

THE ROLE OF RELEVANT OTHERS IN THE DETERMINATION OF FAIR PAY

by

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(ABSTRACT)

Although scholars may disagree about the effectiveness of using money to motivate workers, few would deny the deleterious effects caused by employee perceptions of underpayment. Yet little is known about the process(es) through which individuals determine whether or not their pay is fair. Indeed, knowledge in this area largely is limited to the awareness that fair pay is a relative concept. That is, individuals judge the equity of pay not from the absolute size of the wage, but rather through comparisons of their wages to those of other people. In addition, pay referents such as the cost of living, also are used to evaluate pay. This use of relevant others is known as the social comparison process.

This study investigated the relationship between certain attitudinal and job-related characteristics of 206 individuals, and their reactions to 18 different pay comparisons. It was determined that respondents' attitudes toward the organization's wage distribution rule, level of aspiration, desire for external movement (to other employers),

and social interaction were related to the way individuals view these comparisons. A structural variable--job tenure--was not found to have a statistically significant association with the social comparison process.

Unlike the six previous studies of this issue, this analysis was framed within the context of a theoretical model. Specifically, Goodman's two-stage model for the selection of pay referents was used to generate the variables of interest, the subsequent research hypotheses, and as a backdrop against which the results of the analysis could be interpreted.

Perhaps the most significant result of this study was finding rather marked temporal stability of pay comparisons. Test-retest analyses showed that over a 3-month period only 5 of 54 pay comparisons demonstrated a statistically significant change in terms of the frequency with which they were reportedly made, the importance ascribed to each comparison, or in terms of the satisfaction felt with each comparison. Finding this element of stability suggests that equity theory may have been prematurely abandoned as a research paradigm.

TABLE OF CONTENTS

<u>Chapter</u>	<u>page</u>
I. INTRODUCTION	1
Problem Statement	1
Significance of This Study	3
II. LITERATURE REVIEW	7
Early Works	7
Reference Groups and Relative Deprivation	11
Social Comparison Theory	13
Adaptation-Level Theory	16
Small Group Comparison Level	17
Equity Theory	19
Distributive Justice	22
Previous Empirical Work	25
Patchen (1961)	26
Andrews and Henry (1963)	29
Finn and Lee (1972)	32
Goodman (1974)	33
Heneman et al. (1978)	37
Hills (1980)	39
Individual and Organizational Variables	41
Pay Level	42
Education	43
Age	44
Satisfaction with Pay	45
Internal and External Mobility	45
Importance of Internal vs. External Comparisons	47
Tenure with Employer	48
Discussion of Previous Empirical Works	49
Methodological Shortcomings	49
Theoretical Shortcomings	51
Conclusion	53
III. PROPOSED MODEL AND CONCEPTUAL HYPOTHESES	55
Conceptual Model	55
Availability of Information	56
Attractiveness/Relevance of Pay Referents	58
Respondent Needs	58
Quantity and Quality of Information	60
Overview	62

Variables Used in the Present Study	63
Conceptual Hypotheses	65
Research Questions	65
Relevant Definitions	67
Stability of Pay Comparisons	68
The Distribution Rule	70
Aspiration Level	72
Aspiration Level and Internal-Above Comparisons	72
Aspiration Level and Social Comparisons	74
Aspiration Level and Historical Comparisons	75
Aspiration Level and Comparison Importance	76
Aspiration Level and Positive External Comparisons	77
Aspiration Level and Economic Comparisons	78
Desire for External Movement	78
Desire for External Movement and External Comparisons	78
Sociability	80
Sociability and Negative Comparisons	80
Job Tenure	81
Job Tenure and Negative Internal-Above Comparisons	82
Job Tenure and Internal-Peer Comparisons	83
Job Tenure and Internal-Below Comparisons	84
Job Tenure and Economic Comparisons	85
Differential Effects of Pay Comparisons on Pay Satisfaction	86
IV. METHODOLOGY	88
Research Instrument	88
Questionnaire Scoring	89
Part I--Pay Comparisons	92
Frequency of Pay Comparisons	92
Importance of and Satisfaction with Pay Comparisons	92
Part II--Attitude Survey	94
Part III--Demographic Information	95
Scale Adequacy	95
Validity of the Measures	95
Reliability of the Measures	98
Pretest Sample	100
Research Sample	104
Operational Hypotheses and Measures of Variables	110
Stability of Pay Comparisons	110
The Distribution Rule	113

The Distribution Rule and Internal-Above Comparisons	113
The Distribution Rule and Internal-Peer Comparisons	115
Aspiration Level	116
Aspiration Level and Internal-Above Comparisons	116
Aspiration Level and Social Comparisons	118
Aspiration Level and Historical Comparisons	119
Aspiration Level and Comparison Importance	120
Aspiration Level and Positive External Comparisons	122
Aspiration Level and Economic Comparisons	123
Desire for External Movement	125
Desire for External Movement and External Comparisons	125
Sociability	129
Sociability and Negative Comparisons . .	129
Job Tenure	132
Job Tenure and Negative Internal-Above Comparisons	132
Job Tenure and Internal-Peer Comparisons	133
Job Tenure and Internal-Below Comparisons	135
Job Tenure and Economic Comparisons . .	136
Differential Effects of Pay Comparisons on Pay Satisfaction	137

V. EMPIRICAL RESULTS 139

Stability of Pay Comparisons	139
Frequency of Pay Comparisons	140
Importance of Pay Comparisons	141
Satisfaction with Pay Comparisons	144
The Distribution Rule	147
The Distribution Rule and Internal-Above Comparisons	147
The Distribution Rule and Internal-Peer Comparisons	150
Aspiration Level	152
Aspiration Level and Internal-Above Comparisons	152
Aspiration Level and Social Comparisons . .	156
Aspiration Level and Historical Comparisons	160
Aspiration Level and Comparison Importance	162
Aspiration Level and Positive External Comparisons	167
Aspiration Level and Economic Comparisons .	170
Desire for External Movement	171

Desire for External Movement and External Comparisons	171
Sociability	178
Sociability and Negative Comparisons	178
Job Tenure	182
Job Tenure and Negative Internal-Above Comparisons	182
Job Tenure and Internal-Peer Comparisons	186
Job Tenure and Internal-Below Comparisons	188
Job Tenure and Economic Comparisons	192
Differential Effects of Pay Comparisons on Pay Satisfaction	194

VI. DISCUSSION OF RESULTS, LIMITATIONS, AND CONCLUSIONS 198

Stability of Pay Comparisons	198
Individual Variables and Pay Comparisons	201
The Distribution Rule	201
Aspiration Level	205
Desire for External Movement	208
Sociability	211
Structural Variables	214
Job Tenure	214
Pay Comparison Impact on Feelings of Pay Satisfaction	216
Limitations	220
Data Collection Techniques	220
External Validity	221
Causality	221
Practical vs. Statistical Significance	222
Capturing the Wage Distribution Rule	223
Pay Satisfaction and Pay Practices Scales	224
Stability of Pay Comparisons	225
Overall Perceptions of Pay Satisfaction	225
Conclusion	226
Model Evaluation	226
Implications for Compensation Theory	229
Stability of Pay Comparisons	229
The Distribution Rule	231
Aspiration Level	233
Desire for External Movement	235
Sociability	236
Differential Effects of Pay Comparisons on Pay Satisfaction	238
Implications for Compensation Practice	240
Stability of Pay Comparisons	240
The Distribution Rule	243
Aspiration Level	246
Desire for External Movement	248

Sociability	250
Differential Effects of Pay Comparisons on Pay Satisfaction	252

BIBLIOGRAPHY	255
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Appendix

	<u>page</u>
A. RESEARCH QUESTIONNAIRE USED IN THIS STUDY	265
B. DESCRIPTIVE STATISTICS OF SAMPLE	276

LIST OF TABLES

<u>Table</u>	<u>page</u>
1. Internal Consistency Estimates	101
2. Demographic Summary of Pilot Sample (n = 15) . . .	102
3. Demographic Summary of Study Sample (n = 206) . .	108
4. Demographic Summary of Common Subjects (n = 86) .	109
5. Test of Hypothesis 1 (Frequency--Stability) . . .	142
6. Test of Hypothesis 1 (Frequency--Emphasis Stability)	143
7. Test of Hypothesis 1(a) (Importance--Stability) .	145
8. Test of Hypothesis 1(a) (Importance--Emphasis Stability)	146
9. Test of Hypothesis 1(b) (Satisfaction--Stability)	148
10. Test of Hypothesis 1(b) (Satisfaction--Emphasis Stability)	149
11. Test of Hypothesis 2	151
12. Test of Hypothesis 2(a)	153
13. Test of Hypothesis 3	155
14. Test of Hypothesis 3(a)	157
15. Test of Hypothesis 3(b)	159
16. Test of Hypothesis 3(c)	161
17. Distribution of Mean Aspiration Scores	164
18. Test of Hypothesis 3(d)	165
19. Test of Hypothesis 3(e)	166
20. Test of Hypothesis 3(f)	169
21. Test of Hypothesis 4	173

22.	Test of Hypothesis 4(a)	175
23.	Test of Hypothesis 4(b)	177
24.	Test of Hypothesis 4(c)	179
25.	Test of Hypothesis 5	181
26.	Test of Hypothesis 5(a)	183
27.	Test of Hypothesis 6	185
28.	Test of Hypothesis 6(a)	187
29.	Test of Hypothesis 6(b)	189
30.	Test of Hypothesis 6(c)	191
31.	Test of Hypothesis 6(d)	193
32.	Test of Hypothesis 6(e)	195
33.	Test of Hypothesis 7	197

CHAPTER I
INTRODUCTION

PROBLEM STATEMENT

Although scholars may disagree about the effectiveness of using money to motivate workers (cf. Winstanley, 1978; Patten, 1977, 1978) few would take issue with Belcher's (1974) argument that the level of pay assigned to various jobs is important to an organization because of its impact on morale, retention, and the ability to attract capable employees. While most organizations probably attempt to provide a "just" wage, ultimately it is the employee, not the employer, who decides whether or not a given wage level is equitable.

Herein lies the greatest difficulty for employers seeking to offer this "just" wage, for little is actually known about the process(es) through which employees determine the appropriateness of their pay. Knowledge of these processes is limited largely to the awareness that fair pay is a relative concept. That is, people ascertain the fairness of their wages not in terms of the absolute level or amount of pay, but rather through a process of comparing their pay with the pay of other people, as well as with such non-human referents as the cost of living. This is known as the social comparison process.

While there is some understanding of the general procedure by which the equitability of wages is determined, virtually nothing is known about the specific pay comparisons individuals make. For instance, do employees compare their present pay to their past pay to determine the fairness of the current wage? Do they compare their wages to those of their friends, relatives, or to some internal "felt fair pay" standard? Are these comparisons mutually exclusive? Are they stable over time? Do certain "types" of employees make certain comparisons? What effects do these wage comparisons have on pay satisfaction? To date, there are no definitive answers to these questions.

Despite the long-standing call for research in this area (cf. Goodman and Friedman, 1971), little attention has been devoted to the role of social comparisons in the process of pay equity determination. Indeed, only six empirical studies of this issue have been reported in the literature: Andrews and Henry (1963), Finn and Lee (1972), Goodman (1974), Heneman, Schwab, Standal, and Peterson (1978), Hills, (1980), and Patchen (1961). As will be shown in Chapter II, these studies have produced conflicting and often contradictory results.

The purpose of this study is to expand upon this stream of research by examining the role of social comparisons in

the determination of the perceived fairness of pay. Specifically, this research project addressed three areas of inquiry. First, an attempt was made to determine if the choices of comparison others are stable over time. Second, this study was designed to develop a framework for explaining and predicting the nature of social comparison processes as they relate to pay. Third, the elicited comparison others were examined in terms of their impact on perceptions of pay equity.

SIGNIFICANCE OF THIS STUDY

While relatively little is known about the manner in which a given rate of pay is judged to be equitable or inequitable, the effects of perceptions of pay inequity, particularly when due to underpayment, have been well researched. Adams (1963a, 1963b, 1965), Adams and Jacobsen (1964), Adams and Rosenbaum (1962), Andrews (1967), and Lawler and O'Gara (1967) have dealt with the effects of pay inequity on employee job performance. These studies consistently have shown that perceived underpayment tends to be associated with a decline in both quantity and quality of worker output under an hourly-paid compensation system. When employees

under a piecework system feel underpaid, there is an increase in the quantity of their work, but at the expense of quality.

Feelings of pay inequity seem to impact on employee attitudes as well as employee behaviours. For instance, Lawler and O'Gara (1967) have reported that while underpaid subjects found their jobs to be more interesting than did those in the overpaid condition, the former also saw their jobs as relatively unimportant, simple, and unchallenging. Similarly, Finn and Lee (1972) described workers who perceived their pay as inequitable as displaying greater dissonance, less favourable work-related attitudes, and a higher propensity to voluntarily terminate their employment. Additionally, Lawler (1971) argues that people's desire for money increases and the attractiveness of their jobs decreases as pay dissatisfaction increases. This increase in the desire for money is believed to lead to behaviours which are likely to result in attempts to acquire more money--unionization, striking, turnover, and so on. Also, as the attractiveness of the job decreases, absenteeism and turnover increase. Consequently, employees' levels of pay satisfaction should be of considerable interest to managers and human resource practitioners.

Despite the seriousness of this issue, very little is known about the manner in which individuals judge the fairness of their pay. This study attempts to provide an initial understanding of the conditions which lead to feelings of pay inequity. From this very broad purpose, several results beneficial to both the academician and the practitioner are expected:

1. Determination of the types of comparison others selected by employees when attempting to ascertain the equitability of their wages.
2. Determination of the (in)stability of these comparisons over time.
3. Determination of the relationship between attitudinal and personal characteristics of the comparer and the reaction to pay referents. Specifically,
 - a) The relationship between acceptance (or lack thereof) of the organization's wage distribution rule and the use of social comparisons.
 - b) The relationship between desire to advance in the employing organization and the selection of and reaction to pay referents.
 - c) The relationship between desire to leave the organization and the appraisal of pay referents.

- d) The relationship between respondent sociability and the use of relevant others.
4. Determination of the relationship between job tenure and the use of comparison others in determining the equitableness of pay.
 5. Determination of the importance of certain pay referents, relative to other pay referents, on the individual's feelings of pay satisfaction.

Tentative answers to these questions will be provided by testing a model for pay referent selection that until now has not been empirically validated. This model, which was first proposed by Goodman (1977), sees the choice of pay comparisons as coming from the respondent's amount of knowledge about the potential referent as well as the attractiveness of that referent (to the respondent). Within the context of this theory, the relationships between five variables--acceptance of the organizational wage distribution rule, level of aspiration, desire for external mobility, sociability, and job tenure--and the role of relevant others in the evaluation of pay will be examined.

Chapter II

LITERATURE REVIEW

Two bodies of literature will be reviewed in this chapter. The first part of this discussion is concerned with the issue of social comparisons in general. Consideration of this body of literature will begin with an examination of the role of society in the formulation of the self, or the ego. From this psychoanalytic perspective, attention will turn to the sociological and psychological viewpoints as to the influence of the social world on the cognitive processes of the individual. Finally, this chapter concludes with a discussion of the six previously published empirical studies of the role of social comparisons in the determination of pay (in)equity.

EARLY WORKS

Sigmund Freud, the father of modern psychoanalysis, perceived the self (the psyche) as an autonomous entity locked in potentially mortal combat with the cultural milieu in which it exists (Willis, 1974). Although Freud may have modernized this notion of individual degeneration as a product of material and intellectual progress ("civilization"),

the origin of this idea can be traced to the eighteenth-century philosopher Jean-Jacques Rousseau. In his Social Contract and Discourses (1751:139) Rousseau wrote that:

luxury, profligacy, and slavery have been in all ages the scourge of the efforts of our pride to emerge from that happy state of ignorance in which the wisdom of providence has placed us. . . . Let men learn for once that nature would have preserved them from science as a mother snatches a dangerous weapon from the hands of her child.

This notion of the self has found little acceptance in the social sciences, as it is believed by many that man "makes himself" in the sense that through the use of social precepts people create, define, and explain the world in which they live. Reality, then, is socially constructed, and one's perceptions of the world are functions of the society and the component social groups to which one belongs.

Because society provides its members with "meanings," the social milieu comes to be the mechanism through which one validates all experiences. Since there is no meaning independent of the social realm, there are no inherent "truths" or absolutes. In the context of this study, this means that to determine the adequacy of one's pay, the individual must attempt to view his or her wages from the same perspective as do the relevant (to the individual) subgroups

within that society. These subgroups become the referents or comparison others for all decisions.

This belief in the influence of social groups on the individual first appeared in the sociological literature in the late nineteenth and early twentieth centuries. Major adherents of this doctrine were Durkheim (1897, 1915), who saw group norms and social affiliations as controlling such diverse things as religious beliefs and suicide rates; Cooley (1902), who argued that individuals owe their very existence to their society; and later by Mead (1934), who saw the mind and the self as being formed by society, a perspective diametrically opposed to that of Freud. Despite this intellectual background, sociological interest in group influences on individual behaviours and attitudes waned after Mead's (1934) work and lay dormant until the publication of The American Soldier volumes in the late 1940's (see below).

Psychologists as well as sociologists were interested in the impact of social groups on individual beliefs and actions. For instance, Sherif (1935) argued that the importance of the concept of a frame of reference lies in large part in the fact that it is the paradigm for the individual's internalization of the norms, values, and standards of his or her culture. Similarly, Chapman and Volkmann (1939) found that an individual's level of aspiration was influ-

enced by the performance of relevant social groups. Hilgard, Sait, and Magaret (1940) reported that individual group members tended to estimate their task performance somewhat in terms of the group (i.e. there was a tendency for individual performance estimates to regress slightly toward the mean performance level of the social group). Finally, MacIntosh (1942) discovered that when two groups are in competition with one another, the status of the group comprising the standard of comparison greatly influences the other group's determination of success and failure. Thus, all three of these studies found that standards people set for themselves in a variety of tasks are altered according to the relative standing of pertinent social comparison groups.

Social psychologists of the 1930's and 1940's also demonstrated interest in the issue of reference group standards. Hyman (1942) found that a person's judgment of his or her status on such things as intellectual, cultural, and economic criteria varied depending on the social comparisons made. One of the better known studies of this time was Sherif's (1943), in which individual judgments in an ambiguous situation were found to be determined by the judgment of others. Similarly, Newcombe (1943) found that the socio-economic views of college women changed as they came more under the influence of the standards of their college community.

REFERENCE GROUPS AND RELATIVE DEPRIVATION

Sociological interest in the effects of group influences on the individual experienced a resurgence with the publication of The American Soldier volumes shortly after World War II. These volumes presented clear evidence that soldiers' self-evaluations, their satisfactions, and their attitudes toward military procedures and army life in general could not be explained merely by knowing their objective conditions or their actual membership groups. Rather, attitudinal differences were due to the fact that different categories of men compared themselves to different groups. From this finding came the concepts of reference groups and relative deprivation (Goodman, 1977).

Reference groups: Reference groups are those groups to which individuals belong or aspire to belong (Kelley, 1952; Merton, 1957). These groups serve two purposes. First, they perform a normative function that establishes and enforces standards or norms. Second, they serve a comparative function that enables people to evaluate their attitudes and opinions against those of the group (Goodman, 1977).

Relative deprivation: In its basic form, relative deprivation occurs when an individual or class of individuals feels deprived in comparison to relevant reference groups and individuals (Pettigrew, 1967). The concept of relative deprivation focuses attention on the nature of the discrepancy between the individual and the comparison group. In this way, it complements the idea of the reference group by giving more understanding to how the discrepancy alters attitudes.

One of the more familiar examples of relative deprivation comes from The American Soldier volumes. Better educated soldiers expressed significantly greater discontent with their chances of promotion--yet objectively their chances of advancement were far better than were those of less educated soldiers. However, these better educated troops were not comparing themselves to their less well-educated counterparts, but to those who were getting better treatment than themselves (i.e. the officers); hence their dissatisfaction (Brickman and Campbell, 1971).

SOCIAL COMPARISON THEORY

While The American Soldier volumes may be seen as the beginning of modern-day interest in social comparisons, perhaps the most important work in this area has been that of Festinger (1955, 1957). While not directly studying the choice of comparisons, Festinger has elaborated a number of formally derived and related hypotheses constituting a theory of the social comparison process.

Festinger predicates his theory on an assumed "drive" of the individual to evaluate his abilities and opinions. To do this, people are believed to select others for comparison who are as similar to themselves as possible. By choosing such others, the evaluations assume greater stability, which enables an individual to maintain consistency within him or herself. That is, the person tries to maintain balance among cognitions, which are defined as knowledge about one's self, one's behaviour, and one's surroundings. Cognitive dissonance occurs when these cognitions are out of balance. The magnitude of this dissonance is a function of the degree of importance attached to the dissonant cognitions.

According to Goodman (1977), much of the controversy surrounding Festinger's theory of cognitive dissonance pertains to the issue of similarity between comparer and other.

This, however, is a controversy that predates Festinger. Merton and Kitt (1950), who first recognized the need to predict an individual's choice of referent groups, hypothesized that some similarity in status attributes must exist (either objectively or in the comparer's mind) for the comparison to occur at all. They argued that once this minimal similarity is recognized, other similarities and differences pertinent to the situation will provide the context for shaping evaluations.

Turner (1955), on the other hand, examined the relevance of different groups to an individual's self-evaluations and found that it is dissimilarity, not similarity, that often is the crucial factor in determining the choice of referent groups. He reported that while mobile men ("future oriented") tended to compare themselves to persons of equal status on matters of mobility, they were likely to compare themselves to those of higher status in judging their occupational success. Thus, the importance of specific groups as comparison frameworks will vary depending upon the subject of concern to the comparer.

The similarity-dissimilarity issue maintained importance in the research literature through the 1960's. A common way of examining this question involved having subjects take a "personality" test measuring both positive and nega-

tive traits. After being falsely told they scored in the middle of the score distribution for their group, subjects were allowed to see the scores of one or two members of that group. Although some of these experiments supported the similarity argument (cf. Darley and Aronson, 1966; Wheeler, 1966), in other instances subjects chose the most able or the least able person with whom to compare their own score (cf. Arrowood and Friend, 1969; Hakmiller, 1966a; Wheeler, Shaver, Jones, Goethals, Cooper, Robinson, Gruder, and Butzine, 1969). Still other studies (cf. Hakmiller, 1966b; Gordon, 1966) tended to support Festinger's similarity contention when subjects were unsure of their ability or opinion under evaluation.

As Pettigrew (1967) and Goodman (1977) pointed out, the experimental paradigm used in these studies is so constrained that it does not reflect the social complexities and major issues of the social comparison process. Moreover, few of the studies adequately operationalized the similarity concept. Finally, there are several alternative information-seeking strategies available to an individual when evaluating some object (e.g. looking at the extremes of the distribution). Thus, while similarity can be a useful referent when it involves a positive attribute, when objective referents are unavailable, and when the range of the

attribute's distribution is known (Pettigrew, 1967), the general applicability of this type of comparison is quite limited (Goodman, 1977).

ADAPTATION-LEVEL THEORY

Adaptation theory, as espoused by Helson (1964), posits that in every situation confronting an organism there is a neutral reference point, referred to as the "adaptation level." To use Goodman's (1977) example, whether an object is light or heavy is judged in terms of this neutral reference point--the adaptation level. This is a dynamic level, however, and the organism will react to stimuli both below and above the adaptation level. The adaptation level is a function of the intensity, frequency, nearness, recency, and affective quality of the stimuli.

Although adaptation level theory most often has been applied to psychophysical judgment experiments, it also may relate to the social comparison process. As stated, the adaptation level is constantly in flux due to the impingement of current stimuli. This also may be true of individuals' assessments of organizational rewards. That is, what an employee considers an attractive outcome/input ratio at

time-1 may be considerably less attractive at time-2, if an upward shift in the adaptation level changes the attractiveness of that ratio (Goodman, 1977).

SMALL GROUP COMPARISON LEVEL

In Thibaut and Kelley's (1959) version of exchange theory, the value of an outcome of social interaction is defined in terms of two relative standards. The first standard, the individual comparison level, suggests that social evaluations can be made by comparison with a person's past experiences as well as with other individuals or groups. This individual comparison level is an average of all the outcomes familiar to the individual (through either personal or vicarious experience), with each being weighted by its salience. In some ways this comparison level is an adaptation level for judging outcomes in the sense advanced by Helson (1964).

The second standard, the comparison level for alternatives, is predicated on the assumption that any given situational outcome can be partly evaluated in terms of the available alternative situations. This standard represents the best available alternative, and serves as the neutral point

on a scale of acceptance-rejection of interaction. Thus, if the situation is better than the best alternative, the individual will be motivated to sustain the interaction even if, by some other standard of evaluation, it is dissatisfying. Similarly, if the situation is not the best alternative, the interaction will cease. As Goodman (1977) points out, the contribution of Thibaut and Kelley's work is that it suggests a new use for social comparison processes. Not only do individuals evaluate the attractiveness of objects, such as pay, but they also appraise the attractiveness of social relationships with others, such as supervisors and co-workers, through the use of social comparisons.

Thibaut and Kelley (1959) also reinterpret and extend Festinger's contention that only people of similar abilities and opinions are selected as referents. They argue that outcomes over which the individual exercises some control (i.e. achieved outcomes) will be more salient than those over which the individual has no control (i.e. ascribed outcomes). Thus the former should have a larger effect on a person's comparison level than the latter. In this line of thought, achieved status differences should have a larger influence on comparison levels than should ascribed status differences. Thus, similarity of ability induces a perception of similar power and hence should contribute heavily to

a person's comparison level. Other similarities, such as comparable status positions, also should induce perceptions of similar power (Pettigrew, 1967).

EQUITY THEORY

Equity theory may be seen as an extension of Festinger's theory of cognitive dissonance. While Festinger sees the individual (Person) as observing only the relationship between his or her own outcomes and inputs, equity theory posits the existence of another individual (Other) against whom Person may compare inputs and outcomes. If this comparison indicates a lack of balance between Person and Other, a "special" form of cognitive dissonance, which Adams (1963a, 1963b, 1965) has labelled "inequity," is experienced. Thus, an equity study is simply a general cognitive dissonance study plus a comparison Other for the subject (Middlemist and Peterson, 1976).

Although there have been several variations of equity theory (cf. Adams, 1963a, 1963b, 1965; Homans, 1961; Jacques, 1961), Adams' formulation has generated the most systematic research efforts (Goodman, 1977; Goodman and Friedman, 1971; Pritchard, 1969). According to Adams (1965:20):

Inequity exists for Person whenever he perceives that the ratio of his outcomes to inputs and the ratio of Others' outcomes to Others' inputs are unequal, either (a) when he and Other are in a direct exchange or (b) when both are in an exchange relationship with a third party and Person compares himself to Other.

If Person, say, were better qualified for a job than Other but both earned the same pay, Person would experience cognitive dissonance. This tension would lead Person to attempt to reduce this dissonance and to establish consonance between job inputs and outcomes, in relation to the inputs and outcomes of Other (Adams and Rosenbaum, 1962).

A form of equity theory that is somewhat "intermediate" between that of Festinger and that of Adams was advanced by Jacques (1961). Jacques, like Festinger, considers only Person, but like Adams he (Jacques) assumes the existence of some standard of comparison. According to Jacques, all employees share an unconscious system of norms of fair payment for certain levels of work. Moreover, each individual is unconsciously aware of his or her own potential capacity for work, as well as the equitable pay level for that work. Jacques claims this level of payment is achieved when pay allows an optimal consumption of goods and services consistent with "dynamic psychological equilibrium." Furthermore, while feelings of satisfaction follow equitable payment,

dissatisfaction or uneasiness results from payment above or below this equitable level.

Despite the seemingly widespread acceptance of equity theory, attempts to explain "real world" employee behaviours from an equity perspective usually have failed (Goodman and Friedman, 1971; Lawler, 1971; Walster, Walster and Berscheid, 1978). Moreover, Mahoney (1979: 170) points out that "individual assessments of equity within the framework of this model do not demonstrate the stability required for operationalization of the model in the determination of equitable wage structures." One possible reason for the failure of equity theory to be prescriptive in the "real world" is Adams' failure to provide rationale for any specific measures of compensation, inputs, or relevant comparison persons (Mahoney, 1979).

Lawler (1971), on the other hand, has provided many of these details. Using equity, social comparison, and discrepancy theories, Lawler argues that pay satisfaction is a function of two perceptions: (a) the amount of pay a person feels s/he should receive and (b) the amount of pay s/he feels s/he does receive. This first perception is seen to be a function of (i) perceived personal job inputs, (ii) perceived job characteristics, and to a lesser degree, (iii) nonmonetary outcomes from work and (iv) pay history. Thus,

a person with relatively high personal job inputs, a demanding job, low nonmonetary outcomes, and high past earnings is likely to feel that he or she should receive a relatively high level of pay (Dyer and Theriault, 1976).

The second component of Lawler's (1971) model, perceived amount of pay received, is thought to be largely a function of pay level and perhaps pay history and perceived pay of referent others. In this way, an individual earning a relatively low salary will recognize this and, unless this person sees him or herself as relatively low on the factors influencing perceived amount of pay that should be received, feelings of pay dissatisfaction are likely (Dyer and Theriault, 1976).

DISTRIBUTIVE JUSTICE

Finally, it should be noted that Homans' (1961) theory of distributive justice emerged around the same time as did Jacques' and Adams' theories, and like these, attempts to explain how people evaluate outcomes. Distributive justice refers to the way rewards and costs of activities are distributed. According to this theory, distributive justice in the work place comes about when an individual's "investments" (e.g. age, seniority, skill, effort) are equal to his or her "profits" (i.e. rewards minus costs). Rewards in-

clude pay and assorted need satisfiers, while costs refer to the unpleasant aspects of a job, such as boredom and discomfort. Equity is achieved when the ratio of profits to investments for a given employee is proportional to the ratios of other employees. As Goodman (1977) points out, far less research has been devoted to distributive justice than to equity theory.¹

As Belcher (1979) notes, sociologists such as Berger, Zedlitch, Anderson, and Cohen (1972) and Cook (1975) have dealt with the concept of the "distribution rule," which is a variation of Homans' (1961) notion of distributive justice. Both the distribution rule and the idea of distributive justice are concerned with the allocation of system rewards. In both concepts valued outcomes are distributed along dimensions of evaluation which include achieved or ascribed traits such as seniority, skill, level of education, need, etc.

Unlike Homans' (1961) and Adams' (1965) beliefs that inputs must be proportional to profits, Cook (1975) maintains that each particular social system will develop its own method (i.e. its own distribution rule) for the alloca-

¹ However, as will be seen below, Goodman's (1974) earlier concern with the structure and administration of the organization's pay system and the effects thereof on an individual's choices of pay referents, does touch upon the concept of the wage distribution rule.

tion of rewards. For example, welfare payments are usually based on an individual's need, not his or her inputs. Thus, instead of there being a strict proportional relationship between inputs and rewards, the welfare system's distribution rule specifies what levels of need are associated with particular levels of assistance, with no consideration of inputs. This information not only serves as the basis for reward expectations, but by specifying the appropriate dimensions of evaluation also defines which comparisons are relevant in the social system.

Cook (1975) hypothesizes that the "justness" of any particular reward distribution is a product of the comparison of one's actual outcomes to the level of outcomes expected to be received based upon the distribution rule perceived to be appropriate to the situation. If the reward allocation violates these expectations, then the distribution is likely to be seen as unjust.

Finally, Cook (1975) argues that this theory applies to social situations which fulfill three conditions. First, one or more socially valued outcomes (e.g. money) must be allocated to individuals in the situation. Also, the magnitude levels of the outcome must be differentially valued. In terms of the study proposed here, this means that a high salary is assumed to be preferred over a low one.

Second, there must be a distribution rule which identifies the nature of the association between the levels of the dimension of evaluation and the levels of the outcome to be distributed in the situation. Third, the distribution rule used in a specific situation must be perceived as legitimate. In this context, legitimacy refers to the extent to which the distribution rule is normatively supported by members of the social system.

PREVIOUS EMPIRICAL WORK

Having reviewed the theoretical literature dealing with the social comparison process in general, attention now will be turned to actual empirical studies of the role of social comparisons in the determination of fair pay. After examining each study individually, the variables common to all will be explicated in an attempt to illustrate points of contention and convergence among these studies.

Patchen (1961)

This study attempted to determine why individuals select the wage comparisons they do. Patchen asked 489 employees in a Canadian oil refinery to name two persons whose yearly earnings were different from their own. Individuals who chose objectively dissonant comparisons (e.g. comparison persons who were of similar status but whose earnings were greater) experienced the comparison as unsatisfactory. These respondents explained their feelings in terms of dissonance between the wage difference and other related differences (such as education, seniority, skill). Conversely, those employees who were satisfied with their comparisons based these feelings on a perceived consonance between the wage difference and other related differences among co-workers in terms of seniority, skill, and so forth. (Opsahl and Dunnette, 1966).

Patchen (1961) also found that respondents' wage positions relative to those most like themselves in terms of age, seniority, education, family and the like, had an important effect on chosen comparisons. Absolute wage position (pay rate), on the other hand, exerted little influence on the choice of comparisons. That is to say, an individual's absolute position in the salary hierarchy made little difference in the selection of upward or downward compari-

sons. Rather, it was the pay position relative to those like him or herself which determined the direction of these comparisons.

For instance, knowing that a respondent was in, say, the top 5% of the salary range for a particular job level would not enable one to predict the type or direction of comparisons this respondent might make. However, if one were to learn how the pay of this same individual compares to the pay of others most like him or herself in terms of age, seniority, education, family, and so forth, then it would be possible to anticipate the selection of comparison others. Thus, individuals in the top 5% as well as those in the bottom 5% of their salary ranges would likely make the same types of comparisons assuming an equivalence of relative pay positions. Specifically, men whose earnings were lower than similar others' tended to make dissonant comparisons (to those on their own occupational level but who were earning more). Also, those with relatively low earnings were more dissatisfied with these comparisons than were their better-paid counterparts.

Patchen also found that as workers' chances of mobility improved, they more frequently chose potentially dissonant comparisons and were more dissatisfied with the prospects of remaining at a wage level lower than that of their compari-

son persons. However, mobility chances within the company and mobility chances outside the company had opposite affects on the choice of presently dissonant comparisons and on present satisfaction with these comparisons. Those workers who had completed the company training program, and therefore who had the best chances of advancement, made fewer upward comparisons than did those who who were barred from this program. Moreover, those with this enhanced potential for promotions tended to select men of different status than themselves when they did compare upward. Hence, they selected fewer presently dissonant comparisons than did their co-workers who were denied admission to the training program. Also, those who had completed the program were more satisfied with the upward comparisons than were other workers. Those respondents having the best self-appraisals of their chances of external mobility were more likely to choose comparison persons who earned more themselves and to be presently dissatisfied with these comparisons.

Patchen also asked his respondents' about their willingness to take personal responsibility for their occupational position. While the degree of acceptance of this personal responsibility did not directly affect the choice of comparisons, it did accentuate the effect of other influences. For example, an individual who accepts personal res-

possibility for earning less than others like him or herself has no justification for protesting the poor wage position and therefore less motivation for making dissonant comparisons. When a person blames low earnings on others, selecting dissonant comparisons can both protect one's self-esteem and support the claim for higher wages.

Finally, respondents in this study were asked to indicate if others had told them they deserve to be paid more than their current wage. Those who had been so told tended to choose comparison persons who earned more than themselves, regardless of their relative pay position. These respondents also were more likely to choose dissonant upward comparisons of similar status (in terms of occupational level and place of work) as themselves.

Andrews and Henry (1963)

In an attempt to determine the impact of several variables (e.g. education, seniority) on managerial attitudes toward pay, Andrews and Henry (1963) surveyed 490 managers in five San Francisco firms. Respondents were classified as to whether they were part of lower management (those whose subordinates were nonmanagement employees), in lower-middle

management positions (those whose subordinates were in lower management), or in middle management (those at the top of a small operating unit, plus respondents at or near the top of a medium-sized operation).

Andrews and Henry (1963) found distinct differences among these three management classifications in terms of reference groups selected for pay comparisons. Members of the lower-middle management group, for example, were more likely to compare their pay to referents outside their own company than were the middle and lower management groups. Conversely, middle management tended to compare its pay to the salaries of those working for the same employer but who were at a lower occupational level. Those in lower management predominantly were concerned with keeping up with their peers.

Respondents' education and, to a degree age, also were found to significantly impact on the choice of pay referents. Andrews and Henry (1963) reported that the greater a respondent's amount of formal education, the more likely that individual would be to compare his or her pay with that of persons outside the company. Also, better educated respondents virtually ignored potential pay comparisons with those in their own organization. Finally, there was a consistent tendency for employees in the youngest age group to make external comparisons.

Pay satisfaction also was found to effect the choice of comparison others. Members of both lower management and lower-middle management who were dissatisfied with their pay were more likely to compare themselves to persons in lower occupational levels than were those managers with average or above-average pay satisfaction.

The likelihood of internal mobility, as assessed by each respondent, also influenced the type of pay comparisons made. For individuals with a perceived high degree of upward mobility, present pay was found to be evaluated at least partially in reference to an aspired-to position and associated pay level, rather than strictly in terms of the appropriateness of the pay for the present position.

On the bases of their research, Andrews and Henry (1963) concluded that a subject's choice of referents for purposes of pay comparison varied as a function of management level and amount of formal education. It also was concluded that both internal and external comparisons are important, with neither being of greater significance to the individual's perception of pay equity than the other.

Finn and Lee (1972)

Using a total sample of 170 professional and scientific employees, Finn and Lee (1972) created two subsamples consisting of those respondents who felt equitably paid ($n = 96$) and those who did not ($n = 74$).² They found that these subsamples differed in terms of their choices of referents for salary comparisons. For instance, the equity sample preferred internal comparisons to a relatively higher degree than did the inequity sample. Conversely, the inequity sample showed a stronger preference for the use of external pay referents than did the equity sample. In terms of the overall importance of internal and external comparisons, it was found that while each subsample made both types of comparisons, there was a general emphasis in both groups on internal referents.

According to Finn and Lee, the equity and inequity subsamples showed no differences in terms of personal or job-related characteristics and perceptions. Although there were no significant between-group differences, the inequitably paid subsample showed certain within-group variations. On average, subjects who sensed a high degree of inequity,

² These groups were formed on the basis of subjects' responses to the following item: "Do you feel that you are being fairly and properly paid at the present time in view of your training and experience, the work you do, and your capabilities? (Yes No)"

relative to those who perceived lower inequity, were younger, less mature professionally, and felt less mobile.

There were between-group differences in terms of job-related attitudes, with the equity subsample clearly demonstrating more favourable attitudes than did the inequity sample. Those respondents who felt inequitably paid had a significantly lower tolerance for dissatisfaction than did the equity sample, as well as a greater propensity to voluntarily terminate the employment relationship.

Goodman (1974)

In a study of 217 subjects ranging from entry level managers to chief operating officers, Goodman found that individuals tended to use one or more of three classes of referents to determine pay equity. First, people may compare their own wages to those of some undifferentiated "Other." That is, individuals may evaluate pay by examining their own outcome/input ratios in light of others' outcome/input ratios. Moreover, these others may be internal or external to the individual's own organization.

The second class of potential referent is System referent, with is subdivided into System-structure and System-

administration. Under Goodman's scheme, the former refers to whether the promised or stated structure of the pay system corresponds to the actual structure. For example, if the organization claims to operate on a merit raise system but in actuality the pay system fails to distinguish between merit and cost of living raises, then a discrepancy exists between the expected structure and the actual structure. "System-administration" identifies referents that arise from the way the pay system is administered. This point can be illustrated with the example used above: If the organization claims to make these "merit" increases every 12 months, but actually gives such raises only once every 18 months, then Goodman would argue that feelings of inequity should arise. Thus, in the case of system-administration referents the issue is not the structure of the system but how that structure is administered.

Goodman's third class of referent is the Self referent, which requires the individual to compare his or her current outcome/input ratio to other such ratios which are unique to that particular individual. This referent is composed of Self-pay history, Self-family (refers to the individual's conception of the level of wages needed to maintain the family's standard of living), and Self-internal (which denotes the individual's conception of own worth).

Goodman found that not only did his respondents tend to use multiple classes of referents, but also that all of these referent categories were significantly associated with respondent pay satisfaction. That is to say, it was determined that any imbalance between an individual's present outcome/input ratio and any of the ratios from the three classes of referents would lead to feelings of pay dissatisfaction. Also, while internal and external referents were selected about equally, the latter were more important in the sense that they showed the highest correlation with respondents' levels of pay satisfaction.

Perhaps one of the most interesting findings by Goodman was that the three referent categories were more strongly associated with pay satisfaction than were other organizational and individual variables. Correlations between salary, length of service, education, and age each with pay satisfaction all were lower than correlations between the pay referent classes and pay satisfaction.

Using amount of education as a proxy for professionalism, Goodman argued that the greater the level of professionalism, the greater the use of outside pay referents. Goodman also maintained that because less educated respondents experience greater difficulty in moving from organization to organization than do their more educated counter-

parts, outside referents will be selected less often and will be less relevant for this type of individual.

It also was reported that salary level somewhat affects an individual's choice of pay referents. For example, while rate of pay was not related to the selection of either System referent, individuals in the lower pay ranges were more likely to select Other-internal referents. In addition, Goodman found salary level to effect the selection of family referents, in the sense that high salaried respondents were more likely to use such referents than were individuals earning low salaries.

Perhaps, though, the greatest impact of salary level is seen through its interaction with the size of pay raises received. Those respondents with high salaries and who received high raises were found to be more likely to select pay history referents. If the respondent had a high salary but had received low raises, then no pay history referents were used. The low salary people, whether they received a high or low raise, were found to be less likely to select pay history referents, although they did use this referent more than did the high-salary low-raise group. Analysis of the third Self referent (internal-self worth) indicated no relationship with either pay level or size of pay raise.

Goodman concluded that the process of selection and comparison of pay referents is continuous and dynamic. Furthermore, he argued that any imbalance between present outcome ratios and those of the multiple referents leads to feelings of dissatisfaction, whereas a balanced relationship results in feelings of satisfaction.

Heneman et al. (1978)

In this study 127 subjects were given five pay comparison dimensions: Personal (involves family, friends, and relatives), Cost of Living (pertains to the adequacy of pay in meeting current needs), Historical (what the individual has received in the past and has become accustomed to), Internal (comparisons within the organization), and External (comparisons with other organizations and with the market). Respondents then were asked to rate the importance of each dimension in determining the fairness of three pay components: pay level, pay raise, and fringe benefits.

Heneman et al. found that subdividing pay into its component parts was an artificial division that respondents apparently do not make on their own. That is, respondents did not greatly differentiate among the pay comparison dimen-

sions according to whether they were considering their salary level, raises, or benefits. Thus, it was concluded that individuals evaluate their pay as a global construct rather than by its components.

Additionally, the cost of living dimension was the most, and personal the least, important pay comparison dimensions. Also, the internal and external dimensions showed the highest intercorrelation of all, and therefore, according to these researchers, were the least differentiated.

In terms of individual and organizational variables, Heneman et al. (1978) reported that respondents with lower education tended to place more emphasis on cost-of-living dimensions than did those with higher education.³ Employee tenure with the organization also impacted on the choice of comparisons; those with greater tenure placed the greatest emphasis on internal comparisons. Once again salary level exerted a significant impact on an individual's choice of comparison others, as those respondents with higher wages placed greater importance on external comparisons.

Perceived chances of mobility (both internal and external) also influenced comparisons. For example, as respondents' perceived likelihood of promotion increased, so did

³ It should be noted that Heneman et al. (1978) are dealing with a quite restricted educational range, as only 13 of their respondents had less than a bachelor's degree.

the importance of historical and personal comparisons. Heneman et al. (1978) speculated that upwardly mobile individuals stress past pay treatment because they have constantly viewed such treatment as evidence of their promotability. Also, personal comparisons may be important because promotions enhance the respondents' status in the eyes of friends, relatives, and family members. Similarly, those respondents who saw a likelihood of leaving their current employer viewed personal comparisons as most important of all comparisons. Conceivably, the current pay of these subjects may have produced dissonant personal comparisons, and leaving the organization would be one way to reduce this dissonance.

Hills (1980)

Based on earlier empirical studies in this area, Hills identified six possible pay referents: Internal, external, expected pay, historical pay, personal worth, and "other" referents. An 18 item questionnaire (three questions per referent) was administered to 275 full-time workers in an attempt to ascertain how important each potential referent was to them in establishing whether or not they were fairly paid.

One of the more notable results of this study was the finding that respondents who made internal comparisons also made external ones. Thus, Hills suggested that making a distinction between pay comparisons internal and external to the organization is not useful. Related to this point is the fact that these results are not compatible with the argument that individuals use an internal self-standard to establish the equity of their pay. Instead, this study indicated that the common referents people use are principally social referents imbedded in the work environment, reference to economic needs, reference to what those in their broader social network earn, and reference to pay received on previous jobs or in past years.

In addition to these broad, empirical findings, Hills also reported that individual and organizational characteristics influence one's choice of comparison others. For instance, individuals who place emphasis on market comparisons perceived greater ease of interorganizational mobility yet also had ambitions for promotion from within; tended to have low company tenure; and occupied jobs into which few people are hired directly. Those respondents who placed greater emphasis on economic needs tended to be in lower occupational groups and, as expected, had lower annual pay. Moreover, they believed it would be difficult to find any

other job, much less a better job than the one they currently had. These individuals also tended to be female and had limited education (relative to the sample as a whole).

Hills also reported that subjects who stressed social/family comparisons believed they would have a hard time finding any other job and aspired for promotions in their own organization. These respondents also reported fewer years of formal education.

Finally, those individuals who stressed historical pay were in the lower occupational classes and received lower annual pay. These people saw little chance of external mobility into a job which would pay at their current level; were low in company tenure; performed jobs into which few people are hired directly; and saw few chances for upward internal mobility. Also, this group of respondents tended to be younger.

INDIVIDUAL AND ORGANIZATIONAL VARIABLES

As hopefully is evident from the above discussion, many of the studies dealing with the issue of pay referents tend to draw somewhat conflicting conclusions. To further elucidate these points of controversy, the seven individual and

organizational variables found in almost all of these studies now will be examined.

Pay Level

According to Patchen (1961), individuals receiving low wages (in a relative sense) tended to place great emphasis on upward comparisons (i.e. to use as referents those on their own job level who earn higher wages). Patchen, however, did not distinguish between internal and external comparisons. Andrews and Henry (1963) seem to agree with Patchen on this point, as their research indicated that members of lower management (the lowest paid group in their study) also stressed internal-peer (same job level) comparisons. Similarly, Goodman (1974) reported that his lower paid subjects also placed great emphasis on internal comparisons, although he did not give the direction of the comparison. On the other hand, lower paid subjects in Hills' (1980) study stressed historical pay and economic need comparisons.

While there is rough agreement among these studies in terms of the types of relevant others chosen by lower paid respondents, there is almost unanimous disagreement as to

the types of referents used by higher paid respondents. Andrews and Henry's (1963) data revealed that their highest paid subjects--those in middle management--stressed internal lower-level comparisons. Heneman et al. (1978) found that the higher the respondent's pay, the more emphasis that was placed on external comparisons. Goodman (1974) offered a third result: subjects earning higher pay attached greater importance to Self-family comparisons. Finally, Finn and Lee (1972) found pay level to have no effect on respondents' choice of pay referents.

Education

There seems to be three "schools of thought" pertaining to the effect of respondents' amount of education on their choice of comparison others. One school is represented by Andrews and Henry (1963) and Goodman (1974), both of whom stated that as a subject's education increased, so did the use of external comparisons. The second school is somewhat opposed to the first in that it is concerned with the effects of limited education. For instance, both Heneman et al. (1978) and Hills (1980) proffered that those subjects with less education tended to rely more on economic need

comparisons. The third position on this issue is held by Finn and Lee (1972) who saw amount of education as having no effect on the choice of pay referents.

Age

Here, too, there is a lack of consensus as to the role this variable plays in an individual's selection of those against whom to compare his or her salary. For instance, Andrews and Henry (1963) found that their youngest subjects stressed external comparisons, while Hills' (1980) results showed that younger employees preferred to compare their present pay to what had been earned on previous jobs (historical pay). It should be noted, though, that unlike Hills (1980), Andrews and Henry (1963) did not measure historical pay, did not request their subjects to consider what had been earned in the past, and limited their analysis to a single job group, i.e. "managers." Thus, the "disagreement" in results between these two studies may be less substantial than first appears.

The effect of respondent age on pay referent selection is not very clear in Finn and Lee's (1972) work. They did find that those employees who felt most inequitably paid

were younger than those employees who felt less inequitably paid. Thus, in this last study it is difficult to determine how age impacted on the choice of significant others.

Satisfaction with Pay

As was true with the above mentioned variables, here, too, there are conflicting results among the studies. Finn and Lee (1972) found that subjects who were satisfied with their pay stressed internal comparisons. Conversely, Andrews and Henry (1963) reported that subjects with low levels of pay satisfaction placed greater emphasis on internal-below comparisons. Goodman (1974), on the other hand, reported that the higher a respondent's level of pay satisfaction, the more likely that person was to select Self-family, System-structure, and Other-external referents.

Internal and External Mobility

There is little consensus among these researchers as to the effect of perceived chances of mobility (both internal and external) on an individual's selection of pay referents.

As for the influence of internal mobility, Patchen (1961) found that those respondents who perceived the greatest chances of promotion made few upward comparisons (although, again, no distinction between internal and external comparisons was made). Andrews and Henry (1963), however, reached a diametrically opposed conclusion, for in their study the more internally mobile respondents stressed internal-above comparisons. Heneman et al. (1978) and Hills (1980) offered yet different results: the first study found that upwardly mobile people stressed personal and historical comparisons, while the second one argued that those respondents believing themselves promotable placed great reliance on market and social/family comparisons. Hills (1980) also found that respondents who reported little perceived opportunity for internal mobility tended to place heaviest emphasis on historical comparisons.

Just as there are differences among these empirical studies as to the affect of internal mobility on the choice of pay referents, so, too, is there inconsistency as to the influence of external mobility. Patchen (1961) reported that respondents who saw external mobility as likely tended to make more upward comparisons than did those not sharing this perception. Results of the Heneman et al. (1978) study indicated that externally mobile respondents made more per-

sonal comparisons than did other subjects. Finally, Hills (1980) found increased use of market comparisons to accompany enhanced perceptions of one's ability to find another job.

Only two studies dealt with the effect of restricted external mobility. Goodman (1974) found that when perceived chances of finding a new job were limited, respondents placed greater stress on internal pay referents. Hills (1980), the only other researcher to consider this variable, reported limited external mobility to be associated with the use of economic need comparisons, social/family comparisons, and historical pay comparisons.

Importance of Internal vs. External Comparisons

After reviewing these studies, perhaps no issue is as open to question as is that pertaining to the importance of internal as opposed to external organizational pay comparisons on perceived equity. While Andrews and Henry (1963) reported that both types of comparisons are important, they did not concern themselves with the question of which (if either) were the more important. Finn and Lee (1972), though, did consider this issue and found internal compari-

sons to receive greater emphasis than did external comparisons. Heneman et al. (1978) found this question of internal-external importance to be somewhat misphrased. Indeed, their study showed these comparisons to be the least differentiated of all comparison dimensions. This argument later was buttressed by Hills (1980), who found no differentiation between internal and external comparisons in terms of importance. Thus, according to Hills (1980), respondents tend to place importance either on both equity dimensions or on neither.

Goodman (1974) approached this question from a somewhat different perspective. Instead of considering the level of importance assigned to these comparisons, he examined the impact of internal-external comparisons on respondents' feelings of pay equity. Goodman (1974) found external comparisons to be more related to feelings of fair pay than were internal comparisons.

Tenure with Employer

Somewhat surprisingly, only two studies considered the possible affects of organizational tenure on pay referent selection. Heneman et al. (1978) found a positive correla-

tion between increased tenure and emphasis on internal comparisons. Similarly, Hills (1980) found that respondents with little tenure put greatest stress on market and historical comparisons.

DISCUSSION OF PREVIOUS EMPIRICAL WORKS

As may be evident from this review of the relevant literature, there are more points of controversy associated with the question of pay equity determination than there are points of agreement. Several conditions exist that may partially explain why there is so little consensus among these studies.

Methodological Shortcomings

First of all, none of these studies approached this issue from a longitudinal perspective. Research in this area traditionally has been based on a single application of a questionnaire or interview. Since prior to the current study the temporal stability (or instability) of an individual's choice of pay referents has not been examined, it is possible that each of these studies dealt with respondents

at different periods in terms of the types of comparisons made.

This could be a rather serious shortcoming in these studies, for if an individual chooses different comparison others at different times, then those involved in this type of research are facing an entirely different problem than now is believed to exist. Instead of attempting to discover the effect, say, of education on an individual's selection of relevant others, researchers would have to be concerned with the conditions that lead to the choices of one comparison over another. An even more challenging scenario is one in which individuals randomly select comparison others. Were this latter condition to exist, the process of pay equity determination would be unfathomable. Indeed, such haphazardous selection of individuals with whom to compare one's wages for all intents and purposes would make the prediction of pay referents an impossible task.

There are also questions about the psychometric adequacy of the questionnaires used in these studies. For instance, only one study reported any measure of the internal consistency of the research instrument (cf. Hills, 1980). Given Nunnally's (1978) claim that most problems of reliability arise due to difficulties internal to the measuring instrument, it is possible that such measurement problems are one cause of the conflicting results.

In addition to problems of reliability, there also are questions as to the validity of the research instruments used in these studies. With the exception of Hills (1980), whose method of composing his questionnaire argues for its content validity (see Chapter IV), none of the other studies seem to have concerned themselves with this issue. Finn and Lee (1972), to mention just one example, used responses to a single question as the criterion by which their equity and inequity subgroups were formed.

Another reason for these varying results could be the types of samples used. Andrews and Henry (1963), Heneman et al. (1978), and Hills (1980) all used respondents from different organizations. If the choice of pay referents is organizationally specific (due to certain structural variables), then the merging of subjects from different companies could very well confound the affects of the different organizations.

Theoretical Shortcomings

The above mentioned possible weaknesses of these six studies are somewhat mechanical points in the sense they refer to methodological/statistical difficulties that may have contributed to the conflicting results so prevalent in this stream of research. Yet a more fundamental problem may ex-

ist, namely, the lack of theoretical underpinnings or bases for the design of the studies and interpretation of results. As Lawler (1971:205) has written: "theory without data is fantasy; but data without theory is chaos." While the sundry results discussed above can hardly be described as chaotic, the lack of a unifying theory or theoretical perspective may have caused some of the difficulties in these studies. Note, though, that even if these researchers had turned to the conceptual literature on the social comparison process, in all likelihood no unifying theory would have been found.

Indeed, as Pettigrew (1967) and Goodman (1977) state, despite certain common elements (e.g. the assumption that an individual is motivated to learn about him or herself by comparison to outside referents), theories of social comparisons are neither well integrated with each other nor conceptually well developed. It would appear that each of the aforementioned theories--reference groups and relative deprivation, social comparison, adaptation level, and small-group comparisons--could benefit from a more general formulation.

Conclusion

Examination of these studies tends to generate more questions than are answered. Thus, below is a partial list of issues requiring further investigation; the first four of these concerns are addressed in the present study.

1. Will a respondent's reaction to relevant others at time-1 be the same at time-2? This is a fundamental issue that prior to now has not been empirically considered.
2. Is the use of pay referents related to the respondents' attitudinal and personal (individual) characteristics?
3. Do respondents' organizational (structural) characteristics (e.g. job tenure) influence their reaction to relevant others?
4. Do different pay referents have different impact on feelings of pay satisfaction? While it is known that multiple comparisons are used, do they equally make the respondent feel (un)fairly paid?
5. How have results of the previous studies been effected by the research instruments used therein? As noted above, concern for the psychometric adequacy of these instruments has been found in only one study.

6. What effect does membership in a work organization have on respondents' reaction to pay comparisons? Two of the three studies in which respondents all came from the same organization found distinct differences between internal and external comparisons. Conversely, the studies wherein these comparisons were least differentiated used subjects from different organizations.
7. What effect would a common job level and occupation have on an individual's evaluation of pay referents? All of the above mentioned studies used respondents from varying job levels and occupations. Would removal of these differences lead to clearer results and conclusions?
8. Do the personal and/or job-related characteristics of potential pay referents affect a respondent's reaction to comparison others? That is, would a subject consider a more experienced female at a job level above his or her own differently than he or she would consider a more experienced male at a higher job level?

Chapter III

PROPOSED MODEL AND CONCEPTUAL HYPOTHESES

In Chapter II the literature pertaining to the general social comparison process was discussed, followed by an examination of the six previous empirical studies of the pay comparison process. Here a theory-based model of the relationship between respondent attitudes and the use of relevant others will be presented. The variables included within this model and the concomitant research hypotheses will be discussed.

CONCEPTUAL MODEL

The study described herein is theory-based in that the hypotheses tested were framed within the tenets of Goodman's (1977) two-stage model pertaining to the availability of information about and the attractiveness/relevance of possible comparison others. Recognizing the problems of current social comparison theories, Goodman (1974, 1977) has attempted to provide a more general framework within which to study the social comparison process as it relates to issues of pay

fairness. According to Goodman, the selection of pay referents is a function of (1) the availability of information about referent categories, and (2) the perceived relevance or attractiveness of these categories. Each aspect of this model will be discussed below.

Availability of Information

The first condition--availability of information--refers to the amount of information an individual possesses about the inputs, outputs, and outcomes of any one referent, as well as the number of referents for which this information is known.⁴ This hypothesis means that an individual must have some information about the outcome/input ratio of a referent before that particular referent can be relevant for the comparison/evaluation process. Note that at this point in his model Goodman (1977) does not consider either the quality of the information (i.e. its perceived reliability and validity) or the relationship between the information's quantity and quality.

⁴ "Inputs" represent the contributions (e.g. age, effort) an individual brings to the job. "Outputs" refer to the products or end results of some work or exchange relationship. "Outcomes" are the rewards or punishments received by the individual in exchange for these inputs (Goodman, 1977).

An individual can acquire information about potential pay referents through two sets of factors. The first set--structural factors--includes such things as the individual's role characteristics and role set. For example, Goodman (1974, 1977) points out that a job in the company's payroll department gives the person a good chance to learn about salaries of other employees. Similarly, level in the organization is generally related to the amount of information available, e.g. vice presidents usually have a broader range of information about others' inputs and outcomes than do front line supervisors.

The second set of factors--individual factors--includes such things as a person's propensity to search the environment for information about potential referents. For instance, Goodman (1968) found that individuals desiring to move up in an organization were likely to engage in search activities to acquire information relevant to their upward movement. Moreover, an individual may "create" pay referents when appropriate ones are not to be found. If, for example, the individual is in a high-frustration/conflict situation, one consequence of various cognitive defense mechanisms could be the generation of potential referents.⁵

⁵ As Goodman (1977) admits, this particular phenomenon has not been empirically documented.

Attractiveness/Relevance of Pay Referents

Respondent Needs

Information about referents, however, is a necessary but necessary condition for the selection of referents. Not only must the individual have a degree of knowledge about the potential referent, but the referent must also have relevance or attractiveness for the comparer. The relevance or attractiveness of a particular referent is a function of its instrumentality in satisfying certain needs. The question of interest, then, is what determines why certain referents better satisfy certain needs than do other referents. Goodman (1977) argues that this issue can be understood only by considering the functional relationship between needs, instrumentality, and relevance, as explicated below.

Needs have several significant affects on the relevance of pay referents. First of all, needs vary in strength. Individuals with a strong need to learn about a particular outcome (e.g. pay) may consider a certain referent to be more important than would those low on this need. Second, a referent may be related to multiple needs. Not only is there a general need to evaluate oneself along such dimensions as inputs and outcomes, but other needs such as recognition and self-esteem also may be tapped during the social comparison process.

Third, the relationship between the need and the referent may be positive, negative, or neutral. If a referent satisfies a need, the relationship is positive. For example, if an individual is able to provide his or her family a style of living superior to what that person experienced as a child, this information may help satisfy the person's need for self-esteem. Similarly, one may choose an "inferior" referent, e.g. someone with the same education, job-related skills, etc. but who receives a lesser salary, to enhance one's self-image.

On the other hand, if the referent blocks the satisfaction of some need, then there is a negative relationship between that referent and that need. To again use the above example, if the individual is unable to provide an acceptable standard of living for the family, or if it is the comparer who is making less money than co-workers of equal education and skills, then these types of comparisons may prevent that individual from satisfying the need for self-esteem. Hence, the referents are negatively instrumental in relation to that particular need. Ideally, it would be possible to identify the multiple needs of an individual and to determine whether the characteristics of the referent facilitate or hinder the satisfaction of the needs under consideration (Goodman, 1974; 1977).

Quantity and Quality of Information

The degree to which a referent satisfies a person's needs also is a function of the reliability and validity of the information about the referent. Goodman (1977) argues that the quality--i.e. the reliability and validity--of information is the most important characteristic thereof. Indeed, the higher the quality of the information, which is to say the higher its perceived reliability and validity, the easier it is for the comparer to evaluate his or her outcome/input ratios relative to those of the referent. Moreover, the easier it is to make a comparison, or in Goodman's (1977) terms the greater the "computational ease," the more attractive that referent becomes to the individual. Thus, the greater the perceived reliability and validity of a referent, the greater its instrumentality hence the more likely its selection.

Note, then, that the quality of information may be inherently different from the availability of information. For example, the comparer may possess an abundance of information about a particular referent. However, if this comparer gives little credence to the information (i.e. considers it unreliable and/or invalid), it is unlikely that the

referent will be an attractive source of evaluation/comparison. After all, if a comparison is made on the basis of invalid data, the comparer will learn little if anything about the object of that comparison. Because, in this case, the referent will be a poor source of need satisfaction, this comparison should hold little attraction for the comparer. But if this large body of information is believed to be valid and reliable, the referent probably will hold great appeal for the individual because of the ease with which the comparison of outcome/input ratios may be made. Thus, while quality of information is independent of the availability of information, quality and referent attractiveness are intimately associated.

The instrumentality of a referent also is affected by the social system's distribution rules (Goodman, 1977). As described earlier, distribution rules are statements about the relationship between outcomes and inputs that serve to legitimate the appropriate outcome/input comparison. The distribution rule, then, helps determine whether a particular referent is appropriate. If the referent is defined as appropriate by this rule, it is likely to be selected. Thus, if the organization distributes rewards, i.e. sets wage levels, strictly on the basis of seniority, Person would consider Other a meaningful comparison if both had equal years of service.

Overview

To briefly summarize this discussion, Goodman (1974; 1977) argues that the selection of referents is a function of (1) the availability of information and (2) the relevance or attractiveness of the referents. Availability of information is affected both by structural (e.g. the comparer's organizational role) and individual (e.g. aspirations of promotion) characteristics of the comparer. The relevance or attractiveness of a potential referent is a function of the number and strength of needs related to that referent and the degree of instrumentality of that referent for satisfying these needs. Instrumentality, in turn, is a function of the computational ease in evaluating a referent as well as the appropriateness of the referent as determined by the distribution rule. Goodman's model may be represented schematically in the following fashion:

Selection of pay referents = f(availability
of information, and relevance or attractive-
ness of referents)

The first part of Goodman's hypothesized relationship may be conceptualized as

Availability of information = f(individual and structural characteristics of the comparer)

Merely having knowledge about a potential referent is a necessary, but not sufficient, condition for the selection of a comparison other. In addition to being known, the potential pay referent must be instrumental to the satisfaction of the comparer's needs. Following Goodman (1977), this second requirement will be operationalized as:

Attractiveness of a referent = f(number and strength of needs related to a referent, and the degree of instrumentality of that referent for satisfying needs)

Variables Used in the Present Study

This research was predominantly concerned with the individual factors that affect information availability, as theoretical/empirical support for the use of such variables is far more abundant than is support for structural variables. The only structural characteristic that was consid-

ered was job tenure. Four individual characteristics were of interest:

1. Knowledge of organizational pay distribution rule
2. Aspiration for internal mobility
3. Desire for external mobility
4. Sociability.

These five constructs--knowledge of pay distribution rule, aspiration, desire to change employers, sociability, and job tenure--were selected because of theoretical and/or empirical support linking each of them with knowledge acquisition. For instance, Berger et al. (1972), Cook (1975), and Goodman (1977) all have argued that since the distribution rule identifies the nature of the association between the levels of the dimension of evaluation and the levels of the outcome to be distributed, this rule is a source of information about potential comparison others. Similarly, Goodman (1968) has found that respondents' knowledge about their organization is directly related to their levels of aspiration.

Mobley (1977) argues that a discrete step in the turnover decision is an evaluation of alternative employment opportunities, which is knowledge acquisition. Weick, Bougon, and Maruyama (1976) have hypothesized that frequent social interaction (i.e. sociability) between an individual and

co-workers provides more opportunities to identify and assess inputs (i.e. to acquire knowledge). Finally, Doeringer and Piore's (1971) discussion of workplace "custom," or the unwritten set of rules based largely upon past practice or precedent, provides support for the idea of job tenure being associated with increased organizationally related knowledge. (A more detailed justification for the selection of these constructs will be provided below.)

CONCEPTUAL HYPOTHESES

Research Questions

A list of unresolved issues that arose from the examination of previous studies involving social comparisons and the determination of pay equity was presented in Chapter II. The first four of these issues were used as a framework within which to place the hypotheses of interest in this study:

1. Will a respondent's reaction to various pay comparisons at time-1 be the same at time-2? (Hypothesis 1)
2. Is the use of pay referents related to the respondent's attitudinal and personal (individual) characteristics? (Hypotheses 2-5[a])

3. Do a respondent's organizational (structural) characteristics influence the reaction to relevant others? (Hypotheses 6-6[e])
4. Do different pay referents have different impacts on respondents' feelings of pay satisfaction? (Hypothesis 7)

These particular issues were chosen because they all focus on the association between characteristics of the respondent and the selection of pay referents. Note that the other four issues in the original list do not share such a common orientation. Consequently, consideration of these issues is believed to have given a common, unified perspective to this empirical study.

Specifically, this study considered the temporal stability of referent selection (Hypothesis 1), and the relationship between personal and attitudinal characteristics of respondents and their use of referents in evaluating pay. Characteristics of concern were knowledge and acceptance of the organization's distribution rule (Hypotheses 2-2[a]), level of aspiration (Hypotheses 3-3[g]), desire to change employers (Hypotheses 4-4[c]), and respondent sociability (Hypotheses 5-5[a]). The effects of job tenure on attitudes toward pay referents (Hypotheses 6-6[c]), as well as the differential impact of pay comparisons on feelings of pay satisfaction (Hypothesis 7), also were examined.

Relevant Definitions

Before presenting the hypotheses of interest, definitions of some of the terms used herein are required. A positive⁶ wage comparison refers to one in which Person is earning more than Other. Conversely, a "negative" wage comparison occurs when Other's wages exceed those of Person. A "consonant" wage comparison takes place when Person and Other are earning the same wage. An "internal" comparison is one between Person and a member of Person's organization. An "internal-above" comparison refers to an internal "Other" who occupies a job at a higher level than does Person. "Internal-below" and "internal-peer" comparisons are to those within Person's organization but at lower and the same job levels as Person, respectively. An "external" comparison designates an Other who is neither a member of Person's organization nor an integral part of Person's social network. "Social" comparisons refer to those among Person and his family, relatives, and friends. "Economic" comparisons refer

⁶ "Positive" is not being used here in the sense of a positive ratio between outcomes and inputs as opposed to a negative value. In this study only absolute values are being considered. Thus, "positive" simply denotes that Person is earning higher pay than is Other.

to such things as salary/cost-of-living comparisons. "Historical" comparisons involve an evaluation of present pay in terms of wages previously received. "Personal" comparisons are those between Person and such referents as what the employing organization promised to pay.

Stability of Pay Comparisons

As stated at the beginning of this study, verifying that individuals make social comparisons to determine the fairness of pay hardly would be unexpected or especially illuminating. A greater contribution to this area of research would be to discover what happens to these comparisons over time. Do individuals react differently toward relevant others from one time to another, or do the reactions remain relatively stable?

Despite the gravity of this question, there is almost nothing in the literature to suggest an answer. Although Adams (1965) hypothesized that alterations in the choice of comparisons would be difficult, this was never tested empirically. Also, while Weick and Nisset's (1968) research suggests that the choices of pay referents remain stable over time, they, too, failed to subject this proposition to di-

rect testing. Goodman (1977), on the other hand, argues that the pay comparison process is dynamic and continuous, which suggests that the selection of pay referents may lack temporal stability. Mahoney (1979) makes a similar point but, like Goodman, does not provide empirical data to support or refute his position. To address this gap in the empirical literature, Hypothesis 1 deals explicitly with the effects of time on the respondent's reaction to various relevant others:

H1: An individual's set of comparison others remains stable over time.

This hypothesis is suggesting simply that individuals do not randomly select pay referents. There seem to be three intuitive arguments for this hypothesis. First, given the rather limited information processing capabilities of individuals, it seems likely that people use a finite, bounded set of pay referents in order to avoid the dysfunctional consequences of information overload (cf. Jacoby, 1977; Malhotra, 1982; Malhotra, Jain, Lagakos, 1982; Wilkie, 1974). Second, the delineation of an individual's set of comparison others will be subject to certain constraints, such as the need to identify only information pertaining to

pay, which further supports the notion of bounded pay referents. Third, given the crucial role of money and wages in society, it is plausible that individuals will make various types of pay comparisons in order to assure themselves they are being treated fairly by the employing organization. However, if the set of relevant others is limited (as argued herein), these assorted comparisons must come from this finite set. Hence, there should be an element of stability in the selection thereof.

The Distribution Rule

Cook (1975) contends that if the distribution rule is perceived to be legitimate and if an individual knows his or her position (or that of any other member of the system) on the dimension of evaluation, then s/he can determine whether or not s/he (or any other member of the system) has been treated inequitably. The distribution rule of interest in this study is the process by which wage levels are determined. In Goodman's (1977) terms, this type of distribution rule is a source of information about potential comparison others, since it helps determine whether a particular referent is an appropriate comparison other for Person. More-

over, through these referents an individual can satisfy the need for just treatment, for self-esteem, and the need to understand ways in which a higher wage can be earned.

For those who perceive as legitimate the organization's wage distribution rule, comparisons with higher paid, higher job-level co-workers should not be too dissatisfying. In addition to the fact that higher level jobs almost invariably mean higher pay, individuals who accept the employer's method of determining pay levels should find this wage differential even easier to accept. Moreover, higher paid same job level co-workers also should not pose excessive pay inequity concerns to respondents who accept the bases on which pay is distributed. After all, given a fair (equitable) basis for salary determination, the occurrence of unequally paid co-workers should be better accepted (in a relative sense) than if the wage difference were perceived to be due to less than legitimate reasons.

Conversely, not all respondents will accept their organization's wage determination process. For these individuals it is believed that negative internal wage comparisons will be negatively instrumental in meeting the aforementioned needs. Indeed, such comparisons will likely be viewed as the epitome of injustice. Thus:

H2: Greater satisfaction with negative internal-above pay comparisons will be associated with increased acceptance of the organization's wage distribution rule.

H2(a): Greater satisfaction with negative internal-peer pay comparisons will be associated with increased acceptance of the organization's wage distribution rule.

Aspiration Level

Familiarity with and acceptance of the organization's wage distribution rule is but one way to acquire knowledge and to determine the relevancy (attractiveness) of potential relevant others. Other attitudinal characteristics such as the individual's desire for upward mobility, or level of aspiration, also seem to be associated with knowledge acquisition. Thus, hypotheses 3-3(g) pertain to the relationship between aspiration and the choice of comparison others.

Aspiration Level and Internal-Above Comparisons

Empirical work by Goodman (1968) indicates that differences in employees' levels of aspiration are positively related to their degree of knowledge about the organization.

The assumption is that people who want to move up in an organization engage in search activities to acquire information relevant to their upward movement. One source of this information, at least in regards to pay, would be upper level job holders. Thus, it is hypothesized that:

H3: Greater importance being placed on internal-above pay comparisons will be associated with higher levels of aspiration.

It is likely that some high aspiration respondents will use upward comparisons to gauge their own future earnings. The difficulty, from a research perspective, lies in the reaction of these people to the disadvantageous wage position in which they find themselves. Some subjects may not be overly bothered by this comparison, since they feel they, too, will eventually reach these positions and the concomitant salary levels. Therefore, the fact they are currently earning less than Other should not cause undue dissatisfaction.

On the other hand, it also is possible that such negative comparisons may be quite irritating. That is, Other's higher earnings (relative to Person) may be constant reminders that the respondent has not achieved the much desired position. When approached from this perspective, negative

internal-above comparisons may be a source of great dissatisfaction.

While any prediction of the directionality of this effect may be premature, it seems likely that respondents' attitudes toward this negative wage position will be related to their level of aspiration. Therefore, it is hypothesized that:

H3(a): Level of satisfaction with negative internal-above pay comparisons will be associated with level of aspiration.

Aspiration Level and Social Comparisons

Conceptually, it seems rather likely that the use of social and familial referents to evaluate one's pay will be associated in some fashion with level of aspiration. On the one hand, it is plausible that individuals desiring to "go far" in the organization would have a rather pressing need for enhanced self-esteem. After all, promotions are forms of recognition as well as potential enhancements of the individual's belief in his or her own abilities. The complement of this work-place demonstration of one's worthiness may be the approval of one's family and friends.

Yet it is equally likely that the approval of those in Person's social network may be ample fulfillment of the need for recognition. For this individual (i.e. low aspiration respondent), work-place promotions may not be all-consuming, and may be secondary to the adulation of one's friends, family, and relatives. Because of this unclear theoretical relationship between aspiration and the importance of social comparisons, directionality must be unspecified. Hence:

H3(b):Level of importance being placed on social pay comparisons will be associated with level of aspiration.

Aspiration Level and Historical Comparisons

While respondents' past earnings likely will be associated with level of aspiration, here, too, the directionality of the relationship can not be specified. That is, individuals with high levels of aspiration may enhance their self-image by comparing present pay to what has been earned in the past. By so doing, the individual has a firm, objective standard against which to measure "how far" he or she has come. Conversely, a low-aspiration respondent may place equal importance on such pay comparisons, particularly if the person is at a job level that is both financially re-

warding and personally comfortable. For this individual, past earnings (which in most cases will be inferior to the current wage) may further enhance the luster of the present job simply because the past earnings are lower than what is currently being earned. Therefore:

H3(c):Level of importance being placed on historical pay comparisons will be associated with level of aspiration.

Aspiration Level and Comparison Importance

In many ways, internal-above comparisons for high aspiration people may be a form of anticipatory socialization (Merton and Kitt, 1950) wherein the comparer takes on the values of the non-membership group to which he or she aspires. Conversely, the groups (job levels) below and on a par with this individual are of considerably lesser importance to the individual, given the emphasis on the reference group. It seems likely, then, that:

H3(d):Less importance being placed on internal-peer pay comparisons than is placed on internal-above pay comparisons will be associated with high levels of aspiration.

and

H3(e):Less importance being placed on internal-below pay comparisons than is placed on internal-above pay comparisons will be associated with high levels of aspiration.

Aspiration Level and Positive External Comparisons

A respondent's desire for advancement in his or her organization suggests, on average, that some conscious or unconscious decision has been made to build a career with that employer. While the high aspiration individual may be able to satisfy certain needs via internal comparisons, the need to verify the correctness of the decision to maintain a long-term relationship with the employing organization probably can best be reinforced through external comparisons. Indeed, by making pay comparisons with lower-paying employers, the respondent's own organization becomes that much more attractive. From this perspective:

H3(f):The selection of positive external pay comparisons will be associated with high levels of aspiration.

Aspiration Level and Economic Comparisons

Just as high levels of aspiration may be associated with certain types of pay comparisons, so too may a lesser desire for upward movement. For instance, internal-above comparisons should have little utility for employees with no desire or possibility of advancing beyond their present job level. Moreover, these individuals must be aware that they more or less are limited to general wage increases instead of the rather substantial raises that often accompany job promotions. This consignment to lesser pay raises may mean that economic demands assume large significance to these people. Therefore:

H3(g): Individuals who consider economic pay comparisons the most important of all pay comparisons will have low levels of aspiration.

Desire for External Movement

Desire for External Movement and External Comparisons

Not only should desire for internal movement lead individuals to engage in information-gathering processes, but desire for external movement also should prompt scanning of

the external environment, hence knowledge acquisition. Support for this assumption is offered by Mobley (1977), who sees an evaluation of the desirability of possible alternatives as one step in the withdrawal process. From this perspective, Hypotheses 4-4(c) relate to the association between the desire to change jobs and pay referent selection:

H4: Greater importance being placed on external pay comparisons will be associated with stronger desires to change employers.

Given that most employees who want to change jobs are unhappy with their current employment situation, any negative information about the employer should be considered rather important. After all, this kind of knowledge validates the correctness of the employee's negative appraisal of the job situation, and in this sense is need-fulfilling. By extension, it is believed that the greater this desire for movement, the greater number of negative external comparisons that will be made. Hence:

H4(a): The selection of negative external pay comparisons will be associated with stronger desires to change employers.

H4(b): Greater importance being placed on negative external pay comparisons will be associated with stronger desires to change employers.

H4(c): Lower satisfaction with negative external pay comparisons will be associated with stronger desires to change employers.

Sociability

Sociability and Negative Comparisons

The last individual variable believed to effect an individual's access to pay equity information is sociability. Weick, et al. (1976:36) state that ". . . extensive contact with work associates should increase the amount of comparison that occurs." In other words, those respondents who tend to be more sociable should make more outcome/input ratio comparisons than do their less gregarious counterparts. This seems to be a reasonable assumption, since this type of contact enables the individual to identify and assess inputs and outcomes of many of his or her co-workers. Moreover, this type of extensive interaction should allow inequity to be sensed sooner and to be reacted to more intensely (Weick, et al., 1976):

H5: Increased interaction among an individual and co-workers will be associated with an

increased number of negative pay comparisons made by that individual.

H5(a): Increased interaction among an individual and co-workers will be associated with lower levels of satisfaction with negative pay comparisons.

Job Tenure

A structural factor having potential to affect one's choice of pay referents is job tenure. According to Doeringer and Piore (1971), "custom," or the unwritten set of work place rules based largely upon past practice or precedent, governs all aspects of the work relationship from discipline to compensation. Moreover, these customs are products of employment stability within internal labour markets. Thus, the longer an individual occupies the same job, the more familiar s/he should become with these rules, i.e. acquire more knowledge. It is for this reason that job tenure is believed to be one way for an individual to increase his or her supply of knowledge about the organization. Hypotheses 6-6(e) will address this issue.

Job Tenure and Negative Internal-Above Comparisons

A seemingly plausible suggestion is that after some point, the longer one stays in a particular position the less likely it is that one will be promoted. With avenues for upward movement now closed, the wages of individuals at job levels higher than that of the respondent should become less important since these are wages the respondent will never achieve. Tentative empirical support for this belief has been reported by Stern and Keller (1953) and Runcimann (1972). Working in France and England, respectively, these researchers found that individuals in one social class rarely compared their wages to those of people in higher, unattainable classes. This sociological finding may be generalizable to the employment situation wherein the worker recognizes that he or she will never be promoted to a higher job level. Thus, this higher position, ipso facto, is as unattainable to the employee as French and English society is to the lower classes of each country. From this perspective:

H6: The longer an individual has held the same job, the less importance that will be assigned to negative internal-above pay comparisons.

Job Tenure and Internal-Peer Comparisons

At the same time, it would seem that the wages of Person's peers should assume even greater importance as job tenure increases. That is, since it is unlikely that Person will ever achieve the "maximum" goal--upper level jobs--s/he should be quite interested in assuring that s/he receive fair treatment at the current job level. In colloquial terms, Person should be expected to "make the best of a bad situation." Moreover, since Person has occupied this job for a good while, s/he should have a significant amount of knowledge about both the outcomes (pay) associated with that position, as well as the inputs of others who have both moved through and remained in that job. At the same time, it likely that Person's awareness of the market-rate for his or her job is decreasing. Thus, based on amount of knowledge, ease of comparison, and the need to make the most out of what is, it is hypothesized that:

H6(a):The longer an individual has held the same job, the greater the importance that will be assigned to internal-peer pay comparisons.

These internal-peer comparisons have the potential to be quite dissatisfying to Person, who is assumed to be very

sensitive to any form of inequitable wage distribution among peers. Therefore:

H6(b):The longer an individual has held the same job, the greater the dissatisfaction that will be assigned to negative internal-peer pay comparisons.

Job Tenure and Internal-Below Comparisons

Lawler (1965) found that managers tend to consistently overestimate the pay of their subordinates, which contributes to feelings of pay dissatisfaction. Thus, it is likely that the longer an individual occupies the same position, assuming that after some point the chances of promotion are inversely related to job tenure, the more sensitive that person becomes to pay differences between him or herself and subordinates. Since upward mobility is an unlikely source of reinforcement for Person's self-image, an alternative way to satisfy this need is to ensure that an adequate pay differential exists between one's self and one's underlings. This assumption is in keeping with Hakmiller's (1962, 1966a) and Wills' (1981) findings that self-enhancement becomes stronger than self-evaluation when Person must fend off derogatory information about him or herself (e.g. lack of promotion). Hence:

H6(c):The longer an individual has held the same job, the greater the importance that will be assigned to internal-below pay comparisons.

Note that according to Lawler (1965), pay comparisons between Person and lower job-level referents are troublesome because s/he feels his/her pay is not sufficiently greater than that of these lower level employees. Assuming the external validity of this finding, it seems that all downward comparisons have the potential to create dissatisfaction. This would seem to be especially true of those respondents with little opportunity to advance. Thus, it is hypothesized that:

H6(d):The longer an individual has held the same job, the greater the dissatisfaction that will be assigned to internal-below pay comparisons.

Job Tenure and Economic Comparisons

Finally, once an individual has reached the summit of his or her career, the lack of promotability means the loss of a major source of pay increases. Aside from general wage

adjustments, this person is almost on a fixed income and will be greatly effected by general economic conditions. Veiga (1981), for example, found this effect in his study of the career movement of managers, as those individuals who had "plateaued" in terms of career advancement generally received lower levels of compensation and salary increases.

Therefore:

H6(e):The longer an individual has held the same job, the greater the importance that will be assigned to economic comparisons.

Differential Effects of Pay Comparisons on Pay Satisfaction

The final question addressed by this research pertains to the effects of these comparisons on feelings of pay equity. That is, do different types of referents (e.g. social, internal) all have the same impact on the respondent's global assessment of whether or not received pay is fair pay? From the context of Goodman's (1977) argument it would seem that different comparisons exert differential impact. Thus, it is hypothesized:

H7: Different types of pay referents will have differential impact on perceptions of pay equity.

Chapter IV

METHODOLOGY

The model used in this study as well as its derivative hypotheses were discussed in the previous chapter. In this chapter the research instrument used for data collection purposes will be examined. Also, arguments as to the psychometric adequacy of the questionnaire will be presented. Finally, the conceptual hypotheses derived in Chapter III will be rephrased in terms more conducive to statistical analyses.

RESEARCH INSTRUMENT

A questionnaire composed of potential comparison others was employed to elicit the standards used by respondents in determining the equitableness of their pay. This instrument (which can be found in Appendix A) is a modified version of that used by Hills (1980), which consists of pay referents identified in earlier works, particularly those of Goodman (1974) and Heneman et al. (1978). There is inferential evidence as to both the validity and reliability of Hills' (1980) questionnaire. As will be elaborated below, the ori-

ginal questionnaire was a product of a thorough search of the professional literature pertaining to pay comparisons. Hence, there should be adequate sampling of the content domain, and therefore evidence of content validity. Also, Hills' (1980) questionnaire has been administered to three different groups, with each application resulting in quite similar factor patterns when subjected to factor analysis. This can be regarded as preliminary evidence of the internal consistency (reliability) of the instrument.

Questionnaire Scoring

The research instrument contained three parts (a detailed description of each is provided below), each consisting of summative or Likert-type scales. This format was selected for two reasons. First, Likert scales are most generally useful in the scaling of people's responses with respect to psychological traits. These scales assume only that individual items are monotonically related to underlying traits and that a summation of items is linearly related to each trait (Nunnally, 1978). Note, though, that this assumption does not imply that each item has exactly the same relationship with the latent attitude (McIver and Carmines,

1981). Indeed, Nunnally (1978) argues that because each item may contain considerable measurement error and/or specificity, the importance of the additive assumption is that it does not overly weight any particular item.

Second, summative scales have a number of attractive advantages over all other methods:

1. They follow from an appealing model.
2. They are rather easy to construct.
3. They are usually highly reliable.
4. They can be adapted to the measurement of many different kinds of attitudes.
5. They have produced meaningful results in many studies to date (Nunnally, 1978).

For all items, a six-point response scale was provided along which respondents were to designate their reaction to each particular item. An even number of scale steps was used, as the inclusion of a neutral step can introduce response styles since some subjects tend to use this step more often than do others. This does not mean, however, that subjects with this propensity are homogeneous. Indeed, Nunnally (1978) reports that often there are reliable differences between such subjects that will be obscured by the neutral step.

Scale scores were obtained by summing the response scores of the component items and then taking a mean value for each scale for each respondent. Three things are particularly noteworthy about this procedure. First, scale means instead of scale totals were used throughout in order to adjust for differences in scale length and to enhance interpretability. Second, whenever a respondent failed to answer at least one-half of the scale's component items, the individual was deleted from that particular analysis.⁷ Third, each item was identically weighted when summing the raw scores. Nunnally (1978) presents two compelling justifications for this equal treatment of all items: (1) it is difficult to defend arbitrary weighting systems, and (2) weighted and unweighted scores usually correlate highly (cf. Alwin, 1973; McIver and Carmines, 1981; Sewell, 1941).

⁷ This pair-wise deletion procedure was deemed preferable to list-wise deletion. Given the rather low sample sizes usually associated with social science research, list-wise deletion would have resulted in a low power study (in statistical terms).

Part I--Pay Comparisons

Frequency of Pay Comparisons

In this part of the research instrument respondents were asked to indicate their agreement (or lack thereof) with statements pertaining to the frequency with which they made 18 potential pay comparisons. A typical statement in this section was: "I often compare my pay to my friends' pay." Subjects were provided responses ranging from Strongly Disagree (1) to Strongly Agree (6) with which to denote their reaction to each statement. A seventh response category--Not Applicable--also was provided, although this answer was deleted from all subsequent statistical analyses.

Importance of and Satisfaction with Pay Comparisons

Next, respondents were asked to compare their salary with that of the same 18 potential pay referents. The first eight items in this section requested the subject to compare his or her wages with the wages of eight different "types" of human pay referents (e.g. "a member of your household"). The individual was to indicate whether s/he was earning more, less, or the same as the chosen comparison other. A quasi-escape answer--Not Sure--was included. The remaining 10 items consisted of impersonal and non-human referents.

For all eighteen comparisons, respondents were requested to indicate how important each comparison was in the evaluation of the fairness of their pay. A six-point scale of possible answers ranging from Very Unimportant (1) to Very Important (6) was provided. Similarly, the respondents indicated their degree of satisfaction with each comparison on a scale varying from Very Dissatisfied (1) to Very Satisfied (6). While no explicit escape option was provided, respondents were instructed to omit any comparisons they found not applicable.

The order in which these items appeared was determined through the use of a random number table. The items initially were divided into those referring to human referents and those referring to non-human comparisons. The eight items which denoted human referents then were numbered consecutively. Next, a random number table was used to determine the order in which the items would appear on the questionnaire. For example, the first item in this section originally was the second item written. Since "2" was the first number between 1 and 8 found in the random number table, the second item on the original list became the first item on the questionnaire. A similar procedure was followed for the inanimate objects.⁸ It is believed that such a ran-

⁸ The order of the items measuring frequency of comparisons parallels the order of this section.

dom ordering helped prevent subjects from developing response sets to similar questions. Once the ordering of items was determined, all respondents received the same version of the questionnaire (at least for the first wave of data collection).

Part II--Attitude Survey

This section of the research instrument attempted to elicit respondent attitudes about:

1. Their satisfaction with the pay practices of their organization (4 items).
2. Their level of aspiration (4 items).
3. Their perceived possibility of external mobility (8 items).
4. Their feelings of social alienation and isolation in the workplace (9 items).
5. Their feelings as to how equitability paid they are (4 items).

The items pertaining to external movement were taken from the questionnaire used by Hills (1980), while those statements dealing with level of aspiration were self-developed. Attitudes toward the administration of the pay system and feelings of pay equity were measured by items from the Compensation (practices) and Compensation (comparison) sca-

les of the Minnesota Satisfaction Questionnaire (MSQ), respectively (Weiss, Dawis, England, and Lofquist, 1967). The sociability items came from the Dean Alienation Scale (Dean, 1960). These items were random ordered in the same manner as discussed above.

Part III--Demographic Information

Here respondents were asked to report such things as the length of time in their current job and with their current employer, the number of previous full-time jobs prior to the present one, and the method by which they were paid (i.e. salaried or wage earner). In addition, personal data such as age, sex, and education were requested.

SCALE ADEQUACY

Validity of the Measures

This study is based on the use of self-report data. Given the subject matter of concern--the use of relevant others in the determination of pay equity--there are few alternative ways of measuring the phenomena of interest. For instance, it would be virtually impossible to develop some behavioural measure of the number of times Person compares

his or her pay to that of a neighbour. Since these comparisons are conceptual, the researcher is faced with the dilemma of either "crawling inside" the head of the respondent and noting the neurological responses to such a comparison, or merely asking the individual about the frequency, importance, and so forth of the particular comparison. Thus, of necessity one must resort to the measurement of attitudes.

Expressed attitudes, such as those examined herein, are often more predictive of individuals' future actions than are so-called "deeper" feelings. In some instances, Nunnally (1978:592) argues, expressed attitudes may be the "cutting edges" of subsequent changes in feelings. Indeed, this is the foundation on which cognitive dissonance theory and the theory of behavioural intentions are based. Thus, the study of attitudes is a legitimate topic for scientific research without showing a high degree of correspondence with other attitude-related forms of behaviour (Nunnally, 1978).

When research interest is centered on attitudes for their own sake, content validity is the major issue. This is somewhat of an obtuse point, as often it is assumed that the predominant interest of the researcher is in explicating the particular attitude as a construct. But since an attitude is a feeling toward some particular social object/target, expressed attitudes are only a single indicator of such

feelings. To explicate the attitude as a construct requires the use of multiple maximally different indicators (Campbell and Fiske, 1959; Nunnally, 1978). This simply was not possible in this study, given both the scarcity, perhaps nonexistence, of behavioural manifestations of pay comparisons, plus the type of sample used in this study. Thus, to illustrate the adequacy of the measures used here, one must accumulate evidence for their content validity.

According to Nunnally (1978), there are two major standards that must be met for ensuring content validity: (1) there must be a representative collection of items and (2) "sensible" methods of test construction must be used. It is felt the research instrument used here satisfies both requirements. First, this questionnaire is largely derived from that used by Hills (1980). The original survey, as earlier discussed, was a combination of those used by Goodman (1974) and Heneman et al. (1978). Hills extracted additional items through a thorough search of the relevant literature on the types of pay comparisons individuals are believed to make. Thus, the question of the adequacy of content domain sampling seems to be answered satisfactorily.

Second, and related to the first point, it is believed that the questionnaire was constructed and presented in a "sensible" manner. The instrument consisted exclusively of

summative (Likert-type) items. As argued above, this format is most generally useful in the scaling of people with respect to psychological traits. Thus, the questionnaire format seems appropriate for the type of research presented here.

Given the current quantitative emphasis of the human resource management area, the failure to provide elaborate statistical "proof" of the validity of a research instrument is usually looked at askance. But as Guion (1965) and Nunnally (1978) argue, the showing of content validity is mainly dependent upon an appeal to the propriety of content and the manner in which it is presented. From this perspective the measures used in this study seem valid.

Reliability of the Measures

While the validity of a measure clearly is a major consideration in test evaluation, reliability is the sine qua non of mental measurement (Guion, 1965). Indeed, reliability, or the extent to which a set of measurements is free from random-error variance, serves as a ceiling for validity, for if the measures produce consistent results, they tend to be free from variance due to random errors. Thus, before an argument for the validity of a measure can be accepted, its reliability must first be shown.

To do this, coefficient alpha values, which are based on the average correlation among items within a scale and the number of items (Carmines and Zeller, 1981), were computed for all combinations of items used in this analysis. Coefficient alpha measures the homogeneity (or internal consistency) of scale items by estimating the correlation between an existing scale and a hypothetical equivalent form. This requires two assumptions. First, it must be assumed that the average correlation between the items in the existing test would be the same as the average correlation between the items in the hypothesized equivalent form. Second, the assumption must be made that the average correlation between items in the two forms would be the same as the average correlation within the existing form (Nunnally, 1970).

According to Nunnally (1978), coefficient alpha is a robust measure in that it is an appropriate reliability index in most situations, since the major source of measurement error is due to inadequate sampling of content. Table 1 contains a list of the scales used in this study and the coefficient alpha value associated with each. Nunnally (1978) argues that instruments used in the early stages of research require only moderate reliability (.70). By this criterion, the scales employed herein appear to have acceptable reliability. Indeed, only four of these scales--aspi-

ration, perceived ease of movement, importance of internal comparisons, and importance of external comparisons--produced an alpha value below .70. Moreover, only the first of these four (the aspiration scale) is substantially below this threshold figure: $\alpha = .53$.

PRETEST SAMPLE

Even though this instrument is based on an existing one with apparently acceptable psychometric adequacy, a pretesting of the questionnaire was required. This was done to eliminate or clarify ambiguous questions or those open to the interpretation of individual respondents.

The questionnaire was distributed to 15 individuals. Table 2 contains a demographic summary of the pilot sample. All members of this pre-test group reported the instructions and item content of the questionnaire to be clear and understandable. There were objections to the format, however, which led to certain changes in the design of the instrument. For instance, the spacing between the possible responses to the first 18 items of Part I and all 29 items of Part II was widened after numerous complaints.

TABLE 1

Internal Consistency Estimates

Scale	Coefficient alpha
Attitude toward wage distribution rule	.83
Aspiration	.53
Sociability	.73
Perceived ease of movement	.67
Intent to move	.93
Social isolation	.73
Importance of historical pay comparisons	.87
Importance of internal pay comparisons	.68
Importance of external pay comparisons	.81
Importance of personal pay comparisons	.65
Importance of economic pay comparisons	.75
Importance of social comparisons	.73

TABLE 2

Demographic Summary of Pilot Sample (n = 15)

Age	31.0	
Education (yrs)	14.0	
Sex (males)	7	(46.7%)
(females)	8	(53.3%)
Job tenure (yrs)	3.6	
Company tenure (yrs)	7.2	

Moreover, in the original questionnaire respondents were asked to name 5 or fewer individuals with whom they most often came into contact, either on or off the job (cf. Festinger, Schachter, and Back, 1950). Very surprisingly, all 15 subjects strenuously objected to this section, with 10 people refusing to supply the requested information. Because of this reaction, the sociogram was deleted from the instrument and replaced with the 9 sociability items mentioned above. This change would have been necessary even without this stringent response by the pilot subjects, since the study could not be conducted within a single organization as originally planned.

Finally, a fuller explanation was included as to why subjects were asked to identify themselves on the questionnaire. Several members of the pre-test group felt intimidated by the identification requirement. When asked if the inclusion of the following statement would reduce their hesitancy to sign the form, all responded affirmatively. Therefore, this statement was inserted just above the location where respondents were to provide their names:

Please print your first and last names in the spaces provided below. The only reason we need this information is because in 3 months we will again ask you to fill out this questionnaire to see if your feelings have changed. Your name is needed only to enable us to match up your answers to both questionnaires.

RESEARCH SAMPLE

Ideally, the sample used in this type of research would consist of individuals performing for a single employer. It is at least plausible that an individual's choice of pay referents may be influenced by certain structural variables in the employing organization. If so, then the merging of subjects from different companies could very well confound the effects of these variables.

The practical realities of the research situation, however, were such that no single organization from which to collect data could be located. Although well over two dozen organizations were contacted about participating in this study, none felt the subject matter to be appropriate for their consideration. The almost unanimous reaction to the study was that it was "inflammatory." That is, the organizations feared that the questions included in the survey instrument would cause employees to become suspicious of the fairness of their pay. This "head in the sand" attitude is rather difficult to understand. It is extremely unlikely that the typical person has not, and does not, regularly make pay comparisons of one form or another. Unfortunately, the contacted organizations did not accept the premise that workers probably evaluate the fairness of their pay prior to anyone actually requesting them to do so.

Therefore, the data used in this analysis came from 15 different locations. Six were local civic organizations, 5 were businesses, 3 were professional associations, and 1 was somewhat of a miscellaneous group. Of the 9 civic and professional groups, 6 allowed their members to complete the questionnaire during a regularly scheduled meeting. For all other sources the questionnaires were either mailed to a contact person or personally delivered to the organization during a regular meeting. Postage-paid, self-addressed envelopes were provided to facilitate return of the survey forms. A total of 353 questionnaires were distributed and 216 were completed and returned, producing a 61.2% response rate. of those returned, 206 (95.4%) were useable in this analysis.⁹

Each questionnaire administration was preceded by a 5-7 minute general explanation of the study. This presentation did not include any discussion of the social comparison process nor were any instructions given as to how the questionnaire was to be completed. This introduction, plus the 25-30 minutes usually required to complete the research instrument, meant that the researcher was asking for a considerable amount of time from each organization. In return for this indulgence, all members who completed and returned the

⁹ The 10 unusable forms were completed by retired individuals.

questionnaire became eligible to win a cash prize. At the end of the study three questionnaires were randomly selected from all those returned. The first name drawn won \$100, the second \$75, the third \$50. To encourage respondents to participate in the second wave of data collection, those who completed both questionnaires were given two entries in the lottery. It is firmly believed by the researcher that had this cash drawing not been offered, the participation of these groups would have been greatly reduced.

Table 3 provides a demographic summary of the study sample. As can be seen from this table, the subjects were fairly well educated (average slightly less than 15 years of formal education), relatively young (average age was 39 years), and from the job and company tenure statistics (6.2 and 9.2 years, respectively) appear to be rather stable job holders.

In terms of sexual make-up, the sample was fairly well balanced, with 117 (57.6%) men and 86 (42.4%) women (with three respondents failing to indicate their sex). The male subsample was better educated ($\bar{X}_{\text{men}} = 15.6$ years; $\bar{X}_{\text{women}} = 13.8$ years; $t = 5.450$, $p < .0001$), older ($\bar{X}_{\text{men}} = 40.1$ years; $\bar{X}_{\text{women}} = 37.8$ years; $t = 1.415$, $p < .1587$), and had longer job tenure ($\bar{X}_{\text{men}} = 6.9$ years; $\bar{X}_{\text{women}} = 5.2$ years; $t = 1.946$, $p < .0530$) and company tenure ($\bar{X}_{\text{men}} = 10.0$ years; $\bar{X}_{\text{women}} =$

8.0 years; $t = 1.859$, $p < .0645$). All subjects were Caucasian.

Approximately 3 months after administering the first questionnaire, these same individuals were asked to complete an abbreviated form of the original survey instrument. While all the groups at time-2 received the 18 items pertaining to the frequency of pay comparisons, one-third of the respondents also were asked about the importance of each comparison in helping them evaluate the fairness of their pay, one-third were asked to indicate their level of satisfaction with each comparison, and the remaining one-third responded to the attitude measurement items (Part III of the time-1 questionnaire).

Of the 120 completed questionnaires returned at time-2, 86 (71.7%) could be matched to a time-1 questionnaire. Table 4 contains a demographic summary of these individuals. As can be seen in this table, there does not appear to be any significant demographic differences between the time-1 and time-2 samples. Aside from a slightly longer average tenure with the employer and in the current job, the time-2 respondents mirror fairly well the total sample.

The rather low number of time-2 responses (120) was disappointing. Such a low response rate is believed to be due largely to two reasons. First, there were very few returns

TABLE 3

Demographic Summary of Study Sample (n = 206)

Age	39.0	
Education (yrs)	14.9	
Sex (males)	117	(57.6%)
(females)	86	(42.4%)
Pay system		
salaried	137	(69.9%)
hourly	59	(30.1%)
Job tenure (yrs)	6.2	
Company tenure (yrs)	9.2	
Job type		
Managerial/Administrative	41	(24.5%)
Professional/Technical	72	(43.6%)
Skilled work	34	(20.2%)
Unskilled work	9	(4.9%)
Work schedule		
Full-time	183	(92.9%)
Part-time	14	(7.1%)

TABLE 4

Demographic Summary of Common Subjects (n = 86)

Age	40.3	
Education (yrs)	15.7	
Sex (males)	49	(57.0%)
(females)	37	(43.0%)
Pay system		
salaried	73	(84.9%)
hourly	13	(15.1%)
Job tenure (yrs)	6.8	
Company tenure (yrs)	10.5	
Job type		
Managerial/Administrative	21	(29.2%)
Professional/Technical	37	(51.4%)
Skilled work	8	(11.1%)
Unskilled work	2	(2.8%)
Work schedule		
Full-time	77	(92.8%)
Part-time	6	(7.2%)

from the private businesses that supplied many of the questionnaires used for the time-1 analysis. This is attributed to the fact that the researcher was totally unknown to these individuals, as there was no direct contact with them at any time. Second, the civic groups had very low common attendance at time-1 and time-2. For example, in one instance 12 questionnaires were obtained from the same organization at both data collection points; only 3 of these were completed by people at both meetings. In an attempt to increase the response rate, individuals who completed the first questionnaire but not the second were mailed the follow-up survey along with a personal letter requesting their cooperation. Of the 53 people to whom the second questionnaire was mailed, 18 (34%) supplied useable responses.

OPERATIONAL HYPOTHESES AND MEASURES OF VARIABLES

Stability of Pay Comparisons

Here the conceptual hypotheses (H) discussed above will be phrased in terms more suitable for statistical analyses.

The first conceptual hypothesis was:

H1: An individual's set of comparison others remains stable over time.

As will be discussed below, determination of pay comparison stability had to be approached in several ways due to the design of this study. Therefore, the conceptual hypothesis presented above will be used to generate 3 operational hypotheses (OH):

OH1(a):The average frequency with which each pay comparison is made at time-1 will not be statistically different ($p < .05$) than the average frequency of reported use at time-2.

OH1(b):The average level of importance assigned to pay referents at time-1 will not be statistically different ($p < .05$) than the average level of importance assigned at time-2.

OH1(c):The average level of satisfaction assigned to pay referents at time-1 will not be statistically different ($p < .05$) than the average level of satisfaction assigned at time-2.¹⁰

Hypothesis 1 is testing the temporal stability of an individual's set of pay comparisons. To more definitively estimate temporal stability, these attitudes would have to be measured several times over an extended period. Because of the nature of the research effort reported here, multiple

¹⁰ Note that the wording of these hypotheses requires the researcher to accept or "prove" the null condition. This is a condition which traditional inferential statistics does not allow, even though the thrust of this research hypothesis requires such acceptance.

applications over a long time span were impossible. Therefore, indications of the stability or instability of these pay comparisons must be demonstrated through multiple techniques in order to counteract the time constraints of this study. Also, note that while the following discussion will deal exclusively with the responses to the frequency items, the same procedures will be applied to the time-1 and time-2 importance and satisfaction results.

To determine the similarity of responses to the frequency items, each individual's response to each item at time-1 will be correlated with that same person's response to the same item at time-2 by means of Pearson's product-moment correlation. Coefficients that are statistically significant at the .05 level will be viewed as indications of item stability.

The second step in the stability analysis will involve a series of matched-pair t-tests. Here individuals' responses to each item at time-1 will be statistically compared with their responses to the same item at time-2. Because the time-1 and time-2 results will be taken from the same sample of subjects, the results are not independent. Due to this lack of independence a matched-pairs t-test instead of Student's t is used (Blalock, 1979).

The Distribution Rule

The Distribution Rule and Internal-Above Comparisons

The second hypothesis mentioned above was:

H2: Greater satisfaction with negative internal-above pay comparisons will be associated with increased acceptance of the organization's wage distribution rule.

This can be restated as:

OH2: There will be a statistically significant ($p < .05$) positive correlation between the average pay-practices score and average satisfaction score assigned to negative internal-above pay comparisons.

The "pay-practices score" refers to the respondents' level of satisfaction with the administration of the organization's compensation system, i.e. level of acceptance of the organization's wage distribution rule. These attitudes will be elicited by four questions taken from the Compensation (practices) scale of the MSQ (Part II--Attitude Survey):

4. We receive pay raises often enough to satisfy me.
7. My salary is based on what I deserve, not what will keep me happy.
13. Salary raises are determined fairly in my company.
15. In this company, a person's salary is connected with the amount of responsibility he or she has.

Respondents' reported levels of agreement with each of these items will be totalled and averaged, with higher mean scores indicating greater acceptance of the organization's pay practices, i.e. distribution rule.

Having done this, the satisfaction score assigned to the item pertaining to internal-above comparisons will be recorded for each individual. The following item refers to this type of internal pay comparison (Part I):

1. Compare your pay to the pay of someone you know in your company whose job is a higher level than your own.

To test this hypothesis, the responses to this item will be segregated into positive response and negative response groups. The degree of association between the average pay-practices scores and the satisfaction scores assigned to the negative internal-above comparisons then will be determined through the use of Pearson's product-moment (r) correlation.¹¹

¹¹ According to Nunnally (1978), the use, or more correctly the interpretation, of Pearson's r is based on three assumptions: (1) the variables of concern must be linearly related, (2) each of the variables must be normally distributed, and (3) the relationship must be homoscedastic rather than heteroscedastic. Also, Guion (1965), Havlicek and Peterson (1977), and Nunnally (1978) argue that unless the assumptions are seriously violated, there should be no real problem in interpreting the product-moment coefficient. As for the t test normally used to determine the statistical significance of the correlation coefficient, Edgell and Noon (1984) have shown that it

The Distribution Rule and Internal-Peer Comparisons

The following hypothesis also was made:

H2(a): Greater satisfaction with negative internal-peer pay comparisons will be associated with increased acceptance of the organization's wage distribution rule.

To put this hypothesis in a form more suitable for quantitative analysis:

OH2(a): There will be a statistically significant ($p < .05$) positive correlation between the average pay-practices score and average satisfaction score assigned to negative internal-peer comparisons.

Here respondents to this item (Part I)--"Compare your pay to the pay of someone you know in your company who is at your job level"--will be divided into those who make a positive pay comparison and those who make a negative. The satisfaction score assigned to the negative comparisons then will be correlated with the average pay-practices score by way of the product-moment correlation.

too is robust enough to withstand violations of the normality assumption (of the distributions of the two variables being correlated). Examination of the frequency distributions for all variables measured in the study indicated no serious violations of the assumptions on which Pearson's r is based (see Appendix A).

Aspiration Level

Aspiration Level and Internal-Above Comparisons

It was argued above that level of aspiration will impact on the respondent's choices of relevant others. Specifically:

H3: Greater importance being placed on internal-above pay comparisons will be associated with higher levels of aspiration.

This may be rephrased as:

OH3: There will be a statistically significant ($p < .05$) positive correlation between the average aspiration score and average importance score assigned to internal-above pay comparisons.

Level of aspiration will be measured by the following self-developed items (from Part II of the research instrument):

11. I would like to have my superior's job.
21. A person with my qualifications should be promoted several times in his or her career.
27. You can measure a person's worth by how far they are promoted in their company.
28. Moving up in this organization is very important to me.

Responses indicating the subject's (dis)agreement with these items will be totalled and averaged. Individual importance scores for the following item--"Compare your pay to the pay of someone you know in your company whose job is at a higher level than your own" (Item 1 from Part I)--will be correlated with the mean aspiration scores by way of Pearson's r coefficient.

Attention then will be turned to the following hypothesis:

H3(a): Level of satisfaction with negative internal-above pay comparisons will be associated with level of aspiration.

In other words:

OH3(a): There will be a statistically significant ($p < .05$) correlation between the average aspiration score and average satisfaction score assigned to negative internal-above pay comparisons.

To test this hypothesis, the satisfaction score assigned to negative internal-above comparisons (Item 1 of Part I) will be determined for each individual. This score then will be correlated with each person's mean aspiration score (see H3) using the product-moment coefficient.

Aspiration Level and Social Comparisons

Still pertaining to the level of aspiration, it was hypothesized that:

H3(b): Level of importance being placed on social pay comparisons will be associated with level of aspiration.

Operationally, this is:

OH3(b): There will be a statistically significant ($p < .05$) correlation between the average aspiration score and average importance score assigned to social pay comparisons.

Attitudes as to the importance of social comparisons will be determined by the following items in Part I of the research instrument:

5. Compare your pay to the pay of one of your friends.
6. Compare your pay to the pay of a relative of yours who does not live with you.
7. Compare your pay to the pay of a member of your household.

Responses to these questions will be totalled and averaged, then correlated with the mean aspiration scores (see H3) by way of Pearson's r .

Aspiration Level and Historical Comparisons

It also has been argued that:

H3(c): Level of importance being placed on historical pay comparisons will be associated with level of aspiration.

Which is to say:

OH3(c): There will be a statistically significant ($p < .05$) correlation between the average aspiration score and average importance score assigned to historical pay comparisons.

Attitudes toward toward the importance of historical pay comparisons will be elicited by the following items (Part I):

11. Compare your pay to the pay you have become accustomed to receiving.
15. Compare your present pay to what you have been paid on previous jobs.
17. Compare your pay to what you have been paid in the past.

For those who have held prior full-time jobs, an average importance score for these three items will be determined and correlated with their average level of aspiration. However, it is certainly possible that for some respondents their current job also will be their first full-time employment. In this case, certain item(s) in this section will not be

appropriate for this type of respondent. Therefore, any respondent who indicates in Part III of the questionnaire that this is his or her first "real" job will be deleted from this particular analysis.

Aspiration Level and Comparison Importance

Another hypothesis pertaining to level of aspiration was:

H3(d): Less importance being placed on internal-peer pay comparisons than is placed on internal-above pay comparisons will be associated with high levels of aspiration.

That is to say:

OH3(d): "High aspiration" respondents will assign a statistically significant ($p < .05$) lower average importance score to internal-peer pay comparisons than to internal-above pay comparisons.

Respondents' attitudes toward the importance of internal-peer comparisons will be ascertained through the following question (Item 3, Part I of the questionnaire): "Compare your pay to the pay of someone you know in your company who is at your job level." The degree of importance assigned to internal-above comparisons will be determined through responses to this item (Item 1, Part I): "Compare

your pay to the pay of someone you know in your company whose job is at a higher level than your own."

To determine what is "high aspiration," the mean responses to those items measuring level of aspiration will be used to generate a scattergram. This plot will be examined to determine the "natural breaks" in the distribution of scores. Should no such breaks be identified, the distribution will be divided at the median, with those respondents scoring above this point being designated as "high aspiration" and those below as "low aspiration."

Having done this, the average importance scores assigned to internal-peer comparisons will be compared to those placed on internal-above comparisons. The statistical procedure used here will be the matched-pairs t-test due to the dependence between responses.

Also:

H3(e): Less importance being placed on internal-below pay comparisons than is placed on internal-above pay comparisons will be associated with high levels of aspiration.

In other words:

OH3(e): "High aspiration" respondents will assign a statistically significant ($p < .05$) lower average importance score to internal-below pay comparisons than to internal-above pay comparisons.

The following item (Item 4, Part I of the questionnaire) will reflect the importance accorded internal-below pay comparisons: "Compare your pay to the pay of someone you know in your company who is at a job level below yours."

The "high aspiration" respondents will be determined in the same manner as described above. Mean levels of importance assigned to the internal-above and internal-below comparisons by the subgroup of interest then will be compared through use of a matched-pairs t-test.

Aspiration Level and Positive External Comparisons

Additionally, it has been hypothesized that:

H3(f):The selection of positive external pay comparisons will be associated with high levels of aspiration.

Or:

OH3(f):The average aspiration score of "high aspiration" respondents will increase in a statistically significant ($p < .05$) manner as the number of positive external pay comparisons increases.

The following items are taken from Part I of the questionnaire and refer to external pay referents:

2. Compare your pay to the pay of someone you know who works for another company.
8. Compare your pay to the pay of someone you

know who works for another company and who is at your job level.

The high aspiration group will be trichotomized based on the number of positive external comparisons (0, 1, or 2). Mean aspiration scores for each level of this trichotomy will be compared through a 1-way analysis of variance (ANOVA) procedure. Assuming this test produces a significant F-value, the individual cell means will be compared by way of Duncan's multiple range procedure.¹²

Aspiration Level and Economic Comparisons

The last hypothesis in this section states that:

H3(g): Individuals who consider economic comparisons the most important of all pay comparisons will have low levels of aspiration.

Or:

¹² Although this hypothesis is quite similar to several of those before it, analysis of variance instead of correlation will be used to test it. This change in methodology is due to the fact that in H3(f) only "high aspiration" respondents are considered. This means that there is a certain degree of range restriction in the distribution of aspiration scores which could artificially depress the correlation coefficient. Conversely, a seemingly similar hypothesis is H4(a), which will entail a correlational methodology. However, note that H4(a) is concerned with an entire score distribution, not just a single segment of that distribution. Hence, correlation will be an appropriate procedure for the latter hypothesis.

OH3(g):A majority of "low aspiration" respondents will assign their highest mean importance score to economic comparisons.

Economic comparisons are believed to be represented by the following items (all from Part I):

12. Compare your pay to the pay you need to meet your family's needs.
15. Compare your pay to the cost of living.
19. Compare your pay to the money you need to meet your own needs.

"Low aspiration" respondents will be those not earlier identified as "high aspiration." A sign test will be used to evaluate this prediction. Average importance scores assigned to all comparisons (internal, external, social, historical, personal, and economic) will be computed for this group of respondents. The number of cases in which economic comparisons are accorded the greatest emphasis will be compared with those in which other types of comparisons are most important. The sign test will be used to determine if the proportion of correct predictions for the sample group can be taken as evidence that in the population of low aspiration individuals, economic comparisons will be the most important at least 50% of the time.

Desire for External Movement

One of the premises on which this study is based is that those individuals desiring to change employers will engage in external environmental scanning to determine both the availability of employment alternatives and the likelihood these alternatives can be achieved. It is with this issue that Hypotheses 4-4(c) will be concerned.

Desire for External Movement and External Comparisons

It was hypothesized that:

H4: Greater importance being placed on external pay comparisons will be associated with stronger desires to change employers.

This is to say:

OH4: There will be a statistically significant ($p < .05$) positive correlation between the desire to change employers and the average importance score assigned to external pay comparisons.

As March and Simon (1958), Forrest, Cummings, and Johnson (1977), Mobley (1977), and Schneider (1976) point out, desire for external movement is a function of both the visibility of alternatives and the attraction and expectancy of attaining them. The "visibility of alternatives" corresponds to a perception of the ease of movement. These atti-

tudes were measured by the following four items (Part II), which were taken from Hills (1980):

9. There are a lot more jobs around than people to fill them.
14. I could find a job as good as the one I now have and not have to leave this area.
19. There are plenty of jobs around for someone of my skills.
26. It would be easy to find another job as good as this one.

One way to measure the "attraction of alternatives" is by measuring the intent for movement. Here this intention will be measured by the following items (Part II of the instrument), also taken from Hills (1980):

6. I am actively looking for another job.
7. I would very much like to work for another employer.
23. As soon as I can find a better job I'll leave.
24. I am seriously thinking about leaving my job.

To determine a respondent's attitude toward external movement, responses to both sets of items will be separately summed and averaged, producing a mean ease-of-movement score and mean intent-to-move score. While both intent to leave

and perceived ease of movement are necessary for an individual to change jobs, neither is sufficient in and of itself to prompt job change. To allow for this necessary/sufficient condition, the average intent score and average ease score will be multiplied together to form a desire-for-external-movement score, with higher products indicating a greater desire to change employers.

Attitudes toward external comparisons will be solicited through the following items (from Part I of the research instrument):

2. Compare your pay to the pay of someone you know who works for another company.
8. Compare your pay to the pay of someone you know who works for another company and who is at your job level.
16. Compare your pay to what other employers are paying for your kind of work.

The average importance score assigned to these three items will be computed and correlated with the desire-for-external-movement score by way of the r coefficient.

It also was hypothesized that:

H4(a): The selection of negative external pay comparisons will be associated with stronger desires to change employers.

Operationally, this is:

OH4(a): There will be a statistically significant ($p < .05$) positive correlation between the average desire-for-external-movement score and the number of negative external pay comparisons selected.

To test this, each individual's desire-for-external-movement score and the number of positive external comparisons made by that person will be correlated. As before, Pearson's product-moment coefficient will be computed.

Another corollary of H4 is the following:

H4(b): Greater importance being placed on negative external pay comparisons will be associated with stronger desires to change employers.

Which is to say:

OH4(b): There will be a statistically significant ($p < .05$) positive correlation between the average desire-for-external-movement and the average importance score assigned to negative external pay referents.

To test this, the responses to those items pertaining to external pay referents (see H4) will be divided into negative and positive responses. The average importance score assigned to the negative external referent items will be correlated with the desire-for-external-movement score by using the r coefficient.

Moreover:

H4(c): Lower satisfaction with negative external pay comparisons will be associated with stronger desires to change employers.

In a form more appropriate for quantitative analysis:

OH4(c): There will be a statistically significant ($p < .05$) negative correlation between the average desire-for-external-movement score and the average satisfaction score assigned to negative external pay comparisons.

Here, too, the two variables of interest will be correlated. Operationalization of these variables has been discussed above (see H4 and H4[a]).

Sociability

Sociability and Negative Comparisons

It has been hypothesized that sociability will be associated with a respondent's selection of comparison others. Specifically:

H5: Increased interaction among an individual and co-workers will be associated with an increased number of negative pay comparisons made by that individual.

Another form of this hypothesis is:

OH5: There will be a statistically significant ($p < .05$) positive correlation between

the average sociability score and the number of negative pay comparisons made by an individual.

To determine the "sociability" of individuals, responses to the following nine items, all from Part III of the questionnaire, will be summed and averaged:

3. Sometimes I feel all alone at work.
8. I don't get invited out by my friends at work as often as I would like.
12. Most people seldomly feel lonely at work.
16. Real friends are easy to find where I work.
17. You can always find friends where you work if you show yourself friendly.
20. The place where I work is basically a friendly place.
22. There are few dependable ties between people at work.
25. People at work are just naturally friendly and helpful.
29. I don't get to visit friends from work as often as I'd really like.

Items 3, 8, 22, and 29 were reverse scored. Thus, higher mean scores for this scale indicate greater sociability.

These items form the Social Isolation Scale of the larger Dean's Alienation Scale (Dean, 1960). Dean (1960) reports split-half reliabilities of 0.84 when corrected for attenuation, thus the reliability of the measure seems to be

of an acceptable magnitude. Moreover, this sub-scale has found frequent use (cf. Bonjean, 1966; Dean, 1960, 1961; Dean and Reeves, 1962; and Erbe, 1964).

Once an average sociability score has been determined for each respondent, that score will be correlated with the number of negative wage comparisons each individual makes. As before, Pearson's r will be used.

It also was hypothesized that:

H5(a): Increased interaction among an individual and co-workers will be associated with lower levels of satisfaction with negative pay comparisons.

Or:

OH5(a): There will be a statistically significant ($p < .05$) negative correlation between the average sociability score and the average satisfaction score assigned to negative pay comparisons.

To evaluate this hypothesis, the average satisfaction score assigned to all negative comparisons will be calculated for each respondent. This value then will be correlated with each individual's mean sociability score.

Job Tenure

Job Tenure and Negative Internal-Above Comparisons

Respondents' length of time in their current jobs (job tenure) is a structural variable believed to be associated with reactions to assorted wage comparisons. Specifically, it was hypothesized:

H6: The longer an individual has held the same job, the less importance that will be assigned to negative internal-above pay comparisons.

This hypothesis may be restated:

OH6: When an individual's importance score assigned to negative internal-above comparisons is regressed against that person's job tenure in months, and the square of that tenure, a statistically significant ($p < .05$) R-square value and negative coefficients for the two independent variables will result.¹³

Although respondents will be asked to provide the number of years and months they have held their present jobs, all tenure figures will be analyzed in months. This will allow incumbents who may have been in their present job for less

¹³ The use of an experience-squared term is a common practice among econometricians (cf. Bloch and Kuskin, 1978; Fogel, 1979; Gunderson, 1978; Hirsch, 1982; Long and Link, 1983; Smith, 1979). The use of this variable is based on the assumption that the marginal benefits associated with each unit of work investment (e.g. each year of experience) decreases over time. The squaring of experience, then, represents the need for larger investments over time to lead to benefits (Mincer, 1974).

than a year to be included in the analysis without resorting to the use of fractional dependent variables.

Responses to the following item (Item 1, Part I)--"Compare your pay to the pay of someone you know in your company whose job is at a higher level than your own"--will be divided into positive and negative comparison groups. The individual's job tenure in months, as well as the square of that tenure, will be regressed against the importance score assigned to these negative comparisons in order to determine the impact of tenure on the evaluation of this relevant other.

Job Tenure and Internal-Peer Comparisons

Still pertaining to job tenure:

H6(a):The longer an individual has held the same job, the greater the importance that will be assigned to internal-peer pay comparisons.

In other words:

OH6(a):When an individual's importance score assigned to internal-peer pay comparisons is regressed against that person's job tenure in months, and the square of that tenure, a statistically significant ($p < .05$) R-square and positive coefficients for the two independent variables will result.

To test this prediction, responses as to the importance of the following referent (Part I) will serve as the dependent variable in the regression equation described for H6:

3. Compare your pay to the pay of someone you know in your company who is at your job level.

It also was hypothesized that:

H6(b):The longer an individual has held the same job, the greater the dissatisfaction that will be assigned to negative internal-peer pay comparisons.

The operationalized version of this would be:

OH6(b):When an individual's satisfaction score assigned to negative internal-peer pay comparisons is regressed against that person's job tenure in months, and the square of that tenure, a statistically significant ($p < .05$) R-square and negative coefficients for the two independent variables will result.

Responses to this questionnaire request (Item 3, Part I)--"Compare your pay to the pay of someone you know in your company who is at your job level"--will be segregated into positive and negative comparisons. The satisfaction level assigned to each negative comparison then will be used as a dependent variable in the above-mentioned regression equation.

Job Tenure and Internal-Below Comparisons

Also, it is believed that:

H6(c):The longer an individual has held the same job, the greater the importance that will be assigned to internal-below pay comparisons.

This is equivalent to saying:

OH6(c):When an individual's importance score assigned to internal-below pay comparisons is regressed against that person's job tenure in months, and the square of that tenure, a statistically significant ($p < .05$) R-square and positive coefficients for the two independent variables will result.

As was done for OH6, OH6(a), and OH6(b), here, too, the number of months on the job and the number of months squared will be the independent variables in the regression equation. The importance attached to the following comparison (Item 4 of Part I) will be the dependent variable--"Compare your pay to the pay of someone you know in your company who is at a job level below yours."

Another hypothesis related to job tenure and lower-level pay comparisons was:

H6(d):The longer an individual has held the same job, the greater the dissatisfaction that will be assigned to internal-below pay comparisons.

Thus:

OH6(d):When an individual's satisfaction score assigned to internal-below pay comparisons is regressed against that person's job tenure in months, and the square of that tenure, a statistically significant ($p < .05$) R-square and negative coefficients for the two independent variables will result.

Here, too, the satisfaction score assigned to internal-below comparisons (Item 4, Part I of the questionnaire) will be the dependent variable in the same regression equation described above.

Job Tenure and Economic Comparisons

The final hypothesis dealing with the effects of job tenure was:

H6(e):The longer an individual has held the same job, the greater the importance that will be assigned to economic comparisons.

Which is to say:

OH6(e):When an individual's average importance score assigned to economic comparisons is regressed against that person's job tenure in months, and the square of that tenure, a statistically significant ($p < .05$) R-square and positive coefficients for the two independent variables will result.

The mean importance score for economic comparisons will be determined in the same way as was done in Hypothesis 3(g).

This value will be used as the dependent variable in the regression equation already described several times before.

Differential Effects of Pay Comparisons on Pay Satisfaction

The last hypothesis with which this study is concerned deals with the issue of the differential impact of pay referents on feelings of pay satisfaction. It has been suggested that:

H7: Different types of pay referents will have differential impact on perceptions of pay equity.

This now will be rephrased as:

OH7: When the average pay satisfaction score is regressed against the average individual importance scores for all pay comparisons, the regression coefficients for some of the comparisons will be statistically significant ($p < .05$).

"Pay satisfaction scores" will be calculated for each respondent and will be the mean value of responses to the following items (Part II), which make up the Compensation (comparisons) scale of the MSQ:

2. I am satisfied with the way my salary compares with similar positions in this company.
5. I feel fairly paid when I compare my salary with that of people just starting with this company.
10. My salary compares well with my co-workers'

salaries.

18. My salary compares favourably with persons in other companies with comparable positions.

The pay satisfaction scores will be regressed against the mean importance scores assigned to the six comparisons dealt with in this study. The full regression model then will be examined for effects of multicollinearity.

Chapter V

EMPIRICAL RESULTS

The results of the statistical analyses described in the previous chapter are presented here. This discussion begins with an analysis of the relationship between respondent attitudes toward the employing organization's wage distribution rule and the reaction to various pay referents. Next is a consideration of how level of aspiration is related to the importance of and satisfaction with pay comparisons. The relationship between desire for external mobility and the choice of relevant others is then considered. The last variables examined here are those involving respondent sociability and job tenure.

STABILITY OF PAY COMPARISONS

As discussed above, a serious criticism of equity theory has been the presumed instability of comparisons. Both Goodman (1977) and Mahoney (1979) have suggested that the pay comparison process may be a dynamic one in which different pay referents are selected at different times. Until this present study, however, apparently there had been no attempts to empirically refute or support the validity of

this criticism. Hypothesis 1 was intended to deal with just this issue:

H1: An individual's set of comparison others remains stable over time.

Frequency of Pay Comparisons

As pointed out in Chapter IV, the design of this study necessitated that multiple procedures be used to determine whether or not there is comparison stability. Hence H1 was operationalized in two ways; the first version was:

OH1(a): The average frequency with which each pay comparison is made at time-1 will not be statistically different ($p < .05$) than the average frequency of reported use at time-2.

Attention first was turned to the stability of use of individual pay referents. Here the frequency response to each particular item at time-1 was correlated with the response to the same item at time-2. This produced 18 correlation coefficients. As can be seen in Table 5, all 18 of these correlations are statistically significant ($p < .05$). Unfortunately, because the same subjects were used to compute all 18 coefficients, it cannot be determined how many of these correlations achieved statistical significance due

to chance alone. Such procedures require independent correlations, which clearly is not the case here. This same condition holds for the importance and satisfaction correlation coefficients.

The second part of this analysis involved a series of matched-pair t-tests. These tests were used to determine whether there was any difference in the average frequency with which each comparison was made at time-1 and at time-2. From Table 6 it can be seen that 15 of the 18 comparisons failed to be statistically significant. This means that only three comparisons were made with different frequencies at time-1 and time-2. Moreover, the positive t values for all three of these comparisons indicate that they were made more frequently at time-2 than at time-1.¹⁴

Importance of Pay Comparisons

In addition to concern for the frequency with which pay comparisons are made, it also is necessary to determine if the importance attached to these various pay referents remains stable over time. Therefore, the second operationalization of H1 was:

¹⁴ The fact that all 18 of the obtained t values are positive may be due to a sensitization effect caused by the initial application of the research instrument.

TABLE 5

Test of Hypothesis 1 (Frequency--Stability)

Comparison	n	r	p
Internal-above	86	.373	.0004
Other companies	86	.497	.0001
Internal-peer	85	.288	.0076
Internal-below	86	.529	.0001
Friends	85	.543	.0001
Relatives	86	.295	.0059
Household	85	.454	.0001
Other co.-peers	85	.537	.0001
Self-worth	85	.598	.0001
Promised pay	84	.453	.0001
Accustomed pay	85	.530	.0001
Family needs	86	.606	.0001
Future pay	86	.422	.0001
Cost of living	85	.656	.0001
Previous pay	85	.495	.0001
Market pay	86	.480	.0001
Past pay	86	.378	.0003
Own needs	86	.714	.0001

TABLE 6

Test of Hypothesis 1 (Frequency--Emphasis Stability)

Comparison	n	t	p
Internal-above	86	0.41	.8640
Other companies	86	2.24	.0278
Internal-peer	85	0.16	.8742
Internal-below	86	0.48	.6342
Friends	85	0.96	.3422
Relatives	86	1.02	.3119
Household	85	1.12	.2648
Other co.-peers	85	3.11	.0026
Self-worth	85	0.51	.6098
Promised pay	84	2.24	.0279
Accustomed pay	85	1.63	.1077
Family needs	86	2.02	.1756
Future pay	86	1.38	.1710
Cost of living	85	1.61	.1102
Previous pay	85	1.17	.2434
Market pay	86	0.58	.5667
Past pay	86	1.81	.0742
Own needs	86	1.14	.2564

OH1(b):The average level of importance assigned to pay referents at time-1 will not be statistically different ($p < .05$) than the average level of importance assigned at time-2.

Once again separate correlations were computed for the time-1 and time-2 responses as to the importance of each of these 18 comparisons. As can be seen in Table 7, only 3 (internal-above, internal-below, and comparison with relatives) of the 18 coefficients failed to achieve statistical significance.

When the average time-1 importance score assigned to each comparison was statistically compared to the average time-2 importance score for the same comparison, only 1 (self-worth) of the 18 matched-pair t-tests was significant. Thus, there was no change in the level of importance assigned to 17 of these comparisons (see Table 8).

Satisfaction with Pay Comparisons

The last hypothesis in this section dealt with the stability of felt satisfaction with these comparisons:

OH1(c):The average level of satisfaction assigned to pay referents at time-1 will not be statistically different ($p < .05$) than the average level of satisfaction assigned at time-2.

TABLE 7

Test of Hypothesis 1(a) (Importance--Stability)

Comparison	n	r	p
Internal-above	40	.292	.0670
Other companies	33	.788	.0001
Internal-peer	29	.540	.0025
Internal-below	39	.270	.0965
Friends	34	.569	.0004
Relatives	36	.251	.1396
Household	35	.624	.0001
Other co.-peers	29	.472	.0098
Self-worth	42	.381	.0127
Promised pay	29	.539	.0026
Accustomed pay	38	.434	.0065
Family needs	43	.517	.0004
Future pay	44	.528	.0002
Cost of living	42	.622	.0001
Previous pay	35	.607	.0001
Market pay	41	.587	.0001
Past pay	42	.509	.0006
Own needs	44	.699	.0001

TABLE 8

Test of Hypothesis 1(a) (Importance--Emphasis Stability)

Comparison	n	t	p
Internal-above	40	0.60	.5536
Other companies	33	-1.67	.1056
Internal-peer	29	-0.61	.5445
Internal-below	39	1.60	.1172
Friends	34	1.95	.0602
Relatives	36	1.07	.2918
Household	35	-0.98	.3342
Other co.-peers	29	1.83	.0774
Self-worth	42	2.34	.0243
Promised pay	29	0.11	.9105
Accustomed pay	38	1.90	.0654
Family needs	43	1.68	.1002
Future pay	44	-0.34	.7333
Cost of living	42	1.18	.2460
Previous pay	35	1.96	.0581
Market pay	41	1.26	.2154
Past pay	42	0.51	.6101
Own needs	44	1.50	.1398

As shown in Table 9, 17 out of 18 correlations were statistically significant. When the average satisfaction scores assigned each item at time-1 and time-2 were compared, only one (own needs) was found to significantly differ in a statistical sense (see Table 10).

THE DISTRIBUTION RULE

The Distribution Rule and Internal-Above Comparisons

It was hypothesized that:

H2: Greater satisfaction with negative internal-above pay comparisons will be associated with increased acceptance of the organization's wage distribution rule.

Which is to say:

OH2: There will be a statistically significant ($p < .05$) positive correlation between the average pay-practices score and satisfaction score assigned to negative internal-above pay comparisons.

This assertion is based on the belief that the distribution rule is a source of information about potential comparison others, since it identifies appropriate referent others for Person. Additionally, higher job-level referents are potential sources for the satisfaction of the needs for just treatment, for self-esteem, as well as the need to understand how higher wages can be earned.

TABLE 9

Test of Hypothesis 1(b) (Satisfaction--Stability)

Comparison	n	r	p
Internal-above	42	.627	.0001
Other companies	32	.784	.0001
Internal-peer	29	.599	.0006
Internal-below	38	.319	.0512
Friends	36	.479	.0031
Relatives	38	.590	.0001
Household	34	.817	.0001
Other co.-peers	29	.841	.0001
Self-worth	48	.601	.0001
Promised pay	31	.563	.0010
Accustomed pay	43	.502	.0006
Family needs	46	.746	.0001
Future pay	46	.592	.0001
Cost of living	47	.692	.0001
Previous pay	38	.403	.0122
Market pay	44	.702	.0001
Past pay	44	.443	.0026
Own needs	48	.725	.0001

TABLE 10

Test of Hypothesis 1(b) (Satisfaction--Emphasis Stability)

Comparison	n	t	p
Internal-above	42	-0.14	.8861
Other companies	32	0.57	.5720
Internal-peer	29	0.57	.5828
Internal-below	38	-0.23	.8197
Friends	36	-0.39	.7016
Relatives	38	1.28	.2102
Household	34	-0.94	.3534
Other co.-peers	29	0.44	.6626
Self-worth	48	-0.72	.4727
Promised pay	31	-0.29	.7734
Accustomed pay	43	0.57	.5698
Family needs	46	-0.17	.8640
Future pay	46	0.86	.3924
Cost of living	47	2.00	.0511
Previous pay	38	0.26	.7968
Market pay	44	-1.24	.2210
Past pay	44	0.00	1.0000
Own needs	48	2.29	.0264

Of the 190 respondents who made the requested internal-above pay comparison, 173 (91.1%) selected a relevant other who was earning more than themselves; 169 of these individuals also answered a sufficient number of the aspiration items to be included in this analysis. The resultant r value of 0.579 ($p < .00005$) indicates a statistically significant positive relationship between the legitimacy ascribed to the wage distribution rule and the satisfaction felt with comparisons involving higher paid, higher job level co-workers. Also, it should be noted that no individual was "Very Satisfied" with the method of wage distribution used by the employing organization, as mean values for this scale ranged from 1.000 to 5.500 (see Appendix B).¹⁵ Table 11 provides further details of this analysis.

The Distribution Rule and Internal-Peer Comparisons

The following hypothesis was made:

H2(a): Greater satisfaction with negative internal-peer pay comparisons will be associated with increased acceptance of the organization's wage distribution rule.

Or:

¹⁵ Unless otherwise noted, the maximum possible value for any scale is 6.000

TABLE 11

Test of Hypothesis 2

Variable	n	Mean	s.d.	Minimum	Maximum
Pay-practices	169	3.402	1.254	1.000	5.500
Neg. Int-above	169	3.609	1.296	1.000	6.000

$$r = 0.579$$

$$p < .00005$$

OH2(a): There will be a statistically significant ($p < .05$) positive correlation between the average pay-practices score and average satisfaction score assigned to negative internal-peer pay comparisons.

It was found that of the 182 subjects who answered this item, 66 (36.3%) chose to compare their pay with that of higher-paid, same job-level relevant others. The resultant correlation between the two variables of interest produced an $r = 0.654$, which is statistically significant at $p < .00005$ (see Table 12).

ASPIRATION LEVEL

Aspiration Level and Internal-Above Comparisons

Within the context of the model being used in this study, it seemed plausible that differences in the level of aspiration among respondents would be associated with differences in their reactions to various pay referents. Specifically, Goodman (1968) argues that level of aspiration is positively related to the degree of knowledge about the organization. Since availability of information is a major component in the Goodman (1977) model, level of aspiration is an obvious variable for this analysis.

Thus, it was hypothesized that:

TABLE 12

Test of Hypothesis 2(a)

Variable	n	Mean	s.d.	Minimum	Maximum
Pay-practices	66	3.438	1.215	1.000	5.250
Neg. Int-peer	66	2.924	1.194	1.000	5.000

$$r = 0.654$$

$$p < .00005$$

H3: Greater importance being placed on internal-above pay comparisons will be associated with higher levels of aspiration.

Which may be rephrased as:

OH3: There will be a statistically significant ($p < .05$) positive correlation between the average aspiration score and average importance score assigned to internal-above pay comparisons.

The assumption underlying this hypothesis is that people who want to advance in the organization engage in search activities to obtain information relevant to their upward movement. Since high-aspiration individuals hope to obtain higher-level jobs, incumbents currently in these jobs likely are important sources of information.

Of the 189 respondents who replied to the item concerning the importance of internal-above pay comparisons, 184 answered enough items in the aspiration scale to warrant inclusion in this analysis. When the appropriate correlation was run, support was found for this hypothesis: $r = 0.210$, $p < .00021$ (Table 13).

Earlier it was hypothesized that:

H3(a): Level of satisfaction with negative internal-above pay comparisons will be associated with level of aspiration.

In other words:

TABLE 13

Test of Hypothesis 3

Variable	n	Mean	s.d.	Minimum	Maximum
Aspiration	184	3.704	0.880	1.333	5.500
Internal-above	184	3.277	1.396	1.000	6.000

$$r = 0.210$$

$$p < .00021$$

OH3(a): There will be a statistically significant ($p < .05$) correlation between the average aspiration score and average satisfaction score assigned to negative internal-above pay comparisons.

This hypothesis was grounded in the belief that an increase in respondents' desire for advancement would be associated with a change in their level of satisfaction with negative internal-above comparisons. On the one hand, there could be a direct parallel change in both variables, since increased aspiration may mean a closer psychological identification with upper level co-workers. On the other hand, these variables may demonstrate a negative relationship. In this scenario the higher paid co-workers would be a constant reminder that Person has not achieved the desired job, hence the comparison becomes dissatisfying.

This prediction was not supported by the data. When the mean aspiration and satisfaction scores were correlated, the product moment coefficient was -0.024 ($p < .7616$) (Table 14).

Aspiration Level and Social Comparisons

Still dealing with level of aspiration, it was hypothesized that:

H3(b): Level of importance being placed on social pay comparisons will be associated with level of aspiration.

TABLE 14

Test of Hypothesis 3(a)

Variable	n	Mean	s.d.	Minimum	Maximum
Aspiration	169	3.723	0.889	1.333	5.500
Neg.Int-above	169	3.627	1.294	1.000	6.000

$$r = -0.024$$

$$p < .7616$$

OH3(b): There will be a statistically significant ($p < .05$) correlation between the average aspiration score and average importance score assigned to social comparisons.

As was true of H3(a), this hypothesis also is based on two scenarios. For some respondents, an increase in aspiration may be associated with an increase in the importance assigned to social comparisons. If so, then, these referents will reinforce Person's self-image and will complement the enhancement provided by job promotions and the like. Conversely, lower aspiration respondents also may consider social referents extremely important, since these comparisons could be sufficient enhancements of Person's self-image.

A total of 172 subjects provided sufficient responses to be included in this analysis. When the appropriate correlation was computed, an r value of 0.211 ($p < .0054$) resulted. As shown in Table 15, the mean value assigned to social comparisons was rather low: $\bar{X} = 2.526$ (a score of 3.0 corresponds to a response of "Somewhat Important"). This somewhat depressed figure was a bit surprising. Since 103 (50%) subjects belonged to social, civic, or professional organizations, it originally was believed that social comparisons would be rather important given the frequent interaction of the respondents.

TABLE 15

Test of Hypothesis 3(b)

Variable	n	Mean	s.d.	Minimum	Maximum
Aspiration	172	3.806	0.868	1.333	5.500
Social comp.	172	2.526	1.200	1.000	5.667

 $r = 0.211$ $p < .0054$

Aspiration Level and Historical Comparisons

The next hypothesis explored the relationship between aspiration level and the importance of historical relevant others was:

H3(c): Level of importance being placed on historical pay comparisons will be associated with level of aspiration.

Which is to say:

OH3(c): There will be a statistically significant ($p < .05$) correlation between the average aspiration score and average importance score assigned to historical pay comparisons.

Here, too, there are competing scenarios. It is possible that high-aspiration respondents may use their lower, previous earnings as objective standards against which to measure their career progress. It also is possible that low-aspiration respondents may find these comparisons important, particularly if the individual is content in the present job. In this instance, lower past earnings compared to the present wage would add further luster to the current job.

As can be seen in Table 16, this hypothesis failed to be supported by the data, as Pearson's correlation was -0.051 ($p < .5027$), and therefore not statistically different from zero.

TABLE 16

Test of Hypothesis 3(c)

Variable	n	Mean	s.d.	Minimum	Maximum
Aspiration	176	3.727	0.855	1.333	5.500
Hist. comp.	176	3.574	1.419	1.000	6.000

 $r = -0.051$ $p < .5027$

Aspiration Level and Comparison Importance

It also was hypothesized that:

H3(d): Less importance being placed on internal-peer pay comparisons than is placed on internal-above pay comparisons will be associated with high levels of aspiration.

Which may be restated as:

OH3(d): "High aspiration" respondents will assign a statistically significant ($p < .05$) lower average importance score to internal-peer pay comparisons than to internal-above pay comparisons.

Hypotheses H3(d) and H3(e) (see below) are both based on the concept of anticipatory socialization. That is, high-aspiration respondents are believed to more closely identify with upper job levels (to which they hope to belong) than with their peers or lower-level co-workers. Hence, more importance will be accorded the higher-level referents than the other two.

To test this hypothesis, the distribution of average aspiration scores was visually examined to determine "natural" (i.e. logical) breaks. As can be seen in Table 17, the most acceptable break seems to be at the median of the distribution. This resulted in a dichotomization of the data such that 98 (50.3%) of the respondents were classified as "low aspiration" ($\bar{X} \leq 3.667$) and 97 (49.7%) were designated

as "high aspiration" ($\bar{X} > 3.667$). For the high aspiration group, the mean importance score assigned to internal-peer comparisons ($\bar{X} = 3.925$) was compared statistically to the level of importance accorded internal-above relevant others ($\bar{X} = 3.582$) by means of a matched-pairs t-test. The resultant t-value of -1.80 failed to obtain statistical significance ($p < .0755$), as Table 18 illustrates.

It was also postulated that:

H3(e): Less importance being placed on internal-below pay comparisons than is placed on internal-above pay comparisons will be associated with high levels of aspiration.

In other words:

OH3(e): "High aspiration" respondents will assign a statistically significant ($p < .05$) lower average importance score to internal-below pay comparisons than to internal-above pay comparisons.

Utilizing a matched-pairs t-test, the directionality of the relationship was found to be as predicted, and the differences between the means was statistically significant: $t_{\text{matched}} = 2.30$; $p < .0242$. Table 19 contains the descriptive statistics for this hypothesis.

TABLE 17

Distribution of Mean Aspiration Scores

score	n	Cumulative	
		n	%
1.333	1	1	0.513
2.000	4	5	2.051
2.250	4	9	2.051
2.333	1	10	0.513
2.500	6	16	3.077
2.667	1	17	0.513
2.750	11	28	5.641
3.000	20	48	10.256
3.250	23	71	11.795
3.333	4	75	2.051
3.500	20	95	10.256
3.667	3	98	1.538
3.750	14	112	7.179
4.000	17	129	8.718
4.250	10	139	5.128
4.333	2	141	1.026
4.500	19	160	9.744
4.667	1	161	0.513
4.750	10	171	5.128
5.000	10	181	5.128
5.250	8	189	4.103
5.333	2	191	1.026
5.500	4	195	2.051

TABLE 18

Test of Hypothesis 3(d)

Variable	n	Mean	s.d.	Minimum	Maximum
Internal-above	80	3.582	1.411	1.000	6.000
Internal-peer	80	3.925	1.385	1.000	6.000

$$t = -1.800$$

$$p < .0755$$

TABLE 19

Test of Hypothesis 3(e)

Variable	n	Mean	s.d.	Minimum	Maximum
Internal-above	84	3.589	1.382	1.000	6.000
Internal-below	84	3.092	1.597	1.000	6.000

 $t = 2.300$ $p < .0242$

Aspiration Level and Positive External Comparisons

The next hypothesis in the series relating to aspiration states:

H3(f):The selection of positive external pay comparisons will be associated with high levels of aspiration.

That is to say:

OH3(f):The average aspiration score of "high aspiration" respondents will increase in a statistically significant ($p < .05$) fashion as the number of positive external pay comparisons increases.

This hypothesis grew out of the belief that high aspiration respondents, either implicitly or explicitly, had made a decision to build a career with their current employer. Furthermore, it was believed that the use of positive external pay referents would help verify the correctness of this decision. In other words, an opposite "grass is always greener" phenomenon is believed to occur: positive external wage comparisons should show the respondent that his or her employer is "better" than other employers.

It was found that those respondents who selected two positive external wage comparisons (the maximum possible) had a mean aspiration level of 4.36 ($n = 27$); those choosing one such comparison had an average aspiration level of 3.73

($n = 52$). Those who failed to use any positive external comparisons had an average aspiration level of 3.62 ($n = 116$). A one-way analysis of variance (ANOVA) indicated significant differences between the means: $F_{obs} = 8.70$; $p < .0002$. Duncan's multiple comparison procedure revealed that the mean associated with the greatest number of positive external comparisons was statistically different from the other two ($p < .05$), which in turn were not significantly different from each other. Table 20 provides additional descriptive data.

Since the significant F_{obs} value indicated a trend in the data (i.e. dependent variable means were not equal for different levels of the independent variable), the next step was to determine the nature of the trend. Basically, a trend is either linear or nonlinear. Since the best prediction equation for data will always be of order $k-1$ (where k is the number of treatment levels), this means that the question of interest is whether a linear or quadratic polynomial is more appropriate to describe the data at hand (Kirk, 1968).

This trend analysis produced $F_{obs} = 14.39$ ($p < .01$), indicating that the linear component of the trend is statistically significant. To determine if there was a quadratic trend component, a test for departure from linearity was

TABLE 20

Test of Hypothesis 3(f)

Dependent variable: Level of aspiration

Source	df	SS	MS	F	p
No. pos. comp.	2	12.1504	6.0752	8.70	.0002
Error	192	134.1196	0.6985		
Total	194	146.2699			

performed; this yielded $F_{obs} = 2.99$, which failed to achieve statistical significance ($p > .05$). It therefore was concluded that the trend does not depart from linearity, and that variability of the cell means about the best-fitting linear equation is due simply to error variability. Thus, in this data set there is a linear relationship between these variables.

Aspiration Level and Economic Comparisons

The last hypothesis in this section stated that:

H3(g): Individuals who consider economic comparisons the most important of all pay comparisons will have low levels of aspiration.

This will be operationalized as:

OH3(g): A majority of "low aspiration" respondents will assign their highest mean importance score to economic comparisons.

Rationale for this hypothesis is that employees with no desire or opportunity for advancement must forego wage increases that accompany promotions. Hence, these subjects will be restricted to smaller general wage adjustments. It therefore was assumed that such respondents would be more attuned to economic needs and economic comparisons than would those with a greater desire for upward mobility.

Of the 98 low aspiration respondents, 32 identified economic comparisons as the most important in evaluating the fairness of their pay. After discarding the 22 cases in which economic comparisons and some other comparison(s) were assigned equal importance, 32 out of 76 useable responses were in the predicted direction.¹⁶ Incorporating this data into a sign test produced a Z score of -1.48, which is not statistically significant ($p < .0694$). Therefore, there is support for the assertion that, for at least 50% of the time, low aspiration respondents will consider economic comparisons the most important of all.

DESIRE FOR EXTERNAL MOVEMENT

Desire for External Movement and External Comparisons

It was argued in Chapter III that the desire to change employers may be related to the individual's propensity to gather information about other employment opportunities. In the context of the Goodman model for the prediction of pay referent selection, desire for external movement should be associated with knowledge acquisition in the form of learn-

¹⁶ Discarding these 22 observations is due to the nature of the statistical procedure used in this analysis (Blalock, 1979).

ing about potential new employers, work conditions, and most importantly for this study, rates of pay. Accordingly, one hypothesis of interest was:

H4: Greater importance being placed on external pay comparisons will be associated with stronger desires to change employers.

Which is to say:

OH4: There will be a statistically significant ($p < .05$) positive correlation between the desire-for-external-movement score and the average importance score assigned to external pay comparisons.

As explained above, the underlying assumption here is that learning about alternative job opportunities is related to the desire to change employers. Since these external pay referents help the respondent judge the potential for job change, the greater the desire to switch jobs, the more relevant becomes this type of pay comparison and the information it provides.

After pair-wise deletion of subjects to adjust for missing data, a total of 148 individuals were included in the analysis. As can be seen in Table 21, correlational analysis supported this hypothesis, as $r = 0.310$, with $p < .00005$.

It also was hypothesized that:

TABLE 21

Test of Hypothesis 4

Variable	n	Mean	s.d.	Minimum	Maximum
Imp. external	148	3.950	1.231	1.000	6.000
Des. for change	148	9.620	6.472	1.250	28.500

 $r = 0.3101$ $p < .00005$

H4(a):The selection of negative external pay comparisons will be associated with stronger desires to change employers.

Operationally, this is:

OH4(a):There will be a statistically significant ($p < .05$) positive correlation between the average desire-for-external-movement score and the number of negative external pay comparisons selected.

In the vast majority of cases, the desire to change employers will be associated with some disgruntlement with the employer. This dissatisfaction with the work situation could be either caused or reinforced by this type of pay referent. However, given the design of this study, causality could not be determined.

Based on the responses of 191 individuals, H4(a) was supported by the data: $r = 0.313$; $p < .00005$ (see Table 22).

A third hypothesis relating to the association between the desire to change employers and the use of external pay referents stated that:

H4(b):Greater importance being placed on negative external pay comparisons will be associated with stronger desires to change employers.

In terms more appropriate for statistical analysis:

TABLE 22

Test of Hypothesis 4(a)

Variable	n	Mean	s.d.	Minimum	Maximum
No. Neg. comp.	191	0.698	0.824	0	2.000
Des. to change	191	9.502	6.366	1.250	28.500

$$r = 0.313$$

$$p < .00005$$

OH4(b): There will be a statistically significant ($p < .05$) positive correlation between the average desire-for-external-movement score and the average importance score assigned to negative external pay referents.

Regardless of the causal direction of this assumed relationship, better paid employees with other firms could be constant reminders to Person that the current employer is not "fair" or equitable. Thus, these referents should be viewed as possessing a significant level of importance.

As can be seen in Table 23, this hypothesis was supported by the data. Specifically, r was found to equal 0.263 ($p < .0003$).

The last hypothesis dealing with the desire for external movement was:

H4(c): Lower satisfaction with negative external pay comparisons will be associated with stronger desires to change employers.

Rephrased, this is:

OH4(c): There will be a statistically significant ($p < .05$) negative correlation between the average desire-for-external-movement score and the average satisfaction score assigned to negative external pay comparisons.

The justification for this proffered hypothesis is similar to that for H4, H4(a), and H4(b). Since this pay referent

TABLE 23

Test of Hypothesis 4(b)

Variable	n	Mean	s.d.	Minimum	Maximum
Imp. neg. ext.	170	3.666	1.502	1.000	6.000
Des. to change	170	9.544	6.790	1.250	28.500

$$r = 0.263$$

$$p < .0003$$

is a source of "negative" information about Person's employer, and since Person (for whatever reason) is unhappy in his or her present job, one would expect the higher paid external referents to be a source of dissatisfaction for the respondent.

Based on the responses of 165 individuals, the hypothesized relationship seems to be upheld. Indeed, analysis produced $r = -0.423$ at $p < .00005$ (Table 24).

SOCIABILITY

Sociability and Negative Comparisons

An individual variable believed to affect knowledge of the inputs and outputs of one's co-workers is sociability. That is to say, it was hypothesized that those respondents who had the most social contact with co-workers would react in specified ways in regards to certain pay referents, as well as being most sensitive to conditions of perceived inequity.

The first hypothesis in this section stated:

H5: Increased interaction among an individual and co-workers will be associated with an increased number of negative pay comparisons made by that individual.

Another form of this hypothesis is:

TABLE 24

Test of Hypothesis 4(c)

Variable	n	Mean	s.d.	Minimum	Maximum
Satisfaction	165	3.688	1.211	1.000	6.000
Des. to change	165	9.478	6.711	1.250	28.500

$$r = -0.423$$

$$p < .00005$$

OH5: There will be a statistically significant ($p < .05$) positive correlation between the average sociability score and the number of negative pay comparisons made by an individual.

The rationale for this hypothesis is that socially active respondents have a greater opportunity to judge the outcome/input ratios of their co-workers than do less outgoing respondents. This type of extensive contact should allow inequity to be sensed sooner. Moreover, since most people consider their work performance to exceed the norm (Meyer, 1975), it seems plausible that most negative pay comparisons may be seen as inequitable. This attitude, plus the sheer number of opportunities highly social respondents have to assess individual inputs and outcomes, produced Hypothesis 5.

On the bases of 164 respondents, this hypothesis was supported by statistical analysis, which produced $r = 0.140$ ($p < .0373$). Table 25 provides additional information about the data used to test this hypothesis.

The second hypothesis pertaining to sociability stated that:

H5(a): Increased interaction among an individual and co-workers will be associated with lower levels of satisfaction with negative pay comparisons.

This may be rephrased to read:

TABLE 25
Test of Hypothesis 5

Variable	n	Mean	s.d.	Minimum	Maximum
Sociability	164	2.878	0.634	1.167	5.333
No. neg. comp.	164	2.878	1.846	0	8.000

$r = 0.140$

$p < .0373$

OH5(a): There will be a statistically significant ($p < .05$) negative correlation between the average sociability score and the average satisfaction score assigned to negative pay comparisons.

This hypothesis is based on the suggestion of Weick et al. (1976) that socially active individuals will react more intensely to inequity than will their less active co-workers. Since, as pointed out above, many negative wage comparisons probably will be viewed as inequitable, heightened sensitivity to this may be reflected in heightened dissatisfaction.

When the variables were correlated, it was found that $r = -0.279$ ($p < 0.0003$). Thus, in this set of data there is a statistically significant negative relationship between respondent sociability and the degree of satisfaction with negative wage comparisons (see Table 26).

JOB TENURE

Job Tenure and Negative Internal-Above Comparisons

Job tenure, the length of time an individual has occupied the same job, was the only structural variable analyzed in this study. It was believed that the longer an individual has remained in the same job, the greater will be that person's familiarity with and acceptance of various workplace norms. For example, work groups often develop performance norms which come to represent a "fair day's work." By

TABLE 26

Test of Hypothesis 5(a)

Variable	n	Mean	s.d.	Minimum	Maximum
Sociability	147	2.913	0.660	1.167	5.333
Sat. neg. comp.	147	3.380.	1.072	1.000	6.000

$$r = -0.278$$

$$p < .0003$$

extension, members of these groups are believed to develop corresponding norms about the rewards that are appropriate for this "fair day's work."

From this perspective, the following was hypothesized:

H6: The longer an individual has held the same job, the less importance that will be assigned to negative internal-above pay comparisons.

Which is to say:

OH6: When an individual's importance score assigned to negative internal-above pay comparisons is regressed against that person's job tenure in months, and the square of that tenure, a statistically significant ($p < .05$) R-square value and negative coefficients for the two independent variables will result.

Here it was assumed that after some point one's chances for promotion and job tenure are inversely related. If so, then internal-above pay referents should become less attractive to Person, since they represent job levels that Person probably will never attain.

This hypothesis found absolutely no support from the data. The regression equation described above yielded a nonsignificant R^2 (0.0097, $p < .4534$). Also, only the job tenure coefficient was in the predicted direction. Parameter estimates and the like may be found in Table 27 .

TABLE 27

Test of Hypothesis 6

Source	df	SS	MS	R-Square	p
Model	2	2.985	1.493	0.0097	.4534
Error	162	304.190	1.878		
Total	164	307.175			

Parameter	Estimate	t	Pr > t
Intercept	-3.434	16.15	0.0010
Job tenure	-0.002	-0.48	0.6331
(Job tenure) ²	6.967 X 10 ⁻¹¹	0.03	0.9726

Job Tenure and Internal-Peer Comparisons

Similarly, the following also failed to be supported:

H6(a):The longer an individual has held the same job, the greater the importance that will be assigned internal-peer pay comparisons.

This may be rephrased as:

OH6(a):When an individual's importance score assigned to internal-peer pay comparisons is regressed against that person's job tenure in months, and the square of that tenure, a statistically significant ($p < .05$) R-square and positive coefficients for the two independent variables will be obtained.

Assuming the validity of the proffered promotion-job tenure relationship, it was conjectured that Person would be most interested in maintaining pay parity with same-level co-workers. Additionally, the longer the respondent held the same job, the greater should be than individual's ability to determine a "fair" outcome/input ratio for that position. After all, the respondent with long job tenure would have had an opportunity to assess the inputs and outcomes of many other people who both moved through and remained in that particular job.

This, too, failed to be confirmed, as the regression led to an R^2 value of 0.027 ($p < .1086$) (see Table 28).

TABLE 28

Test of Hypothesis 6(a)

Source	df	SS	MS	R-Square	p
Model	2	10.229	5.115	0.0270	.1086
Error	162	363.562	2.722		
Total	164	373.791			

Parameter	Estimate	t	Pr > t
Intercept	3.778	17.78	0.0001
Job tenure	-0.002	-0.53	0.5995
(Job tenure) ²	-6.267 X 10 ⁻¹⁰	-0.45	0.6530

Job Tenure and Internal-Below Comparisons

It also was hypothesized that:

H6(b):The longer an individual has held the same job, the greater the dissatisfaction that will be assigned to negative internal-peer pay comparisons.

In more testable terms, this is:

OH6(b):When an individual's satisfaction score assigned to negative internal-peer pay comparisons is regressed against that person's job tenure in months, and the square of that tenure, a statistically significant ($p < .05$) R-square and negative coefficients for the two independent variables will result.

Because of the importance this type of respondent is believed to attach to internal-peer comparisons, it was felt that Person would be rather sensitive to (i.e. express more dissatisfaction with) any form of inequitable pay among these referents. The resultant R^2 of 0.003 was clearly non-significant ($p < .9102$), as Table 29 indicates.

Another hypothesis pertaining to job tenure was:

H6(c):The longer an individual has held the same job, the greater the importance that will be assigned to internal-below pay comparisons.

Or:

TABLE 29

Test of Hypothesis 6(b)

Source	df	SS	MS	R-Square	p
Model	2	0.281	0.140	0.003	.9102
Error	62	92.335	1.489		
Total	64	92.616			

Parameter	Estimate	t	Pr > t
Intercept	2.929	7.25	0.0001
Job tenure	0.001	0.13	0.8988
(Job tenure) ²	-1.564 X 10 ⁻⁹	-0.24	0.8114

OH6(c):When an individual's importance score assigned to internal-below pay comparisons is regressed against that person's job tenure in months, and the square of that tenure, a statistically significant ($p < .05$) R-square and positive coefficients for the two independent variables will result.

If it is correct that those with lengthy job tenure have only slight chances of promotion, then pay referents likely having the most relevance would be same-level co-workers (see discussion just above) and lower-level co-workers (since they have the opportunity to "catch up" to Person). This hypothesis reflects the assumed importance of this latter pay referent.

As before, the data do not support this hypothesis: $R^2 = 0.010$ at $p < .4186$ (see Table 30).

Moreover:

H6(d):The longer an individual has held the same job, the greater the dissatisfaction that will be assigned to internal-below pay comparisons.

Operationally, this is:

OH6(d):When an individual's satisfaction score assigned to internal-below pay comparisons is regressed against that person's job tenure in months, and the square of that tenure, a statistically significant ($p < .05$) R-square and negative coefficients for the two independent coefficients will result.

TABLE 30

Test of Hypothesis 6(c)

Source	df	SS	MS	R-Square	p
Model	2	4.182	2.091	0.010	.4180
Error	176	420.544	2.389		
Total	178	424.726			

Parameter	Estimate	t	Pr > t
Intercept	3.276	15.25	0.0001
Job tenure	-0.005	-1.18	0.2412
(Job tenure) ²	1.142 X 10 ⁻⁸	0.82	0.4130

The rationale for this hypothesis comes from Lawler's (1965) work in which it was found that a significant amount of pay dissatisfaction among managers was due to their belief that their own pay was not sufficiently greater than that of their subordinates. This hypothesis extends that finding to include all downward comparisons.

As was true of the previous hypotheses pertaining to job tenure, this one also could not be supported by the data: $R^2 = 0.003$ ($p < .7464$). (See Table 31 for additional descriptive statistics.)

Job Tenure and Economic Comparisons

The final hypothesis in this section stated that:

H6(e): The longer an individual has held the same job, the greater the importance that will be assigned to economic comparisons.

In other words:

OH6(e): When an individual's average importance score assigned to economic comparisons is regressed against that person's job tenure in months, and the square of that tenure, a statistically significant ($p < .05$) R-square and positive coefficients for the two independent variables will result.

This hypothesis reflects the assumption that a lack of promotability means the loss of a major source of pay rais-

TABLE 31

Test of Hypothesis 6(d)

Source	df	SS	MS	R-Square	p
Between	2	0.809	0.404	0.003	.7464
Within	171	236.065	1.380		
Total	173	236.874			

Parameter	Estimate	t	Pr > t
Intercept	4.266	25.31	0.0001
Job tenure	-0.001	-0.32	0.7470
(Job tenure) ²	0.182 X 10 ⁻⁹	0.58	0.5632

es. Aside from across-the-board general wage adjustments, or perhaps some form of "merit pay," this respondent is almost on a fixed income and is probably greatly affected by general economic conditions.

Here, as before, a very low R^2 was found: $R^2 = 0.009$ ($p < .4218$). (cf. Table 32)

As will be argued in the next chapter, the very dismal performance of this set of hypotheses may be due to sampling individuals from different companies. This cross-organizational data collection perhaps led to serious confounding of structural variables unique to each organization.

DIFFERENTIAL EFFECTS OF PAY COMPARISONS ON PAY SATISFACTION

The last hypothesis in this study deals with the impact of the six types of comparisons on respondents' feelings of pay equity. Specifically, it was hypothesized that:

H7: Different types of pay referents will have differential impact on perceptions of pay equity.

In terms more amenable to statistical analysis:

OH7: When an individual's mean pay satisfaction score is regressed against the average individual importance scores for all pay comparisons, the regression coefficients for

TABLE 32

Test of Hypothesis 6(e)

Source	df	SS	MS	R-Square	p
Between	2	1.832	0.916	0.009	.4218
Within	192	202.797	1.056		
Total	194	204.628			

Parameter	Estimate	t	Pr > t
Intercept	4.444	32.89	0.0001
Job tenure	-0.003	-1.28	0.2033
(Job tenure) ²	8.465 X 10 ⁻⁹	1.03	0.3028

some of the comparisons will be statistically significant ($p < .05$).

This hypothesis is largely derived from Goodman's (1974) finding that respondents use multiple pay comparisons when evaluating the justness of their wages. Here this result is extended to determine if these multiple comparisons all have equal impact on respondents' feelings of being fairly or unfairly paid.

Hypothesis 7 was supported by the data, as the regression produced a statistically significant R-square value of 0.152 ($F_{obs} = 3.67$; $p < .0022$). Also note in Table 33 that only two of the comparisons--internal and historical comparisons--exert a statistically significant impact on perceptions of general pay satisfaction.¹⁷

(Examination of multicollinearity diagnostics suggested no apparent problems associated with correlated independent variables.)

¹⁷ It should be noted that this statement is based on statistically significant partial t-tests. The use of such a test, however, is really a partial or marginal test, because each regression coefficient depends on all the other regressors in the model. Thus, this is a test of the contribution of each regressor given the other regressors in the model (Montgomery and Peck, 1982).

TABLE 33

Test of Hypothesis 7

Source	df	SS	MS	R-Square	p
Between	6	23.664	3.944	0.152	.0022
Within	123	132.178	1.075		
Total	129	155.842			

Parameter	Estimate	t	Pr > t
Intercept	4.541	9.30	0.0001
Internal	-0.279	-3.01	0.0032
External	0.001	0.01	0.9904
Personal	-0.051	-0.47	0.6388
Social	-0.124	-1.36	0.1764
Historical	0.224	2.86	0.0050
Economic	0.021	0.17	0.8660

Chapter VI

DISCUSSION OF RESULTS, LIMITATIONS, AND CONCLUSIONS

In the previous chapter the results of the statistical analyses were presented with little if any speculation and/or interpretation as to their meanings. This chapter presents a summary discussion of the relationships between each of the five variables considered in this project and the role of "relevant others" in the determination of equitable pay. Next, a discussion of the limitations of this study will be presented. Finally, the chapter concludes with a consideration of the implications of this study for both the theoretician and the human resource practitioner.

STABILITY OF PAY COMPARISONS

Based on this analysis, it seems that respondents tend to be consistent in terms of the frequency with which they make each pay comparison, the importance they ascribe to each, and the satisfaction they feel toward each (Hypothesis 1). As stated in Chapter I, the stability of pay comparisons is a crucial issue in this type of research, but one which previously had not been empirically addressed.

In terms of reported frequency, the most stable comparisons (which is to say the ones having the largest test-retest correlation) were those where present pay was compared to the pay respondents believed they were worth, to the pay required to satisfy their own needs, to the pay needed to meet the family's needs, and to the cost of living. Not only did respondents show the most agreement in terms of how frequently these comparisons were made, but these also were the most frequently made comparisons (see Appendix B).

Comparisons to self-worth, own needs, family needs, and cost of living form a logically consistent unit. American society stresses that children are to have a higher standard of living than did their parents. This means, at least to a degree, that an individual who cannot provide his or her children with more and better material comforts is a "failure." Hence, a person's self-evaluation, i.e. self-worth, is intimately associated with the ability to provide for the family's needs. Such an interpretation is not limited to married respondents, as even workers without families to support are likely to take a measure of their own self-worth from their style of living. Indeed, one's life-style in general is an indication of the "success" one has achieved. Thus, any decline in this standard of living, whether due to personal deficiency or to unfavourable economic conditions,

is a form of "failure," and in all likelihood will have a negative impact on one's self-image.

Probably, though, the most significant finding from this particular analysis was the marked stability of the levels of importance attached to pay comparisons and the satisfaction felt toward them. When reported frequencies of comparison at time-1 and time-2 were compared with matched-pairs t-tests, only 3 of the 18 comparisons had significantly changed. Even greater stability was found, however, when the importance scores for both time periods were compared, as only 1 of these comparisons had changed in a statistically significant manner. Similar results came from the analysis of the satisfaction scores.

Moreover, of the 5 comparisons that were relatively unstable, none were unstable along more than one dimension.¹⁸ That is, the 3 comparisons that were unstable in terms of frequency of comparison were quite consistent in terms of importance and satisfaction scores. Similarly, the two other unstable comparisons changed only in terms of a single dimension.

¹⁸ Three comparisons were unstable in terms of the frequency with which they were made. One showed instability in the level of importance, and one was unstable in regards to respondents' level of reported satisfaction.

Thus, there does seem to be some element of stability to the respondents' reaction to these various relevant others. While there may be a slight (in a relative sense) unstableness in terms of the frequency with which individuals make these comparisons, their reactions to the pay referents remain quite constant. As will be argued below, it is this latter finding that has most relevance to both academicians and practitioners. After all, how often a particular comparison is made probably is of little concern. The more pressing issue pertains to the individual's reaction to that comparison, particularly in light of the apparent stability of that reaction.

INDIVIDUAL VARIABLES AND PAY COMPARISONS

The Distribution Rule

According to Berger et al. (1972), Cook (1975), and Goodman (1977), the organization's wage distribution rule, or the bases on which salary levels are determined, specifies the nature of the relationship between the levels of the dimensions of evaluation and the concomitant levels of rewards to be distributed to the members. Thus, this rule provides the individual with information about potential comparison others. This means that Other would be a more relevant pay referent for Person if both individuals occu-

pied the same level on these evaluative dimensions, than if one were at a higher or lower level than the other. It was hypothesized that individuals who accept (i.e. perceive as legitimate) the bases on which pay levels are determined would react differently to various pay referents than would those who do not ascribe this legitimacy.

This hypothesis tended to be upheld by the results of this study, as seen by the statistical support of Hypotheses 2 and 2(a). These results were not surprising, since acceptance of the manner in which pay levels are determined enables the individual to some what rationalize or de-personalize negative wage comparisons. For instance, if Other is receiving higher pay than is Person, this differential can have either objective (e.g. greater seniority by Other, higher job level, etc.) or subjective (e.g. supervisor favouritism) explanations. While both of these justifications pose potential threats to Person's self-image, the former explanation of the unequal pay is fairly correctable. Indeed, by working "better" or by simply acquiring greater seniority, Person may increase his or her level of pay and thereby reduce the wage disparity. But if the wage discrepancy is viewed as having subjective origins, the disadvantageous pay position may become a constant irritant and provide Person with no avenue of redress. It would seem, then,

that when differences in earnings are due to legitimate, accepted (by Person) reasons, they would be less psychologically frustrating.

This argument suggests that Person will better accept a negative wage comparison with a higher job-level referent than with one at Person's own level in the hierarchy. Since jobs at higher organizational levels almost always entail higher salaries than do lower level jobs, Person is already accustomed to and likely accepts an upward wage differential. This disparity should be even more acceptable when the respondent supports the bases on which the organization determines wage levels in general. In this situation there will be both structural (higher job levels) and individual (acceptance of the wage distribution rule) justifications for Person's lower salary relative to higher-level comparison others.

It is unlikely, though, that even the presence of both individual and structural bases for same-level co-workers earning higher pay than Person will completely dissipate the threat to Person's ego posed by such a disadvantageous wage position. If Person accepts the bases on which pay levels are determined, then he or she cannot claim favouritism or unfairness as the cause of the pay disparity. Moreover, unless pay is based on variables unrelated to performance,

such as job tenure, Person must admit that the higher-paid same job-level co-worker is a "better" worker than is s/he.

Such an admission can be a serious blow to one's self-image. Dyer, Schwab, and Theriault (1976) report that subjects in their study felt that level of job performance should be the most important factor in determining the size of salary increases. Yet when Meyer (1975) had workers compare their own job performance to that of their co-workers, over 95% of the respondents described themselves as above-average performers. It would seem, then, that in general individuals tend to see themselves as "good" performers. If so, then admitting that co-workers do a better job than themselves likely would inflict a serious blow to these individuals' self-esteem.

The data in this study provided empirical support for this conceptual analysis. While satisfaction with negative internal-above pay comparisons was moderately high for all respondents ($\bar{X} = 3.628$; out of a possible 6.0), the mean satisfaction score for negative same-level comparisons was only 2.924 (again with the maximum possible value being 6.0). When statistically compared, these two means are significantly different: $t_{\text{matched}} = -3.90$ $p < .0002$. Thus, even if respondents accept the bases on which wage levels are determined, there still is likely to be considerable

concern with what Belcher (1974) has labelled "employee equity."

In addition, the differential importance levels assigned to negative internal-above ($\bar{X} = 3.228$) and negative internal-peer ($\bar{X} = 3.640$) pay referents also reflect this concern for employee equity. Application of a matched-pairs t-test revealed that same-level comparisons are statistically more important than are cross-level comparisons: $t_{\text{matched}} = -3.34$, $p < .0001$. Thus, in terms of both importance and satisfaction, all respondents seem to place a great degree of interest in maintaining pay parity with those at the same hierarchical level as themselves.

Aspiration Level

A major component of Goodman's (1977) model of pay referent selection pertains to the relationship between knowledge acquisition and the role of pay referents in the evaluation of pay. Specifically, a potential pay referent will become an actual pay referent only when the comparer has sufficient knowledge to determine the referent's relevancy, or attractiveness, in the determination of pay fairness.

One variable that seems to affect supply of and avenues to knowledge is the individual's level of aspiration, or de-

sire for upward mobility. Goodman (1968) has found that differences in people's levels of aspiration are positively related to their degree of knowledge about the employing organization. Thus, the greater respondents' desire for upward movement, the greater should be their knowledge about the firm and its employees. Assuming both the parallelism (if not equivalence) of knowledge and information as well as the validity of Goodman's model, this wider store of knowledge should have some relationship to the manner in which Person responds to sundry pay comparisons.

Support for this argument was found to be mixed, although five of the eight hypotheses pertaining to aspiration and reaction to different pay referents were supported (Hypotheses 3, 3[b], 3[e], 3[f], and 3[g]). Specifically, the data indicate that as Person's level of aspiration increases, so does the importance assigned to internal-above pay comparisons. In some ways this finding tends to support the sociological concept of anticipatory socialization (Merton and Kitt, 1950). Briefly, anticipatory socialization refers to the phenomenon wherein the individual assigns greater importance to the values and beliefs of the reference group in which membership is desired, than is assigned to the values and beliefs of the group to which Person currently belongs (the membership group). In terms of this study, as Person's

aspiration increases, so does the desire to join the higher job-level group, hence the greater ascribed importance of these referents.

Because of this increasing desire to transform the reference group into the membership group, Person is hypothesized to assume the values of that group. It is relatively safe to assume that most people feel that workers at job levels lower than their own should be paid less than themselves. Consequently, it is possible that Person will come to feel that his or her higher job-level co-workers should receive higher pay than he or she. After all, the high-aspiration respondent may be cognitively, if not physically, a member of the higher-level group.

Yet there are certain factors that tend to "muddy" this discussion. For example, if the higher-level job group does represent a desired end state for the high-aspiration individual, there should have been some relationship between average desire for internal movement and satisfaction with negative internal-above pay comparisons. But as seen in the discussion of Hypothesis 3(a) in Chapter V, no such relationship was found.

Furthermore, if the effects of anticipatory socialization are being manifest here, why do high-aspiration respondents place more importance on internal-peer referents than

on internal-above? As the analysis of Hypothesis 3(d) revealed, the levels of importance assigned to these two types of referents are statistically equivalent. It may be that the needs of high aspiration respondents to "do better," i.e. earn higher wages, than their co-workers exceed their need to identify with the higher-level referent group. If so, then internal-peers are quite important comparisons since they provide some indication that Person is a "good" performer and should expect to be promoted.

Desire for External Movement

Just as the desire for internal movement (i.e. high aspiration) seemed to be associated with information-gathering processes, thereby facilitating appraisals of potential pay referents, so too should the desire for external mobility. Specifically, it was argued in Chapter III that individuals wanting to change employers would scan the external environment to discover alternative job opportunities. This assumption was derived from Mobley's (1977) conceptualization of turnover as a process activity, one step in which is the evaluation of the desirability and availability of possible employment opportunities. As pointed out in the immediately preceding chapter, support was found for all the proffered hypotheses (Hypotheses 4-4[c]) relating to this issue.

In general, results of this study support Mobley's (1977) contention that scanning of the external environment is part of the turnover process. As shown in the evaluation of Hypothesis 4, there is a statistically significant association between the desire to change employers and the level of importance assigned to external wage comparisons. This finding also is congruent with Goodman's (1977) theoretical reasoning. That is, the use of external comparisons is one way for a respondent to expand his or her knowledge base to be used in the evaluation of pay. These external referents assume added importance for those strongly wanting to leave the organization, since such comparisons help satisfy their needs to more fully learn about alternative employment positions.

While external comparisons in general add to an individual's knowledge base, negative external pay comparisons in particular were found to be associated with the desire to change employers (Hypothesis 4[a]). In other words, the greater a person's desire to leave the organization, the more wage comparisons that were made to higher-paid external referents. Additionally, respondent level of satisfaction with such comparisons was negatively related to the desire for external movement.

These results suggest that people who want to leave the organization find negative external wage comparisons to be both more important and more dissatisfying than do those with a lesser such desire. While one can but speculate as to the causal relationships involved here, two competing interpretations suggest themselves.

First, it may be that for some people any negative external wage comparison is dissatisfying and therefore important, and leads to the decision to voluntarily terminate the employment relationship. Conversely, external comparisons in general may be important, and negative ones particularly dissatisfying. Regardless, this first scenario means that turnover is virtually uncontrollable assuming, of course, the existence of employment alternatives. After all, employees will always be able to find someone at another company who is earning more than themselves.

The second interpretation is that once the worker has decided to withdraw, s/he will seek any negative external comparisons, perhaps to help justify this decision. This, too, presages difficulties for the employer. If the turnover decision is buttressed and rationalized in this fashion, there very well may be little the employer can do to alter the individual's intention to seek other employment.

Sociability

In what more or less was a passing comment, Weick and his colleagues (1976) speculated that an individual's sensitivity to equity concerns may be a function of the amount of interaction between that individual and his or her co-workers. This conjecture seemed to have been drawn from the assumption that by virtue of continual social interaction, the individual develops an informed, albeit biased, appraisal of the inputs of co-workers. In this way the socially active respondent is better able to gauge the appropriateness of rewards given in exchange for inputs. While this argument has significant intuitive appeal within the context of equity theory, Weick et al. (1976) failed to empirically test it.

Sociability is a "natural" variable to be included in this study, since Weick's argument essentially is a knowledge-acquisition/attractiveness-of-pay-referent one. Perhaps this "naturalness" is best illustrated by the fairly strong degree of support for this position found in the data analyzed here, as both hypotheses (Hypotheses 5 and 5[a]) pertaining to the sociability variable were supported by empirical analyses. Moreover, this support was found despite the low variance (0.653) in social interaction scores. Since the magnitude of Pearson's r is a function of the var-

iability of the variables of concern, it was surprising to find that both hypotheses in this section yielded statistically significant results in light of this rather restricted variance in sociability scores.

There does appear to be a positive relationship between respondent interaction with co-workers and the number of negative wage comparisons made, as maintained in Hypothesis 5. Furthermore, it seems that as social interaction increases, so does dissatisfaction with the inferior wage position. Both of these findings support Weick's argument that socially active respondents experience heightened sensitivity to equity concerns.

This increase in experienced dissatisfaction with comparisons involving higher paid referents may be due to the sheer number of individuals with whom socially active respondents come into contact. That is, socially outgoing people have an opportunity to evaluate the outcome/input ratios of many individuals. Since people tend to inflate their own job performance relative to that of their co-workers (Meyer, 1975), the social individual constantly sees others receiving rewards disproportionate to their efforts, at least in the eyes of that individual. These constant reminders of this inequality may be associated with the greater levels of pay comparison dissatisfaction, which again is tentative evidence of enhanced sensitivity to equity concerns.

Here, as before, the issue of causality arises. The comment by Weick and colleagues entails the implicit assumption that this accentuated reaction to perceived inequity is a function of the respondent's level of sociability. This same directional effect could be extrapolated from Goodman's (1977) model. Goodman argues that Person must possess a degree of knowledge about a pay referent before that referent can be used to evaluate Person's pay. In other words, knowledge acquisition (here in the form of sociability) must precede pay comparison (accentuated reaction to higher paid Others). Thus, both Goodman (1977) and Weick et al. (1976) seem to argue for a causal relationship wherein social interaction leads to pay referent selection. Unfortunately, any discussion of causality currently must remain at the level of pure speculation. The cross-sectional methodology used in this study supports the existence of some association between sociability and respondent reaction to pay comparisons, but does not permit inferences of causality between the two.

STRUCTURAL VARIABLES

Job Tenure

The variables discussed up to this point have all been individual variables, which is to say they have reflected traits unique to and which emanate from the respondent. Results of this study suggest that such variables are associated with individuals' reactions to certain types of pay comparisons. It is quite likely, though, that variables within the organization (structural variables) also are related to Person's disposition toward certain relevant others. The study reported here considered one such variable--job tenure.

Hypotheses 6-6(e) were predicated on the assumption that the longer an individual remained in the same job, the greater would be that person's familiarity with and acceptance of various work group and work place norms. A particular concern here is the influence of production norms, or the informal group's determination of what constitutes a "fair day's work." Since the psychological contract of any job is the implied relationship of a "fair day's work" in return for a "fair day's pay," it was believed that internalization of these norms would give the respondent a firm, well-established basis on which to evaluate his or her pay. It also was assumed this internalization process would increase over time.

It was within this theoretical framework that the relationships between job tenure and such attitudes as importance assigned to negative internal-above comparisons, importance of internal-peer wage comparisons, and the like, were analyzed. As pointed out in Chapter V, the data provided no support whatsoever for any of these hypotheses. Given such a dismal failure of the job tenure variable, it is quite tempting to conclude that length of time in the present job is an irrelevant dimension in the study of the pay comparison process. Despite the attractiveness of this conclusion, it certainly would be premature and perhaps inappropriate, the impelling statistical evidence to the contrary notwithstanding.

Three of the six previous empirical inquiries into the pay comparison process used cross-organizational sampling techniques. This means that respondents have been drawn from several different organizations. While this study was to have been done originally within a single firm, the inability to locate a site necessitated the use of subjects from various organizations. It is certainly possible that such a method of data collection led to the confounding of assorted structural characteristics unique to each organization. Conceptually, it seems very likely that organizational practices such as pay secrecy as opposed to pay openness,

performance-based wage increases versus seniority-based increases, and the like, may have some relationship to the use of and reaction to relevant others in the evaluation of one's pay. Consequently, the statistically (and practically) nonsignificant effect of job tenure may be due to the type of sample used in this study.

PAY COMPARISON IMPACT ON FEELINGS OF PAY SATISFACTION

It was conjectured in Hypothesis 7 that some pay comparisons would have greater impact on respondents' perceptions of fair pay than would others. This belief was predicated on two bases. First, the varying results of the six published studies on social comparisons and feelings of pay equity may have been partially caused by the differential importance of comparisons. That is to say, certain groups of subjects may consider certain comparisons to be of greater importance than do other groups. Second, intuitively, it seems unlikely that respondents would place equal importance on all comparisons. If they did, this would suggest, for example, that historical pay comparisons could be "substituted" for internal comparisons.

One way to determine this differential importance (or lack thereof) would be to ask respondents simply to rank these comparisons in terms of their impact on pay evalua-

tion. But such a procedure would require the individual to separately consider each comparison. Given the complexity of the human information processing capabilities, treating each comparison as an entity separate unto itself probably would be overly simplistic. In order to more fully capture this complexity, the mean importance scores assigned to each comparison were used as independent variables in a regression equation to determine their impact on a summary measure of pay satisfaction. As pointed in Chapter V, Hypothesis 7 was supported as two comparisons--internal and historical--were found to significantly impact on these feelings.

The negative coefficient associated with internal comparisons is rather interesting, since it implies that pay comparisons between Person and co-workers tend to reduce satisfaction with pay. There may be two related explanations for this finding. First, Person may view the employment setting as a zero-sum game. That is, an organization possesses a finite store of rewards: there are but so many promotions available, pay raises usually come from a limited pool, only one person will be "Employee of the Year," and so forth. Person, then, may realize that workers from other firms are not competitors for these limited rewards. Instead, Person may see his or her co-workers as the greatest threats to reward acquisition. Since people tend to inflate

their own performance levels relative to those of their co-workers (Meyer, 1975), Person is likely to evaluate the job inputs of these people as being inferior to his or her own. So unless every one else in the organization is paid less than is Person, the failure of these "inferior" inputs to lead to inferior outcomes easily can cause Person to feel underpaid. Hence the negative regression coefficient for internal comparisons.

Conversely, the directional effect of this comparison may be related to the sociability argument advanced by Weick et al. (1976) and supported by this study. Since Person interacts on a daily basis with co-workers, he or she is better able to appraise these individuals' contributions to their jobs than the contributions of employees in other firms. Since greater sociability appears to be related to greater sensitivity to equity concerns (as indicated by the empirical support of Hypotheses 5 and 5[a]), this constant interaction may explain the detrimental impact of internal referents on feelings of pay satisfaction. Moreover, the inability of Person to evaluate the job inputs and outcomes of those in other companies may help explain the statistically nonsignificant affect of external pay comparisons on respondent attitudes toward pay fairness.

The positive regression coefficient found for historical pay comparisons indicates that the greater importance a respondent places on past earnings, the greater will be his or her satisfaction with present pay. A speculative explanation for this result relates to the rampant price inflation of the late 1970's and early 1980's. Although salary increases on a whole did not keep pace with the increases in the cost of living, rather large pay raises (in an absolute sense) were received during these years. While these were artificial increases in the sense that inflation more than consumed the wage boost, respondents may be considering only the absolute difference between their current wage and previous wage. With increases in the Consumer Price Index now being far lower than those earlier in this decade, today's greater value of the dollar may further encourage one's feelings of significant improvement over prior pay levels. Of course, this is pure speculation since respondents were allowed to determine for themselves the time period referred to by "past pay."

LIMITATIONS

As true of any research effort, this study has certain limitations that should be openly stated. Admission of these difficulties is not meant to cast doubt on the validity of the findings, but rather is intended to provide a more complete context within which to interpret these results.

Data Collection Techniques

One of the more serious problems with this study is the use of subjects from several different organizations. As already stated several times, this type of data collection may lead to the confounding of organizationally specific forces which affect the social comparison process. In light of recent work by Dansereau, Alutto, Markham, and Dumas (1982), Dansereau, Alutto, and Yammarino (1984), Markham and Scott (1983), and Markham, Dansereau, Alutto, and Dumas (1983), intra-group and -organization influences on member attitudes and the like is much more extensive than previously thought.

The Within and Between analytic technique (WABA) used by these researchers allows one to determine which source of variation--within-unit or between-unit--represents stronger covariation between the items of interest. Application of this procedure to data extracted from a single organization

would enable the researcher to ascertain the effects (if any) of, say, the work group on the individual's reaction to assorted pay comparisons. Cross-organizational sampling, however, will obscure such effects.

External Validity

There is a very real question here as to the generalizability of these results. As pointed out earlier, subjects used in this study tended to be well-educated and relatively young. Moreover, this sample was not random in the sense that by belonging to social and professional organizations, there was a strong degree of self-selection of respondents involved. Finally, and again as stated above, there probably was serious confounding of organizationally-specific influences caused by sampling individuals from assorted employers.

Causality

While these results may be some what suggestive, the use of a correlational and cross-sectional methodology prevents any discussion of causal relationships. Finding an association between, say, level of aspiration and the degree of importance placed on internal-above comparisons certainly adds to our knowledge about the process of pay equity deter-

mination. However, an even greater advancement would be the ability to say that making "X" number of negative external wage comparisons causes an increase in the respondent's desire to change jobs. Now that the existence of some relationship between attitudes and social comparisons has been tentatively supported, the next step in the research effort should be to determine the directionality of that effect.

Practical vs. Statistical Significance

Research in the social sciences has long been beset by the problem of statistically significant results which have questionable practical significance. Correlations of .20 and .30 are ubiquitous in attitudinal research, and as can be seen from Chapter V, the study described here is no exception. When the social, emotional, and psychological "baggage" human subjects bring into any study is viewed in conjunction with the often-times questionable research instruments used by social scientists, crisp, clean relationship between attitudes and other variables become virtually impossible to discover. Clearly the presence of so many confounding variables will depress the magnitude of the correlations between variables of interest.

Capturing the Wage Distribution Rule

There may be some question as to how well the Compensation (practices) scale of the MSQ captures the concept of the wage distribution rule. The items in this scale measure the respondent's general attitudes toward such things as the manner in which the employer determines salary levels and wage increases. The wage distribution rule, on the other hand, is associated with attitudes toward the specific bases for pay distribution (e.g. performance-based pay decisions as opposed to tenure-based increases). Therefore, the adequacy of the Compensation (practices) scale as a measure for attitudes about the wage determination process may be debated.

Perhaps a better way to measure these specific attitudes would be to give respondents a list of possible factors on which pay levels can be determined, and then ask them to indicate which factors are used by their employers; how important they (the respondents) think each factor is and should be in making pay decisions; and how satisfied they are with each factor as a basis for pay distribution. However, such an elaborate procedure would have significantly lengthened an already long questionnaire and possibly reduced subject participation. It was for this reason that the MSQ scale was used.

Pay Satisfaction and Pay Practices Scales

The MSQ (equity) scale was used here as a summary measure of respondents' levels of satisfaction with pay; the MSQ (practices) scale was used to determine attitudes toward the wage distribution rule. These two scales were designed originally to load on the same factor when subjected to factor analysis, which means that scores on these items will be highly correlated. Because of this, there may be some question as to whether or not these scales are "tapping" different constructs.

Here it is believed that these scales do in fact measure different phenomena. This belief is based on two assertions. First, correlation does not mean equivalence. The number of drownings and the sale of ice cream cones are strongly correlated, yet clearly these are distinct events. Second, it was found that the means of the distributions of scores for these scales are statistically different: $\bar{X}_{\text{equity}} = 4.000$; $\bar{X}_{\text{practices}} = 3.519$; $t = -6.17$, $p < .0001$. Moreover, Hartley's F_{max} test was used to determine the statistical (in)equality of the sample variances. When the sample variance associated with the pay practices scale ($s^2 = 1.583$) was divided by that associated with the equity scale ($s^2 = 1.219$), they were found to be unequal: $F = 1.299$, $p < .01$.

The above argument is not meant to suggest that a construct cannot be multidimensional. However, it does seem that if both measures are "tapping" the same underlying dimensions, then the subjects used in this study should have responded to both scales in a similar fashion. The significant t and F values suggest they did not.

Stability of Pay Comparisons

It was argued that attitudinal stability was tentatively determined through the application of basically the same questionnaire to the same set of subjects at two points in time (separated by a three month interval). Although statistical comparisons of these two sets of responses suggest a rather marked stability in attitudes, this cannot be taken as "proof" that pay comparisons are indeed stable. Final determination of this issue will require sampling of the same subjects more than twice and over a longer period of time than three months. Such extensive investigation of pay referent stability simply was not possible in this study.

Overall Perceptions of Pay Satisfaction

Finally, the MSQ (comparisons) scale was used to obtain a general measure of pay satisfaction. It should be noted that three of the four items in this scale refer to internal

pay referents. Consequently, this may some what account for the statistically significant effect of internal pay comparisons on these general feelings of pay equity.

CONCLUSION

Model Evaluation

(Before evaluating the adequacy of the model used in this study, a note of caution must be interjected. This study, for the most part, was mainly concerned with the knowledge acquisition/availability of information component of the Goodman model. Although the attractiveness of potential pay referents [the second part of Goodman's (1977) model] was considered in the generation of the research hypotheses, this component received less attention than did the first. A thorough evaluation of the full model would require identification of the needs of the sampled individuals. This type of analysis was beyond the scope of this study. Also, a needs analysis would have required a large amount of time being donated by the civic and professional groups used in this investigation. Thus, the following discussion of the conceptual adequacy of Goodman's model should be seen as mainly applicable to one aspect of this model.)

This study has considered whether one can anticipate an individual's reaction to various relevant others used to

determine the fairness of pay. To investigate this issue, Goodman's (1977) model of the social comparison process was used to generate a number of variables believed to effect these reactions. Conceptual and operational hypotheses then were derived from these variables. Finally, the model provided a theoretical back drop against which to interpret results of the empirical testing of these hypotheses.

Dubin (1976) states that the utilization of any model begins with a logical elucidation of the model itself. This involves the derivation of truth statements or propositions from that model. The sole test of the adequacy of these propositions is that they all are logically consistent with the model. It is believed that the model used in this study has met this first criterion of adequacy. For example, Goodman's model assumes that pay referent selection is a function of the availability of information about the referent, as well as the relevance or attractiveness of that referent. A sample proposition derived from this model is the tenet that pay referent selection is associated with the respondent's level of aspiration. Such a proposition seems logically consistent with the model, since theoretical and empirical support was provided for the proffered relationship between knowledge acquisition (the first component of the model) and level of aspiration. Similar connections

were demonstrated for each variable used in this study and the Goodman model.

The second step in the evaluation of a model is to determine whether or not there is a connection between the model and the external, observable world (Dubin, 1976). Explanation of this connection requires that each proposition be converted into a testable hypothesis. As can be seen in Chapter III, all propositions derived from this model did lend themselves to this conversion. Third, the conceptual hypotheses must be operationalized, which means that an empirical indicator for each must be established. The transformation of the conceptual into operational hypotheses was carried out in Chapter IV.

Last, the predictions from the model must be subjected to empirical testing. Results of this procedure were presented in Chapter V. As pointed out in that chapter, all but one of the propositions (that pertaining to job tenure) derived from this model performed as predicted. Thus, using Dubin's (1976) criteria, it tentatively seems that the Goodman model is adequate.

Implications for Compensation Theory

Stability of Pay Comparisons

In some ways, perhaps the most significant result of this study is its apparent defense of equity theory. There are several common criticisms of this theory. One persistent accusation has been that equity theory does not lend itself to field research because of the volatility of pay referent selection (cf. Goodman, 1977; Mahoney, 1979). Another frequent criticism of this theory has centered around the inability of researchers to determine which job inputs and outcomes individuals consider relevant (cf. Weick, 1966; Lawler, 1971). Finally, both conceptual and empirical efforts to quantitatively model the outcome/input relationship have failed (cf. Vecchio, 1984).

It seems that this perhaps unjustified, and certainly premature, discarding of equity theory is akin to "throwing out the baby with the bathwater." There are three reasons for this contention. First, as seen in Chapter V, individuals appear to be rather stable in terms of the frequency with which they make pay comparisons, the importance they assign to these comparisons, and their level of satisfaction with these comparisons. While temporal stability of three months is far from "proof" of comparison permanence, it does indicate that this process is more stable than often be-

lieved. If so, then the "common wisdom" that equity theory is not an appropriate framework for empirical research perhaps should be reevaluated.

Second, the criticism of the failure of equity theorists to identify relevant inputs and outcomes is valid yet also premature. As this study indicates, different "types" of people react differently to similar types of pay comparisons. This may mean there is no standardization of relevant inputs and outcomes across all people. It is more likely that different "types" of individuals assign importance to different types of rewards and the like. If so, then equity theory has been attacked and generally abandoned because of its failure to supply specific details before its general theoretical framework has been elucidated. To put this discussion in a historical context, comparable criticisms of Newton's fledgling theory of gravity would have addressed its inability to explain the perturbations in the orbit of Mars around the sun. Once the notion of gravity was more fully understood, details (such as the explanation of orbit irregularities) could follow. As argued by Walster et al. (1973:175): "Equity theory has no need to know why the scrutineer perceives individuals to be in a relationship; it is enough to know that he does" (original emphasis).

Third, just because it is not known if equity ratios are better expressed as O_a / I_a or $(O_a - I_a) / I_a$, or whatever, does not mean that equity theory is an unworkable paradigm. Just as determination of relevant inputs and outcomes must follow a more complete understanding of the boundary conditions of the theory, so too must the development of a metric for equity research.

The Distribution Rule

This study seems to provide a degree of support for the arguments of Berger et al. (1972), Cook (1975), and Goodman (1977) that the distribution rule helps individuals to identify relevant others. Moreover, this rule, or the bases on which the organization dispenses rewards, also provides people with information about these referents. For example, a positive relationship was found between an individual's acceptance of the organization's wage distribution rule and that person's satisfaction with negative internal-peer pay comparisons. When it is recalled that people tend to see themselves as better performers than their co-workers, this lessened dissatisfaction with such comparisons suggests that some respondents may have objective bases on which to rationalize their disadvantageous wage positions.

These "objective bases" may be provided by acceptance of the wage distribution rule. Since this rule specifies which behaviours the organization rewards, the findings reported herein imply that respondents who accept the rule recognize that their higher-paid same-level colleagues possess "more" of these evaluative traits than do they. Hence, it seems that a legitimate distribution rule (i.e. one that is accepted by the employees) may somewhat attenuate feelings of pay dissatisfaction.

Perhaps, then, inquiries into the issue of pay satisfaction should attempt to capture and determine the legitimacy (in the eyes of the employees) of the participating organization's wage distribution rule. While there have been several previous attempts to measure the relationship between pay satisfaction and the bases on which wage levels are determined (cf. Birnbaum, 1983; Carroll and Tosi, 1973; Dyer et al., 1976; Lawler, 1966; Lawler and Porter, 1966; Penner, 1966; Ronan and Organt, 1973; Schwab and Wallace, 1974), these efforts largely have centered on the association between pay satisfaction and performance and/or objective measures such as age and company tenure. As Dreher (1981) points out, such studies usually involve regressing some general measure of pay satisfaction against these independent variables. The results of this procedure have been

marginally successful at best, producing R-square values ranging from .025 (Ronan and Organt, 1973) to .176 (Schwab and Wallace, 1976).

Another approach was taken by Dyer and Theriault (1976) and Dreher (1981), both of whom included attitudinal/perceptual variables (e.g. perceived adequacy of pay administration, perceptions of job inputs) in regression equations in attempts to explain levels of pay satisfaction. For Dyer and Theriault (1976), an R-square of .470 resulted. Dreher (1981) first omitted these variables, using only the objective measures, and obtained an R-square of .12. The inclusion of the attitudinal measures resulted in an R-square value of .48. While an incremental increase in R-square is expected simply due to the inclusion of additional variables, it is unlikely that such a significant boost would be due purely to mathematical reasons. Thus, results of this current study, in conjunction with Dreher's (1981) finding, suggest that it may be fruitful to look beyond the physical exchange of labour for money, and to consider the conceptual/attitudinal components of the exchange relationship as well.

Aspiration Level

An a priori assumption of this study was that those individuals wanting to advance in their organizations (the "high aspiration" respondents) would identify more closely with upper-level referents than with those at their own job level. That is, it was believed that the effects of anticipatory socialization would override concerns about maintaining wage parity with the respondents' "temporary" co-workers. This belief, however, could not be fully substantiated by the data, as internal-peer referents were found to be more important in the determination of pay equity than were referents higher in the organization.

From a theoretical perspective, this suggests that the effects of anticipatory socialization may be tempered by a "reality component," which in this case would be concern for employee equity. This reality-tempering effect probably is beneficial to the person. As Merton and Kitt (1950) maintain, extreme identification with the reference group is functional for the individual only within a relatively open social structure which allows for vertical mobility. Organizations, however, are not terribly open systems, since only a limited number of people can and will be promoted. In this study, respondents' implicit recognition of this may be demonstrated by the greater importance they place on internal-peer comparisons, relative to internal-above compari-

sons, when evaluating the fairness of their pay. After all, complete identification with upper-level job holders could lead to wage disparities among those in the membership group (i.e. same-level co-workers). This clearly could be dysfunctional for the individual, particularly if the desired promotion never comes.

Desire for External Movement

Mobley (1977) has argued that turnover is a process activity made up of several discrete steps. One of these steps involves scanning the external environment to ascertain the probability of finding and obtaining desirable alternative job opportunities. Results of the current study tend to corroborate this argument. For example, a direct association was found between the desire to quit and the number of external wage comparisons a person made as well as the importance assigned to these comparisons. The increase in the number of negative comparisons implies that for whatever reason, the individual was finding alternative work situations seemingly preferable to the current one (at least in terms of pay). While respondents may have inadvertently found some of these more favourable job opportunities, it is very unlikely that the discovery of all of them was due to serendipity. Hence, in all probability there must have been

some element of search activity (i.e. environmental scanning) on the part of the individual. This position supports Mobley's process argument, since such activity suggests turnover is not a spontaneous, "spur-of-the-moment" decision.

Furthermore, this study reinforces the idea that the turnover decision is a function of both the availability of alternative opportunities and the perceived attractiveness of these opportunities. This conclusion is drawn from the multiplicative definition of desire-for-external-movement used here: a high score required the respondent to report many alternative jobs and a strong likelihood of acquiring these jobs. This, too, tends to make the turnover decision a conscious, rational one (in most instances).

Sociability

There seems to be a direct relationship between an individual's level of social activity and his or her sensitivity to equity concerns. Specifically, a positive correlation was found between social activeness and the number of negative wage comparisons made. Furthermore, such comparisons tended to be more dissatisfying as sociability increased.

These findings offer support for Lawler's (1971) contention that financial remuneration can be instrumental for the fulfillment of a variety of needs, including the need for esteem and recognition. If so, then finding socially active people to demonstrate a marked concern with pay fairness should be expected. For many people an active social life is an indication of acceptance by colleagues and friends. Indeed, the well known "wall flower" is defined by the lack of a social life and companions. Social popularity, then, is an indication of the esteem in which others hold one as well as the recognition that one possesses certain attractive traits.

Assuming the veracity of these assumptions, gregarious people should be quite attuned to equity concerns, since money helps satisfy some of the same needs as does social activity. Because these needs are so important to these respondents, all sources of need fulfillment become important. If co-workers are "unfairly" earning more than the "social butterfly," then an important way to satisfy these needs has been blocked.

This discussion suggests that researchers should consider the impact of these types of needs when investigating pay satisfaction. Moreover, this finding reemphasizes the concept of individual differences, which often is overlooked

by researchers in their attempts to discover broad, "scientific" principles of management.

Differential Effects of Pay Comparisons on Pay Satisfaction

Some pay comparisons were found to be more important in terms of their impact on feelings of pay fairness than were others. This suggests two tentative conclusions.

First, people may look for reasons both to be satisfied and dissatisfied with their current wage. This conclusion is prompted by the fact that the two comparisons having statistically significant impacts on pay satisfaction exerted opposite effects. While the level of importance assigned to internal pay comparisons reduced the respondent's satisfaction with the current wage, the importance of historical comparisons increased the level of overall pay satisfaction. Perhaps, then, pay satisfaction and pay dissatisfaction have different origins. To elaborate, pay dissatisfaction (or at least lower pay satisfaction) is somewhat imposed on the individual by external forces (the wages of other people). Pay satisfaction, on the other hand, seems to come from within the individual in that historical pay comparisons require the evaluation of the person's current wage relative to his or her previous wages.

This argument is roughly parallel to the two-factor theory of job satisfaction (Herzberg, Mausner, and Synderman, 1967). Herzberg et al. (1967) argue that "hygiene factors" can cause feelings of job dissatisfaction. Examples of such factors are relationships with supervisors, peers, and subordinates. Note that these same three general classes of individuals were used as internal pay referents in the present study. And just as these influences contribute to job dissatisfaction in Herzberg's theory, so too in this study do they contribute to pay dissatisfaction.

The second factor in the two-factor theory is composed of "satisfiers," which are believed to improve job satisfaction. Achievement, recognition, advancement, and personal growth, according to Herzberg et al. (1967) are examples of satisfiers. By this definition, job satisfaction comes from intrinsic factors. Similarly, pay satisfaction also may come from within the individual. Since the historical comparisons require Person to evaluate the current wage in terms of earlier wages, these provide Person with a measure of his or her achievement or advancement (i.e. "satisfiers").

The second conclusion that may be extrapolated from this finding relates to the primacy of internal comparisons relative to external ones in regards to the affects on feel-

ings of fair pay. As pointed out in Chapter II, the importance of each of these relative to the other has been frequently debated in the literature on pay comparisons. While obviously the findings of this study will not settle the issue, it is noteworthy that this is the only study using cross-organizational sampling techniques that found one of these comparisons to be more important than the other.

Implications for Compensation Practice

Stability of Pay Comparisons

Finding a degree of stability in respondents' use of and reaction to various referents was a "positive" result as far as compensation theory is concerned. From the practitioner's point of view this stability may not be such welcome news. This result may mean that once formed, employees' attitudes about the fairness of their pay may be rather difficult to change. If so, then very early in the workers' careers the personnel manager should begin a concerted effort to create positive feelings toward the organization's pay rates.

If over time individuals do tend to react in the same way to the same pay comparisons, then the type of comparison--positive or negative--initially made can either colour

or reflect their long-term attitudes about pay.¹⁹ Thus, instead of dealing with pay dissatisfaction in a reactive manner, the practitioner must take proactive measures to prevent this problem. One such step would be to show all newly hired employees how their pay compares to that offered by other employers (assuming, of course, such a comparison is favourable to the first organization). This could be a simple addition to the firm's orientation program for new workers.

Creating a sense of external equity, however, does not seem as important as creating a feeling of internal equity, especially in light of the differential importance accorded these pay comparisons. Unfortunately, achieving these latter feelings probably is more difficult, as well as more important. After all, not only are the internal referents seen on a daily basis, but they also are the one's who job inputs seem to be consistently denigrated by the individual relative to his or her own. Consequently, these referents are constant assaults on the individual's sense of pay fairness.

¹⁹ Since this study does not lend itself to a discussion of causality, it cannot be determined if the type of pay comparison causes or mirrors the individuals' feelings toward pay.

A step that may attenuate the deleterious impact of such comparisons would be to show the newly hired that the organization has definite standards of performance and that financial and nonfinancial rewards are allocated on these bases. For example, the personnel practitioner could point out current employees who have advanced in job level and show how each demonstrates traits which the organization rewards.

The statistically nonsignificant impact of external wage comparisons on feelings of pay satisfaction was an unexpected finding. Assuming the validity of this result, this may mean that organizations place too much time and emphasis on area wage and hour surveys. This study suggests that external equity has little affect on current employees' feelings of pay satisfaction. Therefore, the time devoted to market surveys perhaps could be better spent on attempts to ensure internal equity. However, this is not a recommendation that should be rashly implemented. While external equity concerns may not influence one's attitudes about the satisfactoriness of one's pay, these concerns may (and probably will) impact on the firm's ability to attract capable employees. Perhaps, then, the human resource manager should neither totally disregard the market rate, nor should s/he be overly preoccupied with it.

The important point for the practitioner is that initial pay comparisons may prove to be resistant to change. Therefore, the organization must strive to ensure that the first pay comparisons individuals make are ones that will put the organization in the best possible light. Obviously, then, it would be to the advantage of the employer to determine or at least significantly impact upon the new employee's choice of relevant others. It is possible that pay satisfaction is easier to create than pay dissatisfaction is to reduce.

The Distribution Rule

It was found that respondents who accept the organization's wage distribution rule, or the bases on which pay raises are determined, tend to be less dissatisfied with negative wage comparisons. Moreover, this rule provides the employee with a way to identify and to acquire knowledge about relevant pay referents. For example, if the organization pays on the basis of individual performance, then Person probably will compare his or her wages to the pay of Others who are performing at the same level.

These findings have several implications for the human resource manager. First, once again the need is evident for the organization to have clear and unambiguous dimensions

along which individuals are evaluated and which are accepted by the workers. Although not empirically tested, Goodman (1977) speculates that without clear pay referents, individuals may make up such comparison others. The question for the practitioner, then, is will these others be advantageous to the organization? By having specified bases for performance evaluation, the practitioner may be able to avoid these flights of imagination by the employees and to help the individual select "correct" comparison others (Belcher, 1979).

Second, merely having these clearly defined evaluation dimensions is not enough, as the firm must make fair and acceptable wage differences among its employees. In other words, the employer must use a performance appraisal system that effectively identifies the good performers. This, though, is still but half the "battle," as the company's compensation system must be designed and function in such a way that these "good performers" (in terms of the dimensions of evaluation) are adequately rewarded relative to their less productive cohorts.

Third, the employer with such effective performance appraisal and compensation systems should not keep secret the results of their use. That is to say, the common organizational practice of maintaining strict pay secrecy may be

dysfunctional to the firm. Lawler (1971) has found that when pay secrecy is practiced, people base wage comparisons on inaccurate information, innuendo, and hearsay. Moreover, in these situations individuals typically overestimate the pay of their peers. So even if Person knows the dimensions along which rewards are allocated, without some knowledge of the salary structure he or she may simply assume underpayment. A very easy way to counteract this tendency would be for the organization to publish the salary ranges and mean pay rates for all jobs. A similar procedure could be followed for pay raises. An additional benefit to such a practice would be to force the organization to make rational pay decisions since it may have to defend them to the workers.²⁰

²⁰ There is some debate in the literature as to the effects of pay openness on pay satisfaction. While Lawler (1971) strongly advocates such a position, Milkovich and Anderson (1972) found some evidence that partially open pay systems (i.e. those which communicate only pay ranges) do not necessarily lead to more accurate pay comparisons. As Dyer, Schwab, and Fossum (1978) point out, the effectiveness of the openness of pay on accuracy of comparisons probably depends on the type of information communicated and the degree of care the organization used in pricing jobs and in determining individual rates of pay. In other words, the success of such a system is largely a function of how well the performance appraisal and job evaluation systems are operating. This reinforces the primacy of such systems, as argued above and discussed further below.

Aspiration Level

From the perspective of the human resource manager, perhaps the most noteworthy result of the investigation of this particular attitude relates to the direct relationship between level of aspiration and number of positive wage comparisons made. This suggests that high-aspiration workers experience frequent validation of their decisions to remain with the firm. That is, given the apparent stability of pay referents, the positive wage comparisons tend to be repeated enhancements of the already favourable attitudes of these people toward the employer. While it is not known if the positive comparisons create the high aspiration or vice versa, the key point for the practitioner is that higher-aspiration employees seem to be looking for positive information about the firm.

The human resource manager should make sure that these individuals' searches are fruitful. One way to do this would be to point out favourable comparisons of their company relative to other organizations. Moreover, since the high-aspiration people already are making favourable wage comparisons, the practitioner may want to concentrate on non-monetary comparisons, e.g. comparisons of working conditions, opportunities for advancement, and so forth.

Another way to nourish these positive feelings would be to accentuate the high-aspiration employees' identification with higher-level job holders. This could be accomplished by putting the more promising of these employees in charge of certain work tasks, something along the lines of "temporary supervisor" or "supervisory assistant." Other managerial actions that seem to appeal particularly to high aspiration individuals include such things as altering the breadth and depth of their job assignments, and providing them with opportunities to acquire new knowledge (e.g. training seminars) (Ginsburg, 1981).

While such intrinsic rewards probably would be highly valued by these people, extrinsic monetary rewards definitely should not be overlooked. Although high aspiration respondents' tend to identify with upper-level job holders, this identification is not complete. Indeed, these respondents seem quite concerned with the issue of employee equity. Thus, once again the crucial nature of the performance appraisal system is revealed. The high-aspiration employee who is a better performer than his or her co-workers must be differentially rewarded, as argued above, and made aware of this larger reward.

Finally, given the significant positive impact of historical pay comparisons on feelings of pay equity, plus the

emphasis high-aspiration employees seem to place on such comparisons, it may be advantageous to the employer to periodically show workers the difference between their starting pay and their current pay. This could be a quite simple procedure; once a year or so, preferably at the time of routine pay increases, each worker could be given a small slip showing the two wage rates. For those high-aspiration workers who also are good performers, the relatively large differences in rates would be objective verification of their hopes for advancement. For the not-so-successful high aspirants, the assumed smaller differential may help them to bring their expectations more in line with organizational realities.

Desire for External Movement

Here, too, the need for the human resource manager to have a proactive instead of reactive orientation is illustrated. This study found increases in the desire to change employers to be positively correlated with increases in the number of negative wage comparisons. When this relationship is viewed within the context of comparison stability, it suggests that negative feelings toward the organization may be created or continually reinforced by these negative com-

parisons.²¹ As Lawler (1971) notes, attractiveness of the job decreases as pay dissatisfaction increases. While it would be unrealistic to assume a perfect correlation of pay dissatisfaction with turnover, there does appear to be some relationship between the two (Hulin, 1968; Lawler, 1971). Consequently, steps taken to make pay levels more attractive should have some affect on the amount of turnover in the organization.

For example, if turnover in general is too high or if the "wrong" people (i.e. the better performers) are leaving, the organization might consider starting a program in which pay rates of other employers are compared to its own. After all, without adequate information on which to base pay comparisons, respondents use innuendo and anecdotes to determine these unknown wage levels. If respondents are overestimating the pay rates of those working else where, (some what of a "grass is always greener" syndrome), then turnover may occur. Perhaps providing these people with accurate pay data could prevent this. As pointed out earlier, though, this must begin prior to the onset of negative feelings and/or negative wage comparisons.

²¹ Once again no statement of causality can be made.

In addition to using pay comparisons to help reduce turnover, this same procedure could be employed to foster selective turnover. This could be a by-product of the practice of showing workers the difference between their starting wage and current wage, as advocated in the previous section. It seems a relatively safe assumption that organizations would like poor performers to voluntarily leave. If the performance appraisal system is functioning properly, then these low performers should have received the lowest (if any) pay raises. Thus, the difference between the two wage rates of concern should be very small. Emphatically pointing this out to these employees may encourage them to make additional (hopefully negative) pay comparisons. These, in turn, should cause or reinforce negative attitudes towards the employing organization which ideally will increase the likelihood of turnover.

Sociability

It has been argued herein that the increased number of negative wage comparisons associated with an increase in respondent social activity, reflects the heightened needs of the individual for esteem and recognition. It is conceivable that such needs are responsible for these individuals' heightened concerns for equitable pay treatment, since pay is one way to satiate the desire for esteem and recognition.

This argument suggests that higher levels of pay may not be the most efficient way for an organization to reduce feelings of underpayment in socially active individuals. Instead, such things as public recognition of an individual's work accomplishments may better satisfy the need for esteem than would a wage increase. This could involve an activity as simple as designating a worker as "Employee of the Month" and/or providing a brief write-up of the worker's accomplishment in the house organ (cf. Cherrington and Wixom, 1983). Simpler still would be setting aside a company bulletin board to be used exclusively for recognition of especially good performance. Although these procedures sound almost absurdly simple, the efficacy of public recognition should not be looked at askance. Scott and Markham (1982), for instance, showed that organizations which used such techniques to recognize good attendance had an absence rate a full percentage point below those that did not provide this recognition.

By using these techniques to satisfy the need for esteem and recognition, the organization is actually reducing the importance of pay. That is, if the needs that make pay important (such as the just-mentioned ones) can be satisfied by nonfinancial rewards, then pay itself should become less important (Lawler, 1971). This may mean that socially ac-

tive respondents will become less sensitive to equity concerns and perhaps will make fewer negative pay comparisons. The association of pay dissatisfaction with such phenomena as turnover, absenteeism, job dissatisfaction, unionization, strikes and grievances (Lawler, 1971) make rather obvious why this should concern management. Moreover, the public recognition techniques are far less costly to the organization than are financial rewards.

Differential Effects of Pay Comparisons on Pay Satisfaction

This investigation revealed that two types of referents--internal and historical--have statistically significant effects on feelings of pay satisfaction. Specifically, the greater the importance ascribed to internal comparisons, the less satisfied respondents are with their current wage. On the other hand, the greater the importance ascribed to historical pay comparisons, the greater the satisfaction with the present rate of pay.

The negative impact of internal pay comparisons does not bode well for the organization. Since these are referents with whom Person daily interacts, and since people tend to devalue the job performance of others relative to their own, this may mean that pay satisfaction will almost always be relatively low. The serious effects of such a

state already have been pointed out (see previous discussion).

The typical response to the deleterious results of pay dissatisfaction is to increase workers wages. While such an action may increase feelings of external equity, it will have little if any affect on the problem of internal (in)equity. A cheaper and more effective solution to this problem seems to lie in the areas of job evaluation and performance appraisal. The crucial role of internal referents strongly suggests the need for an organization to maintain fair and acceptable wage differences among its jobs at different organizational levels. In other words, the job evaluation system must produce a wage structure that is reasonable in the eyes of the employees. Probably the best way to help bring about this result is to allow employee involvement in the design and use of the job evaluation system.

Not only must there be rational wage differences among jobs, but pay differentials within jobs also must be objectively determined in a manner acceptable to the employees. Workers must see that those who perform in organizationally prescribed ways reap rewards superior to those who do not so perform. Hence, not only must the performance appraisal system correctly identify the better performers and the com-

pensation system provide desired financial and nonfinancial rewards, but employees must be able to see the results of these events. This suggests, once again, that organizations should lift the veil of secrecy that surrounds pay rates. While this does not mean that individual wages should be made public, it does mean that better performers must realize they are better rewarded than are their less productive counterparts.

As for the impact of historical comparisons, here, too, the practice of periodically showing employees how their current wage compares to their past one would again be applicable.

Finally, perhaps the ultimate implication of the differential effects of pay referents is that a certain degree of pay dissatisfaction probably is an organizational reality with which practitioners must learn to live.

BIBLIOGRAPHY

- Adams, J.S. Wage inequities, productivity and work quality. Industrial Relations, 1963a, 3, 9-16.
- Adams, J.S. Toward an understanding of equity. Journal of Abnormal and Social Psychology, 1963b, 67, 422-436.
- Adams, J.S. Inequity in social exchange. Advances in Experimental Social Psychology, (L. Berkowitz, ed.). New York: Academic Press, 1965.
- Adams, J.S. and Jacobsen, P.R. Effects of wage inequities on work quality. Journal of Abnormal and Social Psychology, 1964, 69, 19-25.
- Adams, J.S. and Rosenbaum, W.E. The relationship of worker productivity to cognitive dissonance about wage inequities. Journal of Applied Psychology, 1962, 46, 161-164.
- Alwin, D.F. The use of factor analysis in the construction of linear composites in social research. Sociological Methods and Research, 1973, 191-214.
- Andrews, I.R. Wage equity and job performance: An experimental study. Journal of Applied Psychology, 1967, 51, 39-45.
- Andrews, I.R. and Henry, M.M. Management attitudes toward pay. Industrial Relations, 1963, 2, 29-39.
- Arrowood, A. and Friend, R. Other factors determining the choice of comparison other. Journal of Experimental Social Psychology, 1969, 5, 233-239.
- Belcher, D.W. Compensation Administration. Englewood Cliffs (NJ): Prentice-Hall, Inc., 1974.
- Belcher, D.W. Pay equity or pay fairness. Compensation Review, 1979, Second Quarter, 31-37.
- Berger, J., Zelditch, M., Anderson, B., and Cohen, B. Structural aspects of distributive justice: A status value formulation. Sociological Theories in Progress (J. Berger, M. Zelditch, and B. Anderson, eds). Boston: Houghton Mifflin, 1972.

- Birnbaum, M.H. Perceived equity of salary policies. Journal of Applied Psychology, 1983, 68, 44-59.
- Blalock, H.H. Social Statistics. New York: McGraw-Hill, 1979.
- Bloch, F.E. and Kuskin, M.S. Wage determination in the union and nonunion sectors. Industrial and Labor Relations Review, 1978, 31, 183-192.
- Bonjean, C.M. Mass, class, and the industrial community. American Journal of Sociology, 1966, 71, 149-162.
- Brickman, P. and Campbell, D.T. Hedonic relativism and planning the good society. Adaptation-Level Theory (M.H. Appley, ed.) New York: Academic Press, 1971.
- Campbell, D.T. and Fiske, D.W. Convergent and discriminant validation by the multitrait-multimethod matrix. Psychological Bulletin, 1959, 56, 81-105.
- Carmines, E.G. and Zeller, R.A. Reliability and Validity Assessment. Beverly Hills: Sage Publications, 1979.
- Carroll, S.J. and Tosi, H.L. Management by Objectives: Applications and Research. New York: Macmillan, 1973.
- Chapman, D.W. and Volkmann, J. A social determinant of the level of aspiration. Journal of Abnormal Social Psychology, 1939, 34, 225-238.
- Cherrington, D.J. and Wixom, B.J. Recognition is still a top motivator. Personnel Administrator, 1983, 28, 87-92.
- Cook, K. Expectations, evaluation, and equity. American Sociological Review, 1975, 372-388.
- Cooley, C.H. Human Nature and the Social Order. New York: Charles Scribner's Sons, 1902.
- Dansereau, F., Alutto, J.A., Yammarino, F.J. Theory Testing in Organizational Behavior. Englewood Cliffs (NJ): Prentice-Hall, 1984.
- Dansereau, F., Alutto, J.A., Markham, S.E., and Dumas, M. Multiplexed leadership and supervision: An application of within and between analysis. Leadership: Beyond Establishment Views (J. Hunt, U. Sekaran, and C. Schriesheim, eds.) Carbondale: Southern Illinois University Press, 1982.

- Darley, J. and Aronson, E. Self-evaluation vs. direct anxiety reduction as determinants of fear affiliation relationship. Journal of Experimental Social Psychology, 1966 (supp. 1), 55-65.
- Dean, D.G. Alienation and political apathy. Social Forces, 1960, 38, 188-189.
- Dean, D.G. Alienation: Its meaning and measurement. American Sociological Review, 1961, 26, 753-758.
- Dean, D.G. and Reeves, J.A. Anomie: A comparison of a Catholic and Protestant sample. Sociometry, 1962, 25, 209-212.
- Doeringer, P.B. and Piore, M.J. Internal Labor Markets and Manpower Analysis. Lexington (MA): Heath Lexington Books, 1971.
- Dreher, G.F. Predicting the salary satisfaction of exempt employees. Personnel Psychology, 1981, 34, 579-589.
- Dubin, R. Theory building in applied areas. Handbook of Industrial and Organizational Psychology (M.D. Dunnette, ed.). Chicago: Rand-McNally, 1976.
- Durkheim, E. Suicide. Paris: R. Alcan, 1897.
- Durkheim, E. The Elementary Forms of Religious Life. Paris: R. Alcan, 1915.
- Dyer, L. and Theriault, R. The determinants of pay satisfaction. Journal of Applied Psychology, 1976, 61, 596-604.
- Dyer, L., Schwab, D.P., and Theriault, R. Managerial perceptions regarding salary increase criteria. Personnel Psychology, 1976, 29, 233-42.
- Dyer, L., Schwab, D.P. and Fossum, J.A. Impacts of pay on employee behaviors and attitudes: An update. Personnel Administrator, 1978, 23, 51-58.
- Erbe, W. Social involvement and political activity. American Sociological Review, 1964, 29, 198-215.
- Festinger, L. A theory of social comparison processes. Small Groups (A. Hare, E. Borgata, and R. Bales, eds.), New York: Alfred A. Knopf, Inc., 1955.

- Festinger, L. A Theory of Cognitive Dissonance. Evanston (IL): Peterson and Company, 1957.
- Festinger, L., Schachter, D. and Back, K. Social Pressures in Informal Groups. New York: Harper, 1950.
- Finn, R.H. and Lee, S.M. Salary equity: Its determination, analysis, and correlates. Journal of Applied Psychology, 1972, 56, 283-292.
- Fogel, W. Occupational earnings: Market and institutional influences. Industrial and Labor Relations Review, 1979, 33, 24-35.
- Forrest, C.R., Cummings, L.L., and Johnson, A.C. Organizational participation: A critique and model. Academy of Management Review, 1977, 2, 586-601.
- Ginsburg, S.G. The high achievers' job satisfaction. Personnel Administrator, 1981, 26, 78-81.
- Goodman, P.S. The measurement of an individual's organization map. Administrative Science Quarterly, 1968, 13, 246-265.
- Goodman, P.S. An examination of referents used in the evaluation of pay. Organizational Behavior and Human Performance, 1974, 12, 170-195.
- Goodman, P.S. Social comparison processes in organizations. New Directions in Organizational Behavior (B.M. Staw and G.R. Salancik, eds.). Chicago: St. Clair Press, 1977.
- Goodman, P.S. and Friedman, A. An examination of Adams' theory of inequity. Administrative Science Quarterly, 1971, 16, 271-288.
- Gordon, B.F. Influence and social comparison as motives for affiliation. Journal of Experimental Social Psychology, 1966 (supp. 1), 55-65.
- Guion, R.C. Personnel Testing. New York: McGraw-Hill, 1965.
- Gunderson, M. The influence of the status and sex composition of occupations on the male-female earnings gap. Industrial and Labor Relations Review, 1978, 31, 217-226.

- Hakmiller, K.L. Threat as a determinant of downward comparison. Journal of Experimental Social Psychology, 1966a (supp. 1), 32-39.
- Hakmiller, K.L. Need for self-evaluation, perceived similarity and comparison choice. Journal of Experimental Social Psychology, 1966b (supp. 1), 49-54.
- Havlicek, L.L. and Peterson, N.L. Effects of the violation of assumptions upon significance levels of the Pearson r. Psychological Bulletin, 1977, 84, 373-377.
- Helson, H. Adaptation-Level Theory. New York: Harper and Row, 1964.
- Heneman, H.G., Schwab, D.P., Standal, J.T., and Peterson, R.B. Pay comparison: Dimensionality and predictability. Proceedings of the 38th Annual Academy of Management Meetings, San Francisco, 1978, 211-215.
- Herzberg, F., Mausner, B., and Synderman, B. The Motivation to Work. New York: John Wiley and Sons, 1967.
- Hilgard, E.R., Sait E.M., and Magaret, G.A. Level of aspiration as affected by relative standing in an experimental social group. Journal of Experimental Psychology, 1940, 27, 411-421.
- Hills, F.S. The relevant other in pay comparisons. Industrial Relations, 1980, 19, 345-351.
- Hirsch, B.T. The interindustry structure of unionism, earnings, and earnings dispersion. Industrial and Labor Relations Review, 1982, 36, 22-39.
- Homans, G.C. Social Behavior: Its Elementary Form. New York: Harcourt, Brace, and World, 1961.
- Hulin, C.L. Effect of changes in job satisfaction levels on employee turnover. Journal of Applied Psychology, 1968, 52, 122-126.
- Hyman, H. The psychology of status. Archives of Psychology, 1942, 38, 15.
- Jacques, E. Equitable Payment. New York: Wiley Press, 1961.

- Jacoby, J. Information overload and decision quality: Some contested issues. Journal of Marketing, 1977, 14, 569-573.
- Kelley, H. Two functions of reference groups. Readings in Social Psychology (G.E. Swanson, T.M. Newcomb, and E.L. Hartley, eds). New York: Holt, 1952.
- Kirk, R.E. Experimental Design: Procedures for the Behavioral Sciences. Belmont (CA): Brooks/Cole Publishing Company, 1968.
- Lawler, E.E. Managers' perceptions of their subordinates' pay and of their supervisors' pay. Personnel Psychology, 1965, 18, 413-422.
- Lawler, E.E. Pay and Organizational Effectiveness: A Psychological View. New York: McGraw-Hill, 1971.
- Lawler, E.E. and O'Gara, P.W. Effects of inequity produced by underpayment on work output, work quality, and attitudes toward the work. Journal of Applied Psychology, 1967, 51, 403-410.
- Lawler, E.E. and Porter, L.W. Predicting managers' pay and their satisfaction with pay. Personnel Psychology, 1966, 19, 363-373.
- Long, J.E. and Link, A.N. The impact of market structure on wages, fringe benefits, and turnover. Industrial and Labor Relations Review, 1983, 36, 239-250.
- MacIntosh, A. Differential effect of the status of the competing group on levels of aspiration. American Journal of Psychology, 1942, 55, 546-554.
- Mahoney, T.A. Compensation and Reward Perspectives. Homewood (IL): Richard D. Irwin, Inc., 1979.
- Malhotra, N.K. Information load and consumer decision making. Journal of Consumer Research, 1982, 8, 419-430.
- Malhotra, N.K., Jain, A.K. and Lagakos, S.W. The information overload controversy: An alternative viewpoint. Journal of Marketing, 1982, 46, 27-37.
- March, J.G. and Simon, H.A. Organizations. New York: John Wiley and Sons, 1958.

- Markham, S.E. and Scott, K.D. A component factor analysis of the initiating structure scale of the LBDQ Form XII. Psychological Reports, 1983, 52, 71-77.
- Markham, S.E., Dansereau, R., Alutto, J., and Dumas, M. Leadership convergence: An application of within and between analysis to validity. Applied Psychological Measurement, 1983, 7, 63-72.
- McIver, J.P. and Carmines, E.G. Unidimensional Scaling. Beverly Hills: Sage Publications, 1981.
- Mead, G.H. Mind, Self, and Society. Chicago: University of Chicago Press, 1934.
- Merton, R. Social Theory and Social Structure. Glencoe (IL): Free Press, 1957.
- Merton, R.K. and Kitt, A. Contributions to the theory of reference group behavior. Continuities in Social Research: Studies in the Scope and Methods of "The American Soldier" (R.K. Merton and P.R. Lazarsfeld, eds.). Glencoe (IL): The Free Press, 1950.
- Meyer, H.H. Pay for performance dilemma. Organizational Dynamics, 1975, Winter, 71-78.
- Middlemist, R.D. and Peterson, R.B. Test of equity theory by controlling for comparison co-workers' efforts. Organizational Behavior and Human Performance, 1976, 15, 335-354.
- Milkovich, G.T. and Anderson, P.H. Management compensation and secrecy policies. Personnel Psychology, 1972, 25, 292-302.
- Mincer, J. Schooling, Experience, and Earnings. New York: Columbia University Press, 1974.
- Mobley, W.H. Intermediate linkages in the relationship between job satisfaction and employee turnover. Journal of Applied Psychology, 1977, 62, 237-240.
- Montgomery, D.C. and Peck, E.A. Introduction to Linear Regression Analysis. New York: John Wiley and Sons, 1982.
- Nash, A. and Carroll, S. The Management of Compensation. Monterey (CA): Brooks/Cole Publishing, 1975.

- Newcombe, T.M. Personality and Social Change: Attitude Formation in a Student Community. New York: Dryden Press, 1943.
- Nunnally, J.C. Introduction to Psychological Measurement. New York: McGraw-Hill, 1970.
- Nunnally, J.C. Psychometric Theory. New York: McGraw-Hill, 1978.
- Opsahl, R.L. and Dunnette, M.D. The role of financial compensation in industrial motivation. Psychological Bulletin, 1966, 66, 94-118.
- Patchen, M. The Choice of Wage Comparisons. Englewood Cliffs (NJ): Prentice-Hall, 1961.
- Patten, T.H. Pay for performance or placation. Personnel Administrator, 1977, 22, 26-29.
- Patten, T.H. Dr. Patten replies. Personnel Administrator, 1978, 23, 49-53.
- Penner, D.D. A Study of the Causes and Consequences of Salary Satisfaction. Crotonville (NY): General Electric Behavioral Research Service (mimeo) [cited in Lawler, 1971].
- Pettigrew, T. Social evaluation theory: Contingencies and applications. Nebraska Symposium on Motivation (M.R. Jones, ed). Lincoln (NB): University of Nebraska Press, 1967, 15, 241-311.
- Pritchard, R.D. Equity theory: A review and critique. Organizational Behavior and Human Performance, 1969, 4, 176-211.
- Ronan, W.N. and Organt, S.W. Determinants of pay and pay satisfaction. Personnel Psychology, 1973, 26, 503-520.
- Rousseau, Jean-Jacques. The Social Contract and Discourses.
- Runciman, W.G. Relative Deprivation and Social Justice. Harmondsworth (England): Penguin Books, Ltd., 1972.
- Schneider, J. The "greener grass" phenomenon: Differential effects of a work context alternative on organizational participation and withdrawal intentions. Organizational Behavior and Human Performance, 1976, 16, 308-333.

- Schwab, D.P. and Wallace, M. Correlates of employee satisfaction with pay. Industrial Relations, 1974, 13, 78-89.
- Smith, M.M. Industrial racial wage discrimination in the U.S. Industrial Relations, 1979, 18, 110-116.
- Scott, K.D. and Markham, S.E. Absenteeism control methods: A survey of practices and results. Personnel Administrator, 1982, 27, 73-86.
- Sewell, W.H. The development of a sociometric scale. Sociometry, 1941, 279-297.
- Sherif, M. A study of some social factors in perception. Archives of Psychology, 1935, No. 187.
- Sherif, M. The Psychology of Social Norms. New York: Harper and Row, 1943.
- Stern, E. and Keller, S. Spontaneous group references in France. Public Opinion Quarterly, 1953, 17, 208-217.
- Thibaut, J.W. and Kelley, H.H. The Social Psychology of Groups. New York: Wiley, 1959.
- Turner, R.H. Reference groups of future-oriented men. Social Forces, 1955, 34, 130-136.
- Vecchio, R. Models of psychological inequity. Presented at the National Meetings of the Academy of Management, Boston, 1984.
- Veiga, J.F. Plateaued versus nonplateaued managers: Career patterns, attitudes, and path potential. Academy of Management Journal, 1981, 24, 566-578.
- Walster, E., Berscheid, E., and Walster, G.W. New directions in equity research. Journal of Personality and Social Psychology, 1973, 25, 151-176.
- Walster, E., Walster, G.W., and Berscheid, E. Equity Theory and Research. Boston: Allyn and Bacon, 1978.
- Weick, K.E. The concept of equity in the perception of pay. Administrative Science Quarterly, 1966, 2, 414-439.
- Weick, K.E. and Nettet, B. Preferences among forms of equity. Organizational Behavior and Human Performance, 1968, 3, 400-416.

- Weick, K.E., Bougon, M.G., and Maruyama, G. The equity context. Organizational Behavior and Human Performance, 1976, 15, 32-65.
- Weiss, D.J., Dawis, R.V., England, G.W., and Lofquist, L.H. Manual for the Minnesota Satisfaction Questionnaire. Minneapolis: Minnesota Studies in Vocational Rehabilitation, Bulletin 45, 1967.
- Wheeler, L. Motivation as determinant of upward comparison. Journal of Experimental Social Psychology, 1966 (supp. 1), 27-31.
- Wheeler, L., Shaver, K., Jones, R., Goethals, G., Cooper, J., Robinson, J., Gruder, C., and Butzine, K. Factors determining choices of a comparison other. Journal of Experimental Social Psychology, 1969, 5, 219-232.
- Wilkie, W.L. Analysis of effects of information overload. Journal of Marketing Research, 1974, 11, 426-466.
- Willis, R.G. Man and Beast. New York: Basic Books, Inc., 1974.
- Wills, T.A. Downward comparison principles in social psychology. Psychological Bulletin, 1981, 90, 245-271.
- Winstanley, N.B. Comments on Patten's 'pay for performance and placation'. Personnel Administrator, 1978, 23, 49-50.

Appendix A

RESEARCH QUESTIONNAIRE USED IN THIS STUDY

PAY REFERENT SELECTION

Please CIRCLE the answer that best shows how you feel about each of the following statements.

	<i>STRONGLY DISAGREE</i>	<i>DISAGREE</i>	<i>SOMEWHAT DISAGREE</i>	<i>SOMEWHAT AGREE</i>	<i>AGREE</i>	<i>STRONGLY AGREE</i>	<i>The answer to the QUESTION DOES NOT APPLY TO YOU</i>
1. I often compare my pay to what other people in this company at a higher job level than mine are paid.....	SD	D	?D	?A	A	SA	NA
2. I often compare my pay to what people I know in other companies are paid.....	SD	D	?D	?A	A	SA	NA
3. I often compare my pay to what other people in this company at my job level are paid.....	SD	D	?D	?A	A	SA	NA
4. I often compare my pay to the pay of people in this company who are below my job level.....	SD	D	?D	?A	A	SA	NA
5. I often compare my pay to my friends' pay.....	SD	D	?D	?A	A	SA	NA
6. I often compare my pay to my relatives' pay.....	SD	D	?D	?A	A	SA	NA
7. I often compare my pay to the pay of the people who live in my house.....	SD	D	?D	?A	A	SA	NA
8. I often compare my pay to what people at my job level in other companies are paid.....	SD	D	?D	?A	A	SA	NA
9. I often compare my pay to what I think I am worth.....	SD	D	?D	?A	A	SA	NA
10. I often compare my pay to what this company promised it would pay me.....	SD	D	?D	?A	A	SA	NA
11. I often compare my pay to the amount of pay I've become accustomed to receiving.....	SD	D	?D	?A	A	SA	NA
12. I often compare my pay to the income I need to meet my family's needs.....	SD	D	?D	?A	A	SA	NA
13. I often compare my pay to what I expect to be paid in the future.....	SD	D	?D	?A	A	SA	NA
14. I often compare my pay to the cost of living.....	SD	D	?D	?A	A	SA	NA
15. I often compare my pay to what I've been paid on previous jobs.....	SD	D	?D	?A	A	SA	NA
16. I often compare my pay to what other employers are paying for my kind of work.....	SD	D	?D	?A	A	SA	NA
17. I often compare my pay to what I've been paid in the past.....	SD	D	?D	?A	A	SA	NA
18. I often compare my pay to the income I need for my own needs.....	SD	D	?D	?A	A	SA	NA
19. I often compare my pay to the inflation rate.....	SD	D	?D	?A	A	SA	NA

Here we would like you to compare what you are paid to what certain other people are paid. Then please answer a few questions about each of these comparisons. *Please omit any of these questions that do not apply to you.*

1. COMPARE YOUR PAY TO THE PAY OF SOMEONE YOU KNOW IN YOUR COMPANY WHOSE JOB IS AT A HIGHER LEVEL THAN YOUR OWN.

Please check one: I am paid MORE than this person.
 I am paid LESS than this person.
 I am paid the SAME as this person.
 NOT SURE.

This comparison is _____ in helping me decide if I am fairly paid (circle one).

Not Important Slightly Important Somewhat Important Moderately Important Quite Important Extremely Important

I am _____ with the way my pay compares to this person's pay (circle one).

Very Dissatisfied Dis-Satisfied Somewhat Dissatisfied Somewhat Satisfied Satisfied Very Satisfied

2. COMPARE YOUR PAY TO THE PAY OF SOMEONE YOU KNOW WHO WORKS FOR ANOTHER COMPANY.

Please check one: I am paid MORE than this person.
 I am paid LESS than this person.
 I am paid the SAME as this person.
 NOT SURE.

This comparison is _____ in helping me decide if I am fairly paid (circle one).

Not Important Slightly Important Somewhat Important Moderately Important Quite Important Extremely Important

I am _____ with the way my pay compares to this person's pay (circle one).

Very Dissatisfied Dis-Satisfied Somewhat Dissatisfied Somewhat Satisfied Satisfied Very Satisfied

3. COMPARE YOUR PAY TO THE PAY OF SOMEONE YOU KNOW IN YOUR COMPANY WHO IS AT YOUR JOB LEVEL.

Please check one: I am paid MORE than this person.
 I am paid LESS than this person.
 I am paid the SAME as this person.
 NOT SURE.

This comparison is _____ in helping me decide if I am fairly paid (circle one).

<i>Not</i>	<i>Slightly</i>	<i>Somewhat</i>	<i>Moderately</i>	<i>Quite</i>	<i>Extremely</i>
<i>Important</i>	<i>Important</i>	<i>Important</i>	<i>Important</i>	<i>Important</i>	<i>Important</i>

I am _____ with the way my pay compares to this person's pay (circle one).

<i>Very</i>	<i>Dis-</i>	<i>Somewhat</i>	<i>Somewhat</i>	<i>Satisfied</i>	<i>Very</i>
<i>Dissatisfied</i>	<i>Satisfied</i>	<i>Dissatisfied</i>	<i>Satisfied</i>		<i>Satisfied</i>

4. COMPARE YOUR PAY TO THE PAY OF SOMEONE YOU KNOW IN YOUR COMPANY WHO IS AT A JOB LEVEL BELOW YOURS.

Please check one: I am paid MORE than this person.
 I am paid LESS than this person.
 I am paid the SAME as this person.
 NOT SURE.

This comparison is _____ in helping me decide if I am fairly paid (circle one).

<i>Not</i>	<i>Slightly</i>	<i>Somewhat</i>	<i>Moderately</i>	<i>Quite</i>	<i>Extremely</i>
<i>Important</i>	<i>Important</i>	<i>Important</i>	<i>Important</i>	<i>Important</i>	<i>Important</i>

I am _____ with the way my pay compares to this person's pay (circle one).

<i>Very</i>	<i>Dis-</i>	<i>Somewhat</i>	<i>Somewhat</i>	<i>Satisfied</i>	<i>Very</i>
<i>Dissatisfied</i>	<i>Satisfied</i>	<i>Dissatisfied</i>	<i>Satisfied</i>		<i>Satisfied</i>

5. COMPARE YOUR PAY TO THE PAY OF ONE OF YOUR FRIENDS.

Please check one: I am paid MORE than this person.
 I am paid LESS than this person.
 I am paid the SAME as this person.
 NOT SURE.

This comparison is _____ in helping me decide if I am fairly paid (circle one).

<i>Not</i>	<i>Slightly</i>	<i>Somewhat</i>	<i>Moderately</i>	<i>Quite</i>	<i>Extremely</i>
<i>Important</i>	<i>Important</i>	<i>Important</i>	<i>Important</i>	<i>Important</i>	<i>Important</i>

I am _____ with the way my pay compares to this person's pay (circle one).

<i>Very</i>	<i>Dis-</i>	<i>Somewhat</i>	<i>Somewhat</i>	<i>Satisfied</i>	<i>Very</i>
<i>Dissatisfied</i>	<i>Satisfied</i>	<i>Dissatisfied</i>	<i>Satisfied</i>		<i>Satisfied</i>

6. COMPARE YOUR PAY TO THE PAY OF A RELATIVE OF YOURS WHO DOES NOT LIVE WITH YOU.

Please check one: I am paid MORE than this person.
 I am paid LESS than this person.
 I am paid the SAME as this person.
 NOT SURE.

This comparison is _____ in helping me decide if I am fairly paid (circle one).

<i>Not</i>	<i>Slightly</i>	<i>Somewhat</i>	<i>Moderately</i>	<i>Quite</i>	<i>Extremely</i>
<i>Important</i>	<i>Important</i>	<i>Important</i>	<i>Important</i>	<i>Important</i>	<i>Important</i>

I am _____ with the way my pay compares to this person's pay (circle one).

<i>Very</i>	<i>Dis-</i>	<i>Somewhat</i>	<i>Somewhat</i>	<i>Satisfied</i>	<i>Very</i>
<i>Dissatisfied</i>	<i>Satisfied</i>	<i>Dissatisfied</i>	<i>Satisfied</i>		<i>Satisfied</i>

7. COMPARE YOUR PAY TO THE PAY OF A MEMBER OF YOUR HOUSEHOLD.

Please check one: I am paid MORE than this person.
 I am paid LESS than this person.
 I am paid the SAME as this person.
 NOT SURE.

This comparison is _____ in helping me decide if I am fairly paid (circle one).

<i>Not Important</i>	<i>Slightly Important</i>	<i>Somewhat Important</i>	<i>Moderately Important</i>	<i>Quite Important</i>	<i>Extremely Important</i>
--------------------------	-------------------------------	-------------------------------	---------------------------------	----------------------------	--------------------------------

I am _____ with the way my pay compares to this person's pay (circle one).

<i>Very Dissatisfied</i>	<i>Dis- Satisfied</i>	<i>Somewhat Dissatisfied</i>	<i>Somewhat Satisfied</i>	<i>Satisfied</i>	<i>Very Satisfied</i>
------------------------------	---------------------------	----------------------------------	-------------------------------	------------------	---------------------------

8. COMPARE YOUR PAY TO THE PAY OF SOMEONE YOU KNOW WHO WORKS FOR ANOTHER COMPANY AND WHO IS AT YOUR JOB LEVEL.

Please check one: I am paid MORE than this person.
 I am paid LESS than this person.
 I am paid the SAME as this person.
 NOT SURE.

This comparison is _____ in helping me decide if I am fairly paid (circle one).

<i>Not Important</i>	<i>Slightly Important</i>	<i>Somewhat Important</i>	<i>Moderately Important</i>	<i>Quite Important</i>	<i>Extremely Important</i>
--------------------------	-------------------------------	-------------------------------	---------------------------------	----------------------------	--------------------------------

I am _____ with the way my pay compares to this person's pay (circle one).

<i>Very Dissatisfied</i>	<i>Dis- Satisfied</i>	<i>Somewhat Dissatisfied</i>	<i>Somewhat Satisfied</i>	<i>Satisfied</i>	<i>Very Satisfied</i>
------------------------------	---------------------------	----------------------------------	-------------------------------	------------------	---------------------------

9. COMPARE YOUR PAY TO THE PAY YOU BELIEVE YOU ARE WORTH.

This comparison is _____ in helping me decide if I am fairly paid (circle one).

<i>Not Important</i>	<i>Slightly Important</i>	<i>Somewhat Important</i>	<i>Moderately Important</i>	<i>Quite Important</i>	<i>Extremely Important</i>
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I am _____ with the way my pay compares to what I believe I am worth (circle one).

<i>Very Dissatisfied</i>	<i>Dis- Satisfied</i>	<i>Somewhat Dissatisfied</i>	<i>Somewhat Satisfied</i>	<i>Satisfied</i>	<i>Very Satisfied</i>
------------------------------	---------------------------	----------------------------------	-------------------------------	------------------	---------------------------

10. COMPARE YOUR PAY TO WHAT THE COMPANY PROMISED IT WOULD PAY YOU.

This comparison is _____ in helping me decide if I am fairly paid (circle one).

<i>Not Important</i>	<i>Slightly Important</i>	<i>Somewhat Important</i>	<i>Moderately Important</i>	<i>Quite Important</i>	<i>Extremely Important</i>
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I am _____ with the way my pay compares to what the company promised it would pay me (circle one).

<i>Very Dissatisfied</i>	<i>Dis- Satisfied</i>	<i>Somewhat Dissatisfied</i>	<i>Somewhat Satisfied</i>	<i>Satisfied</i>	<i>Very Satisfied</i>
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11. COMPARE YOUR PAY TO THE PAY YOU HAVE BECOME ACCUSTOMED TO RECEIVING.

This comparison is _____ in helping me decide if I am fairly paid (circle one).

<i>Not Important</i>	<i>Slightly Important</i>	<i>Somewhat Important</i>	<i>Moderately Important</i>	<i>Quite Important</i>	<i>Extremely Important</i>
--------------------------	-------------------------------	-------------------------------	---------------------------------	----------------------------	--------------------------------

I am _____ with the way my pay compares to the pay I have become accustomed to receiving (circle one).

<i>Very Dissatisfied</i>	<i>Dis- Satisfied</i>	<i>Somewhat Dissatisfied</i>	<i>Somewhat Satisfied</i>	<i>Satisfied</i>	<i>Very Satisfied</i>
------------------------------	---------------------------	----------------------------------	-------------------------------	------------------	---------------------------

12. COMPARE YOUR PAY TO THE PAY YOU NEED TO MEET YOUR FAMILY'S NEEDS.

This comparison is _____ in helping me decide if I am fairly paid (circle one).

<i>Not Important</i>	<i>Slightly Important</i>	<i>Somewhat Important</i>	<i>Moderately Important</i>	<i>Quite Important</i>	<i>Extremely Important</i>
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I am _____ with the way my pay compares to the pay I need to meet my family's needs (circle one).

<i>Very Dissatisfied</i>	<i>Dis- Satisfied</i>	<i>Somewhat Dissatisfied</i>	<i>Somewhat Satisfied</i>	<i>Satisfied</i>	<i>Very Satisfied</i>
------------------------------	---------------------------	----------------------------------	-------------------------------	------------------	---------------------------

13. COMPARE YOUR PRESENT PAY TO WHAT YOU EXPECT TO BE PAID IN THE FUTURE.

This comparison is _____ in helping me decide if I am fairly paid (circle one).

<i>Not Important</i>	<i>Slightly Important</i>	<i>Somewhat Important</i>	<i>Moderately Important</i>	<i>Quite Important</i>	<i>Extremely Important</i>
--------------------------	-------------------------------	-------------------------------	---------------------------------	----------------------------	--------------------------------

I am _____ with the way my pay compares to what I expect to be paid in the future (circle one).

<i>Very Dissatisfied</i>	<i>Dis- Satisfied</i>	<i>Somewhat Dissatisfied</i>	<i>Somewhat Satisfied</i>	<i>Satisfied</i>	<i>Very Satisfied</i>
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14. COMPARE YOUR PAY TO THE COST OF LIVING.

This comparison is _____ in helping me decide if I am fairly paid (circle one).

<i>Not Important</i>	<i>Slightly Important</i>	<i>Somewhat Important</i>	<i>Moderately Important</i>	<i>Quite Important</i>	<i>Extremely Important</i>
--------------------------	-------------------------------	-------------------------------	---------------------------------	----------------------------	--------------------------------

I am _____ with the way my pay compares to the cost of living (circle one).

<i>Very Dissatisfied</i>	<i>Dis- Satisfied</i>	<i>Somewhat Dissatisfied</i>	<i>Somewhat Satisfied</i>	<i>Satisfied</i>	<i>Very Satisfied</i>
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15. COMPARE YOUR PRESENT PAY TO WHAT YOU HAVE BEEN PAID ON PREVIOUS JOBS.

This comparison is _____ in helping me decide if I am fairly paid (circle one).

<i>Not Important</i>	<i>Slightly Important</i>	<i>Somewhat Important</i>	<i>Moderately Important</i>	<i>Quite Important</i>	<i>Extremely Important</i>
--------------------------	-------------------------------	-------------------------------	---------------------------------	----------------------------	--------------------------------

I am _____ with the way my pay compares to what I've been paid on previous jobs (circle one).

<i>Very Dissatisfied</i>	<i>Dis- Satisfied</i>	<i>Somewhat Dissatisfied</i>	<i>Somewhat Satisfied</i>	<i>Satisfied</i>	<i>Very Satisfied</i>
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16. COMPARE YOUR PAY TO WHAT OTHER EMPLOYERS ARE PAYING FOR YOUR KIND OF WORK.

This comparison is _____ in helping me decide if I am fairly paid (circle one).

<i>Not Important</i>	<i>Slightly Important</i>	<i>Somewhat Important</i>	<i>Moderately Important</i>	<i>Quite Important</i>	<i>Extremely Important</i>
--------------------------	-------------------------------	-------------------------------	---------------------------------	----------------------------	--------------------------------

I am _____ with the way my pay compares to what other employers are paying for my kind of work (circle one).

<i>Very Dissatisfied</i>	<i>Dis- Satisfied</i>	<i>Somewhat Dissatisfied</i>	<i>Somewhat Satisfied</i>	<i>Satisfied</i>	<i>Very Satisfied</i>
------------------------------	---------------------------	----------------------------------	-------------------------------	------------------	---------------------------

17. COMPARE YOUR PAY TO WHAT YOU HAVE BEEN PAID IN THE PAST.

This comparison is _____ in helping me decide if I am fairly paid (circle one).

<i>Not Important</i>	<i>Slightly Important</i>	<i>Somewhat Important</i>	<i>Moderately Important</i>	<i>Quite Important</i>	<i>Extremely Important</i>
--------------------------	-------------------------------	-------------------------------	---------------------------------	----------------------------	--------------------------------

I am _____ with the way my pay compares to what I've been paid in the past (circle one).

<i>Very Dissatisfied</i>	<i>Dis- Satisfied</i>	<i>Somewhat Dissatisfied</i>	<i>Somewhat Satisfied</i>	<i>Satisfied</i>	<i>Very Satisfied</i>
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18. COMPARE YOUR PAY TO THE MONEY YOU NEED TO MEET YOUR OWN NEEDS.

This comparison is _____ in helping me decide if I am fairly paid (circle one).

<i>Not Important</i>	<i>Slightly Important</i>	<i>Somewhat Important</i>	<i>Moderately Important</i>	<i>Quite Important</i>	<i>Extremely Important</i>
--------------------------	-------------------------------	-------------------------------	---------------------------------	----------------------------	--------------------------------

I am _____ with the way my pay compares to the money I need to meet my own needs (circle one).

<i>Very Dissatisfied</i>	<i>Dis- Satisfied</i>	<i>Somewhat Dissatisfied</i>	<i>Somewhat Satisfied</i>	<i>Satisfied</i>	<i>Very Satisfied</i>
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ATTITUDE SURVEY

Please CIRCLE the answer that best indicates your feelings about each of the following statements.

The answer to the question DOES NOT APPLY TO YOU

	<u>STRONGLY DISAGREE</u>	<u>DISAGREE</u>	<u>SOMEWHAT DISAGREE</u>	<u>SOMEWHAT AGREE</u>	<u>AGREE</u>	<u>STRONGLY AGREE</u>	
1. I would very much like to work for another employer.....	SD	D	?D	?A	A	SA	NA
2. I am satisfied with the way my salary compares with similar positions in this company.....	SD	D	?D	?A	A	SA	NA
3. Sometimes I feel all alone when I'm at work.....	SD	D	?D	?A	A	SA	NA
4. We receive pay raises often enough to satisfy me.....	SD	D	?D	?A	A	SA	NA
5. I feel fairly paid when I compare my salary with that of people just starting with this company.....	SD	D	?D	?A	A	SA	NA
6. I am actively looking for another job.....	SD	D	?D	?A	A	SA	NA
7. My salary is based on what I deserve, not what will keep me happy.....	SD	D	?D	?A	A	SA	NA
8. I don't get invited out by my friends at work as often as I would really like.....	SD	D	?D	?A	A	SA	NA
9. There are a lot more jobs around than people to fill them.....	SD	D	?D	?A	A	SA	NA
10. My salary compares well with my co-workers' salaries.....	SD	D	?D	?A	A	SA	NA
11. I would like to have my superior's job.....	SD	D	?D	?A	A	SA	NA
12. Most people seldom feel lonely at work.....	SD	D	?D	?A	A	SA	NA
13. Salary raises are determined fairly in my company.....	SD	D	?D	?A	A	SA	NA
14. I could find a job as good as the one I now have and not have to leave this area.....	SD	D	?D	?A	A	SA	NA
15. In this company, a person's salary is connected with the amount of responsibility that person has.....	SD	D	?D	?A	A	SA	NA
16. Real friends are easy to find where I work.....	SD	D	?D	?A	A	SA	NA
17. You can always find friends where you work if you show yourself friendly.....	SD	D	?D	?A	A	SA	NA
18. My salary compares favourably with persons in other companies with comparable positions.....	SD	D	?D	?A	A	SA	NA

Appendix B

DESCRIPTIVE STATISTICS OF SAMPLE

FREQUENCY VARIABLES

Comparison	n	Mean	s.d.	Minimum	Maximum
Internal-above	186	3.731	1.388	1.000	6.000
Other co.	193	4.233	1.271	1.000	6.000
Internal-peer	180	4.372	1.517	1.000	6.000
Internal-below	193	3.233	1.440	1.000	6.000
Friends	196	3.352	1.440	1.000	6.000
Relatives	192	2.776	1.371	1.000	6.000
Household	168	2.815	1.573	1.000	6.000
External-peer	192	4.494	1.330	1.000	6.000
Self-worth	203	4.699	1.199	1.000	6.000
Promised pay	141	3.397	1.672	1.000	6.000
Accustomed pay	181	4.049	1.542	1.000	6.000
Family needs	195	4.661	1.217	1.000	6.000
Future pay	202	4.559	1.337	1.000	6.000
Cost of living	204	4.563	1.232	1.000	6.000
Previous pay	170	3.847	1.572	1.000	6.000
Other employers	199	4.482	1.317	1.000	6.000
Past pay	190	3.947	1.471	1.000	6.000
Own needs	206	4.611	1.243	1.000	6.000
Inflation	203	4.275	1.324	1.000	6.000

RELATIVE PAY VARIABLES

	n	Mean	s.d.	Minimum	Maximum
Internal-above	190	2.115	0.501	1.000	4.000
Other co.	190	2.194	1.107	1.000	4.000
Internal-peer	182	2.505	0.973	1.000	4.000
Internal-below	191	1.335	0.878	1.000	4.000
Friends	197	2.121	1.171	1.000	4.000
Relatives	196	1.994	1.107	1.000	4.000
Household	154	1.545	0.750	1.000	4.000
External-peer	181	2.342	1.142	1.000	4.000

IMPORTANCE VARIABLES

	n	Mean	s.d.	Minimum	Maximum
Internal-above	189	3.227	1.412	1.000	6.000
Other co.	181	3.441	1.589	1.000	6.000
Internal-peer	172	3.639	1.543	1.000	6.000
Internal-below	188	3.117	1.581	1.000	6.000
Friends	182	2.824	1.479	1.000	6.000
Relatives	182	2.230	1.383	1.000	6.000
Household	153	3.385	1.487	1.000	6.000
External-peer	162	3.962	1.575	1.000	6.000
Self-worth	201	4.567	1.275	1.000	6.000

Promised pay	148	3.837	1.582	1.000	6.000
Family needs	197	4.329	1.354	1.000	6.000
Accustomed pay	185	3.724	1.442	1.000	6.000
Future pay	201	4.348	1.455	1.000	6.000
Cost of living	204	4.284	1.230	1.000	6.000
Previous pay	176	3.443	1.616	1.000	6.000
Other employers	190	4.310	1.366	1.000	6.000
Past pay	189	3.486	1.668	1.000	6.000
Own need	205	4.253	1.296	1.000	6.000

SATISFACTION VARIABLES

	n	Mean	s.d.	Minimum	Maximum
Internal-above	188	3.664	1.307	1.000	6.000
Other co.	172	3.761	1.370	1.000	6.000
Internal-peer	164	3.829	1.350	1.000	6.000
Internal-below	183	4.273	1.149	1.000	6.000
Friends	175	3.937	1.335	1.000	6.000
Relatives	173	4.265	1.238	1.000	6.000
Household	148	4.155	1.281	1.000	6.000
External-peer	152	3.513	1.602	1.000	6.000
Self-worth	200	3.265	1.408	1.000	6.000
Promised pay	143	4.181	1.287	1.000	6.000

Accustomed pay	184	4.141	1.112	1.000	6.000
Family needs	195	3.764	1.142	1.000	6.000
Future pay	201	3.577	1.290	1.000	6.000
Cost of living	201	3.666	1.209	1.000	6.000
Previous pay	174	4.195	1.131	1.000	6.000
Other employers	187	3.513	1.384	1.000	6.000
Past pay	188	4.138	1.138	1.000	6.000
Own needs	205	3.800	1.185	1.000	6.000

ATTITUDINAL VARIABLES

	n	Mean	s.d.	Minimum	Maximum
Change emp.	194	3.226	1.641	1.000	6.000
Similar positions	197	4.045	1.378	1.000	6.000
Alone at work	158	3.240	1.589	1.000	6.000
Pay raises	194	3.422	1.582	1.000	6.000
Starting pay	188	3.888	1.452	1.000	6.000
Actively looking	186	2.650	1.724	1.000	6.000
Deserve	197	3.416	1.561	1.000	6.000
Invited out	147	2.653	1.274	1.000	6.000
More jobs	204	2.671	1.443	1.000	6.000
Coworkers	188	4.250	1.168	1.000	6.000
Superior's job	183	3.213	1.584	1.000	6.000

Seldomly alone	161	3.627	1.228	1.000	6.000
Fair raises	194	3.525	1.479	1.000	6.000
Leave area	196	2.780	1.459	1.000	6.000
Responsibility	198	3.762	1.573	1.000	6.000
Real friends	161	4.142	1.150	1.000	6.000
Friendly	166	4.445	1.006	1.000	6.000
External-peer	192	3.786	1.338	1.000	6.000
Own skills	202	3.985	1.471	1.000	6.000
Friendly place	164	4.786	0.905	1.000	6.000
Promotion	196	5.086	0.943	1.000	6.000
Ties at work	165	2.915	1.226	1.000	6.000
Better job	194	3.020	1.751	1.000	6.000
Seriously	194	3.051	1.797	1.000	6.000
Natural	165	4.169	0.934	1.000	6.000
Easy to leave	199	3.045	1.356	1.000	6.000
Promotions	203	2.871	1.294	1.000	6.000
Moving up	188	3.904	1.340	1.000	6.000
Visit friends	151	3.304	1.148	1.000	6.000

DEMOGRAPHIC VARIABLES

	n	Mean	s.d.	Minimum	Maximum
Present job	197	74.230	71.780	1.000	432.000

Present co.	193	110.000	90.920	1.000	516.000
Prior jobs	190	2.363	2.039	0.000	12.000
Education	200	24.875	2.473	9.000	18.000
Age	196	39.040	11.488	20.000	76.000

SCALE VARIABLES

	n	Mean	s.d.	Minimum	Maximum
Attitude toward pay practices	197	3.519	1.257	1.000	6.000
Aspiration scale	195	3.752	0.868	1.333	5.500
Social comparisons scale	182	2.498	1.186	1.000	5.666
Historical pay scale	187	3.558	1.421	1.000	6.000
Perceived ease of movement	203	3.119	1.022	1.000	5.500
Perceived intent to move	192	2.982	1.579	1.000	6.000

Desire to move	191	9.502	6.365	1.250	28.500
Sociability scale	164	2.878	0.653	1.166	5.333
Internal pay comparisons	188	3.335	1.184	1.000	6.000
External pay comparisons	182	3.899	1.290	1.000	6.000
Personal pay comparisons	201	4.317	1.125	1.000	6.000
Economic pay comparisons	204	4.294	1.033	1.000	6.000
Perceived equity	194	3.999	1.103	1.000	6.000

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