classroom group would seem to
be enhanced by having the membership of approximately the
same age.

Furthermore, it is equally feasible to propose that the
tendency to cooperate with the experimenter and his decision
would be greater with game like decisions while there would
be less cooperation in critical decision sustainment. This
proposition seems confirmed by the results that demonstrate
little difference among groups in decision sustainment for
the unimportant decisions. Only in the more critical deci-
sions did the group composition and group size variables
have any differentiating power.

Because of the complex interactions involved in group
processes, it seems quite obvious that the function used to
describe the relationship between group size and risk taking
behavior shall of necessity be individualized for the vari-
ous types of decisons as shown in the current experiment. A
horizontal line would approximate the relationship or lack
of relationship between group size and risk taking in the
unimportant decision case. However, a quadratic orthogonal

polynominal would best approximate the relationship in the
critical decision case. The functional relationships also
varied with the group composition variable.

From the above discussion, it would appear that model
building effects are faced with an arduous task which shall
require much more parametric data to insure even minimal
success. To facilitate model building efforts, future ex-
perimentation should employ random effects, as opposed to
the fixed effects model employed in the present experiment.

In conclusion, it would seem to be of pragmatic value
to reexamine the external validity of laboratory experiment-
ation in decision making. While idealistically each person
is involved in decisions pertaining to his own survival or
well-being, in practice one discovers that individual deci-
sions are actually second order decisions. In essence, this
would imply that an individual has a least an equal proba-
bility of being confronted with deciding whether to support
decisions passed down to him from those in control of vari-
ous organizations. It is quite probable that the relatively
unique findings of this experiment occurred because the de-
cision was of a support or sustainment nature as opposed to
actual decision construction.

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Appendix I

The group of you are going to see a movie and you are deciding on what movie to go see from amoung these five movies. These are all new movies and none of you have seen any of them.

a movie starring Clint Eastwood and Agnes Moorehead

a movie starring Marland Brando and Shelly Winters

a movie starring Richard Burton and Elizabeth Taylor

a movie starring Peter O'Toole and Jane Fonda

a movie starring Burt Reynolds and Katherine Ross

It has been decided you will go see the movie starring Richard Burton and Elizabeth Taylor. How much do you agree with the decision to go see the movie starring Richard Burton and Elizabeth Taylor? ... Rate on the scale how much you agree with the decision.

There is a grant of $2,000 which is to be given to only
one needy family living in a certain region. A survey of
that area reveals that there are five needy families living
within that area. Thes are the five families:

no. 1 This family is composed of a 41 year-old man with a se-
vere respritory ailment and is out of work, his 40 year-old
wife who has terminal cancer yet she has been managing to
take care of her husband and their 16 year-old son and 11
year-old daughter. The family is on welfare.

no. 2 This is an elderly couple. The man is a 70 year-old
diabetic. His wife, 68 years old, is blind in one eye and
has heart trouble. They live in a very run-down house by the
railroad tracks. The roof leaks and is in serious need of
repair. The only income the couple has comes from their soc-
ial security payments and they must pay a rent for their
house.

no. 3 This is a young family. The father is 22 and the moth-
er is 21. They have two children and are expecting a third
in two months. The father is unskilled and unemployed. They
live on the outskirts of the city near the city dump. They
must pay rent for their delapadated three-room house. The
parents want to move to another location for the sake of the
children but can't afford it. Their only source of income
is the father's unemployment check.

no. 4 This family consists of a 38 year-old mother and ten
children. The father has been dead five years. He died at
the end of a long illness and the mother has only recently
paid the medical bills. The children range in age from six
to sixteen. The mother works as a cook and the two oldest
children work after school. They pay $65 a month for their
rented home and the mother is not quite able to meet all the
bills and is slowly slipping into debt.

no. 5 This family is made up of a 50 year-old man, his 51
year-old wife, and the woman's 76 year-old father. The wo-
man is a victim of polio and her left leg is paralized. Her
father is confined to bed and requires over $200 worth of
medication a month. They live in a rented house. Their on-
ly source of income is the social security payments the old
man collects.

It has been decided that family no. 5, the family com-
prised of the man 50, his wife 51, and the 76 year-old fath-

er of the woman.

How much do you agree with this decision?...Rate on the scale how much you agree with this decision.

These six people have defective kidneys and must use a kidney machine to live. There is however only one such machine that is available only long enough for one of these people. The machine is already being used by other people and it is free long enoughtfor only one more person to use it. This meansethat only one of these six can live, the other five will definitely die.

no. 1 This is a woman 32 years old. She is the mother of 6 and is expecting another. She is good-looking butmnot especially so. Her husband is a very wealthy and powerful lawyer. She ignore her children and spends most of her time going to parties. She smokes a great deal and is a drug adict.

no. 2 This a man 52 years old. He is a bachelor and is an accountant for a large mail-order firm. On weekends and two evenings a weekaafter work he spends his time helping out at the local boys' club. He gives generously to charity. He isvalso an alchoholic.

no. 3 This is an 18 year-old boy who has run away from his wealthy but broken home. He does odd jobs for a house of prostitution and has become addicted to drugs. He is trying to save enough money to attend a vocational school but isn't having much success.

no. 4 This is a 62 year-old woman who is the grandmother of 2 orphaned grandsons who are in Junior High school and live with her. She is poor but does get welfare payments. She has taught her grandsons to steal and once spent three years in prison herself for robbery.

no. 5 This is a 43 year-old man, a highly respected physican and a widower. He helps to support his married daughter whose husband is disabled. He gives generously to the charc urch. He has a terminal disease and has two years at most to live.

It has been decided that no. 2, the 52 year-old bachelor will be saved. How much do you agree with this decision sion?...Rate on the scale how much you agree with this decision.

Appendix II

Mark on this scal how much you agree with the decision that has been reached. Circle the number that indicates how much you agree with the decision, with 1 meaning you completely agree with the decision and 6 meaning you completely desagree with the decision that has been reached.

      1   2   3   4   5   6

Appendix III

Table of Raw Data

		b1	b2	b3
	s1	3	6	4
	s2	6	6	3
	s3	2	6	5
	s4	3	6	5
	s5	2	5	6
	s6	6	6	6
A1	s7	5	5	6
C1	s8	2	5	6
	s9	5	5	6
	s10	1	4	5
	s11	1	4	6
	s12	1	3	6
	s13	3	5	4
	s14	2	5	6
	s15	3	5	5
	s16	3	4	5
	s17	4	5	3
	s18	3	6	3

	b1	b2	b3
s19	6	6	6
s20	3	5	6
s21	2	6	5
s22	4	6	6
s23	4	5	4
s24	6	6	6
s25	5	3	3
s26	2	3	5
s27	4	3	4
s28	3	3	2
s29	3	4	5
s30	5	3	5
s31	5	3	1
s32	3	6	2
s33	2	4	5
s34	5	6	5
s35	2	5	6
s36	2	4	6

A2
C1

		b1	b2	b3
	s37	1	3	6
	s38	1	4	6
	s39	1	3	6
	s40	1	3	6
	s41	1	3	4
	s42	1	3	6
A1	s43	3	5	4
C2	s44	3	4	1
	s45	6	5	1
	s46	3	6	1
	s47	3	6	4
	s48	2	1	2
	s49	6	5	4
	s50	3	6	1
	s51	6	6	3
	s52	4	5	6
	s53	4	6	3
	s54	3	4	5

		b1	b2	b3
	s55	2	5	3
	s56	2	5	1
	s57	2	4	4
	s58	1	4	6
	s59	4	2	2
	s60	5	5	3
	s61	6	6	1
A2	s62	4	5	1
C2	s63	3	6	2
	s64	3	5	2
	s65	4	6	4
	s66	4	6	4
	s67	1	6	6
	s68	1	6	1
	s69	6	6	3
	s70	3	4	6
	s71	4	5	3
	s72	1	6	4

		b1	b2	b3
	s73	2	5	3
	s74	3	1	3
	s75	2	5	3
	s76	2	4	3
	s77	2	2	3
	s78	4	6	3
	s79	2	1	2
A1	s80	2	1	3
C3	s81	1	6	3
	s82	3	3	3
	s83	6	1	3
	s84	5	4	1
	s85	5	6	4
	s86	4	5	3
	s87	2	6	1
	s88	2	5	4
	s89	4	4	4
	s90	2	4	2

	b1	b2	b3
s91	3	5	3
s92	1	6	2
s93	2	3	4
s94	6	4	5
s95	4	3	5
s96	5	6	1
s97	3	2	6
s98	5	5	6
s99	6	6	3
s100	6	4	3
s101	2	3	6
s102	6	4	1
s103	1	4	6
s104	1	3	6
s105	5	5	6
s106	2	5	6
s107	5	5	6
s108	1	4	5

A2
C3

	b1	b2	b3
s109	4	6	4
s110	1	2	4
s111	6	5	6
s112	2	4	6
s113	2	2	5
s114	1	5	3
s115	4	4	3
s116	1	6	4
s117	2	6	4
s118	1	5	6
s119	6	5	6
s120	1	5	4
s121	6	5	5
s122	1	3	2
s123	2	6	5
s124	5	6	1
s125	3	2	4
s126	2	5	2

A1
C4

		b1	b2	b3
	s127	5	6	4
	s128	1	2	4
	s129	3	3	5
	s130	2	2	6
	s131	2	1	2
	s132	5	2	4
	s133	2	5	3
A2	s134	2	4	4
C4	s135	4	4	6
	s136	2	6	1
	s137	3	2	5
	s138	2	6	4
	s139	3	6	2
	s140	2	4	6
	s141	1	3	6
	s142	2	2	6
	s143	2	3	5
	s144	1	5	5