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### **Abstract**

Past research has demonstrated a negative relationship between ambition, or the desire to get ahead, and job satisfaction. In the present paper, age was hypothesized to moderate the relationship between ambition and job satisfaction such that the relationship between ambition and satisfaction is more negative for older employees than for younger employees. Three studies, with three criterion variables (promotion satisfaction, extrinsic job satisfaction, overall job satisfaction), were used to test the hypothesis. Results indicated support for the hypothesized interaction. The discussion focuses on the implications of the results for organizational and individual career management strategies.

### **Employee Age as a Moderator of the Relationship Between Ambition and Work Role Affect**

Although it has received limited investigation, ambition, or the desire to get ahead, is a potentially important individual difference in the study of employee motivation and satisfaction. An emerging body of research supports ambition as one of the most powerful predictors of career attainment. Judge, Cable, Boudreau, and Bretz (1994) found that ambition was a strong predictor of ascendancy of American executives. Cox and Cooper (1989) found that successful British executives displayed a high degree of personal ambition. Howard and Bray (1988) found that the strongest predictor of advancement for AT&T managers was individuals' desires to get ahead. By definition, ambitious individuals set high goals for their career attainment. Thus, the link between ambition and career success is fully consistent with the predictions of goal setting theory, which has demonstrated that high goals lead to higher levels of motivation and performance (Locke, Shaw, Saari, & Latham, 1981; Mento, Steel, & Karren, 1987). It is not surprising then, that in organizational settings, ambition is perceived as a key to success and as a positive attribute to possess.

Despite the positive role that ambition plays in organizational settings, it also has a negative side. Ambitious people are fundamentally dissatisfied with where they are and constantly want to improve the conditions of their job in some significant way (Judge & Locke, 1993). Ambition drives these individuals to set higher standards for self-satisfaction. As a result, ambitious people must achieve more to be satisfied than those with less ambition. This is what drives them to excel and improve. Moreover, both social cognitive theory (Bandura, 1986) and control theory (Campion & Lord, 1982) suggest that since people use their aspirations (goals) as standards of self-satisfaction, holding performance level constant, goal level should be negatively related to satisfaction. Thus, individuals with high goals should be harder to satisfy than those with low goals (Mento, Locke, & Klein, 1992). In turn, high ambition--because it represents a high standard of aspiration--should be associated with low satisfaction.

Indeed, evidence supports this proposition. Several recent studies have found a significant, negative relationship between ambition and job satisfaction (Erez, 1994; Judge & Locke, 1993; Judge et al., 1994). In these studies, dissatisfaction arose when individuals were in positions which were below their desired levels within the organization hierarchy. A potential explanation of these results may be found in a series of studies conducted by Mento et al. (1992). These investigators found a negative relationship between goal level and anticipated satisfaction (valence) across performance levels. Mento et al. explained this negative association using Bandura's (1988) principle of motivation. According to this principle,

individuals develop a plan which they pursue until their actions are congruent with their goals. Personal satisfaction becomes contingent upon meeting established goals. Thus, those who perform below their desired goal level should be dissatisfied, while those who just meet or surpass their desired performance level should be relatively satisfied. It appears then, that exceeding goals will be more favorable to the self-concept than either falling short or even meeting one's goals. However, this implies that one must perform at a higher level in order to exceed established goals and thus achieve greater satisfaction. Surpassing goal levels may be difficult for ambitious individuals because they are more likely to set high goals. Thus, they are probably most likely to fail or to just meet expectations rather than to exceed them, leading to lower levels of satisfaction.

Further explanation for the negative relationship between ambition and job satisfaction is provided by multiple discrepancy theory (Michalos, 1985b). This theory explains satisfaction in different domains of life by different aspirational gaps. For example, "real-ideal gap" theorists have argued that job satisfaction is dependent upon the discrepancy between what an individual actually attains and what this individual ideally would like to attain (e.g., Ilgen, 1971; Locke, 1976; McClelland, Atkinson, Clark, & Lowell, 1953). Similarly, "goal-achievement gap" theory predicts that the gap between what one has and what one expects to achieve determines current level of satisfaction with multiple domains of life (Michalos, 1985a). Michalos (1985a) cites a great deal of research that supports both of these theories in relation to different domains of life, including job satisfaction (e.g., Canter & Rees, 1982; Cherrington & England, 1980). In effect then, individuals who are ambitious are constantly striving to bridge the gap between where they are and where they want to be or expect to be in the future. As long as a gap exists, multiple discrepancy theory predicts dissatisfaction.

One of the factors that was hypothesized by Michalos (1985b) to influence the discrepancy perception between what one wants and what one has is age. Older individuals were proposed to have less discrepancy between what they wanted and what they had as well as less discrepancy between what they had and what they expected to have in the future. If this proposition were true in terms of career goals, it would suggest that older individuals are less ambitious and therefore more satisfied with where they are in the organizational hierarchy. However, Michalos (1985b) did not find support for this proposition. In fact, in relation to the domain of satisfaction with paid employment, the influences of age on the want-has gap and the expect-has gap were found to be nonsignificant. These results suggest that age does not necessarily influence discrepancy perceptions between existing and desired level within the organizational hierarchy.

Moreover, seeking promotions may represent a behavior enacted by ambitious individuals as a way to bridge the gap between where they currently are in their careers and where they expect to be in future. Thus, if older employees are less ambitious they should seek fewer promotions. In fact, Wright and Hamilton (1978) suggested that older employees go through a "grinding down" stage where they come to terms with what is available to them and lessen their expectations for satisfying work. However, the empirical evidence on the relationship between age and ambition is mixed. Some empirical research indicates that individuals maintain their expectations of promotions at a later time in their careers (Chinoy, 1955; Sofer, 1970), while other studies have found a negative relationship between age and ambition (Erez, 1994; Judge et al., 1993; Judge & Locke, 1993). One explanation for these inconsistent results might be found in Rhodes' (1983) suggestion that since promotional opportunities are under the control of organizations (Schwab & Heneman, 1977), the organizational policies regarding advancement may effect employees' ambitions. Thus, older employees may not be less ambitious per se, but only may be able to exhibit high ambition in organizations that encourage promotions.

Despite this lack of clear evidence to support a difference in ambition among different age groups, the gap between where one is and where one wants to be may be more salient to older individuals. This gap is likely to be more apparent to older workers for several reasons. First, society and organizations have different expectations of older individuals which may contribute to older workers' perceptions of their inability to achieve their desired goals (Stanwyck, 1983). Furthermore, due to the pyramidal nature of organizations and limited corporate growth within the last decade, there are fewer levels available as one moves up the career ladder (Gutteridge, Leibowitz, & Shore, 1993). Assuming that older individuals have been gradually attaining promotions during their careers, as one ages, there are fewer hierarchical levels available to them, as well as fewer years to attain these promotions. As such, ambition may be more frustrating to older employees due to goal conflict (high goals with a low expectancy of success).

Second, Stanwyck (1983) argued that as individuals age, they set more realistic goals from those of their earlier years. However, setting more realistic goals is not necessarily the same as giving up on ambition. Indeed, Knox (1977) asserted that although individuals who set realistic goals may acknowledge that they are not able to achieve their "adolescent dream[s]," accepting this conclusion can be frustrating as well as depressing. Part of this frustration may come from the referent other that individuals compare themselves against in regard to goal achievements. Younger individuals probably are more likely to pick a referent other, regardless

of age, who represents where that younger person wants to be in the future. On the other hand, older individuals may be more likely to define a referent within their same age group to decide how their personal successes compare to that referent other. In this regard, younger individuals are less likely to be frustrated because they have longer to achieve their goal whereas older individuals may be very frustrated particularly if they find that their referent others, within their age group, have achieved more than they have at the same age. For example, midlife managers striving to be high-level executives may find it frustrating to compare themselves to members of their cohort who have already achieved this goal. Conversely, younger managers, who also use the older managers' same referent others, are less likely to experience the same level of frustration as the midlife managers, because these younger individuals know they still have time to achieve this end. Thus, the referents one chooses may be a contributing factor to the level of frustration experienced by older workers.

One further explanation for a more dissatisfying effect of ambition for older individuals is related to American norms of career success. Rosenbaum (1979) argued that employees in American society often are led to believe that they can improve their positions within an organizational hierarchy throughout their careers. However, evidence indicates that the use of promotional opportunities as a major employee motivator has slowed considerably in the last decade, even for individuals in the 30 to 50 age range (Giblin, 1986). This suggests that past norms may not be valid anymore. Downsizing and the flattening of the organizational hierarchy may reduce employees' chances for upward advancement (Goddard, 1989). Older employees may be especially vulnerable to these changing norms because on the one hand, they have moved through their careers believing that advancement would always be available to them while, on the other hand, they are faced with fewer prospective promotional opportunities. As such, past expectations of career mobility present false hopes for older individuals which may translate into greater dissatisfaction caused by the ambition of these older workers.

In summary, while there is reason to believe that ambition is more dissatisfying to older employees, no previous research has tested the moderating influence of age on the ambition-satisfaction relationship. Thus, we advance the following hypothesis:

Age moderates the relationship between ambition and job satisfaction such that high levels of ambition are more dissatisfying for older workers than for younger workers. Relatedly, the relationship between ambition and job satisfaction is more negative for older workers than for younger workers.

In offering the above hypothesis, it is important to distinguish ambition from related individual characteristics. Because ambition reflects the drive needed to attain one's career

goals, it is a similar concept to need for achievement (Nach) which reflects a strong goal orientation. Although the two constructs have obvious similarities, ambition is conceptually different from Nach. Nach represents a personality trait (McClelland, 1961) while ambition reflects a motivational state (Howard & Bray, 1988). In other words, the fact that some individuals have a general tendency to achieve does not necessarily mean that these people will be ambitious in the work environment. Thus, the general dispositional tendency to strive for success (Nach) should be separated from its motivational manifestation in the job situation (ambition). Empirical data also suggests that the two constructs are distinct. Howard and Bray (1988) found a moderate correlation between ambition and Nach. Judge, Boudreau, and Welbourne (1994) found a relatively low correlation between ambition and Nach ( $r=+.14$ ,  $p=.09$ ). These authors found that ambition was more highly related to, but still distinct from, the work value of achievement (Ravlin & Meglino, 1987) ( $r=+.26$ ,  $p < .01$ ). Thus, ambition is only partially a result of achievement needs and values, yet because ambition has been defined in terms of the work context, it may have a greater impact on work role affect and behavior than general achievement values or needs.

Because ambition was conceptualized in this study as desired advancement in the organizational hierarchy, which is mainly related to promotions, we separately investigated the moderating role of age on the relationship between ambition and promotion satisfaction. However, promotions are not the only goals toward which ambitious individuals strive. In fact, promotions often are the most viable means of attaining extrinsic rewards such as status and salary. Theoretically then, it is relevant to investigate the moderating effect of age on the relationship between ambition and extrinsic satisfaction. Thus, this relationship was investigated as well. Finally, ambition also may have spillover effects on overall job satisfaction. If employees are dissatisfied with where they are in the organizational hierarchy, this may influence their overall perceptions of their current jobs, because they are not performing those duties that they believe themselves capable of performing. Therefore, we also investigated the effect of age on the relationship between ambition and overall job satisfaction. Data from three different studies were used to test the hypothesis, representing diverse settings and populations. Similar measures were used in all three samples and the same analyses were conducted for each of the data sets. Similar results should indicate generalizability across different populations.

## Method: Study 1

### Setting, Subjects, and Procedure

The data for Study 1, which were collected as part of a master's thesis on the dispositional source of job satisfaction (Erez, 1994), were obtained from employees at a large public university located in the Midwest. Subjects occupied a wide range of non-academic positions within the university, including secretaries, maintenance and grounds crew, and janitorial staff. Average age of the subjects was 44.8 years ( $SD=10.6$  years). A random sample of 700 university employees, stratified by department, was drawn from the larger population of service employees. Surveys were mailed to subjects through campus mail. Subjects were asked to sign an informed consent form, which described the nature of the study, informed them that an honorarium was to be paid as a result of returning a completed survey, and assured them that their responses were completely confidential. Two hundred and twenty-four subjects returned useable surveys, representing a response rate of 32%. Using data from the university's records, respondents did not differ from nonrespondents with respect to any demographic variable, including age.

### Measures

Overall job satisfaction. Overall job satisfaction was measured using the short form of the Minnesota Satisfaction Questionnaire (MSQ; Weiss, Dawis, England, & Lofquist, 1967). Subjects were asked to respond to 20 statements about their job using a 1=very dissatisfied with this aspect of my job to 5=very satisfied with aspect of my job scale. The statements in the MSQ are both intrinsic (e.g., "The chance to do different things from time to time," "The chance to do something that makes use of my abilities") and extrinsic ("My pay and the amount of work I do," "The way my job provides for steady employment") in nature. In the present study, as in past research, the MSQ displayed a high degree of reliability ( $\alpha=.89$ ).

Extrinsic job satisfaction. Because the short form of the MSQ contains 10 intrinsic items and 10 extrinsic items, a measure of extrinsic satisfaction can be obtained from the questionnaire (Arvey, Bouchard, Segal, & Abraham, 1989; Hauber & Bruininks, 1986). The reliability of this 10-item measure of extrinsic satisfaction was relatively high ( $\alpha =.79$ ).

Promotion satisfaction. Promotion satisfaction was measured by a specific item from the MSQ pertaining to promotions. The respondent used the same 1 to 5 scale in responding to the statement, "The chances for advancement on this job."

Age and ambition. Age was computed by subtracting the year the respondent was born from 1993. The birth date of each subject was obtained from information contained in the university's archival data base. Ambition was assessed by a question on the survey that asked

subjects how many levels they wished to move up from their present job. Responses ranged from 0 (I am content where I am at in the organizational hierarchy) to 4 (I wish to advance four or more levels beyond my current position). This measurement was based on the measure used by Howard and Bray (1988) in their comprehensive study of AT&T managers. Those expressing a desire to move up many levels are assumed to have more ambition than those who are content where they are at (Judge & Locke, 1993). Ambition (number of desired advancement levels) was distributed as follows: 0 levels=25%; 1 level=33%; 2 levels=23%; 3 or more levels=19%.

## **Method: Study 2**

### Setting, Subjects, and Procedure

The setting for this study, which was part of a larger study on the effect of thought processes on job and life satisfaction (Judge & Locke, 1993), was a large university in the Northeast. Subjects were clericals employed in all departments within the university. Average age of the subjects was 37.7 years ( $SD=10.9$  years). Before surveys were mailed to the employees, a 25% random sample, stratified by college and department, was drawn from a data base containing the names of all clericals working at the university. The sampling procedure produced a list of 453 names and valid campus addresses. Surveys were mailed to employees through campus mail. Subjects were told in a cover letter that individual responses were completely confidential, and were promised an honorarium in return for their participation. Subjects also were asked to sign an informed consent form. From the pool of 453 respondents, 231 usable surveys were returned, representing a response rate of 51%. Response rates did not significantly differ among the departments or by gender.

### Measures

Overall job satisfaction. Overall job satisfaction was measured by the Job Descriptive Index (JDI; Smith, Kendall, & Hulin, 1969). The five facets of job satisfaction measured by the JDI were (reliability estimates are in parentheses): pay ( $\alpha =.87$ ), promotion ( $\alpha =.89$ ), supervision ( $\alpha =.89$ ), co-workers ( $\alpha =.90$ ), and the work itself ( $\alpha =.88$ ). The intercorrelations among the facets reveal a communality among the dimensions, suggesting a second-order general factor (Parsons & Hulin, 1982). Thus, consistent with past research, an overall job satisfaction variable was computed by adding the five JDI subscales (Judge & Hulin, 1993).

Extrinsic job satisfaction. Because pay and promotion opportunities are thought to reflect extrinsic facets of the job while factors such as coworkers and the work itself are more intrinsic in nature (Campbell & Pritchard, 1976), extrinsic job satisfaction was measured by summing the JDI-Pay and JDI-Promotions subscales.

Promotion satisfaction. Promotion satisfaction was measured by the JDI-Promotions subscale. As indicated earlier, the reliability of this scale was .89.

Age and ambition. Ambition was assessed by the same question as in Study 1. Ambition (number of desired advancement levels) was distributed as follows: 0 levels=15%; 1 level=16%; 2 levels=41%; 3 or more levels=28%. Age was measured by a specific question on the survey which asked subjects to indicate their age in years.

### **Method: Study 3**

#### Subjects and Procedure

Subjects were executives contained in the data base of a large executive search firm located in the Southwest. Average age of the subjects was 45.4 years (SD=7.2 years). On average, subjects had earned roughly six promotions in their careers, their last promotion occurred about three years ago, and the typical executive was positioned two levels below the chief executive officer of the organization. Surveys were mailed to a sample of 3,581 executives. Accompanying the survey was a cover letter soliciting the subjects' participation, and a stamped enveloped addressed to the research team. Subjects were told in the cover letter that while their responses were not anonymous, all responses were strictly confidential. Of the surveys that were mailed out, 1,388 useable surveys were returned, representing a response rate of 39%. Respondents did not differ from nonrespondents with respect to any variable in the search firm's data base, including age.

#### Measures

Overall job satisfaction. Overall job satisfaction was measured with three items, two of which Scarpello and Campbell (1983) suggested were valid measures of job satisfaction, exhibiting psychometric properties as favorable as more established measures of job satisfaction. These measures were the Gallup Poll measure of job satisfaction (where respondents indicate whether they are satisfied with their job by responding "YES" or "NO"), and the non-graphic version of the G. M. Faces Scale. Additionally, an adapted version of the Percent Time Happy Item was used (Fordyce, 1977), where the individual reported the percent time they are satisfied with their job on average. This item was used because it has received favorable evaluations in other research (e.g., Diener, 1984). Because the three items were measured on different scales, they were standardized prior to computation of the composite measure. The coefficient alpha estimate for the measure was .85.

Extrinsic satisfaction. Extrinsic satisfaction was measured with the career satisfaction scale developed by Greenhaus, Parasuraman, and Wormley (1990), which is largely extrinsic in

orientation. The five items assess satisfaction with the following career outcomes: overall career success, attainment of career goals, goals for income, goals for advancement, and goals for skill development. Greenhaus et al. (1990) reported an acceptable level of internal consistency for this scale ( $\alpha=.88$ ). In the present study, the coefficient alpha estimate was .87.

Promotion satisfaction. Promotion satisfaction was measured by the question on satisfaction with advancement contained in the career satisfaction measure described above.

Age and ambition. Age was measured from archival information contained in the search firm's data base. Ambition was measured in an identical manner to the previous two studies. Ambition (number of desired advancement levels) was distributed as follows: 0 levels=20%; 1 level=43%; 2 levels=27%; 3 or more levels=10%.

## Results

### Moderated Regression Analyses

The age-ambition interaction was tested using hierarchical moderated regression (Cohen & Cohen, 1983). Accordingly, the main effects were entered into the equation first, followed by the interaction. Increases in variance explained ( $R^2$ ) by the main effects and interaction were computed at each step. A significant problem in using moderated regression is that the interaction term often is highly correlated with its constituent main effects (Stone, 1988). Perhaps the most widely accepted solution to this problem is to center the main effects at their means before the interaction is computed (Cronbach, 1987; Stone, 1988). Thus, in all three studies the interaction term was constructed by multiplying centered values for age and ambition. Because ambition and the interaction were expected to have negative coefficients (as age and ambition increase, satisfaction is expected to decrease), one-tailed tests of significance were used because there was an expected direction of the relationship (Hays, 1981). In the case of age, there was no expected direction, so two-tailed tests were used.

Table 1 presents the hierarchical moderated regression results predicting overall job satisfaction. As the table indicates, ambition was a negative predictor of overall job satisfaction in all three studies. Age was a nonsignificant predictor of overall job satisfaction, except in Study 1, where it positively predicted job satisfaction. Cumulatively, the main effects explained a significant amount of variance in overall job satisfaction (on average, about 6%). Most importantly for the purposes of this paper, the interaction between age and ambition was a significant negative predictor of overall job satisfaction in each study. The table also indicates that the interaction explains a significant amount of variance in job satisfaction over and above

the variance explained by the main effects. However, the incremental variance explained was quite small (on average, 1% over the main effects).

**TABLE 1: Moderated Regression Results Predicting Overall Job Satisfaction**

Step and Variable	Study 1 $\beta$ (SE)	Study 2 $\beta$ (SE)	Study 3 $\beta$ (SE)
<u>Step 1: Main Effects</u>			
Age	+.125 (.067)*	+.031 (.066)	-.035 (.029)
Ambition	-.252 (.067)**	-.252 (.066)**	-.150 (.029)**
$\Delta R^2$	.099**	.068**	.021**
$R^2$	.099**	.068**	.021**
<u>Step 2: Interaction</u>			
Age x Ambition	-.093 (.064)+	-.114 (.065)*	-.107 (.029)**
$\Delta R^2$	.008+	.013*	.011**
$R^2$	.107**	.081**	.032**
<u>N</u>	224	231	1,246

Note: +  $p < .10$ ; \*  $p < .05$ ; \*\*  $p < .01$ . Column entries are standardized regression coefficients (standard errors are in parentheses).

Table 2 presents the regression results predicting extrinsic satisfaction. As was the case with overall job satisfaction, age was an inconsistent predictor of extrinsic satisfaction (significant and positive in Study 1, nonsignificant in Study 2, and marginally significant and negative in Study 3), and ambition was consistently a negative predictor of extrinsic job satisfaction. As a block, the main effects explained between 5% and 12% of the variance in extrinsic satisfaction, which was significant in each case. Also consistent with the results for overall job satisfaction, the interaction was a significant negative predictor of extrinsic satisfaction in all three studies. The interaction explained a significant amount of incremental variance in extrinsic satisfaction. Although the variance explained again was small (on average, 2%), it was somewhat higher than when predicting overall satisfaction.

**TABLE 2: Moderated Regression Results Predicting Extrinsic Job Satisfaction**

Step and Variable	Study 1 $\beta$ (SE)	Study 2 $\beta$ (SE)	Study 3 $\beta$ (SE)
<u>Step 1: Main Effects</u>			
Age	+.121 (.066)*	+.001 (.067)	-.047 (.028)+
Ambition	-.291 (.066)**	-.223 (.067)**	-.231 (.028)**
$\Delta R^2$	.122**	.053**	.050**
$R^2$	.122**	.053**	.050**
<u>Step 2: Interaction</u>			
Age x Ambition	-.129 (.063)*	-.157 (.066)**	-.132 (.027)**
$\Delta R^2$	.016*	.024**	.017**
$R^2$	.138**	.077**	.067**
<u>N</u>	224	231	1,311

Note: +  $p < .10$ ; \*  $p < .05$ ; \*\*  $p < .01$ . Column entries are standardized regression coefficients (standard errors are in parentheses).

Contained in Table 3 are the regression results predicting promotion satisfaction. Except for Study 1, age was a negative predictor of promotion satisfaction. As was the case in all three studies, ambition was a negative predictor of promotion satisfaction. Cumulatively, the main effects explained a significant amount of variance in promotion satisfaction (roughly 8% on average). As was the case with the other two dependent variables, the hypothesized interaction was a significant negative predictor of promotion satisfaction across all three studies. On average, the interaction explained about 2% of the variance in promotion satisfaction. This is consistent with the incremental variance explained in extrinsic satisfaction and somewhat more than that explained in overall job satisfaction.

**TABLE 3: Moderated Regression Results Predicting Promotion Satisfaction**

Step and Variable	Study 1 $\beta$ (SE)	Study 2 $\beta$ (SE)	Study 3 $\beta$ (SE)
<u>Step 1: Main Effects</u>			
Age	.014 (.067)	-.175 (.067)**	-.067 (.027)**
Ambition	-.322 (.067)**	-.118 (.067)*	-.302 (.027)**
$\Delta R^2$	.106**	.034*	.085**
$R^2$	.106**	.034*	.085**
<u>Step 2: Interaction</u>			
Age x Ambition	-.116 (.063)*	-.155 (.066)**	-.151 (.027)**
$\Delta R^2$	.014*	.023**	.022**
$R^2$	.120**	.056**	.107**
<u>N</u>	224	231	1,311

Note: \*  $p < .05$ ; \*\*  $p < .01$ . Column entries are standardized regression coefficients (standard errors are in parentheses).

It should be noted that similarly significant interaction effects to those reported above were observed in Study 3 even after controlling for current job level (a measure of job level was not available for Study 1 or Study 2). This held for all three dependent variables. This suggests that the interaction between age and ambition in predicting satisfaction is not confounded by the job level of the incumbent. The interaction does not appear to be wholly due to the fact that older ambitious employees occupy higher-level jobs which prohibit further advancement.

#### Subgroup Analyses

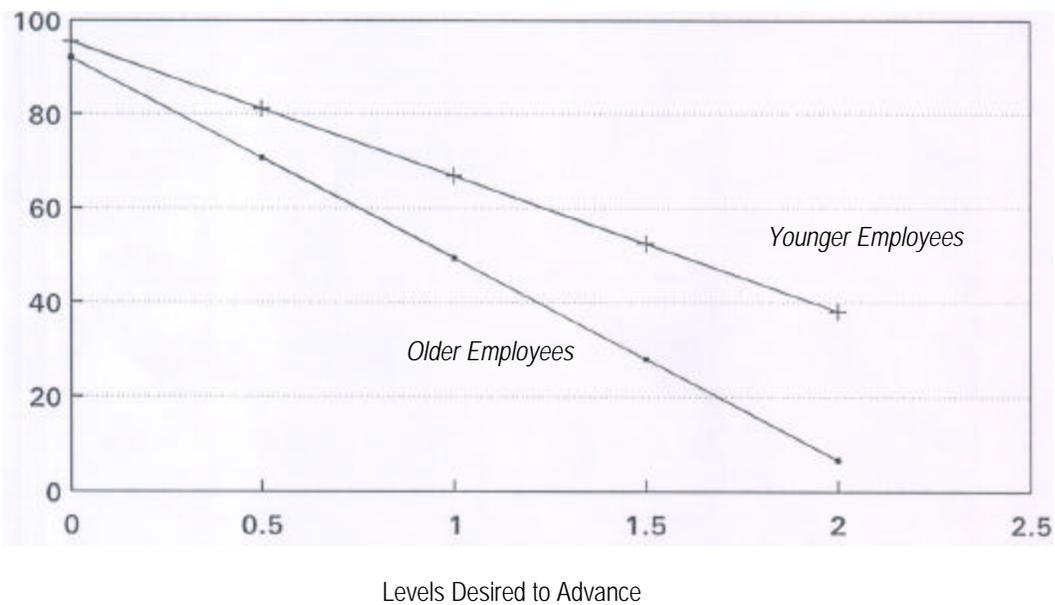
In order to facilitate interpretation of the interaction, the methods used to describe the nature of interactions in moderated regression analyses were used (Cohen & Cohen, 1975; Stone, 1988). Specifically, the significant interaction indicates that the slope of the regression line representing the effect of ambition on satisfaction depends on the age of the employee. Figures 1-3 provide illustration of the interaction. Rather than present all nine figures (three dependent variables in three studies), the most representative figure was chosen for each study (see the figure captions for a description). The figures show that ambition is negatively related

to all three types of job satisfaction and that older employees generally are less satisfied than younger employees. More importantly, and consistent with the hypothesis, the figures show that the effect of ambition on satisfaction is more negative for older than younger employees.

Figure 1. Interaction of age and ambition in predicting overall job satisfaction (Study 3 data).



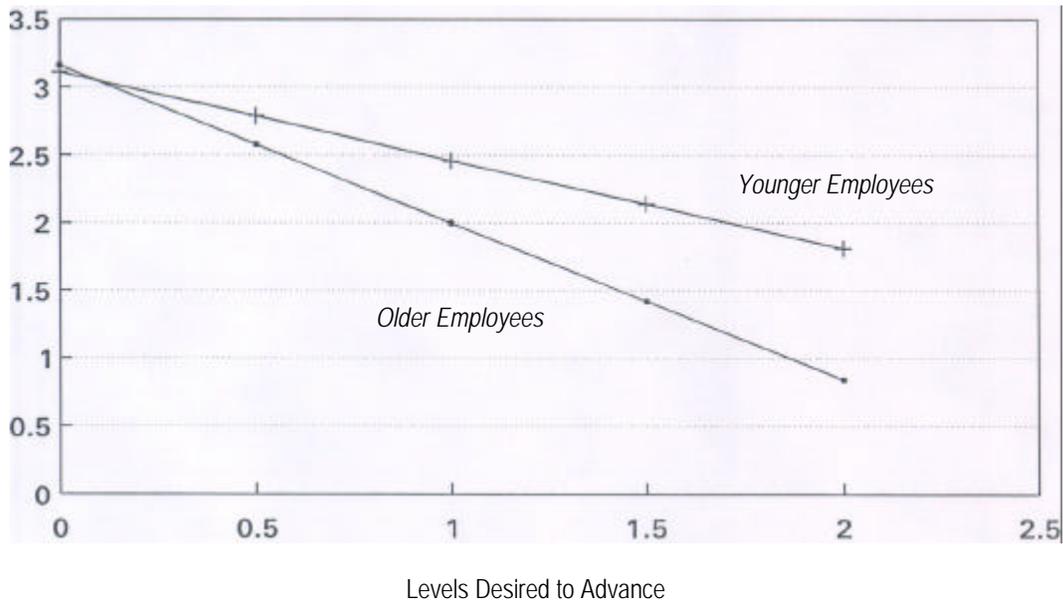
Figure 2. Interaction of age and ambition in predicting extrinsic job satisfaction (Study 2 data).



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**Figure 3. Interaction of age and ambition in predicting promotion satisfaction (Study 1 data).**


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A correlational subgroup approach (Jaccard, Turrisi, & Wan, 1990) provides additional support for the nature of the interaction. For descriptive purposes, old and young employees were split at the median into two groups for each study. With respect to overall job satisfaction, the correlation between ambition and job satisfaction for older than average employees was  $-.35$  ( $p < .01$ ) for Studies 1 and 2, and  $-.23$  ( $p < .01$ ) for Study 3. The corresponding figures for younger employees were  $-.17$  (*ns*),  $-.16$  (*ns*), and  $-.08$  (*ns*). For extrinsic satisfaction, the correlations between ambition and job satisfaction for Studies 1, 2, and 3, were  $-.38$  ( $p < .01$ ),  $-.33$  ( $p < .01$ ), and  $-.29$  ( $p < .01$ ) for older than average employees, and  $-.21$  ( $p < .05$ ),  $-.13$  (*ns*), and  $-.17$  ( $p < .01$ ) for younger employees. With respect to promotion satisfaction, the correlations between ambition and job satisfaction for Studies 1, 2, and 3, were  $-.34$  ( $p < .01$ ),  $-.19$  ( $p < .05$ ), and  $-.37$  ( $p < .01$ ) for older than average employees, and  $-.28$  ( $p < .05$ ),  $-.03$  (*ns*), and  $-.23$  ( $p < .01$ ) for younger employees. Using Fisher's *r*-to-*Z* transformation to test for differences in the corresponding correlations (Jaccard et al., 1990), analyses indicated that except for the correlation between ambition and promotion satisfaction for Study 1, the correlations between ambition and satisfaction for older employees were significantly more negative than those for younger employees (at least at the .10 level). Overall, these results suggest that the negative effect of ambition on satisfaction is greater for older than average employees than for younger than average employees.

### Other Tests of Interaction

The small amount of variance that the interaction explains in satisfaction might suggest that the practical relevance of the interaction is trivial. However, it is common for variance explained by interactions in field research to be small (McClelland & Judd, 1993), and several researchers have argued that incremental variance explained often gives misleading estimates of practical effects (Champoux & Peters, 1980). One means of estimating the practical effect of the interaction is to compare the differences in predicted values of the dependent variable for relevant combinations of the interaction components (Jaccard et al., 1990). In the case of the present study, this entailed determining differences in predicted satisfaction levels for realistic levels of ambition (desired advancement of one and two levels) and age (age levels deviated one standard deviation from the mean). In order to provide representative estimates, we report the middle (i.e., least extreme) estimate from the three studies.

With respect to overall job satisfaction, results indicated that the desire to advance one level in the organization resulted in a 7.4% lower predicted level of job satisfaction for employees one standard deviation older than average than for those one standard deviation younger than average. The corresponding difference for the desire to advance two levels was 20.7%. With respect to extrinsic satisfaction, the middle result suggested that the predicted level of satisfaction for older employees with a desire to advance one level was 11.4% lower than for younger employees with the same level of ambition. For those wishing to advance two levels, the difference in extrinsic satisfaction was 31.3%. Finally, the middle results for promotion satisfaction indicated that older employees with a desire to advance one level had a predicted promotion satisfaction level 20.6% lower than younger employees with the same level of ambition. For those with a desire to advance two levels beyond their current position, the difference in promotion satisfaction was 97%. These results suggest that there are appreciable practical differences in predicted satisfaction levels as a result of the significant interaction between age and ambition.

### **Discussion**

Results of the present study supported the hypothesized interaction between age and ambition in predicting promotion, extrinsic, and overall job satisfaction. Older workers with high ambition were more dissatisfied than younger workers with equal levels of ambition. This interaction was found across three substantially different samples and across three different forms of job satisfaction. Also, using a correlational subgroup approach (Jaccard et al., 1990), the correlations between ambition and satisfaction for older employees were significantly more

negative than those for younger employees. Additionally, predicted values of the dependent variables showed substantial practical differences in predicted satisfaction levels as a result of the age-ambition interaction.

One possible explanation of the interaction is that ambitious older workers are more dissatisfied because they have a lower expectancy of advancing in the future. This perception may be based on the reality which exists in many organizations where promotions come relatively quickly in early career stages but tend to slow in later stages (Hall, 1986; Rosenbaum, 1984), and by organizational restructuring efforts that have resulted in diminished promotion opportunities, particularly for older cohorts (Saveri, 1991). As noted by an older manager in Goffee and Scase's (1992) case study of British managers, "I don't feel as though I've got too great a future ... I am in a rut ... It's been an interesting career but it's come to an end now" (p. 376). Thus, ambitious older workers may be more dissatisfied because there is a gap between where they want to be and where they think they can go (Michalos, 1985a). In fact, in Study 3 we asked subjects to report how many levels they thought they realistically could advance in their current organization (a measure of expectancy). The correlation between this item and age was  $-.23$  ( $p < .01$ ), suggesting that older workers do have lower expectancies of advancing. In part, this may explain the interaction, but not in total. Entering the measure of expectancy into the Study 3 regression equations reduced the size of the interaction, but only slightly (it did not change the significance levels). This result suggests that the interaction is partly due to lower expectancy, but also is due to other factors.

Career myths (Rosenbaum, 1979) also may contribute to greater dissatisfaction among ambitious older workers. In many organizations, there is the expectation that workers can continually improve their positions (Rosenbaum, 1979). While workers may expect to continually advance in a linear fashion, the reality of organizational promotion systems may be quite different. Given the hierarchical design of organizations where all but the chosen few eventually plateau, this promise of continual advancement may be a myth (Driver, 1985), particularly for older workers. In fact, in both Study 1 and Study 3, older employees were more likely to be plateaued in that they had significantly higher levels of job tenure than younger employees. This eventual plateauing is only exacerbated by recent trends of organizational downsizing and delayering (Saveri, 1991). Because older workers are more likely to describe themselves in terms of a linear career model which equates continual ascendance up the organizational ladder with career success (Driver, 1985), they are more likely to find a disconnect between their career self-concept and the current realities of organizational career

systems. As noted by Driver (1988), when a worker's career concept does not match that of the organization, dissatisfaction often results.

### Limitations and Strengths

This study has several limitations. The variance explained by this interaction was quite small (albeit significant) across all three studies; explained variance ranged from 1%-2%. While the incremental variance explained is often used as an index of importance in interaction effect sizes, there is some controversy on this issue (Stone, 1988). In fact, Champoux and Peters (1980) argue against using incremental  $R^2$  as an indicator of the importance of interaction effects, and propose instead that researchers focus on regression slopes and predicted values of the dependent variable. Given that incremental variance explained often is not the most useful means of determining the importance of moderating effects, perhaps more weight should be placed on the practical differences revealed by the effect sizes.

A second limitation is that process variables were not measured in any of the studies. We can conclude that the interaction is significant, but we have not developed a process model that attempts to explain the cause of the interaction. Some of the process variables that should be studied were identified earlier in the paper. They include the plateau effect inherent in the pyramidal structure of organizations, different career concepts for older workers, and the gaps suggested by multiple discrepancies theory. It is likely that these processes are interrelated. The identification of the interaction is an important first step in the understanding of the relationship between age and ambition in affecting work attitudes. The identification and measurement of these and other relevant process variables will be the logical next step.

A third limitation is that two key variables were assessed with single-item measures. Ambition was assessed with a single-item measure across all three studies and promotion satisfaction was assessed with a single-item measure in Studies 1 and 3. However, the measure of ambition has been extensively used in the past and found to be valid (e.g., Howard & Bray, 1988; Judge & Locke, 1993). A related limitation is that ambition was only defined in terms of levels of advancement desired. Ambition may be multidimensional in that workers may have ambition for additional training and development, ambition for lateral transfers, ambition for more pay and higher status assignments, and so on.

Although the present study has several limitations, these limitations are accompanied by several strengths. First, the interaction was found across three discrete studies that included clerical workers, service employees, and executives. The significance of these findings at all organizational levels speaks to their generalizability. Given the difficulty of finding significant interaction effects in psychological research (McClelland & Judd, 1993), and given the degree to

which findings from psychological research often are not replicated (Lykken, 1991), more confidence can be placed in the validity of the results. Furthermore, given that examination of predicted values is a practical method of evaluating the significance of moderating effects (Champoux & Peters, 1980), the large changes in predicted satisfaction found across these three studies add weight to the importance of the findings. Finally, in two of the studies, the age measure was collected from archival data. Therefore, self-report bias would not seem to be a likely explanation of the interaction.

### Implications

Because the work force is aging at an unprecedented rate (Johnson & Packer, 1987), the satisfaction of older workers is likely to be a growing concern of organizations in the future. That ambition, presumably a characteristic that organizations value, induces dissatisfaction particularly in older workers is likely to cause organizations some concern. These concerns would seem to be well-founded given the trends toward flatter organizational structures with diminished promotional opportunities (Saveri, 1991), trends toward later retirement with the abolition of mandatory retirement (Paul & Townsend, 1993), and evidence indicating that perceptions of impaired career prospects lead to increased absenteeism, impaired work relationships with superiors, and greater health problems (Near, 1985). Thus, the potentially harmful effects implied by the interaction may become even more conspicuous in the future.

But what can organizations do to make an aging work force more satisfied with their jobs and careers while still encouraging ambition and achievement in their workers? Perhaps the clearest implication derives from Driver's (1985, 1988) research on career concepts. Driver has classified workers' career concepts into four categories: linear, expert, transitory, and spiral. The linear career type has been the prototypical model; employees with a linear career concept are interested in careers in which upward mobility can be expected, and where career progress is measured against the metric of promotions up the organizational hierarchy. Given the pressures on upward mobility caused by the aging of the work force and organizational restructuring, the linear model is the career type most likely to experience frustration in today's organizations (Driver, 1985). In fact, research suggests that both achievement-oriented and older workers are more likely to describe themselves in terms of the linear career concept (Driver, 1988). Thus, it is not surprising ambition is frustrating to older employees whose ideal career concept is one of upward advancement, advancement that is blocked in contemporary organizational structures.

Driver (1985) suggests three possible non-linear career paths (expert, transitory, and spiral) that may help to alleviate this linear career crisis. The expert path describes that taken

by the person who chooses a life long vocation in the attempt to become an authority in their chosen field. The transitory path describes that taken by the person who values the ability to move from one--possibly unrelated--occupation to another. The spiral path describes a career characterized by major, but related, career/work changes every 5 to 10 years. This allows for the development of new skills based upon one's previous skill base and increasing opportunities for new career options; lateral as well as upward. While all three non-linear career paths are relevant here (and less frustrating than the linear model), the spiral career path may offer the most promise. Thus, organizations that promote a spiral career option through lateral development opportunities (with fair pay increases) may negate the effect of the observed interaction. Thus, moving away from a linear career model to a more holistic and developmental career model may enhance the both the career development and satisfaction levels of older workers (Meier, 1985). Northcraft, Griffeth, and Shalley (1992) present some success stories of organizations that have successfully adapted employees from the traditional linear model when faced with flatter and leaner organizational structures. It should be noted while much of the focus on promotion systems and career planning has been on managerial employees, given our results suggesting that inability to advance is as frustrating for exempt as nonexempt employees, expansion of this focus to lower-level employees seems appropriate.

In addition to organizational implications suggested by the interaction, for the individual worker there are additional considerations. Stanwyck (1983) discusses career related stresses and their effect on the self-esteem of older workers. He theorizes that individuals who feel confirmed by their accomplishments and who perceive that relevant others value their accomplishments will maintain positive self-esteem. Conversely, those who do not value their own accomplishments and know that others devalue them will suffer from declining self-esteem. This results in frustration and depression. Therefore, the earlier discussion concerning Driver's (1985) different career typologies would also be relevant in older workers' efforts to remain motivated in later career stages. Individuals who are flexible enough to embrace non-linear career alternatives such as the spiral and expert options may have a higher likelihood of remaining motivated and satisfied as their careers progress in the newly designed (reengineered) organizations of today and tomorrow. Bardwick (1986) takes a complimentary approach in providing a number of practical recommendations for individuals to rechannel their ambitions into other facets of organizational life. As she notes:

Ambition is an asset when it is followed by success. But ambition that dictates a goal of promotion is ultimately a liability that can cause grievous pain. Too many people who restrict "success" to promotion are fragile and vulnerable when

promotions cease (p. 65) ... At work, [individuals may] have to give up ambitions for promotion and replace them with ambitions of challenge (p. 98).

Thus, Bardwick does not suggest that individuals give up their ambitions, but that they refocus them toward equally fulfilling but more achievable pursuits, such as challenging work assignments, new career opportunities, and more active pursuit of nonwork interests. As she noted, these refocusing efforts may be particularly important for older employees who are more likely to be plateaued in their present job assignments, and by ambitious employees, who are likely to be particularly frustrated by plateauing.

### Future Research

As mentioned previously, the next logical step will involve the development of a process model that examines the links between age and goals, performance levels, rewards, and satisfaction (Locke & Latham, 1990). In particular, it would be useful for research to examine the degree to which the age-ambition interaction is due to the discrepancies predicted by multiple discrepancy theory (Michalos, 1985a). For example, are older workers more likely to experience gaps in where they are versus where they want to be, where they expect to be versus where want to be, or some of the other gaps suggested by Michalos (1985a)? Relatedly, it is important for future research to investigate whether older workers respond behaviorally as well as attitudinally to the aspirational gaps created by their ambition. As is generally the case in age-related research, longitudinal data would be particularly useful in investigating the degree to which the psychological processes outlined above might further clarify the results.

In addition to exploring the psychological basis of the interaction, future research also should investigate organizational factors that may underlie the age-ambition interaction. Clearly, part of the interaction can be explained by the fact that older employees often occupy higher-level jobs, and thus have fewer levels into which they can be promoted. However, there may be other explanations such as age discrimination in promotion practices, where research has found that when age is perceived to be a factor in promotion decisions, negative attitudes in older workers result (Hassell & Perrewe, 1993). Furthermore, age norms may contribute to the increased dissatisfaction of ambitious older workers. Lawrence (1988) argues that age norms place social pressure on employees because these norms are used as markers for mobility expectations. It seems probable that ambitious employees, because advancement is salient to them, are particularly likely to attend to such markers. As Lawrence (1988) notes, advancing age often means reduced expectations which, when combined with increased attention to age norms, may spell increased frustration for older workers. Clearly, these are areas for future investigation.

Finally, because ambition need not be confined to promotion opportunities, it is important for research to examine the potential multi-dimensionality of ambition. For example, since the rate of pay increases declines with age and tenure (Mincer, 1974), would the interaction be observed with respect to pay aspirations? Furthermore, an examination of the moderating effects of age on ambition as it relates to various life domains (satisfaction with home life, marital relationships, leisure) is another important area for future research. The examination of these topics will facilitate scientific understanding and practical efforts regarding the role of ambition for older workers.

## References

- Arvey, R. D., Bouchard, T. J., Segal, N. L., & Abraham, L. M. (1989). Job satisfaction: Environmental and genetic components. Journal of Applied Psychology, *74*, 187-192.
- Bandura, A. (1986). Social foundations of thought and action: A social-cognitive theory. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (1988). Self-regulation of motivation and action through goal systems. In V. Hamilton, G. Bower, & N. Frijda (Eds.), Cognitive perspectives on emotion and motivation (pp. 37-61). Dordrecht, the Netherlands: Kluwer Academic.
- Bardwick, J. M. (1986). The plateauing trap. New York: AMACOM.
- Campbell, J. P., & Pritchard, R. D. (1976). Motivation theory in industrial and organizational psychology. In M. D. Dunnette (Ed.), Handbook of industrial and organizational psychology (pp. 63-130). Chicago: Rand-McNally.
- Campion, M. A., & Lord, R. G. (1982). A control systems conceptualization of the goal-setting and changing process. Organizational Behavior and Human Performance, *30*, 265-287.
- Canter, D., & Rees, K. (1982). A multivariate model of housing satisfaction. International Review of Applied Psychology, *31*, 185-208.
- Champoux, J. E., & Peters, W. S. (1980). Applications of moderated regression in job design research. Personnel Psychology, *33*, 759-783.
- Cherrington, D. J., & England, J. L. (1980). The desire for an enriched job as a moderator of the enrichment-satisfaction relationship. Organizational Behavior and Human Performance, *25*, 139-159.
- Chinoy, E. (1955). Automobile workers and the American dream. New York: Random House.
- Cohen, J., & Cohen, P. (1983). Applied multiple regression/correlation analysis for the behavioral sciences. New York: Wiley.
- Cox, C. J., & Cooper, C. L. (1989). The making of the British CEO: Childhood, work experience, personality and management style. Academy of Management Executive, *3*, 241-245.
- Cronbach, L. (1987). Statistical tests for moderator variables: Flaws in analyses recently proposed. Psychological Bulletin, *102*, 414-417.
- Diener, E. (1984). Subjective well-being. Psychological Bulletin, *95*, 542-575.
- Driver, M. J. (1985). Demographic and societal factors affecting the linear career crisis. Canadian Journal of Administrative Science, *2*, 245-263.
- Driver, M. J. (1988). Careers: A review of personal and organizational research. In C. I. Cooper & I. Robertson (Eds.), International review of industrial and organizational psychology (Vol. 3, Ch. 8, pp. 245-277). Chichester, England: Wiley.

- Erez, A. (1994). Dispositional source of job satisfaction: The role of self-deception. Unpublished master's thesis, Cornell University.
- Fordyce, M. W. (1977). Development of a program to increase personal happiness. Journal of Counseling Psychology, 24, 511-521.
- Giblin, E. J. (1986). The challenge facing human resources. In H. Heneman & D. Schwab (Eds.), Perspectives on personnel/human resource management (3rd ed., pp. 11-16). Homewood, IL: Irwin.
- Goddard, R. W. (Feb., 1989). Work force 2000. Personnel Journal, 83-86.
- Goffee, R., & Scase, R. (1992). Organizational change and the corporate career: The restructuring of managers' job aspirations. Human Relations, 45, 363-385.
- Greenhaus, J. H., Parasuraman, S., & Wormley, W. M. (1990). Effects of race on organizational experiences, job performance evaluations, and career outcomes. Academy of Management Journal, 33, 64-86.
- Gutteridge, T. G., Leibowitz, Z. B., & Shore, J. E. (1993). Organizational career development. San Francisco: Jossey-Bass.
- Hall, D. T. (1986). Breaking career routines: Mid-career choice and identity development. In D. T. Hall & Associates (Eds.), Career development in organizations (Ch. 4, pp. 120-159). San Francisco: Jossey-Bass.
- Hassell, B. L., & Perrewe, P. L. (1993). An examination of the relationship between older workers' perceptions of age discrimination and employee psychological states. Journal of Managerial Issues, 5, 109-120.
- Hauber, F. A., & Bruininks, R. H. (1986). Intrinsic and extrinsic job satisfaction among direct-care staff in residential facilities for mentally retarded people. Educational and Psychological Measurement, 46, 95-105.
- Hays, W. L. (1981). Statistics (3rd ed.). New York: Holt, Rinehart, & Winston.
- Howard, A., & Bray, D. (1988). Managerial lives in transition: Advancing age and changing times. New York: Guilford Press.
- Ilggen, D. R. (1971). Satisfaction with performance as a function of the initial level of expected performance and the deviation from expectations. Organizational Behavior and Human Performance, 6, 345-361.
- Jaccard, J., Turrisi, R., & Wan, C. K. (1990). Interaction effects in multiple regression. Newbury Park, CA: Sage.
- Johnson, W. B., & Packer, A. E. (1987). Workforce 2000: work and workers for the twenty-first century. Indianapolis, IN: Hudson Institute.

- Judge, T. A., & Hulin, C. L. (1993). Job satisfaction as a reflection of disposition: A multiple source causal analysis. Organizational Behavior and Human Decision Processes, 56, 388-421.
- Judge, T. A., & Locke, E. A. (1993). Effects of dysfunctional thought processes on subjective well-being and job satisfaction. Journal of Applied Psychology, 78, 475-490.
- Judge, T. A., Boudreau, J. W., & Welbourne, T. M. (1994). Job attribute preferences of job seekers in the U.S. and Central Europe. Working paper, Department of Human Resource Studies, Cornell University.
- Judge, T. A., Cable, D. M., Boudreau, J. W., & Bretz, R. D. (1994). An empirical investigation of the determinants of executive career success. Paper presented at the annual meetings of the Academy of Management, Dallas, TX.
- Knox, A. B. (1977). Adult development and learning. San Francisco: Jossey-Bass.
- Lawrence, B. S. (1988). New wrinkles in the theory of age: Demography, norms, and performance ratings. Academy of Management Journal, 31, 309-337.
- Locke, E. A. (1976). The nature and causes of job satisfaction. In M. D. Dunnette (Ed.), Handbook of industrial and organizational psychology (pp. 1297-1343). Chicago: Rand-McNally.
- Locke, E. A., & Latham, G. P. (1990). A theory of goal setting and task performance. Englewood Cliffs, NJ: Prentice-Hall.
- Locke, E. A., Shaw, K. N., Saari, L. M., & Latham, G. P. (1981). Goal setting and task performance: 1969-1980. Psychological Bulletin, 90, 125-152.
- Lykken, D. T. (1991). What's wrong with psychology today? In D. Cicchetti & W. M. Grove (Eds.), Thinking clearly about psychology (pp. 73-87). Minneapolis: University of Minnesota Press.
- McClelland, D. C. (1961). The achieving society. New York: Van Nostrand Reinhold.
- McClelland, D. C., Atkinson, J. W., Clark, R. A., & Lowell, E. L. (1953). The achievement motive. New York: Appleton-Century-Crofts.
- McClelland, G. H., & Judd, C. M. (1993). Statistical difficulties of detecting interactions and moderator effects. Psychological Bulletin, 114, 376-390.
- Meier, D. (1985). New age learning: From linear to geodesic. Training & Development Journal, 39, 40-43.
- Mento, A. J., Locke, E. A., & Klein, H. J. (1992). Relationship of goal level to valence and instrumentality. Journal of Applied Psychology, 77, 395-405.
- Mento, A. J., Steel, R. P., & Karren, R. J. (1987). A meta-analytic study of the effects of goal setting on task performance: 1966-1984. Organizational Behavior and Human Decision Processes, 39, 52-83.

- Michalos, A. C. (1985a). Job satisfaction, marital satisfaction and the quality of life: A review and a preview. In F. M. Andrews (Ed.), Research on the quality of life (pp. 57-83). Ann Arbor, MI: University of Michigan Press.
- Michalos, A. C. (1985b). Multiple discrepancies theory (MDT). Social Indicators Research, 16, 347-413.
- Mincer, J. (1974). Schooling, experience, and earnings. New York: NBER.
- Near, J. (1985). A discriminant analysis of plateaued vs. nonplateaued managers. Journal of Vocational Behavior, 26, 177-88.
- Northcraft, G. B., Griffeth, T. L., & Shalley, C. E. (1992). Building top management muscle in a slow growth environment: How different is better at Greyhound Financial Corporation. Academy of Management Executive, 6, 32-41.
- Parsons, C. K., & Hulin, C. L. (1982). An empirical investigation of item response theory and hierarchical factor analysis in applications to the measurement of job satisfaction. Journal of Applied Psychology, 67, 826-834.
- Paul, R. J., & Townsend, J. B. (1993). Managing the older worker - don't just rinse away the gray. Academy of Management Executive, 7, 67-74.
- Ravlin, E. C., & Meglino, B. M. (1987). Effects of work values on perception and decision making: A study of alternative work value measures. Journal of Applied Psychology, 72, 666-673.
- Rhodes, S. R. (1983). Age-related differences in work attitudes and behavior: A review and conceptual analysis. Psychological Bulletin, 93, 328-367.
- Rosenbaum, J. E. (1979). Organizational career mobility: Promotion chances in a corporation during periods of growth and contraction. American Journal of Sociology, 85, 21-48.
- Rosenbaum, J. E. (1984). Career mobility in a corporate hierarchy. Orlando, FL: Academic Press.
- Saveri, A. (1991). The realignment of workers and work in the 1990s. In J. M. Kummerow (Ed.), New directions in career planning and the workplace (pp. 117-153). Palo Alto, CA: Consulting Psychologists Press.
- Scarpello, V., Campbell, J. P. (1983). Job satisfaction: Are all the parts there? Personnel Psychology, 36, 577-600.
- Schwab, D. P., & Heneman, H. G., III. (1977). Age and satisfaction with dimensions of work. Journal of Vocational Behavior, 10, 212-220.
- Smith, P. C., Kendall, L., & Hulin, C. L. (1969). The measurement of satisfaction in work and retirement. Chicago: Rand-McNally.
- Sofer, C. (1970). Men in mid-career. Cambridge, MA: Cambridge University Press.

- Stanwyck, D. J. (1983). Self esteem through the life span. Family and Community Health, *6*, 11-28.
- Stone, E. F. (1988). Moderator variables in research: A review and analysis of conceptual and methodological issues. In G. R. Ferris & K. M. Rowland (Eds.), Research in personnel and human resources management (Vol. 6, pp. 191-229). Greenwich, CT: JAI Press.
- Weiss, D. J., Dawis, R. V., England, G. W., & Lofquist, L. H. (1967). Manual for the Minnesota Satisfaction Questionnaire. Minneapolis: Industrial Relations Center, University of Minnesota.
- Wright, J. D., & Hamilton, R. F. (1978). Work satisfaction and age: Some evidence for the 'job change' hypothesis. Social Forces, *56*, 1140-1158.