INEQUITY IN SOCIAL EXCHANGE

15.322
Spring '69

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CROTONVILLE, NEW YORK

I. Introduction

Philosophers, political scientists, politicians, jurists, and economists traditionally have been the ones concerned with the just distribution of wealth, power, goods, and services in society. Social psychologists and their brethren, with the notable exceptions of Blau (1964), Homans (1961), and Thibaut and Kelley (1959), have displayed remarkably little professional interest in this, despite the fact that the process of exchange is almost continual in human interactions. They have, of course, studied social behavior involving reciprocal, as distinguished from unilateral, transactions, but their sights have been focused on the amount and content of communications; attitudinal, affective, motivational, perceptual, and behavioral changes; changes in group structure, leadership, and so on, rather than on exchange proper. Yet, the process of exchange appears to have characteristics peculiar to itself and to generate affect, motivation, and behavior that cannot be predicted unless exchange processes are understood.

A distinguishing characteristic of exchange processes is that their resultants have the potentiality of being perceived as just or unjust. But what are the consequences of outcomes being perceived as meeting or not meeting the norms of justice? Nearly all the attention given to this question has been to establish a relationship between perceived injustice and dissatisfaction (Homans, 1950, 1953, 1961; Jaques, 1956, 1961a; Patchen, 1959, 1961; Stouffer *et al.,* 1949; Vroom, 1964; Zaleznik *et al.,* 1958). Not surprisingly, this has been accomplished with success. Does a man treated unfairly simply express dissatisfaction? Are there not other consequences of unfair exchanges? What behavior is predictable? These questions and related ones are a principal concern of this paper.

Rather than simply present a theory from which the behavior of persons engaged in a social exchange may be deduced, the plan of this chapter is to present first in chronological order two major concepts relating to the perception of justice and injustice. First is the concept of relative deprivation and the complementary concept of relative gratification, developed by Stouffer and his associates (1949). Homans' highly elaborated concept of distributive justice (1961) will be discussed next. These will then be integrated into a theory of inequity from which it will be possible to specify the antecedents and consequences of injustice in human exchanges.

II. Relative Deprivation

Following World War II, the publication of the first *American Soldier* volume by Stouffer and his colleagues (1949) excited interest among sociologists and social psychologists. The effect was at least in part due to the introduction of a new concept, relative deprivation, used by the authors to explain what were seemingly paradoxical findings. According to Merton and Kitt (1950), the formal status of the concept was that of an intervening variable which explained the observed relationship between an independent variable, such as education level or rate of promotion, and a dependent variable, such as satisfaction with some aspect of Army life.

Relative deprivation was not formally defined by the authors, however, nor by Merton and Kitt (1950), who analyzed in great detail the implication of the concept for sociological theory in general and for reference group theory in particular. The essential meaning of the concept may be inferred from two illustrations of its use by the authors of *The American Soldier*. Despite the objective fact that soldiers with a high school education had better opportunities for advancement in the Army, high school graduates were not as satisfied with their status and jobs as were less educated men. This apparent paradox is explained by assuming that the better-educated men had higher levels of aspiration, partly based on what would be realistic status expectations in civilian life, and that they were, therefore, relatively deprived of status and less satisfied with the status they achieved. It may be noted that the validity of this explanation depends upon showing that level of aspiration is greater than status achieved among high school graduates as contrasted to soldiers with less education. While this is not demonstrated by the authors, it appears to be a credible assumption. It is the relative deprivation, then, that accounts for less satisfaction among better-educated men.

A second illustrative use of relative deprivation is made by the authors of *The American Soldier* in accounting for the puzzling fact that Army Air Corps men were less satisfied with promotion opportunities than were men in the Military Police, even though objective opportunities for mobility were vastly greater in the Air Corps. Relative deprivation is invoked to explain the anomaly as follows: The high promotion rate in the Air Corps induces high expectations of mobility; lower-ranking and low-mobile men, compared to higher-ranking and high-mobile men, feel deprived in the face of their expectations and express dissatisfaction. Among military policemen, on the other hand, expectations of promotion are low, and the fate of most policemen is quite similar: namely, low rank. In sum, there is a discrepancy between expectation and achievement among Air Corps enlisted men and little or no discrepancy between expectation and achievement among men in the Military Police. The discrepancy results in dissatisfaction with mobility. Or more precisely, the assumed existence of a discrepancy between expectation and achievement is held to account for the empirical observation that men were less satisfied in one branch than in the other.

Spector (1956), in an experiment directly related to these findings by Stouffer *et al.,* varied perceived probability of promotion and fulfillment and tested the hypothesis that "*on failing to achieve* an attractive goal, an individual's morale will be higher if the probability of achieving the goal had been perceived to be low than if it had been perceived to be high" (p. 52). He found that the high expectations-nonpromotion group had lower morale and was less satisfied with the promotion system than was the low expectations-nonpromotion group, thus corroborating experimentally the military survey findings. Comparable findings have been made by Gebhard (1949).

The effects of relative deprivation (the unfair violation of expectations) upon sociometric choices are clearly shown in an experiment designed by Thibaut (1950) to learn about the conditions that affect group cohesiveness. Underprivileged boys from camps and settlement houses in the Boston area participated in the experiment in groups of

10 to 12 boys, all of whom had known, played, and lived with one another for some time. After filling out a questionnaire in which they were asked to rank the four boys they would most like to have on their team to play games if their groups were to be divided, the boys in each group were split into two teams of five or six. Thibaut formed each team so that each boy would have about an equal number of preferred and of nonpreferred partners and so that each team would be composed of approximately the same number of popular, or *central,* and less popular, or *peripheral,* boys in terms of sociometric choices received. Although there were several experimental conditions in his study, only one of them concerns us here. This is the condition in which each set of two teams played four games and one of the pairs was given consistently an inferior, menial, uninteresting, or unpleasant role during the series of games. These were the *low-status* teams (called "unsuccessful low-status" by Thibaut).

Following the last game, each boy answered a questionnaire in which he was again asked to order his preferences for teammates. A general finding was that a boy tended to shift his sociometric choices after the games to boys who had actually been teammates. Of greater interest here is the fact that low-status *central* boys were more likely to display such shifts than were low-status *peripheral* boys. The former were popular boys, presumably aware of their status among their fellows, who were forced to assume low-status roles in violation of the roles they would customarily play. The role of the low-status peripheral boys, on the other hand, were more or less a confirmation of their relatively low popularity among their friends. Compared to the peripheral boys, then, the central boys were relatively deprived, and they manifested their greater dissatisfaction with their fate by shifting to a greater extent their sociometric choices from central boys on the opposing team to boys on their own team. Thibaut also reports evidence that the low-status central boys displayed exceptional hostility to members of the opposing (high-status) teams and that all low-status boys keenly felt the injustice of their fate.

These findings are of especial interest because they cannot be accounted for simply on the hypothesis that abuse or minority group membership will result in withdrawal and increased cohesiveness. Such a hypothesis would have required that low-status peripheral and central boys show the same behavior. But, as noted, central boys were more likely to shift their sociometric choices and to display overt hostility to opponents. They were the ones who suffered the greater relative deprivation.

The studies that have been described form an interesting set. In the data from the surveys by Stouffer *et al.* (1949), there is no empirical

evidence of relative deprivation. None of the soldiers or airmen were asked, for example, if specific expectations were violated or, more directly, if they felt relatively deprived with respect to status. Relative deprivation was used, ex post facto, to explain anomalous findings. The concept had no existential character; it was a hypothetical construct—rather than an intervening variable, as Merton and Kitt classified it (1950). The Spector (1956) experiment, by manipulating expectations of promotions and achievement, created a condition of relative deprivation. Thus, operationally, relative deprivation took on the status of a variable, an independent variable, variations in which were related to variations in "morale." In another laboratory experiment, Thibaut (1950) created conditions of relative deprivation, which were not any the less real for having been created unintentionally by his manipulations of group status and group success. In this respect his experiment is analogous to Spector's. But the nature of his experimental task allowed a very broad range of behavior to be displayed spontaneously. As a result there was direct evidence of feelings of injustice in reaction to the manipulation of relative deprivation, as well as of dissatisfaction, hostility, withdrawal, and changes in sociometric choices. Thus, proceeding from the military surveys to the Thibaut experiment, a useful construct emerges, receives experimental support, and its meaning becomes elaborated.

Bearing this and the survey and experimental data described earlier in mind, there emerge certain conclusions. First, it seems that manifest dissatisfaction and other behavior are responses to acutely felt injustice, rather than directly to relative deprivation. Relative deprivation is a condition occurring naturalistically or an experimental manipulation which elicits feelings of injustice. In turn, feelings of injustice trigger expressions of dissatisfaction and, in addition, the kind of behavior exhibited by Thibaut's juvenile subjects. Injustice, then, may be said to mediate the effects of relative deprivation. A second conclusion is that what is just is based upon relatively strong expectations, such as that educational achievement will be correlated with job status achievement and that one will be promoted at about the same rate as one's fellows, or that the role one plays in one situation—in laboratory games—will be in line and with the role one usually assumes—in the settlement house or camp.

Thirdly, it is clear that a comparative process is inherent in the development of expectations and the perception of injustice, as implied by the term *relative* deprivation. Well-educated men felt unfairly treated in comparison to the treatment they would have received in civilian life or in comparison to the treatment civilians did receive. Injustice was suffered by unpromoted or less-mobile airmen in relation to the general mobility of men in the Air Corps, whereas there was no such felt injustice among low-mobile military policemen when they compared their rate of promotion to the low promotion rate prevalent in the Military Police.

A particularly felicitous additional example of the process of comparison and its importance is provided by Sayles (1958). He notes that ". . . foundries are often hot spots, highly aggressive in seeking fulfillment of their demands where they are part of larger manufacturing organizations. However, when the plant is entirely devoted to the foundry operation, they are relatively weak and inactive" (p. 104). Foundry workers are highly paid to compensate for the unpleasant work conditions and the high physical exertion required and because of a short labor supply in this skill area. Other workers, however, rank foundry operators quite low and look down on them, according to Sayles. Thus, when foundry employees are present for purposes of comparison, other workers feel relatively deprived as regards earnings, and the resulting dissatisfaction may take hostile forms. Conversely, the foundry workers, being the butt of the despisement of others, may react by being unusually assertive and demanding.

Finally, it may be noted, if it is not obvious, that felt injustice is a response to a *discrepancy* between what is perceived to be and what is perceived should be. In the illustrative cases taken from *The American Soldier* and from the Spector and Thibaut experiments, it is a response to a discrepancy between an achievement and an expectation of achievement.

III. Distributive Justice

The existence of relative deprivation necessarily raises the question of distributive justice, or of the fair share-out of rewards; for, as noted earlier, deprivation is perceived relationally. The concept is not new, having been explored by political philosophers and others from the time of Aristotle. In the hands of Homans (1950, 1953, 1961) and of his colleagues (Zaleznik *et al.,* 1958), the concept of distributive justice has taken on the articulated character of what may be more properly called a theory. As fully developed by Homans (1961), it is a theory employing quasi-economic terms. According to him, distributive justice among men who are in an exchange relationship with one another obtains when the profits of each are proportional to their investments. Profit consists of that which is received in the exchange, less cost incurred. A cost is that which is given up in the exchange, such as foregoing the rewards obtainable in another exchange, or a burden assumed as a specific function of the exchange, such as a risk, which would include not only potential real loss but the psychological discomfort of uncertainty as well. Investments in an exchange are the relevant attributes that are brought by a party to the exchange. They include, for example, skill, effort, education, training, experience, age, sex, and ethnic background.

Schematically, for a dyad consisting of A and B, distributive justice between them is realized when:

$$\frac{\text{A's rewards less A's costs}}{\text{A's investments}} = \frac{\text{B's rewards less B's costs}}{\text{B's investments}}$$

When an inequality between the proportions exists, the participants to the exchange will experience a feeling of injustice and one or the other party will experience deprivation. The party specifically experiencing relative deprivation is the one for whom the ratio of profits to investments is the smaller.

Making explicit that it is the relation between *ratios* of profits to investments that results in felt justice or injustice is a distinct contribution that takes us beyond the concept of relative deprivation. To be sure, an individual may feel deprived, but he feels deprived not merely because his rewards or profits are less than he expected or felt was fair. Many men, when comparing their rewards to those of another, will perceive that their rewards are smaller, and yet they will not feel that this state of affairs is unjust. The reason is that persons obtaining the higher rewards are perceived as deserving them. That is, their rewards are greater because their investments are greater. Thus, for example, if being of the male sex is perceived as a higher investment than being of the female sex, a woman operator earning less than a man doing the same work will not feel unjustly treated. The proportionality of profits to investments is comparable for the woman and for the man. Similarly, a young instructor usually does not feel that his rewards, low as they may be, compare unfairly with those of an associate professor in his department. As Homans notes, "Justice is a curious mixture of equality within inequality" (1961, p. 244).

The theory of distributive justice also addresses itself to the case of two or more persons, each of whom receives his rewards from a third party: an employer, for example. In such an instance, each of the persons is in an exchange with the employer, as in the simple dyadic situation discussed; but, in addition, each man will expect that the employer will maintain a fair ratio of rewards to investments between himself and other men. This, of course, is the perennial dilemma of employers, and it almost defies a perfect solution, though it is capable of better solutions that are often developed. One difficulty with finding neat solutions is that A's perception of his rewards, costs, and investments are not necessarily identical with B's perception of A's situation. To complicate matters, two persons, though they might agree as to what their investments are, may disagree as to the weight each investment should be given. Should age count more than sex? Should education be given as much weight as job experience? The psychometrics of this has not yet received much attention.

The relationship of distributive justice to satisfaction is treated only briefly by Homans, but it is nevertheless the subject of a formal theoretical proposition. If a state of injustice exists and it is to a man's disadvantage—that is, the man experiences deprivation—he will "display the emotional behavior we call anger" (Homans, 1961, p. 75). Here Homans is overly influenced by Skinnerian rhetoric. He means, plainly, that dissatisfaction will be felt or expressed. If, on the other hand, distributive justice fails of realization and is, to an observer at least, to a man's advantage, he will feel guilty. This aspect of the proposition is more novel and is substantiated by observations by Jaques (1956, 1961a) and by laboratory experiments by Adams (1963a) that will be discussed later. Homans also implies that the thresholds for displaying dissatisfaction and guilt are different when he remarks that ". . . he (the guilty man) is less apt to make a prominent display of his guilt than of his anger" (1961, p. 76). This suggestion, also made by Adams (1963a) and deducible from observations made by Jaques (1956), implies that distributive justice must fail of realization to a greater extent when it is favorable to an individual before he reacts than when it is to his disadvantage.

Others have stated formal propositions that obviously refer to the same phenomena as encompassed by the theory of distributive justice. The propositions listed by two writers are especially noteworthy because they were expressed in terms similar to those of Homans. Sayles (1958, p. 98), discussing the manifestation of dissatisfaction in industrial work groups, surmised that factory workers "compute" the fairness of their wages as follows:

$$\frac{\text{Our importance in the plant}}{\text{Any other group's importance}} = \frac{\text{Our earnings}}{\text{Their earnings}}$$

When the equality obtains, satisfaction is experienced. An inequality between the ratios causes pressures for redress, accompanied by dissatisfaction. "Importance in the plant" may be taken as equivalent to the perceived investments of group members, including skills and type of work performed, length of service, and such. This is made explicit in his model of the "economic world of the worker in his work group." According to this analysis, men are portrayed as comparing their jobs to other jobs and asking the questions, "Are these higher paying jobs actually more skilled than our own?" and "Do we earn *enough more* than the lower rated jobs to compensate for the skill difference?" (Sayles, 1958, p. 105). The term "earnings" is, of course, comparable to Homans' rewards but is a less comprehensive term, excluding other outcomes such as intrinsic job rewards. It also subsumes less than the concept of profit or net reward, since it makes no provision for negative outcomes or costs, such as unfavorable work conditions or tyrannical supervision. Nevertheless, it is clear that Sayles conceives of justice as being a function of the perceived equality of ratios of investments and of rewards.

Using the terms of Festinger's theory of cognitive dissonance (1957), Patchen postulates that workers making wage comparisons make a cognitive relation of the following type (1961, p. 9):

$$\frac{\text{My pay}}{\text{His (their) pay}} \text{ compared to } \frac{\text{My position on dimensions related to pay}}{\text{His (their) position on dimensions related to pay}}$$

This formulation is similar to Sayles' but more explicit, for dimensions related to pay are specified as being attributes such as skill, education, and seniority. These are clearly the same as Homans' investments. Patchen differs somewhat from Homans in his conceptualization, however, in that he also includes job interest among his "dimensions" related to pay. This is not so much an investment as it is a reward, either with positive or negative valence. When, according to Patchen, an inequality results from the comparison of the two proportions, cognitive dissonance is experienced. In turn, dissatisfaction is manifested. However, dissonance and the attendant dissatisfaction are not necessarily a bad state of affairs from the point of view of the individual. Patchen points this out in an interesting departure from dissonance theory. Although consonant comparisons may be satisfying, they provide no basis for mobility aspirations, whereas dissonant comparisons unfavorable to the person permit a man to think that he is more deserving, that he merits higher pay or status. In effect, then, Patchen suggests that the motivation to attain consonance may be dominated by achievement motivation, and that under these circumstances dissatisfaction resulting from dissonant comparisons may be tolerated. Parenthetically, it may be pointed out that the pitting of these two motivations may partially explain why researchers have been unable to replicate some experiments that offered support for dissonance predictions (see Conlon, 1965, for example).

Relative deprivation and distributive justice, as theoretical concepts, specify some of the conditions that arouse perceptions of injustice and, complementarily, the conditions that lead men to feel that their relations with others are just. But they fail to specify theoretically what are the consequences of felt injustice, other than dissatisfaction. To be sure, Sayles (1958) mentions the use of grievance procedures and strikes to force redress, Homans (1961) cites a study by Clark (1958) in which a female employee reported slowing her pace of work as a means of establishing a more just relation with a co-worker, and Patchen (1961) gives evidence of dissonance reduction when wage comparisons are dissonant. However, these are more or less anecdotal and are not an articulated part of a theory. Men do not simply become dissatisfied with conditions they perceive to be unjust. They usually do something about them. In what follows, then, a theory will be developed that will specify both the antecedents of perceived injustice and its consequences. It is not a new theory. There are already too many "little" theories in social psychology. Rather, it builds upon the work previously described, and, in addition, derives a number of major propositions from Festinger's theory of cognitive dissonance (1957).

IV. Inequity

In what follows it is hoped that a fairly comprehensive theory of inequity will be elaborated. The term *inequity* is used instead of *injustice* first, because the author has used this term before (Adams and Rosenbaum, 1962; Adams, 1963a,b, 1965; Adams and Jacobsen, 1964), second, to avoid the confusion of the many connotative meanings associated with the term *justice,* and third, to emphasize that the primary concern is with the causes and consequences of the absence of equity in human exchange relationships. In developing the theory, major variables affecting perceptions of inequity in an exchange will be described. A formal definition of inequity will then be proposed. From this point the effects of inequity upon behavior and cognitive processes will be discussed and research giving evidence of the effects will be presented. For heuristic purposes employee-employer exchanges will be a focus because such relations are within the experience of almost everyone and constitute a significant aspect of human intercourse. Moreover, much empirical research relating to inequity has been undertaken in business and industrial spheres or in simulated employment situations. It should be evident, however, that the theoretical notions offered are quite as relevant to any social situation in which an exchange takes place, explicitly or implicitly, whether between teammates, teacher and student, lovers, child and parent, patient and therapist, or opponents or even enemies, for between all there are expectations of what is fair exchange.

A. Antecedents of Inequity

Whenever two individuals exchange anything, there is the possibility that one or both of them will feel that the exchange was inequitable. Such is frequently the case when a man exchanges his services for pay. On the man's side of the exchange are his education, intelligence, experience, training, skill, seniority, age, sex, ethnic background, social status, and, of course, the effort he expends on the job. Under special circumstances other attributes will be relevant. These may be personal appearance or attractiveness, health, possession of certain tools, the characteristics of one's spouse, and so on. They are what a man perceives as his contributions to the exchange, for which he expects a just return. As noted earlier, these are the same as Homans' (1961) investments. A man brings them into an exchange, and henceforth they will be referred to as his *inputs.* These inputs, let us emphasize, are *as perceived by their contributor* and are not necessarily isomorphic with those perceived by the other party to the exchange. This suggests two conceptually distinct characteristics of inputs, *recognition* and *relevance.*

The possessor of an attribute, or the other party to the exchange, or both, may recognize the existence of the attribute in the possessor. If either the possessor or both members of the exchange recognize its existence, the attribute has the potentiality of being an input. If only the nonpossessor recognizes its existence, it cannot be considered psychologically an input so far as the possessor is concerned. Whether or not an attribute having the potential of being an input is in fact an input is contingent upon the possessor's perception of its relevance to the exchange. If he perceives it to be relevant, if he expects a just return for it, it is an input. Problems of inequity arise if only the possessor of the attribute considers it relevant to the exchange, or if the other party to the exchange considers it irrelevant and acts accordingly. Thus, unless prohibited from doing so by contract terms, an employer may consider seniority irrelevant in granting promotions, thinking it wiser to consider merit alone, whereas the employee may believe that seniority is highly relevant. In consequence, the employee may feel that injustice has been done. Conversely, the employer who is compelled to use seniority rather than merit as a promotion criterion may well feel that he has been forced into an inequitable exchange. In a personal communication Crozier (1960) made a relevant observation. Paris-born bank clerks worked side by side with clerks who did identical work and earned identical wages but who were born in the provinces. The Parisians were dissatisfied with their wages, for they considered that a Parisian upbringing was an input deserving recognition. The bank management, although recognizing that place of birth distinguished the two groups, did not, of course, consider birthplace relevant in the exchange of services for pay.

The principal inputs that have been listed vary in type and in their degree of relationship to one another. Some variables such as age are clearly continuous; others, such as sex and ethnicity, are not. Some are intercorrelated: seniority and age, for example. Sex, on the other hand, is largely independent of the other variables, with the possible exception of education and some kinds of effort. Although these intercorrelations, or the lack of them, exist in a state of nature, it is probable that the individual cognitively treats all input variables as independent. Thus, for example, if he were assessing the sum of his inputs, he might well "score" age and seniority separately. It is as if he thought, "I am older and have been with Acme longer than Joe," without taking account of the fact that the two attributes are correlated. This excursion into the "black box" should not imply, as Homans (1961) seems to imply, that men assess various components of an exchange on an ordinal scale. If the work of Jaques on equitable payment (1956, 1961a) is taken at face value, there is reason to believe in this respect that men employ interval and ratio scales, or that, at the very least, they are capable of making quite fine ordinal discriminations.

On the other side of an exchange are an individual's receipts. These *outcomes,* as they will be termed, include in an employee-employer exchange pay, rewards intrinsic to the job, satisfying supervision, seniority benefits, fringe benefits, job status and status symbols, and a variety of formally and informally sanctioned perquisites, such as the right of a higher-status person to park his car in a privileged location. These are examples of positively valent outcomes. But outcomes may have negative valence. Poor working conditions, monotony, fate uncertainty, and the many "dissatisfiers" listed by Herzberg *et al.* (1959) are no less "received" than, say, wages and are negatively valent. They would be avoided, rather than approached, if it were possible. As in the case of job inputs, job outcomes are often intercorrelated. For example, greater pay and higher job status are likely to go hand-in-hand.

In other than employee-employer exchanges, though they are not precluded from these exchanges, relevant positive outcomes for one or both parties may consist of affection, love, formal courtesies, expressions of friendship, fair value (as in merchandise), and reliability (as part of the purchase of a service). Insult, rudeness, and rejection are the other side of the coin. It may be noted that in a vast array of social relations reciprocity is a functional element of the relation. What is in fact referred to by reciprocity is equality of exchange. The infinitive "to reciprocate" is commonly used to denote an obligation to give someone equal, positively valent outcomes in return for outcomes received. When a housewife says, "John, we must have the Browns over, to reciprocate," she means to maintain a social relationship by reestablishing a parity in the outcomes of the two families. In this connection, it can be observed that reciprocation is usually "in kind." That is, there is a deliberate effort to match outcomes, to give equal value for value received. People who undershoot or overshoot the mark are called "cheapskates" or "uppish" and pretentious, respectively.

In a manner analogous to inputs, outcomes are *as perceived,* and, again, they should be characterized in terms of recognition and relevance. If the recipient or both the recipient and giver of an outcome in an exchange recognize its existence, it has the potentiality of being an outcome psychologically. If the recipient considers it relevant to the exchange and it has some marginal utility for him, it *is* an outcome. Not infrequently the giver may give or yield something which, though of some cost to him, is either irrelevant or of no marginal utility to the recipient. An employer may give an employee a carpet for his office in lieu, say, of a salary increment and find that the employee is dissatisfied, perhaps because in the subculture of that office a rug has no meaning, no psychological utility. Conversely, a salary increment may be inadequate, if formalized status recognition was what was wanted and what had greater utility. Or, in another context, the gift of a toy to a child may be effectively irrelevant as reciprocation for a demonstration of affection on his part is he seeks affection. Fortunately, in the process of socialization, through the reinforcing behavior of others and of the "verbal community" (Skinner, 1957), the human organism learns not only what is appropriate reciprocation, but he learns also to assess the marginal utility of a variety of outcomes to others. In the absence of this ability, interpersonal relations would be chaotic, if not impossible. An idea of the problems that would exist may be had by observing travelers in a foreign culture. Appropriate or relevant reciprocation of outcomes is difficult, even in such mundane exchanges as tipping for services.

In classifying some variables as inputs and others as outcomes, it is not implied that they are independent, except conceptually. Inputs and outcomes are, in fact, intercorrelated, but imperfectly so. Indeed, it is because they are imperfectly correlated that there need be concern with inequity. There exist normative expectations of what constitute "fair" correlations between inputs and outcomes. The expectations are formed—learned—during the process of socialization, at home, at school, at work. They are based by observation of the correlations obtaining for a reference person or group—a co-worker or a colleague, a relative or neighbor, a group of co-workers, a craft group, an industry-wide pattern. A bank clerk, for example, may determine whether her outcomes and inputs are fairly correlated, in balance so to speak, by comparing them with the ratio of the outcomes to the inputs of other female clerks in her section. The sole punch-press operator in a manufacturing plant may base his judgment on what he believes are the inputs and outcomes of other operators in the community or region. For a particular professor the relevant reference group may be professors in the same discipline and of the same academic "vintage." While it is clearly important to be able to specify theoretically the appropriate reference person or group, this will not be done here, as the task is beyond the scope of the paper and is discussed by others (e.g., Festinger, 1954; Hyman, 1942; Merton and Kitt, 1950; Patchen, 1961). For present purposes, it will be assumed that the reference person or group will be one comparable to the comparer on one or more attributes. This is usually a co-worker in industrial situations, according to Livernash (1953), but, as Sayles (1958) points out, this generalization requires verification, as plausible as it may appear.

When the normative expectations of the person making social comparisons are violated, when he finds that his outcomes and inputs are not in balance in relation to those of others, feelings of inequity result. But before a formal definition of inequity is offered, two terms of reference will be introduced to facilitate later discussion, *Person* and *Other*. *Person* is any individual for whom equity or inequity exists. *Other* is any individual with whom Person is in an exchange relationship, or with whom Person compares himself when both he and Other are in an exchange relationship with a third party, such as an employer, or with third parties who are considered by Person as being comparable, such as employers in a particular industry or geographic location. Other is usually a different individual, but may be Person in another job or in another social role. Thus, Other might be Person in a job he held previously, in which case he might compare his present and past outcomes and inputs and determine whether or not the exchange with his employer, present or past, was equitable. The terms Person and Other may also refer to groups rather than to individuals, as when a class of jobs (e.g., toolmakers) is out of line with another class (e.g., lathe operators), or when the circumstances of one ethnic group are incongruous with those of another. In such cases, it is convenient to deal with the class as a whole rather than with individual members of the class.

B. Definition of Inequity

Inequity exists for Person whenever he perceives that the ratio of his outcomes to inputs and the ratio of Other's outcomes to Other's inputs are unequal. This may happen either (a) when he and Other are in a direct exchange relationship or (b) when both are in an exchange relationship with a third party and Person compares himself to Other. The values of outcomes and inputs are, of course, as perceived by Person. Schematically, inequality is experienced when either

$$\frac{O_p}{I_p} < \frac{O_a}{I_a}$$

or

$$\frac{O_p}{I_p} > \frac{O_a}{I_a}$$

where $O = \Sigma_{o_i}$, $I = \Sigma_{o_i}$ and p and a are subscripts denoting Person and Other, respectively. A condition of equity exists when

$$\frac{O_p}{I_p} = \frac{O_a}{I_a}$$

The outcomes and inputs in each of the ratios are conceived as being the sum of such outcomes and inputs as are perceived to be relevant to a particular exchange. Furthermore, each sum is conceived of as a weighted sum, on the assumption that individuals probably do not weight elemental outcomes or inputs equally. The work of Herzberg *et al.* (1959) on job "satisfiers" and "dissatisfiers" implies strongly that different outcomes, as they are labeled here, have widely varying utilities, negative as well as positive. It also appears reasonable to assume that inputs as diverse as seniority, skill, effort, and sex are not weighted equally. Zaleznik *et al.* (1958), in attempting to test some predictions from distributive justice theory in an industrial corporation, gave equal weight to five factors which correspond to inputs as defined here—age, seniority, education, ethnicity, and sex—but were unable to sustain their hypotheses. In retrospect, they believe (Zaleznik *et al.*, 1958) that weighting these inputs equally may have represented an inadequate assumption of the manner in which their respondents summed their inputs.

From the definition of inequity it follows that inequity results for Person not only when he is, so to speak, relatively underpaid, but also when he is relatively overpaid. Person, will, for example, feel inequity exists not only when his effort is high and his pay low, while Other's effort and pay are high, but also when his effort is low and his pay high, while Other's effort and pay are low. This proposition receives direct support from experiments by Adams and Rosenbaum (1962), Adams (1963a), and Adams and Jacobsen (1964) in which subjects were inequitably overpaid. It receives some support also from an observation by Thibaut (1950) that subjects in whose favor the experimenter discriminated displayed "guilty smirks" and "sheepishness." The magnitude of the inequity experienced will be a monotomically increasing function of the size of the discrepancy between the ratios of outcomes to inputs. The discrepancy will be zero, and equity will exist, under two circumstances: first, when Person's and Other's outcomes are equal and their inputs are equal. This would be the case, for example, when Person perceived that Other's wages, job, and working conditions were the same as his and that Other was equal to him on such relevant dimensions as sex, skill, seniority, education, age, effort expended, physical fitness, and risk incurred (risk of personal injury, of being fired for errors committed, for instance). Secondly, the ratios will be equal when Person perceives that Other's outcomes are higher (or lower) than his and that Other's inputs are correspondingly higher (or lower). A subordinate who compares himself to his supervisor or work group leader typically does not feel that he is unjustly treated by the company that employs them both, because the supervisor's greater monetary compensation, better working conditions, and more interesting, more varied job are matched on the input side of the ratio by more education, wider range of skills, greater responsibility and personal risk, more maturity and experience, and longer service.

Although there is no direct, reliable evidence on this point, it is probable, as Homans (1961) conjectured, that the thresholds for inequity are different (in absolute terms from a base of equity) in cases of under- and overreward. The threshold would be higher presumably in cases of overreward, for a certain amount of incongruity in these cases can be acceptably rationalized as "good fortune" without attendant discomfort. In his work on pay differentials, Jaques (1961b) notes that in instances of undercompensation, British workers paid 10% less than the equitable level show "an active sense of grievance, complaints or the desire to complain, and, if no redress is given, an active desire to change jobs, or to take action . . ." (p. 26). In cases of overcompensation, he observes that at the 10 to 15% level above equity "there is a strong sense of receiving preferential treatment, which may harden into bravado, with underlying feelings of unease . . ." (p. 26). He states further, "The results suggest that it is not necessarily the case that each one is simply out to get as much as he can for his work. There appear to be equally strong desires that each one should earn the right amount—a fair and reasonable amount relative to others" (p. 26).

In the preceding discussion, Person has been the focus of attention. It should be clear, however, that when Person and Other are in an exchange interaction, Other will suffer inequity if Person does, but the nature of his experience will be opposite to that of Person. If the outcome-input ratio discrepancy is unfavorable to Person, it will be favorable to Other, and vice versa. This will hold provided Person's and Other's perceptions of outcomes and inputs are equivalent and provided that the outcome-input ratio discrepancy attains threshold level. When Person and Other are not engaged in an exchange with one another but stand in an exchange relationship with a third party, Other may or may not experience inequity when Person does. Given the prerequisites mentioned above, he will experience inequity if he compares himself to Person with

respect to the same question as induces Person to use Other as a referent (e.g., "Am I being paid fairly?").

C. Consequences of Inequity

Although there can be little doubt that inequity results in dissatisfaction, in an unpleasant emotional state, be it anger or guilt, there will be other effects. A major purpose of this paper is to specify these in terms that permit specific predictions to be made. Before turning to this task, two general postulates are presented, closely following propositions from cognitive dissonance theory (Festinger, 1957). First, the presence of inequity in Person creates tension in him. The tension is proportional to the magnitude of inequity present. Second, the tension created in Person will motivate him to eliminate or reduce it. The strength of the motivation is proportional to the tension created. In short, the presence of inequity will motivate Person to achieve equity or to reduce inequity, and the strength of motivation to do so will vary directly with the magnitude of inequity experienced. From these postulates and from the theory of cognitive dissonance (Festinger, 1957; Brehm and Cohen, 1962), means of reducing inequity will be derived and presented. As each method of reduction is discussed, evidence demonstrating usage of the method will be presented. Some of the evidence is experimental; some of it is the result of field studies, either of a survey or observational character.

1. Person Altering his Inputs

Person may vary his inputs, either increasing them or decreasing them, depending on whether the inequity is advantageous or disadvantageous. Increasing inputs will reduce felt inequity, if

$$\frac{O_p}{I_p} > \frac{O_a}{I_a}$$

conversely, decreasing inputs will be effective, if

$$\frac{O_p}{I_p} < \frac{O_a}{I_a}$$

In the former instance, Person might increase either his productivity or the quality of his work, provided that it is possible, which is not always the case. In the second instance, Person might engage in "production restriction," for example. Whether Person does, or can, reduce inequity by altering his inputs is partially contingent upon whether relevant inputs are susceptible to change. Sex, age, seniority, and ethnicity are not modifiable. Education and skill are more easily altered, but changing these requires time. Varying inputs will also be a function of Person's perception of the principal "cause" of the inequity. If the discrepancy between outcome-input ratios is primarily a function of his inputs being at variance with those of Other, Person is more likely to alter them than if the discrepancy is largely a result of differences in outcomes. Additionally, it is postulated that given equal opportunity to alter inputs and outcomes, Person will be more likely to lower his inputs when

$$\frac{O_p}{I_p} < \frac{O_a}{I_a}$$

than he is to increase his inputs when

$$\frac{O_p}{I_p} > \frac{O_a}{I_a}$$

This is derived from two assumptions: first, the assumption stated earlier that the threshold for the perception of inequity is higher when Person is overrewarded than when he is underrewarded; secondly, the assumption that Person is motivated to minimize his costs and to maximize his gains. By the second assumption, Person will reduce inequity, insofar as possible, in a manner that will yield him the largest outcomes.

Altering certain inputs has the corollary effect of altering the outcomes of Other. A change in the quality and amount of work performed, for instance, will usually affect the outcomes of Other. When this is the case, the effect of both changes will operate in the same direction in the service of inequity reduction. It follows, therefore, that *less* a change in inputs is required to eliminate inequity than if the change had no effect on Other's outcomes. Inputs, a change in which would have no or very little impact on Other's outcomes, are attributes such as education, age, and seniority—at least to the extent that they are uncorrelated with performance.

Several experiments have been conducted specifically to test the hypothesis that Person will reduce inequity by altering his inputs (Adams and Rosenbaum, 1962; Adams, 1963a; Adams and Jacobsen, 1964). The most recent of these will be described in detail here. In this experiment the hypothesis tested was that if Person perceives that he is overpaid in an exchange with his employer because his inputs are inadequate, he will experience inequity and attempt to reduce it by increasing relevant inputs.

Students hired to proofread galley pages were exposed to one of three conditions of inequity. In a *high inequity* condition (H), they were induced to perceive that they were unqualified to earn the standard proofreader's rate of 30 cents per page and were told that they would, nevertheless, be hired and paid that rate. Another group of subjects were in

the *reduced inequity* condition (R), in which an identical perception was induced, but in which the piece rate was reduced to 20 cents by reason of the subjects' lack of qualifications. In this condition, in effect, the low inputs of subjects were matched by low outcomes. Thus, if the basic model of inequity was valid, subjects in this condition should suffer no greater feelings of inequity than subjects in the third, *low inequity* condition (L), in which persons hired were made to believe that they were fully qualified to earn the standard rate of 30 cents per page. The task consisted of correcting errors in simulated galley proof pages from a manuscript on human relations in industry. Proofreading required that each page be read, that each error detected be underlined in the text, and that a checkmark be placed in the margin at the level of the error. Each galley page contained a standard number of words, and a set number of errors were introduced systematically on each page. The errors were misspellings, grammatical mistakes, incorrect punctuation, and typographical errors, such as transpositions of letters. Productivity was measured by the number of pages proofed in one hour; work quality was measured by the mean number of errors detected per page proofed.

Since they could not alter their outcomes, it was predicted that H subjects would attempt to reduce inequity by investing high inputs, which, in this situation, they could also perceive as increasing the outcomes of the employer. More specifically, it was hypothesized that the work quality would be higher among H subjects than among R and L subjects, and that it would not vary significantly between the R and L conditions. The prediction that input differences would be on the dimension of work quality was based on the consideration that the only other relevant input subjects could vary was productivity; but since an increase in productivity would result in increased outcomes, due to the piece-rate payments, inequity could not be reduced in this manner. Doing better quality work *on each piece,* however, would effectively serve to reduce inequity. Following this reasoning, a second hypothesis could be formulated: Productivity among H subjects would be lower than among R and L subjects, since more careful work would require additional time to complete each page.

The results supported the hypothesis. Subjects in the H condition performed significantly better work, as measured by the number of introduced errors detected per page, and produced significantly less in one hour than subjects in the R and L conditions. The latter did not differ from each other with respect to either quality of work or productivity. An unexpected finding was that significantly more nonerrors were classified as errors by subjects in the H condition than in the other conditions. Generally, these misclassified nonerrors were of a type that permitted minimal or no basis for being perceived as errors. For example, the word "conceive" was underlined as an error by several subjects, although it was correctly spelled. This gives some indication of the strength of motivation underlying the behavior. A somewhat analogous finding was made by Arrowood (1961). He paid his subjects in advance for three hours of work and found that those who perceived their pay as too great tended to work more than three hours.

In similar experiments (Adams and Rosenbaum, 1962; Adams, 1963a), subjects were paid by the hour. In these it was predicted that in the high inequity conditions subjects would alter their productivity inputs. The data bore this out. In one of these experiments subjects performed identical tasks under hourly and piece-rate wage conditions. Under a high inequity induction, productivity was higher with hourly pay and lower with piecework pay than under a low inequity induction. These results give support to the earlier suggestion that there exists a tendency to reduce inequity in a manner that yields the largest outcomes. Hourly paid workers could have reduced inequity by improving the quality of their work, but this would have lowered their outcomes. On the other hand, pieceworkers had no choice but to reduce inequity by increasing work quality, with consequent loss of income. Considering the fact that subjects in this experiment, as in others, needed their earnings, the results also suggest that the need to establish equity was a more potent motivation that the motivation to maximize monetary gains.

In the experiments described above, inequities potentially advantageous to Person were the focus because, if the hypotheses were sustained, the evidence would be more striking. There is, of course, also evidence that Person will reduce his inputs when he suffers the disadvantages of inequity, when the discrepancy of outcome-input ratios is unfavorable to him. This is apparent in a field study by Clark (1958), which investigated supermarket checkout counters manned by a "ringer" (cashier) and a "bundler." These two were not involved in a direct exchange with one another; rather, both were in an exchange with the employer and expected him to see to it that their outcome-input ratios were not incongruous. Under normal conditions, ringing was a higher-status, better-paid job, handled by a permanent, full-time employee. Bundling was of lower status and lower pay, and was usually done by part-time employees, frequently youngsters. Furthermore, psychologically, bundlers were perceived as working *for* ringers.

Because customer flow in supermarkets varies markedly from day to day, a preponderance of employees were part-timers. This same fact required that many employees be assigned to checkout counters during rush hours. When this occurred, many ringer-bundler teams were formed, and it is this that resulted in inequities, for employees differed considerably

in a number of input variables, notably sex, age, and education. Not infrequently, a bundler would be directed to work for a ringer whose status (determined by sex, age, and education) was lower. For example, a college male 21 years of age would be ordered to work for a high school girl ringer of 17. Or a college girl would be assigned as a bundler for an older woman with only a grade school education. The resulting inequities may be described as follows in theoretical terms: A bundler with higher inputs than a ringer had lower outcomes—i.e., working *for* someone of lower status, which is assumed to be invidious and psychologically negatively valent, as well as receiving lower wages.

When interviewed by the investigator, the store employees were quite explicit about the inequities that existed. It appeared that the principal means used by the bundlers to reduce inequities were to decrease the rate at which they filled shopping bags—i.e., by reducing their inputs, which would have effectively decreased inequity since some of their other inputs were too high relative to their own outcomes and to the inputs of the ringers. One girl explicitly stated to the investigator that when she was ordered to bundle for a ringer of lower status than herself, she deliberately slowed up bundling.

Interestingly, this behavior is nicely reflected in the financial operation of the stores. A substantial part of the total labor cost of operating a supermarket is the cost of manning checkout counters. It follows, therefore, that one should be able to observe a correlation between the incidence of inequities among ringer-bundler teams and the cost of store operations, since the inequity reduction took the form of lowered productivity. This is indeed what was found. When the eight supermarkets were ranked on labor efficiency (number of man-hours per $100 of sales) and "social ease" (an index of the proportion of ringer-bundler pairs whose outcome-input ratios were discrepant), the two measures correlated almost perfectly: the greater the inequity, the greater the cost of operating the stores. To give an example, one of the two stores studied most intensively ranked high in inequity and had labor efficiency of only 3.85, whereas the other which ranked low in inequity, had a labor efficiency of 3.04. Thus, it cost approximately 27% more to operate the store in which inequities were more frequent.

A further finding of Clark's is worth reporting, for it gives one confidence that the relative inefficiency of the one store was indeed due to the presence of relatively more inequity. This store went through a period of considerable labor turnover (perhaps as a result of employees leaving the field to reduce inequity), and associated with this was an increase in labor efficiency and an increase in the "social ease" index. There is, therefore, quasi-experimental evidence that when inequities are reduced, individual productivity increases (i.e., production restriction is lowered), with the result that operating costs decrease.

2. Person Altering his Outcomes

Person may vary his outcomes, either decreasing or increasing them, depending on whether the inequity is advantageous or disadvantageous to him. Increasing outcomes will reduce inequity, if

$$\frac{O_p}{I_p} < \frac{O_a}{I_a}$$

conversely, decreasing outcomes will serve the same function, if

$$\frac{O_p}{I_p} > \frac{O_a}{I_a}$$

Of these two possibilities, the second is far less likely, and there is no good evidence of the use of this means of reducing inequity, though some may be available in the clinical literature. There are, however, data bearing on attempts to increase outcomes, data other than those related to wage increase demands in union-management negotiations, probably only a part of which are directly traceable to wage inequities.

In the experiment by Thibaut (1950), to which reference was made earlier, teams of 5 or 6 boys made up of approximately equal numbers of popular and unpopular boys were assigned either high- or low-status roles in playing a series of four games. The low-status teams were unfairly treated in that, although they were comparable in their characteristics (i.e., their inputs) to the high-status teams, they were forced to adopt an inferior, unpleasant role vis-a-vis the other team. For example, in one game they formed a human chain against which the other team bucked; in another, they held the target and retrieved thrown bean bags. Thus, since their inputs were equal to, and their outcomes lower than, those of the high-status teams, they were clearly suffering the disadvantages of inequity. From Thibaut's report of the behavior of the low-status teams, it is evident that at least four means of reducing the inequity were used by them: lowering the high-status team members' outcomes by fighting with them and displaying other forms of hostility; lowering their inputs by not playing the games as required, which would also have had the effect of lowering the outcomes of the high-status team members; by leaving the field, that is, withdrawing and crying; and by trying to interchange roles with the high-status teams. The latter is the relevant one for purposes of discussion here.

Thibaut (1950) reports that about halfway through the second game the participants had come to understand the experimenter's intention,

i.e., that the status differentiation was to be permanent. At this stage of the experiment low-status subjects began to express mobility aspirations, asking the experimenter that the roles of the two teams be reversed. This may be interpreted as an attempt to establish equity by increasing outcomes, since assumption of high status would have been accompanied by pleasurable activities. Interestingly, though the report is not entirely clear on this point, there is the suggestion that, when the attempt of low-status subjects to increase their outcomes was rejected by the experimenter, they desisted and, instead, engaged more in withdrawal.

Also giving evidence that increasing outcomes will serve to reduce inequity is a study of unfair wages among clerical workers by Homans (1953). Two groups of female clerical workers in a utilities company, cash posters and ledger clerks, worked in the same, large room. Cash posting consisted of recording daily the amounts customers paid on their bills, and management insisted that posting be precisely up to date. It required that cash posters pull customer cards from the many files and make appropriate entries on them. The job was highly repetitive and comparatively monotonous, and required little thought but a good deal of walking about. Ledger clerks, in contrast, performed a variety of tasks on customer accounts, such as recording address changes, making breakdowns of over- and underpayments, and supplying information on accounts to customers and others on the telephone. In addition, toward the end of the day, they were required by their supervisor to assist with "cleaning up" cash posting in order that it be current. Compared to the cash posters, ledger clerks performed a number of nonrepetitive clerical jobs requiring some thought; they had a more *responsible* job; they were considered to be of higher status, since promotion took place from cash poster to ledger clerk; and they were older and had more seniority and experience. Their weekly pay, however, was identical.

Summarizing in the terms of the inequity model, cash posters had distinctly lower inputs than ledger clerks (i.e., they were younger, and had less experience, less seniority, and less responsibility). With respect to outcomes they received equal wages, but their jobs were somewhat more monotonous and less interesting. On the other hand, the ledger clerks' inputs were superior with respect to age, experience, seniority, skill, responsibility, and versatility (they were required to know and do cash posting in addition to their own jobs). Their earnings were equal to the cash posters', but they were required to "clean up" (note connotation) posting each day, an activity that would deflate self-esteem and would, therefore, be a negative outcome. In the balance, then, the net outcomes of ledger clerks and cash posters were approximately of the same magnitude, but the inputs of the clerks were definitely greater.

From this it would be predicted that the ledger clerks felt unfairly treated and that they would try to increase their outcomes.

The evidence reported by Homans (1953) is that the ledger clerks felt the inequity and that they felt they ought to get a few dollars more per week to show that their jobs were more important—that their greater inputs ought to be matched by greater outcomes. On the whole, these clerks seemed not to have done much to reduce inequity, though a few complained to their union representative, with, apparently, little effect. However, the workers in this division voted to abandon their independent union for the CIO, and Homans intimates that the reason may have been the independent union's inability to force a resolution of the inequity.

The field studies of dissatisfaction with status and promotions by Stouffer *et al.* (1949) and the experiments by Spector (1956), in which expectation of promotion and morale, which were described in Section II, may also be interpreted as cases of inequity in which dissatisfactions were expressions of attempts by Persons to increase their outcomes.

3. *Person Distorting his Inputs and Outcomes Cognitively*

Person may cognitively distort his inputs and outcomes, the direction of the distortion being the same as if he had actually altered his inputs and outcomes, as discussed above. Since most individuals are heavily influenced by reality, substantial distortion is generally difficult. It is pretty difficult to distort to oneself, to change one's cognitions about the fact, for example, that one has a BA degree, that one has been an accountant for seven years, and that one's salary is $700 per month. However, it is possible, within limits, to alter the utility of these. For example, State College is a small, backwoods school with no reputation, or, alternatively, State College has one of the best business schools in the state and the dean is an adviser to the Bureau of the Budget. Or, one can consider the fact that $700 per month will buy all of the essential things of life and a few luxuries, or, conversely, that it will never permit one to purchase a Wyeth oil painting or an Aston Martin DB5. There is ample evidence in the psychological literature, especially that related to cognitive dissonance theory, that individuals do modify or rearrange their cognitions in an effort to reduce perceived incongruities (for a review, see Brehm and Cohen, 1962). Since it has been postulated that the experience of inequity is equivalent to the experience of dissonance, it is reasonable to believe that cognitive distortion may be adopted as a means of reducing inequity. In a variety of work situations, for example in paced production line jobs, actually altering one's inputs and outcomes may be difficult; as a consequence these may be cognitively changed in relatively subtle ways.

Although not a cognitive change in inputs and outcomes per se, related methods of reducing inequity are for Person to alter the *importance* and the *relevance* of his inputs and outcomes. If, for example, age were a relevant input, its relative importance could be changed to bring about less perceived inequity. Person could convince himself that age was either more or less important than he thought originally. In terms of the statement made earlier that net inputs (and outcomes) were a weighted sum of inputs, changing the importance of inputs would be equivalent to changing the weights associated with them. Altering the relevance of inputs and outcomes is conceived of as more of an all-or-none process: Present ones are made irrelevant or new ones are made relevant. For instance, if Person perceived that the discrepancy between his and Other's outcome-input ratios were principally a result of his outcomes being too low, he might become "aware" of one or more outcomes he had not recognized as being relevant before, perhaps that his job had variety absent from Other's job. Obviously, importance and relevance of inputs and outcomes are not completely independent. An outcome suddenly perceived as being relevant automatically assumes some importance; conversely, one that is made irrelevant in the service of inequity reduction assumes an importance of zero. Nevertheless, the psychological processes appear to be different and it is useful, therefore, to keep them conceptually distinct.

Evidence of cognitive distortion to reduce inequity is not very impressive. In a study by Leventhal *et al.* (1964), subjects were hired to participate in an experiment to taste pleasant and unpleasant liquids. At the end of the task one-third of the subjects were told they would receive a payment of 60 cents in lieu of the promised $1.25, one-third were informed they would be paid $1.90 in lieu of $1.25, and to the remaining one-third it was stated they would be paid the promised $1.25. According to the inequity model, the first two groups presumably felt unfairly rewarded. When asked under what circumstances they felt subjects should be paid for their services, these two groups were significantly less likely to assert that they should always be paid than were subjects who were paid the full amount promised. Considering first only the underpaid subjects, this can be taken as an indication that they revised either the judgment of their inputs, by lowering it, or their estimate of fair outcomes, by lowering it. They could, in effect, have been saying, "What I did wasn't much," or "Sixty cents is about the right amount for this kind of task." Alternatively, they could have adduced a new, relevant outcome, such as the satisfaction of contributing to science. An equally plausible explanation which is unrelated to the reduction of inequity is offered by Leventhal and his associates, namely, that the decreased payment induced a low expectancy set with respect to payment in experiments.

The lower expectancy of the overpaid subjects does not manifest inequity reduction by cognitive distortion. More likely, as Leventhal *et al.* suggest, this indicates a desire to rectify the inequity by accepting lower payment in subsequent experiments, that is, to increase the experimenter's outcomes on a later occasion.

An experiment by Weick (1964) suggests that subjects, some of whose outcomes are unjustly low, may increase their net total outcomes by "task enhancement," that is, by distorting their evaluation of the task. Weick found that subjects working for an inconsiderate experimenter who had lured them to work for no credit, evaluated their task more highly than subjects who worked for normal course credits. Specifically, it appeared that the subjects who were short-changed by the experimenter distorted their outcomes by coming to believe that the experiment was relatively quite interesting and important.

4. Person Leaving the Field

Leaving the field may take any of several ways of severing social relationships. Quitting a job, obtaining a transfer, and absenteeism are common forms of leaving the field in an employment situation. These are fairly radical means of coping with inequity. The probability of using them is assumed to increase with magnitude of inequity and to decrease with the availability of other means.

Data substantiating the occurrence of leaving the field as a mode of reducing inequity is sparse. In the aforementioned study by Thibaut (1950), it was observed that low-status team members withdrew from the games as it became increasingly clear what their fate was and as, it must be presumed, the felt injustice mounted. In a study by Patchen (1959) it was observed that men who said their pay should be higher had more absences than men who said the pay for their jobs was fair. This relationship between perceived fairness of pay and absenteeism was independent of actual wage level. That absenteeism in this study was a form of withdrawal is strongly supported by the fact that men with high absence rates were significantly more likely than men with low rates to say that they would not go on working at their job, if they should chance to inherit enough money to live comfortably without working.

5. Person Acting on Other

In the face of injustice, Person may attempt to alter or cognitively distort Other's inputs and outcomes, or try to force Other to leave the field. These means of reducing inequity vary in the ease of their use. Getting Other to accept greater outcomes, which was a possible interpretation of some of the findings by Leventhal *et al.* (1964), would obviously be easier than the opposite. Similarly, inducing Other to lower his inputs may be easier than the reverse. For example, all other things being equal, such as work group cohesiveness and the needs and ability of an individual worker, it is probably easier to induce a "rate buster" to lower his inputs than to get a laggard to increase them. The direction of the change attempted in the inputs and outcomes of Other is the reverse of the change that Person would make in his own inputs and outcomes, whether the change be actual or cognitive. By way of illustration, if Person experienced feelings of inequity because he lacked job experience compared to Other, he could try to induce Other to decrease a relevant input instead of increasing his own inputs.

Cognitive distortion of Other's inputs and outcomes may be somewhat less difficult than distortion of one's own, since cognitions about Other are probably less well anchored than are those concerning oneself. This assumption is consistent with the finding that "where alternatives to change in central attitudes are possible, they will be selected" (Pilisuk, 1962, p. 102). Acceptable evidence that inequity, as such, is reduced by cognitive distortion of Other's inputs or outcomes is nonexistent, although there is ample evidence that cognitive dissonance may be reduced by perceptual distortion (e.g., Bramel, 1962; Brehm and Cohen, 1962; Steiner and Peters, 1958). An observation made while pretesting procedures for an unpublished study by Adams (1961) is little better than anecdotal. To test some hypotheses from inequity theory, he paired a subject and a stooge at a "partner's desk." Each performed sequentially one part of the preparation of a personnel payroll. In one condition the subject was paid $1.40 per hour and performed the relatively complex task of looking in various tables for standard and overtime rates, looking up in other tables the products of pay rates and hours worked, and recording the products on a payroll form. The stooge, whose pay was announced as being $2.10 per hour, performed the presumably much easier task of summing products on a machine and recording the totals on the form the subject passed to him across the desk. In addition, the stooge was programmed to be slightly ahead of the subject in his work, so that his task appeared fairly easy. It was hoped that these conditions would lead the subject to perceive that, compared to the stooge, he had higher inputs and lower outcomes. Nothing of the sort happened. Most subjects pretested felt that the relationship was equitable, and this appeared to result from the fact that they distorted cognitively the stooge's inputs in an upward direction. Specifically, they convinced themselves that the stooge was performing a "mathematical task." Simple *adding* on a machine became *mathematics*.

Forcing Other to leave the field, while theoretically possible, is probably difficult of realization and would, no doubt, be accompanied by anxiety about potential consequences or simply by the discomfort of having done something socially unpleasant. This aspect makes it costly to Person; it lowers his outcomes to some extent. Firing an individual in an employer-employee exchange and some divorces and separations are common examples of this means put to use. Somewhat though barely more subtle is the practice of creating an inequity by withholding expected outcomes (e.g., salarly increases, promotions) to the point where an individual leaves the field "voluntarily."

6. Person Changing the Object of His Comparison

Person may change Other with whom he compares himself when he experiences inequity and he and Other stand in an exchange relationship with a third party. This mode is limited to the relationship specified; it is not applicable when Person and Other are in a direct exchange. Changing the object of comparison in the latter situation would reduce to severing the relationship.

The resolution of inequity by changing comparison object is undoubtedly difficult of accomplishment, particularly if Person has been comparing himself to Other for some time. Person would need to be able to make himself noncomparable to Other on one or more dimensions. For instance, if Other, whose outcome-input ratio was previously equal to Person's received a salary increase without any apparent increment in inputs, Person could try to reduce the resulting feeling of inequity by conceiving of Other as belonging now to a different organizational level. But this would likely meet with little success, at least in this culture. A cognitive change of this sort would be extremely unstable, unless it were accompanied by changes in the perception of Other's inputs: for instance, that Other had assumed greater responsibility when his salary was increased. But this involves a process of inequity reduction already referred to.

In the initial stages of comparison processes, as when a man first comes on the job, it probably is relatively easy to choose as comparison Others individuals who provide the most equitable comparisons. This does not necessarily entail making comparisons with men whose outcomes and inputs are the same as one's own; it is sufficient that their outcome-input ratio be equal to one's own. In a study of the choice of wage comparisons. Patchen (1961) asked oil refinery workers to name someone whose yearly earnings were *different* from theirs and then proceeded to ask them questions about the resulting wage comparisons and about their satisfaction with them. Of the workers who named someone

earning *more* than they, 60% indicated satisfaction with the comparison and only 17.6% reported dissatisfaction. Among those who were satisfied, 44.6% stated they were satisfied because they had financial or other advantages, i.e., compensating outcomes, and 55.8% indicated satisfaction with the upward comparison because the person with higher earnings had more education, skill, experience, seniority and the like, i.e., higher inputs. Patchen's data may be recast and reanalyzed to make a different point. Among the men who chose comparison persons whose outcome-input ratios seemingly were equal to theirs, approximately 85% were satisfied with the comparison and only about 4% were dissatisfied. While Patchen's study does not bear directly either on what wage comparisons men actually make in their day-to-day relations with others or on changes in comparison persons when inequity arises, it gives clear evidence that comparisons are made on the basis of the equality of the outcome-input ratios of the comparer and comparison person and that such comparisons prove satisfying, i.e., are, at least, judged to be not inequitable.

7. Choice among Modes of Inequity Reduction

Although reference has been made previously to conditions that may affect the use of one or another method of reducing inequity, there is need for a general statement of conditions that will govern the adoption of one method over another. Given the existence of inequity, any of the means of reduction described earlier are potentially available to Person. He may alter or attempt to alter any of the four terms in the inequality formula or change his cognitions about any of them, or he may leave the field and change his comparison Other, but it is improbable that each of the methods are equally available to him *psychologically* (no reference is made to environmental constraints that may affect the availability of methods), as the work of Steiner and his colleagues on alternative methods of dissonance reduction suggests (Steiner, 1960; Steiner and Johnson, 1964; Steiner and Peters, 1958; Steiner and Rogers, 1963).

Set forth below are some propositions about conditions determining the choice of modes by person. As will be noted, the propositions are not all independent of one another, and each should be prefaced by the condition, *ceteris paribus.*

(*a*) Person will maximize positively valent outcomes and the valence of outcomes.

(*b*) He will minimize increasing inputs that are effortful and costly to change.

(*c*) He will resist real and cognitive changes in inputs that are central to his self-concept and to his self-esteem. To the extent that any of Person's outcomes are related to his self-concept and to his self-esteem, this proposition is extended to cover his outcomes.

(*d*) He will be more resistant to changing cognitions about his own outcomes and inputs than to changing his cognitions about Other's outcomes and inputs.

(*e*) Leaving the field will be resorted to only when the magnitude of inequity experienced is high and other means of reducing it are unavailable. Partial withdrawal, such as absenteeism, will occur more frequently and under conditions of lower inequity.

(*f*) Person will be highly resistant to changing the object of his comparisons, Other, once it has stabilized over time and, in effect, has become an anchor.

These propositions are, admittedly, fairly crude, but they permit, nevertheless, a degree of prediction not available otherwise. In the resolution of a particular injustice, two or more of the processes proposed may be pitted one against the other. To propose which would be dominant is not possible at this stage of the development of the theory. One might propose that protection of self-esteem would dominate maximization of outcomes, but it would be conjecture in the absence of evidence.

V. Conclusion

Dissatisfaction is both so commonplace and such an irritant, particularly in industrial and other large organizations, that it has been the subject of widespread research (see Vroom, 1964, for a recent, thorough review). Despite prima facie evidence that feelings of injustice underlay a significant proportion of cases of dissatisfaction, thorough behavioral analyses of injustice were not made until recently. In the classic Hawthorne studies (Roethlisberger and Dickson, 1939), there was ample evidence that much of the dissatisfaction observed among Western Electric Company employees was precipitated by felt injustice. Describing complaints, the authors referred frequently to reports by workers that wages were not in keeping with seniority, that rates were too low, that ability was not rewarded, and the like, as distinguished from reports that, for example, equipment was not working and that the workshop was hot. They stated that "no physical or logical operations exist which can be agreed upon as defining them" (p. 259), and they sought "personal or social situations" (p. 269) that would explain the complaints parsimoniously. Yet, the notion of injustice was not advanced as an explanatory concept.

It is not contended here, of course, that all dissatisfaction and low morale are related to a person's suffering injustice in social exchanges. But it should be clear from the research described that a significant portion of cases can be usefully explained by invoking injustice as an explanatory concept. More importantly, much more than dissatisfaction may be predicted once the concept of injustice is analyzed theoretically.

In the theory of inequity that has been developed in this chapter, both the antecedents and consequences of perceived injustice have been

stated in terms that permit quite specific predictions to be made about the behavior of persons entering social exchanges. On the whole, empirical support for the theory is gratifying, but it falls short of what is desirable. More research is required. This is particularly so because some of the support comes from data leading to the formulation of parts of the theory. Needed are direct tests of propositions made in the theory, as well as empirical tests of novel derivations from the theory. Some research filling these needs is under way. Being tested, for example, is the hypothesis that overpaid workers for whom an increase in inputs is impossible will reduce inequity by decreasing their outcomes, specifically by developing unfavorable attitudes toward their employer, their working conditions, the pay rates, and so on.

In order for more refined predictions to be made from the theory, theoretical, methodological, and empirical work are also required in at least two areas related to it. First, additional thought must be given to social comparison processes. The works of Festinger (1954), Hyman (1942), Merton and Kitt (1950), Newcomb (1943), and Patchen (1961) are signal contributions but still do not allow sufficiently fine predictions to be made about whom Person will choose as a comparison Other when both are in an exchange relationship with a third party. For example, as a function of what variables will one man compare himself to a person on the basis of age similarities and another man compare himself on the basis of attitude similarities? Second, psychometric research is needed to determine how individuals aggregate there own outcomes and inputs and those of others. Is the assumptive model that net outcomes are the algebraic sum of elemental outcomes weighted by their importance a valid one?

The need for much additional research notwithstanding, the theoretical analyses that have been made of injustice in social exchanges should result not only in a better general understanding of the phenomenon, but should lead to a degree of social control not previously possible. The experience of injustice need not be an accepted fact of life.

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