The Role of Individual Differences in the Referent Selection Process

Angela M. Young
California State University, Los Angeles
Robert A. Brymer
Florida State University

ABSTRACT

Based in equity theory and referent selection (Adams, 1963; Goodman, 1974; Kulik & Ambrose, 1992), this study examined the predictive strength of individual differences on referent selection and equity perceptions regarding pay. Data were collected from 231 managers and findings indicated that individuals high in need for achievement or power are most likely to use *Self* referents. Further, results provide evidence that referent type is more strongly associated with perceptions of pay equity than are individual differences.

The referent selection process, grounded in equity theory (Adams, 1963), has been studied by researchers for many years and variables relevant to the theory have been linked to several organizational outcomes such as pay satisfaction and work attitudes (Dornstein, 1989; Goodman, 1974; Heneman, 1985; Martin & Lee, 1992; Oldham, Kulik, Ambrose, Stepina, & Brand, 1986a; Scholl, Cooper, & McKenna, 1987; Summers & DeNisi, 1990). While most studies on referent choice have dealt with situational and demographic factors in relation to referent selection (Adams, 1963; Goodman, 1974; Oldham et al., 1986a; Oldham, et al., 1986b), some researchers have speculated that individual differences play a more prominent role in referent selection and perceptions of pay equity than expressed in extant literature (Kulik & Ambrose, 1992; Mowday, 1991; Oldham, Nottenburg, Kassner, Ferris, Fedor, & Masters, 1982; Oldham et al., 1986b; Stepina & Perrewé, 1991; Summers & DeNisi, 1990). Therefore, the purpose of this study is to examine the role of individual differences in referent selection and to determine the extent to which individual differences and referent selection impact perceptions of pay equity.

Referent Type and Time Orientation

The process of referent selection involves identifying the source of the comparison used by an individual. That source, a comparative referent, is somewhat of a benchmark against which we make comparisons about our own situation. Another person to whom we compare ourselves, a situation to which we compare our own situation, or some organizational system used as a guideline in determining equity perceptions are examples of comparative referents. Most studies have categorized referent choices as *Other*, *System*, and *Self* (Goodman, 1974; Oldham, et al.Kulik, Stepina, & Ambrose, 1986b). The referent categories in this study will follow these previous works, but will include additional categories allowing for no selection of a comparative referent, *None*, and selection of multiple referents, *Multiple*.

Along with type of referent selected, equity theory also includes an aspect of time such as *Present*, *Future*, or *Past* referents (Goodman, 1974). For example, a person could compare his or her current position to a desired future position envisioned for himself or herself. In this case, the

person is using a *Future-Self* referent. Categories of time orientation in this study were: *Past*, *Present*, and *Future* referent.

Individual Differences

Most pertinent to this study is the work of Oldham et al. (1986b) who found that employees who used *Self-future* referents across job facets such as compensation, supervisory behavior, security, and job complexity, experienced lower satisfaction, higher turnover and absenteeism, and lower performance levels. These findings were in partial contrast to the findings presented by Oldham et al. (1982) in which performance levels were high with individuals using *Self* referents. An explanation for the discrepancy included a discussion of McClelland's (1961) work on achievement motivation theory (Oldham et al, 1986b). Oldham et al. used McClelland's arguments to support the contention that individuals' needs, need for achievement in particular, might add to the explanation of differences in referent selection, time orientation, and work outcomes. The Oldham et al. (1986b) finding is important to this study because it shows that personal characteristics might, in part, affect the referent choice a person makes and resulting perceptions of pay equity.

Individual needs, in general, influence behavior in that people conduct themselves in ways which satisfy unique levels of individual needs (French, 1955; Steers & Braunstein, 1976). In keeping with the reasoning of existing equity research, this study included need for achievement, feedback, and recognition. Additionally, needs for power and autonomy also were included in order to broaden the scope of the investigation. Thus far, individual differences, referent type, and time orientation have been described as possible relevant factors. To test the relationships among these variables, two hypotheses were developed.

H1: Individuals can be grouped into categories of referent types based on individual differences.

H2: Individuals can be grouped into categories of time orientation based on individual differences.

Equity Perceptions Regarding Pay

Of all job facets investigated in previous research, pay has consistently emerged as a relevant facet. While there is existing evidence that referent type influences levels of pay equity, there is also some empirical evidence that individual differences may influence equity perceptions and feelings of satisfaction (Gutek et al., 1986; Staw & Ross, 1985). In fact, Gutek et al. (1982) found that satisfaction and equity perceptions were broad and well-developed feelings, and that high levels of satisfaction may be attributable more to the individual than to situational factors. Thus, a closer examination of the relationship between referent selection, individual differences, and pay equity is required. The next two hypotheses deal with examining whether individual differences or referent type is more influential in determining perceptions of pay equity.

H3: The type of referent selected by an individual will be associated with the level of equity perceived regarding pay.

H4: The type of referent an individual selects will be more strongly associated with reported perceptions of equity regarding pay than will individual differences.

Method

Sample

Data for this study were collected from mid-level managers, supervisors, and non-supervisory employees working in a variety of jobs in the hospitality industry. A questionnaire was administered, on a voluntary basis, to 231 individuals participating in one of several seminars. Of the respondents reporting gender, 40% were men and 51% were women. Seventy percent of the respondents reported ethnicity as Caucasian, 4% African-American, 10% Hispanic, 1% Asian, and 2% reported ethnicity as "Other." The average age of respondents was 35 years old and the average time in current positions was 4 years.

Measures

Individual Differences

Needs. Four needs: achievement, affiliation, autonomy, and power were measured using Steers and Braunstein's (1976) Manifest Needs Questionnaire. Each of the four needs were measured with 5 items and responses range from Always (7) to Never (1). Cronbach Alpha reliability estimates for the sample were: achievement (.58); affiliation (.56); autonomy (.64); and power (.72). Although autonomy, power, and achievement were the main focus of this study, affiliation was included in the questionnaire to adhere to the existing scale format.

Feedback. Need for Feedback was measured with three items which assessed the extent to which a respondent feels that he or she gets enough information to determine how well he or she is performing on the job. Responses are based on a scale ranging from Always (7) to Never (1). The reliability estimate for the scale was .89.

Recognition. Amounts of recognition or respect a respondent feels he or she needs is measured with three items. The items were measured on a scale of Always (7) to Never (1) with a reliability estimate of .91.

Dependent Variables

Referent Type. To pinpoint the type of referent a respondent uses, three questions were presented. First, the respondent was asked if he or she makes comparisons between his or her pay and another person's pay, indicating an *Other* referent. Next, a question about whether or not the respondent compares his or her pay situation to another different pay situation in the past or a personal situation desired for the future, indicating a *Self* referent. Finally, a question about whether or not the respondent compares his or her pay situation to information received, indicating a *System* Referent. Each of the questions dealing with referent type was measured on a Yes (1) or No (0) response scale and the respondent was able to answer 'yes' or 'no' to all questions. An additional category of *None* was coded for those respondents answering 'no' to all

questions regarding selection of any type referent and a category *Multiple* was coded for those respondents answering 'yes' to more than one question about types of referents selected.

Time Orientation. To measure the time orientation of the referent selected, the respondent was directed to answer three questions regarding time. *Past*, *Present*, and *Future* time orientation was measured for individuals who reported selection of a *Self* or *System* referent and *Past* or *Present* time orientation was measured for individuals who reported selection of an *Other* referent. *Past, Present, and Future* time orientations were coded as 1, 2, and 3, respectively.

Pay Equity. Perceived fairness of the amount of money a respondent receives in relation to skills, effort, and amounts other people receive was measured with five items. Three items were adapted from items presented in Cook, Hepworth, Wall, and Warr (1981). Cook et al. cited Cammann, Fichman, Jenkins, and Klesh (1979) and Seashore, Lawler, Mirvis, and Cammann (1982) as sources for the items. Two additional items were adapted from Scholl, Cooper, & McKenna (1987) and one item "I am compensated fairly" was created for this measure. All the items were measured on a seven-point scale and the reliability estimate was .90.

Results

Data Analysis

First, descriptive statistics, correlations, and reliabilities were calculated for each of the variables and are presented in Table 1. Next, the relationship between needs and referent selection was tested with discriminant analysis. Discriminant analysis was used to determine if individuals, when grouped by needs scores, could be classified into referent type and time orientation categories. That is, the question of whether or not a person with specific needs scores uses a specific type of referent and time orientation was analyzed to test hypotheses 1 and 2, and the results are presented in Tables 2 and 3. Finally, two discriminant analysis tests were conducted to evaluate differences between levels of individual differences and perceptions of pay equity, and to determine if individual differences or referent type was a better indicator of perceptions of pay equity. Results are presented in Tables 4 and 5.

Table 1
Correlations[a,b]

	N	Mean	St. Dev.	1	2	3	4	5	6	7	8	9	10	11
Referent Type														
No Referent	231	.40	.49											
Self	231	.08	.26	-23*										
System	231	.06	.23	-20*	-07									
Other	231	.16	.37	-36*	-12*	-11								
Multiple	231	.31	.46	-55*	-19*	-16*	-29*							
Time-orientation	231	1.48	1.31	-89*	16*	24*	16*	61*						
Pay Equity	222	1.86	.63	22*	06	-04	-11	-16*	-21*	(.90)				
Individual Differences														
Need for Achievement	216	2.32	.48	-15*	-10	-01	-07	22*	21*	-06	(.58)			
Need for Autonomy	204	1.83	.37	02	04	03	-01	-05	01	-13*	09	(.64)		
Need for Power	222	2.08	.32	-09	09	06	-11*	10	12*	-11	21*	-01	(.72)	
Need for Feedback	223	2.09	.45	.02	-02	12*	-12*	03	01	08	12*	-09	04	(.89)
Need for Recognition	224	1.95	.42	.10	00	08	-03	-12*	-11	13	-12*	01	-08	10 (.91)

[a] Reliabilities are shown in parentheses for multi-item measures; [b]Decimals are omitted for correlations
* Significant at the p<.05 level (one-tailed)

Table 1

Hypotheses Tests

Hypothesis 1 stated that individuals could be grouped into categories of referent types, based on individual differences. The results of the Wilks' Lambda statistic from the discriminant analysis, presented in Table 2, indicated that the overall test had a significant result at the p=.01 level (*df*=20, $X2$=36.95). Further, based on the Wilks' Lambda statistic and the discriminant function-variable correlations, two individual difference variables could be identified as significant in categorizing respondents into referent type categories: need for achievement ($F(5,178)=4.05$; $p<.01$) and need for power ($F(5,178)=3.90$; $p<.01$). However, based on an evaluation canonical discriminant functions and the chi-square statistics associated with each eigenvalue, only the first function was signification. Further examination of the canonical discriminant functions and the discriminant function-variable correlations, showed that the first function can be characterized by need for achievement and power.

Next, the group centroid means were examined in order to determine which referent types were most strongly associated with the significant individual differences, need for achievement and power. It appears that the strongest association was between individuals who select *Self* referents. Individuals high in need for achievement or power are most likely to use *Self* referents. Individuals selecting *System* referents scored lowest in need for achievement and power. Hypothesis 1, therefore, was partially supported in that two individual differences tested were relevant in categorizing respondents by referent type.

Table 2

Discriminant Analysis for Referent Type Based on Individual Differences (n=183)

Variable	Wilks' Lambda	F	Discriminant Function-Variable Correlations[a] Functions			
			1	2	3	4
Need for Achievement	.917	4.05*	**73**	-39	-40	-04
Need for Autonomy	.959	1.90	28	85	13	-40
Need for Power	.919	3.90*	**73**	-03	-40	52
Need for Feedback	.984	0.72	23	-11	42	57
Need for Recognition	.978	1.00	-24	32	44	70

Group Centroids for Groups by Referent Type[a]

Groups	Discriminant Functions Functions			
	1	2	3	4
No Referent	-30	-11	-04	09
Self	**60**	34	-29	09
System	-41	63	33	11
Other	-31	08	-06	-23
Multiple	43	-09	10	-02

*$p<.01$; [a] Decimals omitted

Table 2

Hypothesis 2, that individuals can be grouped into categories of time orientation based on individual differences, was tested using discriminant analysis. The preliminary difference tests, shown in Table 3, indicated that need for feedback and achievement were significant. The Wilks' Lambda statistics were: need for feedback ($F(5,108)=1.28$; $p<.05$) and need for achievement ($F(5,108)=2.52$; $p<.10$). However, the overall test of canonical discriminant functions was not significant. Therefore, Hypothesis 2 was not supported and the most that can be learned from the Wilks' Lambda result is that individuals reporting referent comparisons in the *Past*, *Present*, or *Future* differ in scores of need for feedback and achievement. While the results of this test may indicate that further investigation is merited or that a closer look at time orientation is required, the results of this study offer little insight into time orientation of referent selection and individual differences.

Table 3

Discriminant Analysis for Time Orientation Based on Individual Differences (n=113)

Variable	Wilks' Lambda	F
Need for Achievement	.956	2.52**
Need for Autonomy	.999	0.02
Need for Power	.935	3.79
Need for Feedback	.977	1.28*
Need for Recognition	.988	0.10

*p<.05; **p<.10

Table 3

To test Hypothesis 3, that the type of referent selected by an individual will be associated with the level of perceived equity regarding pay, referent types (*None, Self, System, Other, and Multiple*) were used as predictor variables in a discriminant analysis test. Results of the test, shown in Table 4, indicated that individuals selecting *None* (F(5,217)=5.41; p<.01) or *Multiple* (F(5,217)=3.49; p<.05) differ in respect to perceptions of equity. Examination of the canonical discriminant functions revealed that the overall equation is significant (*df*=2, *x*2=18.95; p=.02) but only the first function emerged as significant. The first function is characterized by a continuum of no selection of a referent to selection of multiple referents, or *None* to *Multiple*. Examination of group centroid means provided evidence that individuals reporting favorable perceptions of pay equity do not report selecting a comparative referents.

Table 4

Discriminant Analysis for Equity Perceptions Based on Referent Type (n=222)

Variable	Wilks' Lambda	F	Discriminant Function-Variable Correlations[a]	
			1	2
No Referent	.953	5.41*	**78**	-49
Self	.988	1.38	35	46
System	.989	1.17	00	82
Other	.984	1.76	-46	-12
Multiple	.969	3.49**	-65	-06

Group Centroids for Groups by Referent Type[a]

Groups	Discriminant Functions	
	1	2
Unfavorable	**-43**	-03
Neutral	14	08
Favorable	27	-29

*p<.01; **p<.05; [a] Decimals omitted

Table 4

Table 5

Discriminant Analysis for Equity Perceptions Based on Individual Difference (n=179)

Variable	Wilks' Lambda	F
Need for Achievement	.991	0.78
Need for Autonomy	.980	1.82
Need for Power	.961	3.62*
Need for Feedback	.993	0.68
Need for Recognition	.982	1.53

*p<.05

Table 5

Hypothesis 4 stated that the type of referent an individual selects, rather than individual differences, will be more strongly associated with reported perceptions of equity regarding pay. The last hypothesis was tested by running a discriminant analysis test of equity perceptions based on individual differences and then comparing the results of total association between the predictors and the discriminant functions for the test of individual differences and pay equity to the test of referent type and pay equity (results from the test of Hypothesis 3 shown in Table 4). The preliminary results of the analysis testing individual differences and pay equity, shown in Table 5, indicated that while need for power was significantly different among individuals' scores of equity perceptions ($F(5,174)=3.62$; $p<.05$), the overall discriminant analysis test was not significant. Therefore, it appears that individual differences do not have a strong association with reported perceptions of equity regarding pay.

To complete the test of Hypothesis 4, the results of the discriminant analysis testing individual differences and equity perceptions was compared with the result of the test of referent type and equity perceptions. The test of association between referent type and equity perceptions provided clear evidence that a significant difference existed among individuals' reports of referent type and equity perceptions. Further, the total association of the relationship between referent type and equity perceptions was calculated by adding together the resulting eigenvalues from the discriminant analysis test (Stevens, 1992). The eigenvalues represent the additive portions of association for each function and the result indicated that the total association between referent type and equity perceptions was 9%. In comparison, the discriminant analysis test of individual differences and equity perceptions did not provide significant results, indicating, at the very least, a relatively weaker relationship between individual differences and equity perception than between referent type and equity perceptions. Hypothesis 4 was supported and the results provide evidence that referent type is more strongly associated with perceptions of pay equity than are individual differences.

Discussion

Up to this point in referent selection research, there has only been speculation about the relationship between individual needs and referent selection or perceptions of equity. This study is the first attempt to measure and associate individual differences with the referent selection process. Results of the first hypothesis test revealed that there are significant differences among individuals' systems. If managers have some insight into the likelihood of types of referent comparisons most salient to individuals, presentation of pay and promotion systems can be tailored to be more relevant and influential to a group of individuals. For example, knowing that individuals scoring high in need for achievement and power use a *Self* referent and are most impressed by information relevant to their personal situation and goals, managers can effectively address pay and promotion opportunities specific to an individual's situation. Similarly, bombarding *Self* referent individuals with information about systematic mechanisms for pay and promotion may be ineffective given the findings of this study.

Findings related to equity perceptions provided evidence that individuals who select no referent or do not use multiple referents generally report more favorable perceptions of equity regarding their pay situations. Again, this information is quite useful in that managers can gain more insight into understanding how employees develop equity perceptions. Further, if

employees who do not select a referent, have more favorable perceptions of equity, a relevant future research question is to examine the extent to which employers can shape or curb employees' selection of referents.

Related to the finding that an association exists between referent type selected and equity perceptions, is the relationship between individual differences and equity perceptions. One individual difference variable, need for power, emerged in preliminary tests as significantly different among individuals' reports of equity perceptions. However, further examination of specific associations did not reveal any additional information. So while, it can be noted that equity perceptions vary among individuals given their need for power, no specific information can be provided about the level of favorable or unfavorable equity perceptions. Given the last two findings regarding the comparison of referent type and individual difference in relation to equity perceptions, this study provides evidence that equity perceptions are associated with the type of referent selected by an individual, and that referent type is more strongly associated with resulting perceptions of equity than individual differences.

Limitations of the Study and Suggestions for Future Research

As with any attempt to collect and analyze data about percept to percept relationships, the question of assessment and self-report arises. Reliabilities for the measures were relatively low, but acceptable, for need for achievement, autonomy, and power. The measures for need for recognition and feedback were somewhat stronger. Given the sample size and the acceptable, albeit low, reliabilities, it is unlikely that the measures themselves caused the dismal results for the two unsupported hypotheses tests. There are additional variables which must be included and addressed in future studies. Perhaps situational variables have a stronger influence on referent type selected and resultant equity perceptions because of the immediate and salient impact situational factors have on an individual.

Conclusion

While many studies have sought to examine situational or demographic variables in relation to referent selection, little evidence beyond speculation has been provided to understand the role of individual differences in the referent selection process. Thus, this is an important first step in identifying the relationship between individual differences and referent selection and substantiating the relationship with data. The contribution of this study is an empirical test of relevant individual differences and a comparison of strength of association between referent type and individual differences in relation to equity perceptions.

References

Adams, J.S. (1963). Toward an understanding of inequity. Journal of Abnormal and Social Psychology, 67, 422-436.

Ambrose, M.L., & Kulik, C.T. (1988). Referent sharing: convergence within workgroups of perceptions of equity and referent choice. Human Relations, 41(9), 697-707.

Cammann, C., Fichman, M., Jenkins, D., & Klesh, J. (1979). The Michigan Organizational Assessment Questionnaire. Unpublished Manuscript, University of Michigan, Ann Arbor, Michigan. Cited in Cook, J.D., Hepworth, S.J., Wall, T.D., & Warr, P.B. (1981). The Experience of Work: A Compendium and Review of 249 Measures and their Use. New York: Academic Press.

Cook, J.D., Hepworth, S.J., Wall, T.D., & Warr, P.B. (1981). The Experience of work: A compendium and review of 249 measures and their use. New York: Academic Press.

Dornstein, M. (1989). The fairness judgements of received pay and their determinants. Journal of Occupational Psychology, 62, 287-299.

French, E.G. (1955). Some characteristics of achievement motivation. Journal of Experimental Psychology, 50, 232-236.

Goodman, P.S. (1974). An examination of referents used in the evaluation of pay. Organizational Behavior and Human Performance, 12, 170-195.

Gutek, B.A., Allen, H., Tyler, T.R., Lau, R.R., & Westat, A.M. (1983). The importance of internal referents as determinants of satisfaction. Journal of Community Psychology, 11, 111-120.

Heneman, H.G., III (1985). Pay satisfaction. In K.M. Rowland & G.R. Ferris (Eds.), Research in Personnel and Human Resources Management, 12, 170-195.

Hills, F.S. (1980). The relevant other in pay comparisons. Industrial Relations, 19, 345-351.

Kulik, C.T., & Ambrose, M.L. (1992). Personal and situational determinants of referent choice. Academy of Management Review, 17, 212-237.

Lee, R.T., & Martin, J.E. (1991). Internal and external referents as predictors of pay satisfaction among employees in a two-tier setting. Journal of Occupational Psychology, 64, 57-66.

McClelland, D.C. (1961). The achieving society. Princeton, NJ: Van Nostrand-Reinhold.

McFarlin, D.B., & Sweeney, P.D. (1992). Distributive and procedural justice as predictors of satisfaction with personal and organizational outcomes. Academy of Management Journal, 35(3), 626-637.

Oldham, G.R., Nottenburg, G., Kassner, M.W., Ferris, G., Fedor, D., & Masters, M. (1982). The selection and consequences of job comparisons. Organizational Behavior and Human Performance, 29, 84-111.

Oldham, G., Kulik, C.T., Ambrose, M.L., Stepina, L.P., & Brand, J.F. (1986a). Relations between job facet comparisons and employee reaction. Organizational Behavior and Human Decision Processes, 38, 28-47.

Oldham, G.R., Kulik, C.T., Stepina L.P., & Ambrose, M.L. (1986b). Relations between situational factors and the comparative referents used by employees. Academy of Management Journal, 29, 599-608.

Scholl, Richard W., Cooper, Elizabeth, A., & McKenna, J.F. (1987). Referent selection in determining equity perceptions: Differential effects on behavioral and attitudinal outcomes. Personnel Psychology, 40, 113-124.

Seashore, S., Lawler, E. Mirvis, P., and Cammann, C. (1982). Observing and Measuring Organizational Change: A Guide to Field Practice. Wiley, New York. Cited in Cook, J.D., Hepworth, S.J., Wall, T.D., & Warr, P.B. 1981. The Experience of Work: A Compendium and Review of 249 Measures and their Use. Warr, P.B. (Ed.). New York: Academic Press.

Staw, B.M., & Ross, J. (1985). Stability in the midst of change: A dispositional approach to job attitudes. Journal of Applied Psychology, 70, 469-480.

Steers, R.M., & Braunstein D.N. (1976). A behaviorally-based measure of manifest needs in work settings. Journal of Vocational Behavior, 9, 251-266.

Stepina, L.P., & Perrewé, P.L. (1991). The stability of comparative referent choice and feelings of inequity: A longitudinal field study. Journal of Organizational Behavior, 12, 185-200.

Stevens, J. (1992). Applied multivariate statistics for the social sciences. New Jersey: Lawrence Erlbaum Associates.

Summers, T.P., & DeNisi, A.S. (1990). In search of Adam's other: Reexamination of referents used in the evaluation of pay. Human Relations, 43, 497-511.

Thibault, J., & Kelley, H.H. (1959). The social psychology of groups. New York: Wiley.