CONDITIONS AFFECTING ATTEMPTS TO CONVERT FATE CONTROL TO BEHAVIOR CONTROL

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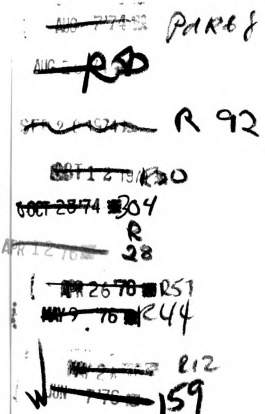
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ABSTRACT

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FATE CONTROL TO BEHAVIOR CONTROL

By

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The present research examined the effects of sex of subject, amount of fate control, worker counterpower, and worker performance on the reward allocation behavior of male and female subjects. It was argued that results of past research which have failed to demonstrate that persons with fate control will attempt to convert their power to behavior control were due to subject's perceptions that such behavior lacked legitimacy. It was assumed that the motivation to establish "own equity" would provide legitimization for fate control conversion attempts.

Subjects, who participated for pay, were placed in the role of supervising the work of another person (a confederate) of the same sex. Supervisors were given feedback on the worker's performance on an envelope addressing task after each of three work periods. Worker performance was always low for the first trial, but for half of the supervisors it improved over the next work periods. Fate control was manipulated by varying the extent to which the supervisors were free to give the worker any portion of the total ($1.50) reward available.

Counterpower was manipulated by varying the extent to which the supervisor's own pay was contingent upon the worker's performance. At the end of each work period supervisors were told to complete a Worker-Rating-Form which asked questions regarding the supervisor's judgment of the worker's motivations and reasons why the supervisor paid the worker as he did.

It was hypothesized that: (a) Male subjects would attempt fate control conversion most when their "own equity" was threatened--under conditions of high fate control and worker counterpower. (b) Females would be less concerned than males with fate control conversion and would tend to reward workers according to their performance (a concern for "other equity").

Results provided some support for the hypothesis: Males did attempt to induce a higher level of performance from their worker under conditions of high fate control and worker counterpower, and; results for females, while marginal, were in the predicted direction. Analysis of self-report data also supported the hypothesis. Males tended to express more concern with converting fate control than did females; on the other hand, females were more concerned with rewarding the worker according to her performance.

Results generated three major conclusions: (a) Concern for "own equity" was a salient motive for males; (b) since the magnitude of predicted differences was not great, there appear to be other norms which serve to inhibit what may be

seen as exploitative behavior; (c) Due to social factors related to sex roles, females are more passive and less interested in utilizing their power, regardless of motivation, than are males.

Approved Lawrence A. Messé
Committee Chairman

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CONDITIONS AFFECTING ATTEMPTS TO CONVERT FATE CONTROL TO BEHAVIOR CONTROL

By

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To Charlotte and John Bubak

for their encouragement and support.

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CHAPTER I

INTRODUCTION

A number of theorists concerned with interpersonal relations (e.g., Blau, 1964; Homans, 1961; and Thibaut & Kelley, 1959) have argued that social behavior can be understood effectively in terms of the exchange of rewards and costs. Thus, man is viewed as using economic principles to govern his behavior: He favors those interactions which maximize his rewards and avoids those which appear to be costly. Since interaction with others is necessary to obtain desired rewards, it follows directly that in certain social situations a person will be dependent on others for the quality (costs versus rewards) of his own outcomes; on the other hand, in other situations the same person might have some power in determining the nature of outcomes for others. Thus, conditions of power and dependency are major determinants of the changes in behavior that occur during the course of any social interaction.

The use of social influence and the exploitation of dependency is a major focus of Thibaut and Kelley's (1959) presentation of a framework for exchange theory. Of most relevance to the present research is Thibaut and Kelley's discussion of the proposed relationship between two types of power, fate control and behavior control.

Fate Control and Behavior Control

Thibaut and Kelley (1959) define fate control as the ability to affect another's outcomes regardless of what the other does. For example, a very small infant usually has little or no control over its own outcomes; thus the parents have the power or ability to affect those outcomes irrespective of the infant's behavior--i.e., the parents have fate control. The amount of fate control possessed by a person is determined by the range of outcome values over which the person (P) can move the other (O). The larger the range of outcome values, the greater P's fate control over O.

Behavior control is defined as the ability to vary one's own behavior in such a manner as to make it desirable for the other to vary his behavior, too. Thus, if by changing his own behavior, P makes it desirable for O to make a corresponding change in behavior, P is said to have behavior control over O. P's behavior control becomes greater the more O is motivated to adjust his behavior according to P's. When P has behavior control, it is the interaction between P's and O's behavioral choices that determines O's outcomes.

For example, in an educational situation, an instructor influences the behavior of his student by varying his own behavior in some specific manner. In fact, the entire educational process can be seen as a type of behavior control interaction between instructor and student. The instructor makes it desirable--usually through some type of grading system or other social rewards--for the student to emit

certain responses, thus controlling his behavior in an attempt to facilitate learning in the student. Note that the instructor does not control the student's outcomes irrespective of his behavior; the student, unlike the infant in the fate control situation, has a number of behavioral choices with corresponding outcomes available, and it is the interaction between these choices and the instructor's behavior that determines the student's actual outcomes.

Under specific conditions fate control can be used to influence O's behavior, that is, fate control can be converted to behavior control. The parent-child example provides a clear illustration of this process. As previously noted, parents typically have extensive fate control over a young infant, but, because they perceive that the infant has a limited capacity to learn at this stage in his development, they tend not to attempt to use this power to control behavior. However, as the child matures, typically the parents perceive the increasing importance of influencing the child's actions. This can be accomplished by the parents converting their power to affect the child's outcomes (i.e., fate control) to the type of power that can influence the child's behavior (behavior control). For example, if the parent always performs specific behaviors in reaction to actions on the child's part (provides desirable outcomes), and systematically varies these behaviors relative to the child's actions, the child will learn to emit those actions which were rewarded and inhibit others that either were

nonrewarded or actively punished.

In the matrix presented as Table 1, P has fate control, i.e., he controls O's outcomes regardless of O's choices. If P always performs set p_2 when O chooses o_1 and p_1 when O chooses o_2, O must choose o_1 in his subsequent behavior in order to obtain the preferred (outcome value of 5 versus a value of zero) outcomes. Thus, when P both selectively matches own choices to O's, and conveys this matching rule to O in some way--thus making O aware of the fact that it is in his best interest always to choose o_1--P's fate control is converted to behavior control. In order for converted fate control to be effective, however, P must continually monitor O's behavior and modify his own responses accordingly. In addition, by repeatedly applying a matching rule, P can implicitly instruct O to choose o_1, and, without any explicit communication, convert his fate to behavior control.

Table 1

An Example of Fate Control

O's choices	P's choices	
	p_1	p_2
o_1	0	5
o_2	0	5

Note: Numbers are hypothetical reward values to O of the behaviors that P emits.

Conversion of fate control is made more salient by the existence of counterpower, or mutual fate control (Jones & Gerard, 1967, p. 526). That is, when O also possesses some degree of fate control over P, it becomes advantageous to both to attempt to affect the other's behavior. In order to achieve desirable outcomes, and counter the other's fate control, each must convert his fate control to behavior control. In this type of situation, P and O can eventually find a mutually satisfactory outcome and thereby stabilize the interaction.

Evidence that implicit conversion does take place under conditions of mutual fate control in the"minimal social situation" is provided by the results of a study by Kelley, Thibaut, Radloff, and Mundy (1962). Kelley, et al. conducted two experiments in which pairs of subjects were kept unaware of the structure of rewards in the relationship, and both subjects made their response choices simultaneous. Findings indicated that over trials subjects tended to "learn" to respond so that each would receive a reward--i.e., they implicitly converted their mutual fate to behavior control and thereby stabilized the relationship at a mutually satisfactory outcome.

Uses of Fate Control to Establish Equity

The importance of the norm of equity in determining reward distribution outcomes has been established by the results of numerous studies (e.g., Lane & Messé, 1971; Lane, Messé & Phillips, 1971; Messé, 1971; Leventhal & Michals,

1969). Equity theory (Adams, 1965; Homans, 1961) states that persons are satisfied with a distribution of rewards to the extent that they perceive the distributed outcomes to be proportional to inputs (i.e., work contributions). As implied by the term "distribution of rewards," the norm of equity leads persons to be concerned not only with their own outcomes, but also with the outcomes of others, ("own equity" and "other equity" respectively; Lane & Messé, 1972; Weick & Nesset, 1968).

It may appear that the norm of equity bears little relationship to the concepts of fate and behavior control. However, it could be that equity plays an important role in determining the extent to which these types of power are utilized. In many circumstances, conversion of fate to behavior control may be perceived as unwarranted exploitation, especially if this behavior violates accepted social norms. On the other hand, it seems reasonable to assume that social norms could provide a basis for the legitimate exercise of power. For example, as Jones and Gerard (1967) suggest, it may be perceived as legitimate for persons who are concerned with establishing equitable outcomes to attempt to utilize the power available to them, including fate control, if such use was needed to provide a "fair" distribution of rewards. Thus, the norm of equity could provide a legitimization for the exercise of fate control in situations that otherwise would result in inequitable reward distributions.

Results of past research (e.g., Leventhal & Lane, 1970; Leventhal, Weiss & Long, 1969; Rothbart, 1968) suggest that the norm of equity legitimizes the exercise of fate control in two ways: (a) when it is used to reward another (O) according to his inputs (i.e., to establish "other equity") and (b) when it is used to provide the person (P) with an equitable reward (i.e., to establish "own equity"). For example, in the study conducted by Leventhal, Weiss and Long (1969), at the completion of a task, subjects were either overrewarded or underrewarded and then given an opportunity to restore equity. Those subjects given more than they deserved subsequently redivided the reward, decreasing their share and increasing the other's, while those given less than they deserved tended to increase the amount paid to themselves. Thus, when given the power to determine their own and another's outcomes, persons in this study tended to use their power to establish both "own equity" and "other equity."

When P uses his fate control to establish other equity, power is used merely to reward O "fairly" and not in an attempt to influence O's behavior. On the other hand, if P perceives that there is some danger that his "own equity" will not be satisfied and that O has some influence or counterpower over P's rewards, it seems likely that P will convert his fate control in an attempt to influence O's behavior. Thus, as Jones and Gerard (1967) hypothesize, fate control conversion would be facilitated by the existence

of counterpower.

It would seem likely, then, that persons will attempt to convert their fate to behavior control when this behavior is legitimized by the norm of equity, that is, when the other person has some control over their rewards and there is some indication that this counterpower might result in their receiving less than a fair reward. Indirect evidence in support of the equity hypothesis is provided by the experimental studies that have failed to demonstrate that persons do in fact attempt to convert their fate control to behavior control.

Rothbart (1968), in an attempt to investigate the use of social power in dyadic interactions, utilized a setting similar to the present research wherein supervisors were able to administer rewards to workers over a series of trials. Rothbart was interested in amounts of reward and punishment that were administered to the worker relative to the subjects' "motivation," (i.e., in terms of the present study, the amount of counterpower present). Results showed that subjects, irrespective of motivation, were more concerned with achieving an equitable distribution of rewards than with modifying the performance of the others.

Wyer and Polen (1971) systematically varied the amount of fate control available to the subject (P) and the amount of counterpower possessed by another (O) in a two-person game. According to Jones and Gerard's (1967) hypothesis, under conditions where P had fate control and O had

counterpower, P should have been more likely to utilize his power in an attempt to influence O's behavior. However, Wyer and Polen found no significant effects for amount of fate control or counterpower.

A reasonable explanation for the lack of supportive results in these two studies lies with the concept of legitimacy, as outlined above. The subjects in the studies by Rothbart (1968) and Wyer and Polen (1971) were students in introductory psychology classes who participated as partial fulfillment of a requirement in their course. Since they were being equitably paid with research credit--which they received irrespective of the outcome of their participation--there was no legitimacy for attempting to use their fate control to obtain the small amounts of money (e.g., an average of about 30¢ in the Wyer and Polen study) that were being offered as an additional reward. In other words, since the subjects were already receiving outcomes (i.e., research credit) that were perceived as equitable, the norm of equity failed to provide a legitimization for the use of their fate control to influence another's behavior.

On the other hand, in order to provide legitimacy for fate control conversion in the present study, subjects were recruited who intended to participate in the research strictly for pay. It was assumed that persons motivated by a concern for monetary rewards would be more interested in equitable outcomes than those who also received other types of rewards (e.g., research credit) and would therefore view the use of

their power to influence the other's behavior as a legitimate means of achieving these desired outcomes.

Focus of the Present Research

It has been hypothesized that the use of fate control in attempts to influence behavior would be perceived as legitimate, and thus more likely to occur when P perceives that this type of response is needed to establish "own equity." Thus, when O has some degree of counterpower over P's outcomes, P will be more likely to use his own power to assure himself of an equitable reward.

Another factor that was thought to influence conversion attempts is the extent to which P perceives that such an attempt would be successful. This perception should be a function of the extent to which P can manipulate O's outcomes, i.e., the extent of his fate control. Thus, P should be more likely to attempt to influence O's behavior when he has a high degree of fate control than when it is perceived as low.

Research dealing with equity and reward distribution behavior (Leventhal & Lane, 1970; Messé & Lichtman, 1972) has shown that the sex of the subject is a significant variable in reward allocation. Results of these studies indicated that female subjects tended to underreward themselves, and thus, appeared less concerned with "own equity" than did males (who tended to respond equitably). Results also indicated that females tended to allocate rewards to the other person of the same sex as a function of her performance,

thus suggesting that they possess greater concern for "other equity" than for "own equity." The results of these studies, then, indicate that there should be fewer attempts at fate control conversion when the interactants are female than when they are male.

In order to examine the conditions under which persons are likely to attempt to convert fate control to behavior control, the present research placed male and female subjects in the role of supervising the work of another person of the same sex. Supervisors were given periodic feedback as to the performance of the other. The performance of the "worker" always started out poorly, but for half of the supervisors it improved somewhat over time. Supervisors rewarded the worker after each of three "work periods." Fate control was manipulated by varying the extent to which the supervisors were free to give the worker any portion of the total reward available to them. Counter power was manipulated by varying the extent to which the supervisor's own pay was contingent upon the worker's performance.

It was felt that the results of the present research would provide unequivocal support for the conversion hypothesis if male supervisors gave the workers more reward when their performance improved but not when it remained low only in the situation in which they had high fate control and the worker had counter power. However, if this pattern of reward allocation occurred under other conditions of fate control and counterpower, the results would be somewhat ambiguous

since such behavior could be determined equally by concerns with fate control conversion to establish own equity and concerns with other equity.

Summary of the Predictions

In summary, the conversion to establish "own equity" hypothesis states that because the norm of equity would legitimize such behavior, male subjects should attempt fate control conversion most under conditions of both high fate control and worker counterpower. Furthermore, no matter the conditions of fate control and counterpower, more conversion attempts should occur when the interactants are male than when they are female, since females appear to have a greater concern for other equity than for own equity.

CHAPTER II

METHOD

Subjects

Subjects were 40 male and 40 female undergraduate students at Michigan State University who participated in the research for pay. They were selected at random from approximately 1400 students who responded to an advertisement in the student newspaper.

Worker's Task

In order to give subjects a basis for evaluating the performance of the other, they were told that the worker (who actually was a confederate) was to copy a list of names and addresses from a telephone book onto individual envelopes. A pretest was run to determine the number of envelopes that undergraduates perceived to be adequate performance. One-hundred-twenty students from introductory psychology classes were given extra credit towards their course grade to complete a short questionnaire that described the envelope-labeling task and asked them to estimate the number of envelopes that a typical person should fill out in a five-minute period if he were performing satisfactorily.

Respondents were reasonably consistent in their estimates ($\sigma = 2.74$), so the average response (11) was used as the norm by which the perception of the other's performance

was manipulated. Low performance was operationalized as indicating to the subjects that the worker had completed 6 envelopes in a 5-minute work period; medium performance was operationalized as 11 envelopes.

Supervisor's Task

To fill in the time while the worker supposedly was addressing envelopes, subjects were asked to complete the Industrial Opinion Questionnaire. This instrument, presented in Appendix A, presents respondents with a series of problems in industrial relations and asks them to complete a 5-minute essay on each. This task was thought to be appropriate, given the framework of the study (a simulation of an industrial situation) that was presented to the subjects and their role as "supervisors." Supervisors were also presented with three "worker-rating-forms," also presented in Appendix A, which they were to complete immediately after each 5-minute work period. These forms contained rating scales related to the supervisor's judgment of the worker's motivations and output. Supervisors were further asked specifically why they paid the worker as they did after each trial.

Rewards

Each subject was given $1.50 with which to pay the worker. He was told that there would be three 5-minute work periods and that he was to give the worker an amount of pay after each period. Under high fate control, the subject was told that he could give the worker any amount that he wished in a work period, up to the $1.50 maximum for the three periods; under

low fate control the subject was told that the total pay to the worker had to sum to at least $1.00, a fact that supposedly the worker was aware of as well.

Payment to the subjects themselves was a function of the condition of counterpower of the worker. Under the condition of no counterpower, subjects were told at the beginning of the experimental session that they would receive $1.00 for their half-hour participation. In the counterpower present condition, subjects were told that their pay was contingent upon the worker's performance: If the worker's total output (over three work periods) was below 20 envelopes, the subject would receive 50¢; if the worker's output was between 20 and 29 envelopes, the subject would be paid $1.75; if it was 30 envelopes or above, the subject would be paid $2.50. Subjects were told that the worker knew that their pay was contingent upon the worker's performance.

Design

The research used a factorial design which examined five variables: sex of subject; fate control (high or low); counterpower (present or absent); worker's performance (low on all three work periods or a sequence of low, medium, medum); and work period. Five male and five female subjects were assigned at random to each condition of fate control, counterpower, and worker performance.

Procedure

Two subjects and two confederates (of the same sex as the subjects) were brought into a room lined with four small

cubicles. Subjects were informed that they were participating in research that was simulating an industrial situation. They were told that two of them would be assigned to the role of "supervisor." Further, each supervisor was to be "in charge" of one worker, but the specific supervisor-worker pairings would not be told to them. They were then shown the two worker cubicles that contained a desk upon which was placed a telephone book, a pen, and a large pile of blank envelopes. They were also shown the supervisor cubicles that contained a desk upon which was placed $1.50 in change, three envelopes labeled "pay", the Industrial Opinion Questionnaire, and the worker-rating-form.

The experimenter always designated the real subjects as "supervisors" and the confederates as "workers" and placed them in the appropriate cubicles. The subjects never saw the confederates again. Subjects were given written instructions which also had been taperecorded and were read to them over a public address system.

The instructions indicated that as supervisors, they were responsible for paying the worker according to their assessment of his performance on the envelope-addressing task. They were told that most workers averaged 10 or 11 envelopes per 5-minute work period. At this point, as dictated by the experimental condition, subjects were told the amount of fate control they had over the other and the extent of the worker's counterpower, as explained above. The subjects were then informed that they should complete the

Industrial Opinion Questionnaire during the work periods, and the worker-rating-form at the end of each period. Sample instructions are provided in Appendix B.

At the end of each 5-minute work period, the experimenter brought the subject the number of envelopes that the worker had allegedly completed. Actually, the number of envelopes was varied systematically, as described above. The supervisor was to count them and place the amount of money he wished to pay the worker in the appropriate envelope, which the experimenter then took to the worker.

After the three work periods and payments to the worker were completed, the subjects themselves were paid the appropriate amount of money. Subjects in the counterpower present-low performance condition were given, without prior notice, an additional 50¢ to make their pay more reasonable.Subjects were asked to wait a few minutes, supposedly to give the worker time to leave the building. Finally all subjects were pledged to secrecy and allowed to leave.

CHAPTER III

RESULTS

The amount of money that the supervisor allocated to his worker after each work period was the dependent variable. However, only the amounts allocated after the first two periods were crucial to the examination of the hypothesis, since subjects knew that the third period was the last and, therefore, their behavior after this trial should not have been affected by any attempt to convert fate to behavior control. For this reason, two analyses of variance of the allocation data were performed; one analysis, reported directly below, examined the effects of sex of subject, fate control, counterpower, and worker performance on allocation behavior after the first two work periods (a repeated measure); the second analysis (reported later in this section) examined the effect of these variables on the per cent of the remaining money that the supervisor gave his worker after the third trial.

Tests of the Hypothesis

Allocation behavior was predicted to be different from Period 1 to Period 2 only when the performance of the worker changed from low to medium, under conditions of high fate control and counterpower, and it was expected that this

especially would be true for males. Thus a five-way interaction was predicted and this effect was marginally significant ($F = 3.04$, $df = 1/64$, $p < .10$).

While the significance of this effect is a necessary implication of the hypothesis in question, it is not an unequivocal test, since a five-way interaction could result from a number of different patterns of results. Therefore, tests of simple effects (Winer, 1971, pp. 347-351) were performed separately for males and females. These tests provided further support for the hypothesis in that the four-way, fate control x counterpower x worker performance x work period interaction was marginally significant for males ($F = 3.97$, $df = 1/64$, $p < .10$), but not for females ($F = .22$). Again, this interaction for males is necessary but not sufficient support for the hypothesis, so two additional tests were performed.

One test, through an extension of the procedure used for individual comparisons (see Winer, 1971, p. 386), examined the difference between the performance x work period interaction under conditions of high fate control and counterpower with this interaction for all other conditions of fate control and counterpower combined. This test yielded a significant effect ($F = 5.59$, $df = 1/64$, $p < .05$). Table 2 presents the relevant cell means for male subjects.

The second test examined the simple performance x work period interactions under each of the conditions of fate control and counterpower. Results of these tests revealed

Table 2

Mean Allocation (in cents) After Work Periods 1 and 2 of Male Subjects, Classified by Experimental Conditions.

Fate Control	Counterpower	Performance	Work Period	
			1	2
High	Present	Low-Medium	28	58
		Low-Low	37	38
High	Absent	Low-Medium	41	45
		Low-Low	49	43
Low	Present	Low-Medium	41	48
		Low-Low	36	59
Low	Absent	Low-Medium	40	44
		Low-Low	38	36

that, as expected, males increased the reward to the worker when his performance improved (but not when it remained low) only under conditions of high fate control and counterpower ($F = 7.57$, $df = 1/64$, $p < .01$). Thus, as hypothesized, male subjects appear to have tried to induce a higher level of performance from their worker, but only when they perceived that they had sufficient control over the other's rewards and the behavior of the other was relevant to their own welfare.

As expected, the analysis of simple effects for females indicated a different pattern of results. However, these analysis revealed only a marginally significant simple main effect for worker performance ($F = 3.42$, $df = 1/64$, $p < .10$). This result suggests that females allocated more money to the worker when her performance started low and improved to medium ($X_{\text{per period}} = 45.0¢$) than when her performance remained low ($X = 39.75¢$).

Allocation Behavior Self-Reports

Although the reward allocation behavior of the supervisors appeared to provide some support for the hypothesis, these data are somewhat equivocal because responses might not have been overt attempts at fate control conversion. Therefore, the self-reports of the subjects as to why they distributed rewards as they did were obtained from the appropriate questions on the worker-rating-forms. Two coders blindly rated the responses of supervisors to determine the extent to which they expressed an intention to convert fate to behavior control and/or a concern for other equity. These ratings, on a three-point scale (0 = absent, 1 = mentioned, 2 = mentioned as primary reason) were highly reliable ($rs > .90$). The average rating over coders for the two variables was subjected to an analysis of variance. This analysis revealed a marginally significant sex x counterpower x expressed reason interaction ($F = 3.07$, $p < .10$).[1] Tests of simple effects yielded a significant simple main effect for reason when counterpower was absent ($F = 57.14$, $p < .001$); supervisors expressed a greater concern for other equity ($X = 1.49$) than for behavior control ($X = .39$). When counterpower was present, there was a simple sex x reason interaction ($F = 9.69$, $p < .01$); cell means relevant to this result are presented in Table 3. Tests of the simple effects indicated

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[1]This analysis revealed that the following effects were also significant ($p < .05$): The main effect for expressed reason, the sex x reason interaction, and the counterpower x reason interaction. However, since these effects are contained within the sex x counterpower x reason interaction, they are not discussed further here.

that, as would be expected from their allocation behavior, males expressed more concern with converting fate control than did females ($F = 3.93$, $p < .10$); on the other hand, females were more concerned with other equity than were males ($F = 5.85$, $p < .05$).

Table 3

Cell Means Relevant to Sex x Expressed Reason for Reward Allocation Simple Interaction

(Under Conditions of Worker Counterpower)

Sex of Supervisor	Expressed Reason	
	Behavior Control	Other Equity
Male	1.12	.99
Female	.72	1.49

Other Significant Effects

While the specific hypothesis was supported, the magnitude of the predicted effects was not great. Therefore, it seemed of interest to examine additional effects which the analysis of variance of the reward allocations made after the first two periods revealed were significant. The fate control x counterpower interaction was found to be significant ($F = 4.18$, $p < .05$). Tests of simple effects revealed that under low fate control, supervisors tended to give higher rewards when the worker had counterpower ($X = 45.12¢$) than when

counterpower was absent (X = 39.0¢, $F = 4.09$, $p < .05$).

The sex x counterpower x work period interaction was also significant ($F = 9.11$, $p < .005$). Tests of simple effects revealed no significant comparisons for females and a significant counterpower x work period interaction for males ($F = 8.10$, $p < .01$). Further exploration indicated that when the worker had counterpower, males gave more reward in the second work period (X = 50.75¢) than in the first (X = 35.75¢, $F = 16.20$, $p < .001$).

The sex x fate control x performance x work period interaction also yielded significance ($F = 4.05$, $p < .05$). Again, further analysis revealed no significant effects for female supervisors. For males, there was a significant three-way simple interaction ($F = 5.62$, $p < .05$). Further analysis indicated that male supervisors rewarded workers when their performance improved (X = 34.50¢, 51.50¢ for Periods 1 and 2 respectively; $F = 10.40$, $p < .005$), but not when it remained low (X = 45.00¢, 44.00¢ for Periods 1 and 2 respectively; $F = .23$). Under low fate control, there was a significant simple main effect for work period ($F = 4.32$, $p < .05$), irrespective of worker performance, supervisors rewarded the worker more in the second work period (X = 46.75¢) than in the first (X = 39.00¢).

Third Trial Allocation Behavior

As noted above, the allocation behavior of the subjects after the third work period was examined in terms of the percentage of the remaining money that was paid to the worker.

Although these data are somewhat tangential to the focus of the present research, the analysis of variance revealed some interesting effects. The four-way interaction was marginally significant ($F = 3.75$, $df = 1/64$, $p < .10$) and so this effect was examined further through the analysis of simple effects.

(a) For males, there was a significant simple main effect for fate control ($F = 4.71$, $df = 1/64$, $p < .05$), indicating a larger percentage of the remainder was allocated under high fate control ($X = 82.69\%$) than under low ($X = 67.9\%$). (b) For females, there was a marginally significant fate control x counterpower simple interaction ($F = 3.50$, $df = 1/64$, $p < .10$) which, when explored further, suggested that when counterpower was absent, a higher percentage was allocated under high fate control (80.70%) than under low (61.40%), a result that mirrors that found for males. (c) Also for females, there was a marginally significant simple main effect for worker performance ($F = 3.25$, $df = 1/64$, $p < .10$); as in Periods 1 and 2, female subjects tended to allocate a higher percentage when the worker's performance started low and improved to medium (78.0%) than when it remained low (65.1%).

CHAPTER IV

DISCUSSION

The results for males were congruent with the theory of social exchange that was developed by Thibaut and Kelley (1959) and refined by Jones and Gerard (1967). Male subjects did attempt to influence the behavior of another through the manipulation of his rewards. The results indicate that, as predicted, fate control conversion is more likely to occur when the other has sufficient counterpower to threaten the person's "own equity", and the amount of fate control available to the person assures him of some measure of success.

It should be noted that while it is clear from the self-report data that under certain conditions a concern for own reward is a salient motive for male subjects, there was no way to differentiate unequivocally between concern for "own equity" and pure self-interest (i.e., to obtain as much reward as possible). Indirect support for the equity interpretation is provided, however, by the findings of Wyer and Polen (1971). In this study, subjects who had already been equitably rewarded did not attempt to influence the other's behavior; if their motive had been self-interest per se, the male subjects in that research should have used their power to obtain more reward regardless of prior outcomes.

It is interesting that the analysis of the self-report

data indicates that males expressed a desire to influence the other's behavior when counterpower was present, irrespective of the amount of fate control available. In other words, when males felt that their "own equity" was threatened by the other's counterpower, they expressed a desire to utilize their fate control. However, as the data for actual allocation behavior indicates, males did not convert their fate to behavior control unless they perceived they had adequate power to influence the worker's performance. Thus, for males, expressed intention differed from actual behavior as a function of the amount of usable power available to them.

This discrepancy between intention and overt behavior mirrors what occurs in many social situations in which the overt expression of a desire to influence others is mediated by such factors as role, status, and self-concept, along with the social norms that regulate these factors. There are societal pressures that tend to induce persons to be aware of the actual (or perceived) limitations, and as a result, to "know their place." It might be particularly enlightening to view results for females from this perspective, in that in the present research, females, while expected to be relatively unconcerned with power and counterpower, were also only slightly concerned with "other equity" in their actual behavior.

It was predicted, from findings of past research, (e.g., Leventhal & Lane, 1970; Messe & Lichtman, 1972) that females

would allocate rewards as a function of worker performance, i.e., would be concerned primarily with "other equity." And while the analysis of the self-report data indicates that "other equity" was indeed a salient motive for females, here again intentions differed somewhat from actual behavior. It appeared then, that other factors such as role and self-concept, as cited above, tend to regulate overt behavior while they do not affect verbally expressed intentions.

While the utility of several aspects of sex role differentiation in our present society are currently being questioned, they nontheless continue to be perpetuated through the processes of socialization, and therefore, necessarily have an effect on a broad range of behaviors. Role and self-concept are important variables relevant to reward allocation behavior. When the common determinants of self-concept are viewed in relation to the position of the female in Western society, it is obvious that females, in general, are regarded as being of lesser status relative to males. This situation--viewed in light of research findings (e.g., Andrews & Valenzi, 1970) which suggest that self-concept strongly influences motivation and behavior in a work setting--suggests that females might lack the adequate self-image that is necessary to act overtly in their own or another's behalf.

One possible explanation for females' expressed concern for other equity also is related to the concept of differential sex roles. Evidence from a study by Gruder and Cook

(1971) indicates that persons (both males and females) are kinder and more helpful to females. This finding suggests that the sex of the worker, not the sex of the subject, might have been responsible for the self-report responses, and, to a lesser extent for the behavior of female dyads. However, Lane and Messe (1971) found that while both male and female subjects did tend to make fewer public self-interested responses when the other was a member of the opposite sex, the over-all mean number of self-interested responses for female choosers in both mixed and same-sex dyads was less than for males. This evidence suggests, then, that while males may tend to be kinder to females in such situations, females tend to be less concerned with "own equity" irrespective of the sex of the other.

It seems likely that a number of closely related social factors may have contributed to the female supervisors' relative lack of attempts to control the other's behavior. For example, differing role expectations regarding characteristics such as competitiveness, superiority, and altruism may help to explain the different concerns of males and females when allocation rewards. In other words, the female role may demand generally more accommodative responses (Vinacke, 1967), regardless of other factors, or, it could be that females are less able to accept the role of a superior and function as a supervisor, and thus, are less likely to capably utilize their coercive power. Males, on the other hand, may be expected to be more competitive, may be more comfortable in the role

of supervisor, and may be therefore less inhibited in using their ability to control others.

Situational Factors

Although male supervisors did appear to be less inhibited in utilizing their fate control to affect another's behavior,results were not as strong as originally expected. Again, a discussion of social norms may provide reasonable explanations for these findings.

It was previously postulated that the research of Wyer and Polen (1971) and Rothbart (1968) failed to show fate control conversion because subjects in these studies did not perceive such behavior as legitimate. In the present research, even though the use of fate control is legitimized in some conditions by a concern with "own equity," it could be that there were other social influences present that inhibit conversion attempts. In order to isolate these influences or norms, it may be helpful to look at situations where the use of fate control is a socially accepted behavior.

The familiar example of parent and child illustrates a situation where the use of one's power to control another's behavior is perceived socially justified, and is not considered exploitative. Jones and Gerard (1967) use the concept of "effect-dependence" in child training to describe the process of child socialization and the power relationships involved therein. There are also situations in business or industry where a person is given the power to control another's outcomes and is expected to utilize that power to

affect the other's behavior. Here too, such actions are looked upon as justified and legitimate.

In both these instances, there is a heirarchy operating whereby the person with fate or behavior control has received his power as a result of some institutionalized process: obviously the parent is viewed socially as responsible for his child; usually a person with power in a business-industrial setting has earned such a position by accepting and meeting responsibilities in the past and is recognized as being more powerful than others.

In the present study, however, subjects were led to believe that they were chosen to be supervisors by chance. There was no other justification available for their receiving control over another's outcomes. It could be, then, that male subjects were somewhat hesitant to appear unjustifiably exploitative even though their own outcomes may have been dependent on such behavior.

Other Significant Results

Other significant findings for the male supervisors suggest that males may have used a number of different strategies to influence the worker's behavior, and these varied as a function of the conditions of fate control and counterpower. In other words,it appears that males attempted to overcome the limitations imposed upon them by the experimental conditions by using such non-contingent tactics as "gift-giving" to influence the worker's performance.

A number of non-predicted significant effects involved

a sex difference in which male supervisors were affected by one or more of the independent variables while females were not. These findings mirror those that were discussed in terms of the specific hypothesis so the issues raised concerning the influence of sex roles, status, and norms on allocation behavior in the context of fate control conversion seem applicable to these nonpredicted sex differences as well.

Implications for Future Research

As noted above, support for the interpretation that male subjects were motivated by a concern with "own equity" rather than by mere self-interest is somewhat indirect, given that they did not actually report that own equity was a reason for their behavior. Therefore, a direct test of this interpretation, using a design similar to that used in the present research, wherein supervisors' base pay was varied--from sufficient for "own equity" to none--could be useful in providing additional insight into the problem. Thus, if subjects with sufficient base pay differed significantly from those with insufficient pay in their attempts to influence another's behavior, an "own equity" interpretation would be supported.

Results and interpretations of past and present research suggest that the laboratory setting has been somewhat inadequate to the task of replicating real-life variables and conditions. Given the intuitive appeal of the theoretical framework and the existence of observable situations where

fate control conversion does occur, it seems reasonable to assume that past inadequacies in experimental settings and design can be overcome. A much more elaborate preparation and design will be required to demonstrate fate control conversion more strongly in the laboratory setting. The subject's superiority with regard to both power and status should in some way be justified, perhaps through the use of pretests or prior experience.

In the present research, the use of self-reports along with allocation behavior data has proved to be a useful tool in determining subjects' motivations with regard to "own" and "other equity". These self-reports tended to make the interpretations of behavioral data less equivocal and thus lent greater support to the hypothesis. Since the motivations of subject ("own equity" and "other equity" versus attempts at achieving maximum rewards) in reward allocation behavior is a major concern of a great deal of research dealing with equity theory, the methodology of the present study, and in particular the self-report questionnaire, might also prove to be a useful research approach in that area.

Finally, while the self-report data were helpful in providing some insight into the alleged motivation of the subjects, a more intricately designed questionnaire could be instrumental in providing necessary information about different motives and inhibitions in distributing rewards in future research. It could be that the accuracy of such a method may be questionable, in that these types of questions

are subject to the effects of social desirability. However, for just these reasons this type of questionnaire could be useful, in that it will help to explore socially motivated behavior and expose those norms that serve to regulate such behavior.

Summary

In summary, results indicate that as hypothesized, males were more likely to convert their fate to behavior control under conditions of high fate control and worker counterpower. Females, contrary to expectations, did not express overtly in allocation behavior their professed concern for "other equity," and, in fact, were not influenced very much by any of the dependent variables. Other significant findings suggest that males varied their allocation strategies as a function of the amount of fate control available and the presence of worker counterpower.

The concepts of social norms, sex role differences, and situational factors were utilized in an attempt to provide suitable explanations for these findings.

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APPENDICES

Work Period II:

1. How many envelopes did the worker address during this, the second work period? _____ envelopes.

2. How would you rate the worker on the following scales, relative to his output during this second five minute work period? (Place an X in the appropriate space).

lazy ____/____/____/____/____/____/____ industrious

fatigued ____/____/____/____/____/____/____ alert

apathetic ____/____/____/____/____/____/____ concerned

3. How many envelopes do you feel the worker should have addressed during this second work period? _____ envelopes.

4. How much money are you going to pay the worker for this five minute work period? $_____.

5. What are your reasons for paying the worker the above amount?

6. How much have you paid the worker altogether at this time? (Add the first and second work period payments).$_____.

PLACE THE AMOUNT YOU HAVE CHOSEN TO PAY THE WORKER FOR THIS WORK PERIOD IN THE BROWN PAY ENVELOPE LABELLED "II".

After the experimenter takes the pay envelopes to the worker, begin to answer question III of the Industrial Opinion Questionnaire.

Industrial Opinion Questionnaire (administered to all subjects)

Work on this questionnaire during the time that the worker is addressing envelopes. You should try to complete one major question (I,II, or III) during each of the three five minute intervals. Please try to answer all parts of each question as extensively as possible in the time allotted. You do not need to put your name on the questionnaire, but please provide the other background information.

I. Background Information

(a) age ____

(b) sex: M or F (circle one)

(c) academic status: freshman, sophomore, junior, senior, grad -- (circle one).

(d) major _____ _____

(e) what geographical section of the U.S. are you from?
Michigan____ East____ Midwest____ (other than Mich.)__
West____ (Check one)

(f) where would you place your political perspectives on the continuum below?

liberal /____/____/____/____/____/____/ conservative
radical reactionary

(g) are your parents: Republicans____ Democrats____

Independents____ (check one)

(h) circle the correct answer to the questions below:

(1) Do you plan to get a full-time job when you graduate?
1. yes
2. no
3. non't know

(2) What is your father's occupation"
1. laborer--factory worker, service employee - e.g., T.V. repairman, post office, etc.
2. white collar--office personnel (but not supervisor or manager).
3. supervisor, manager, or self-employed.
4. professional (school teacher, lawyer, accountant, etc.)
5. unemployed.

(3) What is your mother's occupation?
1. laborer--factory worker, service employee - e.g., T.V. repairman, post office, etc.
2. white collar--office personnel (but not supervisor or manager).
3. supervisor,manager, or selfemployed.
4. professional (school teacher, lawyer, accountant, etc.)
5. unemployed, housewife.

(4) How many children in your family?
1. one, (I am an only child)
2. two, (me and one other)
3. three
4. four
5. five or more.

II.

(a) If you were asked to take a psychological test for a job you wanted, how likely is it that you would fake your answers to try to make a very favorable impression?

(b) What personality traits do you feel are generally desired in prospective employees?

(c) Why do you feel these qualities are desired in prospective employees?

(d) To what extent do you feel you possess these qualities?

III.

(a) What factors do you feel are the most important ones for employees being satisfied with their jobs?

(b) Which factor of the ones mentioned in part (a) do you feel is the most important one?

(c) Why did you select this one factor? Explain fully.

APPENDIX B

INSTRUCTIONS

Example of Instructions
(Administered to subjects in the High fate control-counterpower present conditions).

This study is concerned with the variables that influence a worker-supervisor interaction in a work-type setting. Two of you have been chosen, on a random basis, to perform the role of supervisor. There are two others, in two other cubicles, that have been chosen to act as workers.

Workers Task:
The worker will be instructed to address envelopes, using listings in the telephone directory as a source for the addresses.

e.g. John J. Smith
123 Main St.
Lansing, Michigan 48910

He will be told to work as quickly and accurately as possible. The worker will address envelopes during three periods, each lasting five minutes. After each five minute period, the worker will give the envelopes he has completed to the experimenter, and the experimenter will then bring them to you, for your evaluation.

Supervisor's task:
There should be two other printed forms on the table in front of you at this time. (a) the Industrial Opinion Questionnaire, consisting of three major questions, and (b) a rating form, with three separate sections, one for each work period. There are also four brown envelopes; one contains $1.50 in small change, and the others are labelled I, II, and III, corresponding to the work periods.

As supervisor, you will be responsible for (1) completing the provided questionnaire during the five minute intervals, (2) counting and evaluating the worker's output after each five minute interval, (3) rating the worker on the form provided after each five minute interval, and (4) determining the amount the worker is to be paid after each trial.

Your role as supervisor will be explained to the workers and they will be aware that they are being rated and their pay is being determined by a supervisor.

(1) Questionnaire: Work on the questionnaire while the worker is addressing the envelopes during the five minute work periods. Please answer the questions as completely as possible.

(2) Counting and Evaluation: The experimenter will bring you the completed envelopes after each five minute work period. Count them and mark the number completed on the space provided on the worker's rating form.

(3) Rating Form: Please complete all items on the rating form after each work period. There is a set of items provided for each five minute period.

(4) Payment of Worker: There is $1.50 in small change in one of the brown envelopes. This is the money to be used to pay the worker over the three work periods. The worker's payment may vary as much as you like after each trial. You have been given $1.50 in an envelope, along with three empty envelopes, to be used as pay envelopes after each work period. The worker need not be paid the entire $1.50; it is up to you to determine the amount of payment after each trial and the total amount paid the worker. The total amount may vary from 0.00 to $1.50. Any money left over at the end of the experiment will be collected by the experimenter.

After you count the envelopes and fill out the appropriate rating items, determine the amount you wish to pay the worker for the five minute period, and place the money in one of the envelopes provided. The experimenter will then take the envelope to the worker and begin another five minute work period. During the time the worker is addressing envelopes, you should be completing the Industrial Opinion Questionnaire.

There will be no interaction, other than the exchange of envelopes and money, between yourself and the worker, either during the experiment or afterwards.

(5) Your Payment: The amount of payment you will receive for your participation in the study will be determined in part by the worker's output. Thus you will be paid a straight "salary" of $.50, plus a "commission" or"bonus" based on how much is completed by the worker. The table below shows how your salary will vary according to the worker's output.

Supervisor's Payment

Worker's Total Output:	HI (30 & above env.) over 3 trials	MED. (20-20 env.) over 3 trials	LO (below 20 env.) over 3 trials
Your Payment:	$2.50 (bonus of $2.00)	$1.75 (bonus of $1.25)	$.50 (base level)

So you can see that it would be to your benefit for the worker to complete as much of the task as possible.

You will be paid after all three of the work periods have been completed.

IF YOU HAVE ANY QUESTIONS REGARDING WHAT YOU ARE TO DO, PLEASE ASK THE EXPERIMENTER BEFORE THE EXPERIMENT BEGINS.

(Administered to subjects in the low fate control-counterpower absent condition).

This study is concerned with the variables that influence a worker-supervisor interaction in a work type setting. Two of you have been chosen, on a random basis, to perform the role of supervisor. There are two other, in two other cubicles, that have been chosen to act as workers.

Worker's Task:

The worker will be instructed to address envelopes, using listings in the telephone directory as a source for the addresses.

e.g. John J. Smith
123 Main St.
Lansing, Michigan 48910

He will be told to work as quickly and accurately as possible. The worker will address envelopes during three periods, each lasting five minutes. After each five minute period the worker will give the envelopes he has completed to the experimenter, and the experimenter will then bring them to you, for your evaluation.

Supervisor's Task:

There should be two other printed forms on the table in front of you at this time. (a) the Industrial Opinion Questionnaire, consisting of three major questions, and (b) a rating form, with three separate sections, one for each work period. There are also four brown envelopes; one contains $1.50 in small change, and the others are labelled I, II, and III, corresponding to the work periods.

As supervisor you will be responsible for (1) completing the provided questionnaire during the five minute intervals, (2) counting and evaluating the worker's output after each five minute interval, (3) rating the worker on the form provided after each five minute interval, and (4) determining the amount the worker is to be paid after each trial. Your role as supervisor will be explained to the workers and they will be aware that they are being rated and their pay is being determined by a supervisor.

(1) Questionnaire: Work on the questionnaire while the worker is addressing the envelopes during the five minute work periods. Please answer the questions as completely as possible.

(2) Counting and Evaluation: The experimenter will bring you the completed envelopes after each five minute work period. Count them and mark the number completed on the space provided on the worker's rating form.

(3) Rating Form: Please complete all items on the rating form after each work period. There is a set of items provided for each five minute period.

(4) Payment of Worker: There is $1.50 in small change in one of the brown envelopes. This is the money to be used to pay the worker over the three work periods. The worker's payment may vary as much as you like after each trial. You have been given $1.50 in an envelope and three empty envelopes, to be used after each period. The worker need not be paid the entire $1.50; it is up to you to determine the amount of payment after each trial and the total amount to be paid the worker. However, the worker must be paid a total of at least $1.00 over the three work periods. The total amount may vary from $1.00 to $1.50. Any money left over at the end of the experiment will be collected by the experimenter.

After you count the envelopes and fill out the appropriate rating items, determine the amount you wish to pay the worker for the five minute period, and place the money in one of the envelopes provided. The experimenter will then take the pay envelope to the worker and begin another five minute work period. During the time the worker is addressing envelopes, you should be completing the Industrial Opinion Questionnaire.

There will be no communication, other than the exchange of envelopes and money, between yourself and the worker, either during or after the experiment.

(5) Your Payment: You will receive a straight "salary" of $1.00 for your participation in the experiment, regardless

of the worker's output. You will be paid after all three work periods have been completed.

IF YOU HAVE ANY QUESTIONS REGARDING WHAT YOU ARE TO DO, PLEASE ASK THE EXPERIMENTER BEFORE THE EXPERIMENT BEGINS.