# Reducing inequity by reallocating rewards[1]

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*The equity model can predict the manner in which members of a dyad allocate among themselves the rewards earned by their group. Among members with equal work inputs, Ss given more than half the reward reduced inequity by decreasing their own share. Those given less than half the reward increased their share. Ss also reduced inequity by planning to compensate for current inequities in future interaction. As expected, level of tension covaried with the magnitude of inequity. Underrewarded Ss overestimated their inputs in order to justify increasing their share.*

The equity model (Adams, 1965) suggests that a member of a dyad, Person, will allocate rewards earned by the dyad in accordance with each member's contribution to the group effort. Person will attempt to make his own outcomes and those of the second member of the dyad, Other, proportional to their respective inputs. Inputs are the traits and behaviors for which Person believes a member of the dyad should be rewarded, particularly those traits and behaviors which are instrumental to effective performance. Outcomes are the rewards and satisfactions which Person believes each member of the dyad is receiving. States of inequity may be profitable or unprofitable for Person, i.e., his outcomes may be too large relative to his inputs or too small relative to his inputs. Inequity arouses a state of tension that is proportional to the disparity between inputs and outcomes. Person can reduce inequity by altering his own inputs and outcomes or those of Other either through a change in behavior or through cognitive distortion.

The equity model has been tested in the context of an employer-employee relationship (Adams, 1963a, b; Adams & Jacobsen, 1964; Adams & Rosenbaum, 1962; Andrews, 1967; Lawler & O'Gara, 1967). The present study differs from earlier studies in three respects, namely: (1) It examines equity processes in dyads composed of cooperating peers. In such a relationship, Other is Person's co-worker. In earlier studies, the identity of Other was uncertain. Ss could have experienced inequity either because they were overpaid relative to their co-workers or because they were not qualified to give their employer a just return for the wage he was paying them. (2) It examines the effect of equity motivation on behaviors different from those observed in previous studies in which the dependent variable was Person's inputs. Dyads receive monetary reward for performing a task in which the members' inputs are similar and held constant. Person is then given either half, more than half, or less than half the rewards earned. The dependent variable is the manner in which Person reallocates these rewards. Ss given more than half the reward are expected to decrease their share while those given less than half are expected to increase their share. Attempts to reduce inequity through cognitive distortion are also measured. Person might compensate for current inequity by planning to change his future behavior toward Other, a type of distortion observed by Leventhal, Reilly & Lehrer (1964). He might also misperceive his inputs to reduce inequity directly or to justify inequity-reducing behavior. (3) It explores the impact of extreme inequity. It was suspected that extreme unprofitable inequity might elicit responses qualitatively different from those which occur at moderate levels of unprofitable inequity.

**Table 1**
**Number of Subjects in Each Category of Response as a Function of Amount of Reward Given to Subject**

| | Amount of reward given to subject | | | | | | |
|---|---|---|---|---|---|---|---|
| Response Category | $1.20 (85.7%) | 95¢ (67.9%) | 70¢ (50.0%) | 45¢ (32.1%) | 20¢ (14.3%) | 5¢ (3.6%) | 2¢ (1.4%) |
| Increasers | 1 | 0 | 0 | 7 | 10 | 11 | 6 |
| Non-changers | 3 | 1 | 12 | 5 | 2 | 1 | 4 |
| Decreasers | 8 | 11 | 0 | 0 | 0 | 3 | 2 |
| Condition *n* | 12 | 12 | 12 | 12 | 12 | 15 | 12 |

## METHOD

The Ss were 94 male students drawn from introductory psychology classes at N. C. State University. Each S worked with another male student who was a confederate of the E.[2] They were separated by a partition and could not see or speak to one another. They interacted by exchanging printed forms. They were told they would work together to earn a joint monetary reward and that the total amount earned would depend upon the speed and accuracy of their performance. However, they would decide for themselves how the money would be divided between them. The dyad worked on an arithmetic task for 14 trials which were divided into two blocks of 7 trials. On each trial, the dyad completed six simple multiplication problems. At all times, the confederate was careful to work for the same length of time as the S. The dyad earned a total of $1.20 on the first block of seven trials and $1.40 on the second. After each block, the members divided the money earned in that block. One member had the right to divide the money as he wished. The other member could modify that division slightly. He could increase or decrease his share of reward by as much as 5¢ or leave it unchanged. After the first block of trials, the S divided the $1.20 that had been earned. Of 94 Ss tested, 88 divided the money evenly. (Testing was discontinued for the six Ss who did not divide the money evenly.) The confederate left the division unchanged. After the second block of trials, the confederate divided the additional $1.40 that had been earned. Ss were then randomly assigned to one of seven conditions. From a total of $1.40, the confederate gave them either $1.20 (85.7%), 95¢ (67.9%), 70¢ (50.0%), 45¢ (32.1%), 20¢ (14.3%), 5¢ (3.6%), or 2¢ (1.4%). The S's modification of this division of reward was the major dependent variable. A questionnaire was then administered. Ss recorded their response to each item on a 7-point rating scale.

## RESULTS

Table 1 shows Ss' response to the division of reward imposed by the confederate. In each condition, each S was classified according to his category of response as either an increaser, nonchanger, or decreaser. (All Ss who changed their share made the maximum allowed.) The data were analyzed by means of Fisher exact probability tests. To form 2 by 2 contingency tables, two of the response categories were combined and contrasted with the third. The results are consistent with the equity model. In groups given either 85.7% or 67.9% of the reward, the number of decreasers is greater than in either the 50.0%, 32.1%, or 14.3% groups ($p < .01$ in all cases). In groups given either 14.3% or 32.1% of the reward, the number of increasers is greater than in either the 50.0%, 67.9%, or 85.7% groups ($p < .05$ or better in all cases). In the group given 50.0% of the reward, the number of nonchangers is greater than in any other group ($p < .01$ in all cases). In the 3.6% and 1.4% groups, the pattern of results resembles that in the 32.1% and 14.3% groups with one interesting exception. In the extreme inequity groups, five Ss decreased their share.

Results of questionnaire items of greatest interest are shown in Table 2. Data from the 3.6% and 1.4% groups which are not

Table 2
**Mean Response to Questionnaire Items Assessing Level of Tension, Perception of Inputs, Anticipated Behavior Toward Partner and Perception of Power**

| | Item | Amount of reward given to subject $1.20 (85.7%) | 95¢ (67.9%) | 70¢ (50.0%) | 45¢ (32.1%) | 20¢ (14.3%) |
|---|---|---|---|---|---|---|
| 1. | Concern about changing division. (0 = not concerned; 6 = greatly concerned) | 4.25 | 3.28 | 1.72 | 1.93 | 4.37 |
| 2. | Concern about division of money. (0 = not concerned; 6 = greatly concerned) | 2.67 | 1.62 | 1.67 | 3.26 | 3.67 |
| 3. | How would you divide money in further interaction? (0 = in my favor; 6 = in his) | 3.97 | 3.19 | 3.01 | 2.33 | 2.14 |
| 4. | Did you do a good job? (0 = I did poor job; 6 = I did good job) | 4.17 | 4.50 | 3.67 | 4.67 | 4.92 |
| 5. | Whose effort was greater? (0 = partner did more; 6 = I did more) | 2.94 | 3.04 | 2.68 | 3.11 | 3.22 |
| 6. | Partner's control over final division. (0 = slight; 6 = complete) | 5.04 | 3.62 | 3.50 | 3.94 | 4.63 |

shown were generally similar to those of the 14.3% group. Significant quadratic effects were obtained on Item 1 ($F = 16.7$, $p < .001$) and Item 2 ($F = 4.9$, $p < .05$). These results indicate that level of tension increases as the magnitude of inequity increases. The significant linear trend obtained on Item 3 ($F = 20.0$, $p < .001$) indicates that Ss reduce inequity by changing their intentions about future behavior. Items 4 and 5 indicate that underrewarded Ss tend to judge their inputs as being relatively high. When the 32.1% and 14.3% groups are combined and compared to the 50.0% group, the combined underrewarded groups attribute better performance ($F = 6.6$, $p < .05$) and greater effort ($F = 6.1$, $p < .05$) to themselves. On Item 6 there is a significant quadratic trend ($F = 7.7$, $p < .01$). The greater the inequity imposed by the confederate, the greater is his perceived control over the division of reward.

## DISCUSSION

The equity model successfully predicts the manner in which co-workers allocate rewards earned by their group. Ss whose monetary outcomes were too large relative to their inputs decreased their share of reward while those whose monetary outcomes were too small relative to their inputs increased their share. Ss whose outcomes were commensurate with their inputs did not alter the allocation of reward. There was some indication that extreme unprofitable inequity may elicit responses different from those elicited at moderate levels of unprofitable inequity. Some of the Ss who received an extremely small amount of money decreased their share even though it was already too small. The questionnaire data support the assumption that inequity arouses a state of tension proportional to the discrepancy between inputs and outcomes. As the magnitude of inequity increased, Ss became increasingly concerned about the division of reward and about making an appropriate change in the division. Ss' power to reduce inequity by reallocating rewards was relatively limited. Consequently, they sought additional means of reducing inequity. They reduced inequity by anticipating changes in their future behavior toward their partners. They expressed an intention to divide future rewards in a manner which would compensate for current inequities.

The data suggest that inequity may produce either primary or secondary cognitive distortion. Primary distortion involves cognitive changes which directly reduce inequity. Thus, underrewarded Ss could (but did not) reduce inequity by underestimating the magnitude of their inputs. Secondary distortion involves cognitive changes which justify behaviors and intentions that directly reduce inequity. Thus, underrewarded Ss could (and probably did) overestimate their perceived inputs to justify their action and intention of increasing their share of reward. They may have overestimated rather than underestimated their inputs because Person's choice of a mode of inequity reduction is influenced by his desire to maximize his outcomes (Adams, 1965). If underrewarded Ss had underestimated their inputs instead of increasing their outcomes, they would have been left with a small share of reward. By engaging in secondary distortion and overestimating their inputs, they were able to justify behaviors and intentions which reduced inequity and simultaneously maximized their monetary outcomes.

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## NOTES


1. This research was supported by Grant GS-1821 from the National Science Foundation to the first author. The report is based on a paper presented at the meeting of the Eastern Psychological Association, April 1967, Boston. The authors wish to thank Frank Musten for his assistance.


2. Data for one S who detected the deception have been deleted.