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ABSTRACT

The term "risky shift" is used to describe the tendency of groups to make a collective decision that is less conservative than the members might make as individuals. Previous research on this subject has been based on three analytical categories: demographic makeup of groups, group familiarity with the task and information, or individual personalities. The amount of time allotted to a discussion has been considered as a factor that might determine whether one group might demonstrate more risky shift than another. One study tested the hypothesis that groups with very short discussion time would be more likely to reveal risky shift in their decisions than those who had more time for discussion. Results of questionnaires that evoked individual choices on certain dilemmas do not, however, support the hypothesis and, further, give rise to questions about the significance of the risky shift phenomenon. (RN)

AN EXPERIMENTAL STUDY OF DISCUSSION TIME AND RISKY SHIFT

by

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Stoner's (1961) master's thesis at MIT reporting the discovery of the risky shift phenomenon has probably stimulated more research than most other theses combined. Many debated its conclusion that groups make riskier decisions than individuals as it ran counter to contemporary research (Atthowe, 1961; Hunt and Rowe, 1960; Lonergan and McClintook, 1961). Stoner's findings also challenged conventional wisdom yet researchers have since often replicated the findings in the United States and abroad.

This study investigated the possibility that risky shift emerges from methodological artifacts. Most of the studies in the area reporting risky shift have adopted a repeated measures design, used the Choice Dilemmas Questionnaire (CDQ), and procedures outlined in Kogan and Wallach, (1964). Studies which vary the methodology such as instructions (Clark and Willems, 1969), instrument (Atthowe, 1961), and procedures (Bennett and Lindskold, 1971) either find a limited version of the phenomenon or fail to find it completely. Of special interest is Bennett and Lindskold's finding that the amount of time spent discussing the risk dilemma influences risky shift and this study sets out to further investigate the procedural variation.

The following review of the literature offers conceptual and operational definitions of risk and risky shift, reviews the parameters of the risky shift literature, and focuses on the influence of discussion time on risky shift. The study's directional hypothesis rests

on the forthcoming review and anticipates the study's methodological results, and discussion sections.

Risky Shift: The Dependent Variable

Conceptual Definitions. Risky shift refers to the tendency of groups to produce a decision that is less conservative than the decision they make if left to do so as individuals (Bennett and Lindskold, 1971). Lewitt and Saville (1971) define risky shift as the tendency of people to shift from the acceptance of moderate levels of risk when considering alternatives independently to higher levels of risk when considering alternatives under group conditions. Kogan and Wallach (1964, p. 5) define risk as: "the subject's assessment of probabilities of success and failure and their corresponding utilities preparatory for making a choice."

Operational Definitions. Researchers have operationalized risky shift in several ways. The great majority used the Choice Dilemmas questionnaire (CDQ) (Kogan and Wallach, 1964, Appendix E); some have measured the level of difficulty of chosen items on the College Board Exams (Wallach, Kogan, and Bem, 1964); and still others manipulated gambling situations (Pruitt and Teger, 1969). This study operationalized risky shift as responses to the CDQ.

Independent Variables and Risky Shift

A review of the literature reveals that risky shift has held the interest of several researchers over the last decade and, consequently, a sizable body of research and theory exists. This review divides the risk literature into three categories based on units of analyses; demographic units, small group units, and personality units. Studies falling into the demographic category manipulated sex, age,

and social class and measured risky shift; studies falling into the small group category measured the influence of information levels and familiarity with the task on risky shift and the studies falling into the personality category measured the influence of achievement orientation, IQ, confidence, anxiety, and arousal on risky shift.

Demographic antecedents to Risky Shift. Demographic research has focused on sex, age, and occupational class. Kogan and Wallach (1964) and Wallach and Kogan (1965) manipulated sex and reported differences in risky shift where masculine and feminine values came into play. Wallach and Kogan (1961) report that older subjects demonstrate less risky shift than younger subjects and Schodel, Ratoosh, and Minas (1959) report that Air Force enlisted men were more risky than college students.

Group Related Antecedents to Risky Shift. Researchers have manipulated the level of information and familiarity of small groups, seeking the influence on risky shift. Wallach and Kogan (1965) report that information about others' risk levels didn't influence risky shift. Bateson (1966), on the other hand, claims that risky shift is a function of familiarity with the task.

Personality and Risky Shift. Psychologists have manipulated achievement motivation, IQ, confidence, anxiety and arousal seeking the influence on risky shift. Atkinson (1957) argued that risk taking correlates with achievement orientation. Scodel et al. (1959) claim that intelligence differenciates high and low risk takers while Kogan and Wallach (1964) hold that test anxiety and defensiveness relates to the specificity or generality of risk taking behavior. Finally, Rule et al. (1971) found a correlation between arousal level and risk taking behavior. A discussion of these risk and risky shift studies has drawn

the parameters of the risky shift phenomenon and prepared the way for a discussion of discussion time and risky shift.

Discussion Time and Risky Shift. Bennett and Lindskold (1971) questioned the influence of procedural and methodological artifact on risky shift. They manipulated group size and discussion time and reported that risky shift emerged from four person groups given three minutes to discuss each dilemma and not from groups with nine minutes to discuss each dilemma. The results of this study suggest that the shorter the discussion time the greater the chance for the emergence of risky shift especially when subjects are already familiar with the dilemmas due to the oft used repeated measures design. The results of the Bennett and Lindskold study lead to the following prediction for this report: groups which analyze each dilemma for one minute should demonstrate more risky shift than groups which analyze each dilemma for two and a half minutes.

METHOD

The first section of this report reviewed the risky shift literature in order to predict the influence of discussion time on risky shift. This section develops the procedures, design, variables, and analytical strategy used in testing the prediction advanced in the first section of the report.

Procedures

Subjects. The subjects (n = 72) were students enrolled in introductory Speech Communication and English courses during the fall semester of the 1972-73 school year at the University of Oklahoma. The majority of the subjects were first semester freshmen whose average age was 18 and generalizability of the results of this study is technically limited to statements about the population from which they were selected.

Design. A repeated measures experimental design with three observations on each experimental subgroup (n = 4) in each of the two treatment conditions (n = 8 subgroups) was used. The control groups for each treatment condition (n = 4) completed both pre and post tests. Subject assignment was random within treatment and control groups.

Risky Shift: The Dependent Variable. Six randomly chosen risk dilemmas from the Kogan and Wallach Choice Dilemmas questionnaire (CDQ) were used as the dependent measure. The questionnaire requests the subject to specify the minimum liklihood of success he would demand for the risky alternative before recommending that it be chosen.

Kogan and Wallach (1964) report a 0.78-- 0.82 test-retest reliability for the CDQ after a week as well as high correlations between the CDQ and an 'extremity index' and a 'subjective probability of failure index.' Maher and Videbeck found a -0.62 point biserial correlation between the CDQ and actual risk taking behavior (that is a positive relationship) in a more recent (1967) report.

Discussion Time: The Independent Variable. A short discussion time was operationalized as one minute per dilemma and a long discussion time was operationalized as two and a half minutes per dilemma.

Testing Procedures. Each subject reacted to the CDQ as an individual at $time_1$, as a group member at $time_2$, and again as an individual at $time_3$. The experimenter manipulated the length of discussion time for the two sets of experimental subgroups while the two control subgroups did not take part in any discussion.

Analysis

Coding ranged from one (conservative choice) to six (risky choice) per dilemma and the results were summed giving a score per questionnaire ranging from 6 to 36. Both pre and post scores for members of each subgroup were summed and averaged yielding a pre, treatment, and post score for each subgroup.

Two sets of analyses were performed on the resultant data; a t test to test the research hypothesis and three correlated analyses of variance to determine the existence of the risky shift phenomenon.

TABLE 1

t TEST BETWEEN SHORT AND LONG TIME DISCUSSION GROUPS ON AMOUNT OF RISKY SHIFT

GROUPS	X_s	σ_x	X_L	σ_x	t	P
SHORT/LONG TIME	4.0625	0.1933	3.7500	0.1612	1.2415	ns

TABLE 2

ANOVAR BETWEEN TREATMENTS IN SHORT DISCUSSION TIME CONDITION

SOURCE	DF	SS	MS	F-Ratio	P
TREATMENTS	2	0.5200	0.2600	2.354	0.1302
ERROR	14	1.5470	0.1105		
TOTAL	16	2.0670			

TABLE 3

ANOVAR BETWEEN TREATMENTS IN LONG DISCUSSION TIME CONDITION

SOURCE	DF	SS	MS	F-Ratio	P
TREATMENTS	2	0.0024	0.0012	0.017	0.9839
ERROR	14	0.9912	0.0708		
TOTAL	16	0.9936			

TABLE 4

ANOVAR BETWEEN INDIVIDUAL PRE AND POST TESTS IN CONTROL GROUPS

SOURCE	DF	SS	MS	F-Ratio	P
TREATMENTS	1	0.3306	0.3306	2.740	0.1398
ERROR	7	0.8442	0.1206		
TOTAL	8	1.1748			

RESULTS

The trend of the results in the hypothesized direction did not reach significance (Table 1) and, indeed, consequent analyses of the data failed to reveal the existence of the risky shift phenomenon

Insert Table 1 about here

in either the short time discussion group (Table 2) or the long time

Insert Table 2 about here

discussion group.(Table 3). Also, no significance exists between the

Insert Table 3 about here

pre and post tests in the control groups.

Insert Table 4 about here

DISCUSSION

The results of this study do not support the research hypothesis which predicted that groups with one minute to discuss each dilemma would demonstrate more risky shift than groups with two and a half minutes to discuss each dilemma. The results also suggest that three minutes of discussion time serves as the minimum amount of time necessary for elicitation of the risky shift phenomenon as Bennett and Lindskold (1971) found risky shift only after three minutes of discussion time. Several other studies have allowed five minutes per discussion item (Kogan and Wallach, 1964) and the upper limit lies below nine minutes as the phenomenon disappeared after that amount of time in the Bennett and Lindskold study.

Perhaps procedural and laboratory artifact lies behind some risky shift results. Evidence for this charge comes from the lack of risky shift for the time main effects in this study and the Bennett and Lindskold (1971) study. Moreover, the phenomenon disappears when subjects make real-world estimates of success probability (Madaras and Pem, 1968; Lamm, Trommsdorff, and Kogan, 1970) or when the dilemmas are presented by means of relatively realistic audio-visual methods (Lewitt and Saville, 1971). Alker and Kogan (1968) and Clark and Willems (1970) found no significance in risky shift after an irrelevant discussion, thereby suggesting that the phenomenon doesn't intrinsically follow from group discussion. Clark and Willems (1969) produced results indicating that revision of the usual wording of the

CDQ "check the lowest probability that you would consider acceptable" eliminated the shift. Finally, Atthowe (1961), Hunt and Rowe (1960), and Lonergan and McClintock (1961) failed to find significant risky shift using various other risky instruments. These studies suggest that risky shift reflects a certain amount of procedural artifact.

Dean Pruitt (1971) abandoned the risky shift terminology and argued for a choice shift or a group induced shift tag for this body of literature. Choice shift can include those studies which found non-significant risky shift and those studies which reported conservative shifts. Two of the traditional 12 CDQ items usually cause a conservative shift and several researchers including Fraser, Gouge, and Billig, (1970) and Vidmar and Burdeny (1969) have constructed additional items which cause conservative shifts. Such a renomination could also cope with non risk oriented group induced shifts such as the improvement of attitudes towards DeGaulle reported by Moscovici and Zavalloni (1969) as well as a study by Doise (1969).

Perhaps the decade of risky shifts has come to a close along with several of the ten theories devised to explain the phenomenon (Pruitt, 1971). Strong evidence suggests that the phenomenon was instrument specific (CDQ) and only operational under restricted designs. Future research might focus on the specific factors which induce risky, conservative, and attitude shifts. Perhaps communication researchers have an orientation and tools which can answer group shift questions.

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