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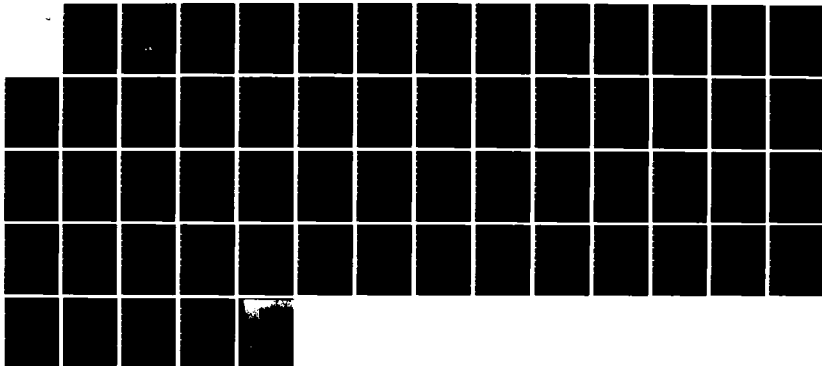
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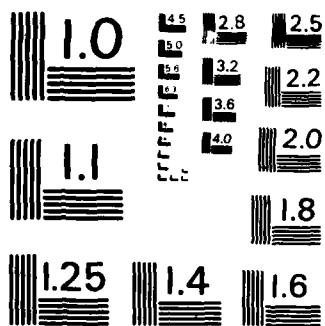
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Factors Affecting the Evaluation  
and Development of  
Minorities in Organizations

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Daniel R. Ilgen and Margaret A. Youtz  
Michigan State University

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Michigan State University  
East Lansing, Michigan 48824

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Daniel R. Ilgen and Margaret A. Youtz  
Michigan State University

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This paper focuses on potential sources of treatment discrimination in organizations. After establishing the existence of mean differences in the performance evaluations of minorities and majorities, several different explanations for these differences were explored. These explanations were arranged on a continuum of severity. The least severe explanation, managerial rating biases, suggests that the performance differences are not true differences but rather, result only from managerial stereotypes, attributions and judgments processes. The other two explanations are more severe since		



Factors Affecting the Evaluation and Development  
of Minorities in Organizations

Legal and social forces continue to stress the need to keep jobs at all levels of complexity and status open to all members of society qualified or potentially qualified to fill such jobs. Progress has been made toward improving job opportunities for minorities over the last 20 years, although much needs to be done to insure that job opportunities for minority group members are equal to those of majority group members.

Progress with respect to minority involvement in work organizations can be addressed in terms of minority group members' access to positions in organizations and their treatment in those and other positions within the organization over their career lives. The negative perspective of entry and long-term treatment have been labeled access discrimination and treatment discrimination by Levitin, Quinn and Staines (1971). Access discrimination refers to limitations unrelated to actual or potential performance placed on minority group members at the time the job is filled, such as rejection of applicants, lower starting salaries, limited advertising of position openings, or failure to send recruiters to locations where minority members are more likely to be available (Terborg & Ilgen, 1975). Treatment discrimination occurs once the minority group members have gained access into the organization. Some examples are slower rates of promotion, assignment to less desirable jobs, lower and/or less frequent raises, or fewer opportunities for training.

To date, far more attention has been paid to reducing access discrimination than treatment. This is not surprising given the fact that it is first necessary to have minority members hired into positions in organizations before attention can be directed toward their treatment once in those positions. Now that access has been improved for minority group members more attention needs to be directed toward treatment within the organization so that minority group members are able to obtain full access to the workforce at all levels of responsibility.

It is our purpose here to address issues of treatment and possible treatment discrimination that are related to the way in which minority group members within organizations are evaluated. We are assuming that performance evaluations are central to most of the more important aspects of treatment in organizations particularly in positions of higher authority and responsibility. Consider for a moment the examples we just gave of treatment conditions--promotions and other position assignments, raises, selection for training, firing, layoffs, as well as more subtle issues such as acceptance into the group or identification as an opinion leader within the work group. All of these are influenced by some person or persons' evaluation of the performance of the person to whom these factors are directed. Thus, we shall first ask the extent to which there are differences in performance evaluations between majority and minority group members. If differences do exist, possible reasons for those differences and ways to reduce these differences will be addressed at the general level and specifically with respect to high-tech industries.



Minority Group Differences in Performance Evaluations

Kraiger and Ford (1983) recently completed a meta-analysis of the literature on the effects of ratees' race on performance ratings. They surveyed the literature from 1966 to 1981 and identified a total of 30 published articles and 44 unpublished manuscripts or technical reports from which they could determine an effect size for race. Using procedures described by Hunter, Schmidt, and Jackson (1982), they estimated the mean effect size for race, effect size variance, sampling error, and population variance in order to establish a confidence interval around the mean effect size for race and test the hypothesis that the effect size differed from zero.

Finding no difference between published and unpublished studies for white raters they combined the two for a total data set of 17,159 ratees and found an effect size of .183 which was significant (the 95 percent confidence interval ranged from  $.02 \leq r \leq .35$ ) (Kraiger & Ford, 1983). Exploring differences in the magnitude of race effects between several subgroups, they found, contrary to prediction, that the differences were significantly stronger in field studies than in the laboratory ( $X_{\text{field}} = .192$ ,  $X_{\text{lab}} = .037$ ,  $p \leq .001$ ). Within field settings, the effect was similar for raters who had received rater training than for those who had not ( $X_{\text{train}} = .207$ ,  $X_{\text{untrained}} = .189$ ,  $z = 1.32$ ,  $p \geq .05$ ). In all cases, the mean performance ratings for the minority group members were lower than those of the majority group. Other comparisons within the field data, between rating scales that were behaviorally based as contrasted to trait based and scales that were completed for administrative purposes versus research

purposes only, yielded no significant differences between the groups compared in the size of the effect of race on ratings when white raters rated employees.

Although the effect size was not large, it was in the range that is considered to be moderate (Cohen, 1969) and was larger in ongoing organizations than in laboratory conditions. The latter is significant because it has been hypothesized by others (e.g., Wendelken & Inn, 1981) that observed race differences in ratings may appear in laboratory studies because of the lack of major cues other than race available in that setting. In the field where the rater is dealing with a person he or she knows quite well, race should be less of an issue according to Wendelken and Inn. The Kraiger and Ford (1983) data show that this is not the case; in fact, race had a greater effect in the field than in the laboratory. Given the field data effects and the potential impact of performance differences on the treatment of minority group members when their performance is rated lower, we will address possible reasons for these race effects in performance evaluations and then propose and evaluate ways to deal with differences in evaluations that might exist. The underlying assumption behind this undertaking is that it is most desirable, for both minority and majority group members, to minimize or eliminate differences in performance and performance evaluations between groups.

#### Sources of Race Effects on Performance Evaluations

The reasons for the observed differences between majority and minority group means in performance ratings can be classified into two sets. The first of these is that the observed differences

may be due to rater biases. Minority group members may perform their jobs at the same level as majority group members but those who rate their performance may err in rating them; (i.e., raters may under-rate minorities). For example, some laboratory studies in which the performance level of the ratee is controlled and the race of the ratee treated as an experimental variable have found lower ratings for minority group members although across studies, this difference has not been very reliable (Landy & Farr, 1980).

The second major class of reasons for the lower ratings includes those conditions that lead minority group members to actually perform at a lower level on the job than the majority group members. We suggest that the reasons for actual lower performance can be ordered along a continuum varying in the severity of cause where severity is viewed in terms of the ease of removing performance decrements. Less severe conditions are those that, once discovered, can be changed relatively quickly by altering the social or physical environment of the performer. At the other extreme, the minority group members' performance has been affected by factors that have deeply affected their motivation or ability and, if possible to change at all, would take considerable time and effort. Examples of the latter would be lowered self-esteem or self-concept or the failure to obtain skills and abilities that take years of formal schooling to develop. Once the latter has occurred, change is, at best, difficult, and probably unlikely.

For purposes of discussion, we shall generalize from the existing psychological literature to minority group members in an attempt to suggest some possible factors influencing minority group members' performance evaluations in organizations. Often there was little or no information available on race per se, but data were available on other subgroups in the minority such as women on traditionally masculine jobs or older workers. In these cases, we have suggested generalizations from other literatures when the dynamics of the processes observed in other groups appeared to be similar to those of minority-majority group issues.

#### Rater Biases

Exploring reasons for differences between majority and minority group performance evaluations leads immediately to a consideration of systematic biases in evaluator ratings. By systematic biases we mean the tendency in raters to elevate or depress the performance ratings of ratees in response to the ratees' classification in some group and independent of their actual performance on the job. When performance evaluations of minority group members are reported to be lower than those of the majority, this may be due to rater tendencies (either intentional or unintentional) to rate minority group members lower and may be totally unrelated to the actual performance level of these persons.

Stereotypes. The social psychological literature on person perception provides a basis for understanding the possible mechanisms of systematic biases in performance ratings due to subgroup membership. One of the most frequently evoked reasons

for systematic misperceptions of others is that of stereotypes (Hamilton, 1979). Heilman (1983) defined stereotypes as, "a set of attributes ascribed to a group and imputed to its individual members simply because they belong to that group", (p. 271). In some cases, stereotypic beliefs may have little or no relationship to the actual mean behavior level of the group with which these beliefs are associated. The belief that athletic ability is associated with lower levels of intelligence is a stereotypic belief that has no basis in truth. Other beliefs may be related to group differences but may have little relevance for a particular member of the group. An example of the latter type of stereotypic belief is one that females prefer to avoid highly mathematically-oriented tasks. There is some evidence for sex differences in mathematical preferences and skills in post-secondary school students, but there is considerable variance within each group. As a result, invoking the stereotypic belief to judge any specific male or female can lead to very inaccurate conclusions.

With respect to minority group members, it is clearly documented that stereotypic beliefs do exist and do lead to misperceptions about specific groups (Hamilton, 1979). On the other hand, it is not clear that minority group stereotypes are a contributing factor to the mean difference in performance ratings between majority and minority group members. In order for the latter to occur, it must be assumed that the stereotypic beliefs either directly or indirectly lead to perceptions of lower levels of performance for minority group members. In the former case (direct), the stereotypic belief itself would be that minority

group members perform more poorly on the job in question. In the latter more subtle condition, stereotypic beliefs must first exist about personal characteristics and then these characteristics in turn must be seen as related to performance. An example of the latter is the stereotypic belief that females are less aggressive than males coupled with the belief that aggressiveness is necessary to be successful on many jobs. Lower performance ratings for females in this case would not result directly from beliefs about performance but indirectly through beliefs about aggressiveness and the association between aggressiveness and job performance.

To our knowledge, there is little or no direct evidence in the published literature that minority or race related stereotypes are the source of observed mean differences in performance ratings between majority and minority group members. Furthermore, the effects of sex and sex role stereotypes on work-related performance evaluations are not very likely to generalize to race. Gender differences are associated with sex roles and these roles are associated with jobs that have in the past been sex-typed. For example, clerical jobs are seen as jobs for women and telephone line persons as jobs for men. These images are changing somewhat, but old beliefs die hard. As a society, we have a long way to go before many jobs will lose their association with primarily one sex rather than the other. On the other hand, jobs are not race typed to nearly the extent that they are sex typed. Furthermore, when there have been jobs that are dominated by a particular racial group, it is probably less likely that the racial group members who perform the job is doing

so because they possess some unique race-related skills and abilities that make them more fit for the job. Thus, the link from race to race-typed jobs and job-relevant person characteristics is weaker for racially defined groups compared to gender defined ones so the effect of stereotypes on performance ratings for minority group members is likely to be much less.

The major race-related bias that does appear in the literature is the tendency for raters to rate more highly individuals of their own race (Landy & Farr, 1980). This has been observed in a number of studies (e.g., Crooks, 1972; Hamner, Kim, Baird, & Bigoness, 1974). In some of the research, such as Hamner, et al. (1974) objective performance differences between race were controlled so that it was possible to attribute the performance differences to rater errors. The same race effect would cancel out differences between racial groups if racial groups were equally represented among raters. Since we know that this is not the case, the tendency to rate same-race ratees higher than those of other races would lead to mean differences in ratings such as have been observed. Yet, keep in mind that this is not a stereotypic effect per se; it does not involve first ascribing characteristics to a group which, in turn, lead to inferences about performance.

Attribution Effects. Recently much attention has been paid not only to judgments about how others perform but the reasons for the performance. In its broadest form, this is known as attribution theory. As described by Kelly (1971), Jones (1979), Jones and Davis (1965), Jones and McGillis (1976) and others, attributions result from a rational process whereby people act as

"naive scientists" when making inferences about others. Of interest to us here are performance attributions--reasons commonly given for performance.

Performance can be seen as resulting from factors that can be classified along two dimensions. The first of these is a performance dimension reflecting the stability of the causal factor. Unstable factors can change rather quickly whereas stable ones are less subject to modification. The other dimension deals with the extent to which the causal factors are due to the individual actor who is performing (internal cause) or to conditions in his or her environment (external cause). Crossing these two dimensions creates a 2 x 2 classification system where stable internal characteristics are typically labeled ability, unstable internal factors effort, stable external factors refer to the difficulty of the situation to the task performer, and luck is an unstable external factor.

The importance of performance attributions is evidenced after judgments have been made about the level of performance and the causes of it. Heilman and Guzzo (1978) found that decisions about personnel actions differed depending upon the rater's beliefs about why the ratee performed as he or she did. In particular, a pay raise was seen as an appropriate reward for good performance as long as performance was seen as due to internal factors--factors under the control of the employee. Good performance due to high ability or to high effort on the part of the employee was seen as deserving of a raise. On the other hand, promotions were viewed as more appropriate for those with good performance due to high ability than for those who



worked hard. Presumably, the rater took into account the fact that a decision to promote demanded some confidence in the ratee's ability to continue to maintain high performance. The stable characteristic of ability apparently created more confidence in future performance than the unstable one of high effort.

Attributional effects create problems for performance appraisal to the extent that there are differences in the attributions made about members of different subgroups--in particular majority and minority group members. Here again we have little direct evidence. There are, however, several observed differences between men and women on attributions (see Deaux, 1976; Deaux & Emswiler, 1974; Heilman, 1983). In a classic study by Deaux and Emswiler (1974), students were asked to infer the reasons behind performance of work performed either by men or by women. In both cases, the level of performance was the same; all were told that the performance was quite good and that the person was successful in his/her work. With equal performance levels, the authors found that good performance for males was attributed to internal factors (skill, ability, hard work, etc.) while successful performance for women was attributed more to external factors such as lucky breaks or other external causes. Since such attributional effects do not necessarily involve sex-role stereotypes, it is possible that attributional differences may exist for the performance of various minority groups.

For example, it is possible that good performance for minorities might be attributed to external factors (e.g. luck) or

unstable factors (e.g. effort) rather than to ability. Good majority performance, on the other hand, might be more likely to be attributed to ability, which is both internal and stable. Similarly, extending the findings of Etaugh and Brown (1975) and Cash, Gillen and Burns (1977) with males and females to minorities, we might suggest that unsuccessful performance for minorities would be more likely to be attributed to ability while unsuccessful majority performance would be more likely to be attributed to bad luck. Clearly, regardless of whether the performance is good or bad, the attributions made about minority group members are likely to be more negative than those made about majority individuals. Based on the findings of Heilman and Guzzo (1978) discussed earlier, minorities would, therefore, also be likely to receive fewer favorable performance outcomes, such as promotions, because of the more negative attributions made about them. It is important to remember that at this point little research has been conducted in this area, so we are merely speculating about the possibility of racial differences in performance attributions. However the extension of the findings with males and females to majorities and minorities does not seem unreasonable. Future research should examine these hypotheses.

Although thus far we have only discussed attributions based on a person's performance level, attributions (both by self and others) can also result from other organizational processes, such as selection and hiring. For example, Chacko (1983), investigated the effects of women's perceptions of being hired primarily because of their ability versus being hired primarily because of equal employment opportunity (EEO) considerations.

When women believed they were hired only to meet EEO guidelines, they perceived their own performance to be lower and took less personal credit for what they did. It seems reasonable to assume that these same attributions, based on beliefs about reasons for selection, should operate in perceivers as well as actors and that they might exist for minority group members as well as women. Specifically, we might suggest that if managers perceive minority individuals as having been hired only to meet EEO requirements, then less favorable perceptions about those individuals and, therefore, lower performance evaluations, may result. To the extent that this occurs, the conditions under which persons were hired may act to bias ratings in performance appraisals.

Information Use. The results of one study dealing with information use suggested that raters may vary their degree of reliance upon objective criteria with respect to forming overall evaluations of performance depending upon the race of the ratee. Bass and Turner (1973) found that raters placed more weight on objective criteria when rating black employees than when rating whites. Put another way, there was a greater subjective component in the overall evaluation of majority employees than minority ones. Greater reliance upon objective data for minority group members' performance ratings would imply that such ratings would potentially be less biased than would the ratings of majority group members. However, if the subjectivity in majority group members' ratings tended to be biased in the positive direction, the end result could be lower ratings for minorities. The impact of such differences could work to the disadvantage of minority groups. At this point there is far too little data on

the differential use of criterion variables to be confident that such effects are common. On the other hand, we agree with Landy and Farr (1981) that this issue deserves more research attention.

Judgment Processes and Stimulus Saliency. At a more abstract level, research on judgment processes may be relevant to understanding differences in performance evaluations between minority and majority group members. Judgment processes most relevant to the above issue deal with the effects of stimuli that for some reason appear more salient or are more easily noticed by the rater. It is assumed that when a stimulus contrasts with other stimuli in the environment, that stimulus is noticed more by the rater. Given the limited presence of minorities in the workforce, especially in positions of higher responsibility, the race of a minority group member should be a salient characteristic.

Taylor and Fiske (1978) and others have found that when certain individuals are novel stimuli (i.e. different from almost everyone else in the work group) they become more salient, that is, stand out more. In the case of a single minority group member among a group of white males, the minority group member should stand out. The interesting questions relate to what the effects of standing out on performance evaluations will be.

As was the case with several of the other issues we have discussed thus far with respect to ratings, there is no reason to believe that salience should necessarily lead to higher or lower evaluations. Nevertheless, it is likely to have some affect on judgments. For example, the work of Tversky and Kahneman (1974) showed that people develop short cuts to simplify judgments. One of these short-cuts was labeled availability. In this case, it

has been found the most available events in memory are seen as the most important factors about a person. Thus, if race is a very salient feature, it may be seen as an important characteristic of the person and may be credited with far more relevance with respect to performance judgment than it deserves.

Another interesting affect of salience has been labeled "illusory correlations" (Chapman, 1967). Low probability events occurring in the environment are seen as occurring together much more frequently than is actually the case. So, for example, if employee theft is a relatively infrequent event and being black is also an infrequent person characteristic then, according to the illusory correlation effect, judges should tend to believe that blacks are more likely to steal from their employer than would be the actual occurrence of such behaviors.

Summary of Possible Bias Effects. After accepting the existence of a mean difference in research on performance evaluations between majority and minority group members, we have explored the degree of support for the common belief that rater biases are responsible for this difference. Although it would be appealing to conclude that the observed differences in mean performance level are more illusory than real (i.e. only exist because of rating biases), at this point, the evidence does not seem to support this conclusion. This is primarily due to the limited nature of the present research data. There has been a tendency to investigate whether or not performance rating differences exist between majority and minority members and then stop at that point; much less research exists on why observed differences exist. More research needs to be conducted to

determine whether the sources of bias discussed above can account for the observed differences in performance level between minority and majority group members.

It seems most likely that the biases which do exist in ratings are the result of complex judgment processes of person perception rather than simple minority group stereotypes. More subtle effects of group membership on attributions about the causes of performance, the attention that obvious membership in a particular minority group draws to the person, and beliefs about the conditions under which the person was hired for the job are but a few of the factors that are likely to impact the way raters gather, store, and recall performance related information about minority group members. Yet, even from a judgment process perspective, it is not clear at this time that such biases are major contributors to differences between majority and minority group members with respect to performance appraisals.

#### The Lost Opportunity Effect

A second possible explanation for the observed performance differences between minorities and majorities is what we will call a "lost opportunities effect". Similar to the rating biases explanation discussed above these lost opportunity factors are generally beyond the control of the individual since they are determined or caused by the environment (primarily other individuals in the organization, such as the individual's supervisor). However, unlike rating biases, which directly effect performance ratings, lost opportunities only affect performance ratings indirectly via their gradual effect over time

on actual performance level. As an example, individuals in the "outgroup" (Dansereau, Graen and Haga, 1975) often have fewer opportunities than those in the "ingroup" for interesting, challenging work where they could develop their skills. This may eventually result in true performance differences between majority and minority group members if minorities are more likely to be in the outgroup in work groups composed primarily of white males.

In general, there are two potential lost opportunity factors that may result in performance differences between majority and minority group members. First, minorities in organizations may be less likely to have a mentor, and, therefore, be less likely to derive some of the benefits that mentorship provides. Second, minority group members may be more likely to be in the "outgroup" and to be "tokens" (Kanter, 1977). Some research evidence suggests that such individuals (outgroup members and tokens) have different work experiences than ingroup, nontoken people. Both of these lost opportunity factors have implications for the potential performance of minorities; they will be discussed in greater detail.

Mentoring and Sponsorship. A mentor is a teacher, advisor or sponsor. It is a person, usually several years older and more experienced than the person mentored or sponsored, who takes a personal interest in that person's career and provides help and guidance to that individual. However, the mentor-protege dyad is a more intense and emotional relationship than any of these terms suggest. Shapiro, Haseltine and Rowe (1978) liken the relationship to that between a parent and child.

Mentors perform a variety of functions that can enhance the performance and/or career of the protege (Levinson, 1978; Kanter, 1977). Mentors may facilitate skill and intellectual development in the protege by acting as a teacher. As sponsors, mentors can use their influence to ease their proteges' entry and advancement in the organization. They may be able to stand up for the persons in question at meetings if there is controversy or provide extra opportunities for the person. It is also possible that by knowing their mentors, proteges may be able to get inside information or by-pass the formal chain-of-command to get work done more quickly. Mentors may also act as "guides" by acquainting proteges with the organization, its values, customs, resources and members. Functioning as role models, mentors may provide the protege with achievements, behaviors and attitudes to emulate. Finally, mentors may provide counsel and moral support in times of stress.

Most evidence to date suggests that mentors can be extremely important to an individual's success in an organization. Research by Roche (1979) indicates that of the top company executives surveyed in their sample, about two thirds of them had had at least one mentor. While this does not prove that having a mentor is necessary to reach the top in an organization, it does suggest that they are important. Although the executives in Roche's sample did not consider having a mentor to be the most important contributor to their success, about 70% felt that the mentor had a substantial impact on them and their career. This same study



also suggested that executives who had had mentors earned somewhat more money at a younger age and were more satisfied with their work.

Kanter (1977) suggested that sponsorship may be even more important to the success of women in organizations than men. She argued that support of people higher up in the organization is a sign of what she called "reflected power"--an indication that the individual (the protege) has the support of an influential person and that the sponsor's resources were behind the individual. She felt that women might be less likely than men to have the support and respect of subordinates (and peers) that is needed to perform effectively as a leader. She suggested that having a sponsor may imply that the individual is, in fact, competent and worthy of respect, cooperation and support and, thus, facilitate the woman's performance. The same rationale seems reasonable for minorities.

The first key question in determining the implications of mentoring processes for minority performance differences lies in how mentors choose their proteges. Shapiro et al. (1978) suggested that the mentor-protege relationship cannot be legislated because of its intense and emotional nature; i.e., individuals cannot be assigned a protege. Little research, however, has been done on how proteges are selected. Sponsors may choose as proteges individuals who have performed well. Social similarity to the mentor may also be an important variable (Kanter, 1977; Hall, 1966). Mentors may choose proteges with whom they can identify and who are socially similar to them. The sponsor often sees himself or herself at an earlier age in

the protege and, hence, is psychologically drawn to the individual (Kanter, 1977). Social class, gender and race are thus, potentially important variables in protege selection.

While sponsorship may be especially critical for minorities to succeed in organizations, it may also be more difficult to obtain, resulting in a double bind for minority group members. If proteges are chosen because they are socially similar to the sponsor, then the race of the potential protege is likely to be important. Cultural, value and social differences between minority and majority group members combined with the fact that there are fewer potential mentors from minority groups in the upper ranks of most organizations suggests that minorities may be less likely to be chosen as proteges.

There are several ways in which not having a mentor can affect the performance of minorities. Not having a mentor may indirectly affect performance by making it harder to obtain needed resources or the support and cooperation of peers and subordinates. Furthermore it might decrease the individual's long-term chances of success in the organization since there would be fewer opportunities for development of the skills needed to advance in the organization or because their good performance might not be noticed or brought to the attention of those responsible for promotions.

As noted above, one mechanism by which mentors impact a proteges' performance is through skill development. One way in which the mentor can aid in the learning process is by acting as a model of effective behaviors for the protege. Bandura (1971) argued that observational learning (modeling) is one of the major ways of

learning new behaviors. Several factors have been shown to enhance the degree of modeling that takes place. Among these is the degree of similarity between the model and the observer. One particularly prominent source of similarity is the racial/ethnic group membership of the model, which suggests that people may be more likely to model the behaviors of people of the same race as themselves. Since there are fewer minority managers in most organizations, there may be fewer minorities to serve as examples of effective behavior for aspiring young minority managers. We are not suggesting that minorities will not copy the behaviors of effective majority managers. Rather, it is possible that minorities may be more willing (or more able) to model managers of the same race since modeling those of a different race may be more difficult, requiring them to learn not only the new behaviors necessary to be a good manager but also the mannerisms and attitudes of a different racial group. If there were managers of the same race for them to model, they would have the opportunity to see how a manager could be successful while still maintaining many of the distinguishing characteristics of their racial group.

This modeling problem is likely to be especially severe for minority females since most of the models available to them will probably be majority males. Here, difficulties due not only to sex differences but also to race differences need to be overcome before modeling can occur. These differences may be acute enough that minority females may find themselves in the position of having no role model (much less multiple role models, which Shapiro et al., 1978 argued are needed to illustrate the range of

different ways in which people can be effective in a job). Thus, another potential performance difficulty for minorities related to the mentoring problem is finding appropriate examples of effective behavior after which they are able to model their own behavior.

In conclusion, having a mentor is one opportunity that minorities may lose as a result of their membership in a particular racial group. This loss could, over time, lead to performance differences between groups. Keep in mind, however, that in this situation we are talking about true differences in performance, not just assumed differences resulting from managerial rating biases.

Ingroup/Outgroup Membership. The second category of lost opportunity factors deals with work group composition. The first factor within this category is borrowed from the vertical dyadic linkage (VDL) model of leadership (Dansereau, Graen and Haga, 1975; Graen, 1976). This model was derived in reaction to the average leadership style theories of leadership which assume that managers treat all of their subordinates similarly. In contrast, Dansereau, Graen and their associates argued that the managers do not behave the same toward all subordinates. Their model suggests that, over time, managers/supervisors implicitly assign subordinates to one of two groups, ingroup or outgroup, and behave in different ways towards members of each group.

Ingroup relationships exhibit many of the characteristics of job enrichment and participative decision-making. Specifically, ingroup members are likely to receive more assistance from the manager and are more likely to be given the interesting and challenging work assignments than are outgroup members. Ingroup

members are also more likely to have inputs into managerial decision-making. The relationship between ingroup members and the manager is generally characterized by greater support, sensitivity and trust than occurs for outgroup exchanges. Another difference between ingroup and outgroup exchanges is in the use of authority. Dansereau et al. (1975) argued that managers are less likely to use authority to influence ingroup members. Influence for ingroup members is more likely based upon a mutual interpersonal exchange--the leader gives extra resources and assistance while the subordinate reciprocates with additional effort and time. For outgroup members, on the other hand, influence is based primarily on the employment contract and the use of authority--the subordinate agrees to accept the leader's legitimate authority in exchange for pay and other benefits. Thus, ingroup members as compared to those in the outgroup should be better equipped to advance in the organization since they should have had more opportunities to develop needed skills and more chances to become visible to those who make promotions.

Other job outcomes are expected to be more favorable for ingroup members. First, supervisory job performance ratings are generally higher for ingroup members than for outgroup people (Graen, 1976). This may occur because of either real or assumed differences in performance between ingroup and outgroup members. In the first case, real differences in performance may develop over time as ingroup members develop their skills to a greater degree through more practice. However, assumed differences in performance may also occur due to managerial rating biases. Secondly, self ratings of job satisfaction are typically higher

for ingroup members than for outgroup while turnover and experienced job problems are lower for ingroup members. All of these things suggest more favorable work experiences for ingroup members than for outgroup members.

As in the discussion of mentoring, the critical issue as this relates to majority-minority performance differences is how ingroup members are chosen. While research has not yet resolved this issue, Dansereau et al. (1975) suggested that the degree of compatibility between leader and member characteristics is important. The more compatible (and similar) the leader and subordinate are the more the leader is likely to be attracted to the subordinate and the more likely the subordinate is to be in the ingroup. As noted earlier, race is a very prominent variable determining similarity. Given this, and the assertion made earlier that the majority of the managers are white, it follows that, other things being equal, minorities may be less likely to be chosen to be in the ingroup and, hence, may be less likely to accrue the benefits of ingroup membership.

Over time, ingroup members, who initially had equal potential to outgroup members, will probably come out ahead due to more and better on the job opportunities. The Management Progress Study at AT&T, by Bray, Campbell and Grant (1974) as well as research by Berlew and Hall (1966) documented the importance of initial job challenge for the later success of managers. To the extent that minorities are more often in the outgroup and lose out on early job challenge opportunities, these same persons may perform more poorly later on due to the nature of their earlier experience.

Another related way in which ingroup/outgroup membership may result in performance differences between minority and majority groups is through perceptions of equity. To the extent that minorities are more likely to be in the outgroup and perceive others (those in the ingroup) as getting more interesting or challenging work, more help from the supervisor etc., a feeling of inequity may result. Minority members may perceive majority members who have equal inputs to themselves (in terms of education, experience, ability, etc.) as receiving more positive outcomes. According to equity theory, this would result in an imbalance in the input/outcome ratio and the perception of inequity (Adams, 1965; Pritchard, 1969). The theory suggests that when individuals experience under reward inequity, they attempt to restore equity by working less hard (decreasing their inputs). Working less hard is likely to be a direct precursor of lower performance and, consequently lower performance ratings.

In summary, because of individuals' minority group membership they may be less likely to be in the ingroup and, as a result have different work experiences. In the long run, such experiences may place them at a disadvantage in relation to other workers and lead to differences between minorities and majorities in performance as well as to differences in advancement potential.

Tokenism. Tokenism, a related group composition factor which also leads to the lost opportunities effect, has been discussed extensively by Kanter (1977). Kanter argued that the work environment of a person is affected by the rarity or scarcity of other individuals similar to that person. She noted

that there are several types of work groups: (1) uniform groups, with only one significant social type in the group; (2) balanced groups, which have two major social types in approximately equal proportions and; (3) skewed groups, in which there is a large preponderance of one type compared to another (she suggested a ratio of approximately 85:15 for the latter). In the case of skewed groups, the person(s) in the smaller group were called "tokens". While Kanter focused primarily on women as tokens, her ideas should generalize to racial minorities.

Kanter's research on tokenism suggested that the relative scarcity of an individual's social type is associated with three perceptual tendencies each leading to a particular token dynamic. First, tokens are highly visible and attract attention because they are different from the majority and, hence, stand out in the group. As a result of their relative scarcity in the workgroup, tokens tend to be treated as representatives of the category (i.e., symbols) rather than as individuals. This leads to the first token dynamic--performance pressures. The token's performance is examined more closely than the performance of non-tokens and is then generalized to other members of their category.

The second perceptual tendency is a contrast effect in which majority group members tend to exaggerate the differences between tokens and themselves. Heightening of the dominant group's boundaries and isolation of the token(s) are the token dynamics associated with the contrast effect. Boundary heightening occurs as a way of preserving the shared culture and values of the dominant group. Isolation of the token may occur intentionally



as majority group members consciously attempt to keep minorities out of their group. However, token isolation may also be unintentional. For example, smooth interaction among group members requires a shared vocabulary and shared attitudes. Tokens may not share these in common with the majority which may make both feel uncomfortable and may make communication between majority group members and tokens more difficult. This serves to heighten the differences between tokens and the majority.

Tokens may also be excluded (either intentionally or unintentionally) from informal gatherings or meetings between majority group members, resulting in tokens being left out of the informal social network. This could be detrimental to tokens because the informal network is an important source of informal socialization and is often how "behind the scene" organization politics are disclosed. The informal network is also an important part of the promotion process (Steward and Gudykunst, 1982). However, some research suggests that women do not differentiate between the formal and informal organization structure (Reif, Newstrom and Monczka, 1975) and hence, tend to rely on the formal organization system (Hennig and Jardin, 1977) more than males. The same may be true of minority group members who are also relatively new to managerial positions in organizations. To the extent that minorities are left out of the informal network or do not recognize its importance, they may also be overlooked when advancement opportunities arise.

Assimilation is the final perceptual tendency and involves the use of stereotypes and generalizations about a person's social type. According to Kanter (1977), it is easier to

stereotype and draw generalizations about tokens because there are often not enough of them in the work group or organization to find ones who don't fit the stereotype. This perceptual tendency is associated with a token dynamic called role encapsulation. Kanter argues that because of stereotypical assumptions about what tokens are like, tokens may be forced into playing a limited number of roles. To the extent this occurs, it would limit the number and type of positions in the organization which are seen as appropriate for them and, therefore, limit their opportunities for career development.

The implications of token dynamics for minority-majority performance differences, like the implications of mentoring processes or ingroup/outgroup membership, are somewhat indirect. While being left out of the informal network does not immediately affect performance, it may, in the long run, make success more difficult. Since much of the socialization into an organization is done informally, tokens may not be socialized as well and, thus, be at a disadvantage. Similarly, because they are not part of the informal network, minority group members may not have access to the information that moves through the organization "off the record" which could help them do their job more effectively. Finally, as noted above, they may not hear about promotional opportunities or be considered for them because they are not as visible.

Overall, the lost opportunities effect may be one explanation for minority versus majority performance differences. While these lost opportunities (i.e., the absence of mentors less interesting or challenging work as a result of being in the

outgroup, and being left out of the informal social network) do not directly affect performance ratings, they may, over time, result in true performance differences between groups. Unfortunately, however, as in the discussion of rating biases, definite conclusions can not be drawn due to the paucity of research in this area. However, our speculations, based on the research evidence involving women, seem plausible. It should be emphasized that these performance differences are not hypothesized to stem from initial ability differences between minorities and majorities. Rather, they could arise due to the fact that minorities and majorities have different work experiences and opportunities after members of each group have been offered the opportunity to join the organization and accept their appointment to it.

#### Self-limiting Behavior

The final explanation for possible performance differences between minority and majority group members at work is the most severe, in terms of the ease of removing the differences. This explanation may best be described as self-limiting behavior on the part of the minority group person, and is viewed here as the long term effect of rating biases and lost opportunities. Self-limiting behavior has two aspects: a motivational component and an ability component. The former is primarily a self-concept problem that may exist prior to entering the organization or may develop from internalizing the rating biases, stereotypes and attribution processes discussed earlier. This is most likely to be an unconscious effect because the individuals may not realize

the extent to which they have accepted the stereotypes about their social type.

The ability component is the long term result of the lost opportunity effect. Eventually, the minority individuals who have been placed in routine, average work assignments for long periods of time will fall behind majority group age cohorts in terms of knowledge and skill development. There becomes a point where such differences once developed cannot be made up by the particular individuals involved without great difficulty. The end result of both the motivational and ability components is the development of self-limiting behaviors. For whatever reason, such individuals will no longer attempt challenging opportunities if they are offered to them. They may be forced to choose lower status job and work assignments because of lower qualifications, or they may voluntarily choose these assignments due to an expectation of failure.

The motivational cause of self-limiting behavior is discussed in some detail by Heilman (1983). Heilman proposed a "lack of fit" model to explain such self-limiting behavior. According to this model, an individual's performance expectations result from an assessment of the degree of fit between perceived self attributes and perceived job requirements. When there is a poor fit, expectations of failure result which can lead to negative self-evaluations and self-limiting behavior (i.e., limiting the range of career options and career advancement activities). To the extent that minority group members attribute to themselves the same negative stereotypes that others do, they are likely to see themselves as not possessing the qualities

required to do more difficult and challenging work assignments. As a result, they may voluntarily choose not to pursue such work opportunities. Note that this contrasts with our earlier discussion of the lost opportunities effect where we argued that work opportunities were less likely to be given to minorities, but where we assumed that such opportunities would be accepted if they arose. Here we suggest that even if these opportunities arise, the individual would not take advantage of them because of an expectation of failure. This is the key difference between self-limiting behavior and the lost opportunity effect and illustrates our assertion that, at this level, minority-majority performance differences are most severe and deep-rooted. This explanation can be considered an internalization of the rating biases and stereotypes discussed earlier because the longer individuals are given low performance ratings, the more they may internalize these negative self evaluations and come to believe them. The end result is likely to be self-limiting behavior. Obviously, however, these low self evaluations may be present prior to entering the organization and merely be made worse or confirmed by the low performance evaluations.

The ability component of self-limiting behavior can be seen as the long term result of the lost opportunities effect. Unlike the motivational component, in this case there is a true performance difference that has developed from being denied the opportunity to learn the skills necessary to advance in the organization.

The problem we are talking about here is analogous to one discussed in the field of education. Educators have long been concerned about deficiencies in the educational background of minority children. Research (e.g., Coleman et al., 1966) has consistently shown that minority children tend to achieve at a lower level than majority children. Problems arise when children fail to learn basic skills in the early school years because they are then often unable to develop higher level skills later on and, thus, continue to be behind. Similarly, when minority workers in organizations do not learn basic work skills early in their career, they may have a hard time later developing the more complex skills needed for higher level jobs. This would be especially true in sequential jobs (e.g. moving from junior to senior bookkeeper) where skills learned in the first job are necessary in order to perform the later job. However, this is also likely to be a problem even when the skills learned in the initial job are not directly practiced in subsequent jobs (e.g. moving from being an accountant to being a manager of accountants) since knowledge of those skills may be necessary in for later jobs (e.g. while an accounting manager may not actually practice accounting, they must have knowledge of it in order to supervise other accountants). Furthermore, good performance in the early job is generally what leads managers to single someone out as having potential for higher level jobs. Thus, failure to learn initial skills adequately may limit how far an individual can advance in an organization.

Self-limiting behavior may be seen as perpetuating performance differences between minority and majority group

members developed as a result of the lost opportunities effect. When individuals refuse to try new or challenging tasks because of an expectation of failure, they never learn whether they could, in fact, do the task. This also eliminates the opportunity to learn skills that may be valuable at a later time. Furthermore, such self-limiting behavior may operate so as to confirm and justify the stereotypes and biases of raters in rating the performance. When a minority group member refuses a challenging job opportunity, it may confirm a belief that members of this group are lazy, afraid of taking risks etc., neither of which characteristics are likely to lead the individual to be seen as having managerial potential.

Conclusions and Implications for Minorities  
in High Technology Industries

Summary and Caution

The primary assumption underlying the present paper is that performance evaluations are central to issues of human resource management both from the standpoint of the organization and from that of the individuals who populate that organization. Such evaluations influence important decisions about job placement, training, promotions, transfers, and terminations. These decisions are critical for effective personnel utilization and for effective career development of individuals.

From this assumption, it was argued that successful utilization of minority group members in any organization including, but not limited to, high technology industries required understanding the nature of performance evaluations for

minority group members. The literature that was reviewed first addressed the extent to which performance ratings for minority group members differed from those of majority group members and second, after concluding that there was some evidence for the existence of a difference between groups, various explanations for this difference were explored. In the remainder of the paper we shall explore what we see as the impact of these findings for attempting to assure an active role of minorities in high technology and other industries.

At this point we need to reiterate the speculative nature of much that we have presented thus far. First, there is the issue of the size of the difference between minority and majority group members on performance appraisals as identified by Kraiger and Ford (1983). These differences were frequently found but the size of the differences were modest. Second, much of the literature used to explain the differences in performance was borrowed from research on male-female differences rather than majority-minority group differences and was then applied to the issue at hand. While all of this seemed reasonable, caution should be taken in accepting these deductions without further data related directly to comparisons between groups differing on race or ethnicity.

#### Courses of Action

We suggest that two courses of action may be taken to attempt to deal with differences in performance evaluations between minority and majority group members. Underlying both approaches is the assumption that high technology industries will



pursue active affirmative action programs. Such programs should assure the flow of minority group members into high technology industries assuming that the typical inducements for employment used in this industry are competitive with other industries recruiting in the same labor market.

Rater Effectiveness. To deal with problems in performance evaluations that stem from the evaluators' ability to provide accurate ratings that are reliable and valid there are really only three ways to attack the problem. These are: develop rating scales that are less subject to rating problems, train evaluators so that they can provide better ratings, and develop policies and practices that increase the likelihood of accurate evaluations. The first of these, the development of rating scales, has received the most attention in the past. At this point, however, it is unlikely that much more can be done with rating scales themselves to increase their quality (Ilgen & Feldman, 1983; Landy & Farr, 1980). This conclusion stems from a review of a large number of studies none of which were directly focused on high technology industries. Nevertheless, there is no reason to suspect that the conclusion would not be the same in this new setting.

Rater training, on the other hand, has been found to be effective for improving performance ratings (Latham & Wexley, 1980). Yet, with respect to minority ratings, we must consider carefully the nature of the training that might be provided. Recall that Kraiger and Ford (1983) found that, for raters who had received rater training, the mean ratings for minority groups were lower than for majority groups. Recently, those who have

been trained to avoid typical errors in rating have also been found to be less accurate in their ratings (Bernardin & Pence, 1980; Borman, 1979). Given the nature of most rater training programs, it is quite likely that the research reviewed by Kraiger and Ford (1983) using rater training used training that focused primarily on eliminating typical rating errors such as halo or leniency and, hence, may have decreased rating accuracy. If training is going to be useful for reducing biases in ratings for minority group members in high technology industries the typical rating error oriented training program is not likely to be useful.

Training focused upon rating accuracy rather than avoiding typical errors in rating is more likely to be useful. Pulakos (1983) compared two types of training--one aimed at teaching the raters what to look for in others' behavior (accuracy) and the other at typical rating errors--and compared the two on rater accuracy. She found that training directed toward accuracy improved raters' ability to make accurate ratings whereas that directed toward typical rating errors did not.

Building upon the work on accuracy training, it should be possible to introduce training that focuses specifically upon problems of rating minorities. For example, raters could be made aware of the influence of beliefs about tokens, the effects of an "atypical" stimulus person on judgments, and the types of attribution errors that are likely to arise when minorities are being rated. Awareness of and practice dealing with such processes in a training program may be able to reduce the effects of the processes when ratings are made on the job.

Finally, it may be possible to change the way in which raters sample information that is later used in ratings so that rating biases can be reduced. We have argued that the rating process is one of (1) gathering information about a ratee, (2) storing that information in memory, and (3) retrieving that information from memory. Policies and practices may be possible to encourage more accurate gathering of information prior to storing it in memory. Thus far, most attention has been directed at the recall phase in spite of the fact that the quality of the recall can be no better than the data that is input into memory to be recalled (Feldman, 1981; Ilgen & Feldman, 1983). Such practices as using a diary to sample information such as suggested by Bernardin and Walker (1977) would be useful at this phase. Also assuming that raters will be using micro-processors and assessing electronic calendars for their own planning especially in high technology industries, sampling strategies could be introduced for asking for brief observations of minority group members' performance on several occasions. These could then be reviewed for major performance evaluation reviews. More controlled sampling of information may provide ways to reduce errors in sampling that are likely to occur because of the salience of minority group characteristics that make them stand out in a group of persons differing from themselves on some dimensions independent of performance.

Career Development. Much of our discussion of limitations in performance level or performance opportunities for minority group members addressed constructs that were eventually mapped into the individual. We have suggested that conditions in the

organization may be major causal factors in creating actual differences among individuals. That is to say, the impact of being in an easily identifiable subgroup, of having access to fewer mentors and role models, et cetera, eventually affects the beliefs, motivation, and skill levels of minority group members themselves. As a result, either modifying just the work environment without training the minority group members or, conversely, changing only minority individuals without attempting to alter the environmental conditions which initially created the problem, is not likely to be effective. However, an emphasis on changing the work environment, when combined with minority group member training may be able to reverse or minimize the impact of some of the conditions that have been discussed. In general, we are suggesting that attempts to eliminate or avoid the negative impacts on the performance of minorities who have joined the organization can be grouped into changes in the task and social environment at work and changes directed toward minority individuals themselves. Both of the latter are concerned with the development of minority employees from the employees' perspective and thus, fall under what is usually labeled career development.

There are several things that organizations themselves may be able to do to deal with the performance problems of minorities. An individual's initial experiences in the organization are perhaps the most significant aspect of their career (in terms of impacting on their later success in the organization). Hence, an organization's newcomer socialization practices would be a potential area for change. Two important aspects of socialization are individuals' job performance and

their interpersonal relationships within the organization. While socialization to the job itself via training is a common practice in most organizations, the development of interpersonal relationships is usually not the target of any systematic efforts and thus, is left up to the individual. Since models of socialization (i.e., Feldman, 1976; Buchanan, 1974) consider this to be a critical aspect of socialization, it is surprising that more systematic efforts are not directed at this aspect of socialization. Getting to know co-workers is likely to be an important source of difficulty for minority newcomers. Since the minority persons will probably be one of only a few of their social type in the workgroup, they may be isolated (or isolate themselves) from the others in the workgroup. Keeping to themselves and not "creating any waves" may seem (to them) to be a good strategy for not having or causing problems, but is unlikely to help them become integrated into the workgroup.

Systematic efforts at interpersonal socialization should be made by organizations. Newcomers could be assigned another co-worker who would answer their initial questions and introduce them to the other co-workers. If several new people start at the same time they could have a weekly meeting to compare experiences and help each other. These people could then serve as a support group for one another. Encouraging "oldtimers" to introduce newcomers to people outside the immediate workgroup may also help. Systematic efforts of this kind could help all newcomers (especially minorities) become part of the workgroup and help eliminate the problem noted earlier of minorities being left out of the informal social network.

Secondly, the organization could develop a "mentoring program". Although it was suggested earlier that the mentoring relationship may be difficult to legislate there may be some room for structuring it. It might be possible to approximate such a relationship by assigning individuals a mentor who may then fulfill some of the important functions of a mentor. In fact, some organizations have attempted such a program by assigning individuals a mentor several levels above them in the organization. These programs are reported to have been useful from the proteges point of view. However, they were less satisfactory for the mentor, since the mentor often did not get any reward for their effort. For example, the psychological satisfaction that often results from a natural (i.e., non-legislated) mentor-protége relationship may be lower. To make such a program successful, organizations may need to provide incentives to the mentors so that they are willing to take on the extra responsibility. Also, psychological testing may be helpful in matching mentors and proteges to improve the possibility of compatibility.

Dealing with the true performance deficits that develop as a result of lost opportunities is likely to be more difficult. However, from the organizations's point of view, there are several things that may be done. Organizations could routinely search for individuals who have been in the organization for a while without advancing or who have plateaued at some level. These individuals could be assessed and offered remedial training to develop basic skills that they didn't learn earlier. Routine periodic assessment of individuals who are not advancing may help

to identify problems before they become too severe. Organizations could also offer career counseling to these individuals to help them formulate specific career objectives given their current skills or skills that could reasonably be developed with remedial training. Such a strategy would result in better utilization of both minority and majority members.

Turning to changes that focus on the person himself or herself rather than on the creation of working conditions to facilitate better career development, we would suggest that minority group members should be advised to be proactive. Specifically, they should seek out mentors and role models, attempt to obtain challenging job assignments, and resist self-limiting attributions for their own performance. None of these is necessarily easy to accomplish. However, this does not imply that the person who seeks out opportunities to develop mentoring relationships with more senior employees would not be more successful at attaining these than one who sits back and waits for such relationships to develop. Similarly, although minority role models are likely to be scarce, majority group members in positions similar to the ones held by minority group members, on most dimensions of role performance should serve as reasonable role models. They may not be quite as good as a minority role model, but they should be considerably better than no role model at all. All of these four issues should receive special attention in formal career development programs for minority group members.

Conclusion

Several assumptions underlay our discussion of minority group members in high tech industries. The first of these was that today, nearly 20 years after the passage of the Civil Rights Act, we know considerably more about providing minority group members with access to a wide variety of jobs than we know about providing these individuals, once they are in the organization, with the same opportunities to advance and build a desirable career for themselves. Therefore, in the next few years, the most interesting and important aspects of human resource management with respect to minority group members will be concerned with the treatment of these individuals who are currently employed by the organization and desirous of developing their career within that organization. Our second assumption was that evaluations of employee performance are major sources of data that influence personnel management decisions which are critical to the organization and to the individual employees involved in the decisions. This assumption along with the observed difference between minority and majority group members on performance appraisal led to an exploration of the reasons behind such differences. It was assumed that a better understanding of group differences was the first step in being able to reduce and eliminate these differences. Finally, we felt there was no reason to believe that conditions in high technology industries with respect to the issues we addressed would be any different than they are in other performance-oriented organizations. Therefore, our discussion rarely referred



directly to high technology industry yet what was discussed should be equally applicable in these industries as any other work setting.

Three sets of variables were identified as possible sources of an observed difference in performance evaluations between minority and majority group members in work settings. These were: biases, lost opportunities, and self-limiting behavior. Our initial intention was to attempt to understand why differences in performance and/or performance evaluations may have arisen, identify the sources of these differences, and then recommend changes in policies, practices, and conditions that would appear to help alleviate the differences.

Potential sources were identified, but many of them were less amenable to change than we had hoped. Consider, for example, the fact that being one of a small identifiable subgroup may affect both reactions of majority group members who observe the performance of the person or persons so identified and also the person himself or herself. This condition is likely to be one that cannot be avoided at least in the initial stages of integrating minority group members into jobs. Even under the most random of replacement conditions for people across jobs, minority group members would only be represented at a level equal to the percent of that group in the population--a condition which would still create a ratio of majority to minority group members that is likely to lead to the perceptual and performance differences that are caused by percent of representation. Therefore, rather than being able to reach conclusions about changes in working conditions that might lead to desired effects,

we are often left with recommending training and other procedures targeted at changing people rather than jobs. While these recommendations coupled with continuation of Affirmative Action plans similar to ones that are currently in practice in many industries were recommended, it must be recognized that the impact of such changes may be quite slow. Attempts to change people's behavior through training oriented toward interpersonal behaviors and perceptions have shown only limited success. Nevertheless, by focusing more attention of both majority and minority employees on the problems and issues of the adjustment and development of minority group employees in the organization, more progress can be made than by ignoring what we feel is becoming and will be the most important thrust of our efforts to successfully open all jobs to minority group members in the next few years.

## References

- Adams, J. S. (1965). Inequity in social exchange. In L. Berkowitz (Ed.), Advances in Experimental Psychology. New York: Academic Press, Inc.
- Bandura, A. (1971). Social Learning Theory. Morristown, NJ: General Learning Press.
- Bass, A. R., & Turner, J. N. (1973). Ethnic group differences in relationships among criteria of job performance. Journal of Applied Psychology, 57, 101-109.
- Berlew, D. E., & Hall, D. T. (1966). The socialization of managers: Effects of expectations on performance. Administrative Science Quarterly, 11, 207-223.
- Bernardin, H. J., & Pence, E. C. (1980). Effects of rater training: Creating new response sets and decreasing accuracy. Journal of Applied Psychology, 65, 60-66.
- Bernardin, H. J., & Walter, C. S. (1977). Effects of rater training and diary-keeping on psychometric error in ratings. Journal of Applied Psychology, 62, 64-69.
- Borman, W. C. (1979). Format and training effects on rating accuracy and rating errors. Journal of Applied Psychology, 64, 410-421.
- Bray, D. W., Campbell, R. J., & Grant, D. L. (1974). Formative Years in Business. New York: Wiley.
- Buchanan, B. (1974). Building organization commitment: The socialization of managers in work organizations. Administrative Science Quarterly, 19, 533-546.

- Cash, T. F., Gillen, B., & Burns, D. S. (1977). Sexism and "beautyism" in personnel consultant decision making. Journal of Applied Psychology, 60, 566-572.
- Chacko, T. I. (1983). Women and equal employment opportunity: Some unintended effects. Journal of Applied Psychology, 67, 119-123.
- Chapman, L. J. (1967). Illusory correlation in observational report. Journal of Verbal Learning and Verbal Behavior, 6, 151-155.
- Cohen, J. (1969). Statistical Power Analysis for the Behavioral Sciences. New York: Academic Press.
- Coleman, J. S., Campbell, E. Q., Hobson, C. J., McPartland, J., Mood, A. M., Weinfeld, F. D., & York, R. L. (1966). Equality of Educational Opportunity. Washington, DC: U.S. Government Printing Office.
- Dansereau, F., Graen, G., & Haga, W. J. (1975). A vertical dyadic linkage approach to leadership within formal organizations. Organizational Behavior and Human Performance, 13, 46-78.
- Deaux, K. (1976). Sex: A perspective on the attribution process. In J. H. Harvey, et al. (Eds.), New Directions in Attribution Research, Vol. 1. Hillsdale, NJ: Erlbaum.
- Deaux, K., & Emswiler, T. (1974). Explanation of successful performance on sexlinked tasks: What is skill for the male is luck for the female. Journal of Personality and Social Psychology, 29, 80-85.

- Etaugh, C., & Brown, B. (1975). Perceiving the causes of success and failure of male and female performances. Developmental Psychology, 11, 103.
- Feldman, D. C. (1976). A contingency theory of socialization. Administrative Science Quarterly, 21, 433-452.
- Feldman, J. (1981). Beyond attribution theory: Cognitive processes in performance appraisal. Journal of Applied Psychology, 66, 127-148.
- Graen, G. (1976). Role-making processes within complex organizations. In M. D. Dunnette (Ed.), Handbook of Industrial and Organizational Psychology. Chicago: Rand McNally.
- Hall, O. (1966). In W. R. Scott and E. H. Volkart (Eds.), Medical Care. New York: Wiley.
- Hamilton, D. L. (1979). A cognitive-attributinal analysis of stereotyping. In L. Berkowitz (Ed.), Advances in Experimental Social Psychology, Vol. 12. New York: Academic Press.
- Hamner, W. C., Kim, J. S., Baird, L., & Bigoness, N. J. (1974). Race and sex as determinants of ratings by potential employers in a simulated work sampling task. Journal of Applied Psychology, 59, 705-711.
- Heilman, M. E. (1983). Sex bias in work settings: The lack of fit model. In L. L. Cummings and B. Staw (Eds.), Research in Organizational Behavior, Vol. 5. Greenwich, CT: JAI Press.

- Heilman, M. E., & Guzzo, R. A. (1978). The perceived cause of work success as a mediator of sex discrimination in organizations. Organizational Behavior and Human Performance, 21, 346-357.
- Hennig, M., & Jardin, A. (1977). The Managerial Woman. New York: Pocket Books.
- Hunter, J. E., Schmidt, F. L., & Jackson, G. B. (1982). Meta-Analysis: Cumulating Research Findings Across Studies. Beverly Hills: Sage Publications.
- Ilgen, D. R., & Feldman, J. M. (1983). Performance appraisal: A process approach. In L. L. Cummings and B. M. Staw (Eds.), Research in Organizational Behavior, Vol. 5. Greenwich, CT: JAI Press.
- Jones, E. E. (1979). The rocky road from acts to dispositions. American Psychologist, 34, 107-117.
- Jones, E. E., & Davis, K. E. (1965). From acts to dispositions. In L. Berkowitz (Ed.), Advances in Experimental Social Psychology, Vol. 2. New York: Academic Press.
- Jones, E. E., & McGillis, D. (1976). Correspondent inferences and the attribution cube: A reappraisal. In J. M. Harvey et al. (Eds.), New Directions in Attribution Research, Vol. 1. Hillsdale, NJ: Erlbaum.
- Kanter, R. M. (1977). Men and Women of the Corporation. New York: Basic Books.
- Kelly, H. H. (1971). Attribution in social interaction. In E. E. Jones, et al. (Eds.), Attribution: Perceiving the Causes of Behavior. Morristown, NJ: General Learning Press.

- Kraiger, K., & Ford, J. K. (1983). A Meta-Analysis of Rater Race Effects in Performance Ratings. In review.
- Landy, F. J., & Farr, J. L. (1980). Performance rating. Psychological Bulletin, 87, 72-107.
- Latham, G. P., & Wexley, K. N. (1980). Increasing productivity through performance appraisal. Reading, MA: Addison-Wesley.
- Levinson, D. J. (1978). The seasons of a man's life. New York: Alfred A. Knopf.
- Levitin, T., Quinn, R. P., & Staines, G. L. (1971). Sex discrimination against the American working women. American Behavioral Scientist, 15, 238-254.
- Pritchard, R. D. (1969). Equity theory: A review and critique. Organizational Behavior and Human-Performance, 4, 176-211.
- Pulakos, E. D. (1983). A comparison of two rater training programs: Error training vs. accuracy training. Unpublished Masters Thesis, Michigan State University.
- Reif, W. E., Newstrom, J. W., & Monczka, R. M. (1975). Exploding some myths about women managers. California Management Review, 27, 72-79.
- Roche, G. R. (1979). Much ado about mentors. Harvard Business Review, 57, 14-28.
- Shapiro, E. C., Haseltine, F. P., & Rowe, M. P. (1978). Moving up: Role models, mentors, and the "patron system". Sloan Management Review, 19, 51-58.

- Stewart, L. P., & Gudykunst, W. B. (1982). Differential factors influencing the hierarchical level and number of promotions of males and females within an organization. Academy of Management Journal, 25, 586-597.
- Taylor, S. E., & Fiske, S. T. (1978). Salience, attention, and attributions: Top of the head phenomena. In L. Berkowitz (Ed.), Advances in Experimental Social Psychology. Vol. 11. New York: Academic Press.
- Terborg, J. R., & Ilgen, D. R. (1975). A theoretical approach to sex discrimination in traditionally masculine occupations. Organizational Behavior and Human Performance, 13, 352-376.
- Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. Science, 185, 1121-1124.
- Wendelken, D. J., & Inn, A. (1981). Nonperformance influences on performance evaluations: A laboratory phenomenon? Journal of Applied Psychology, 66, 149-158.



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800 N. Quincy Street  
Arlington, VA 22217

LIST 2 ONR FIELD

Psychologist  
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Detachment, Pasadena  
1030 East Green Street  
Pasadena, CA 91106

LIST 3 OPNAV

Deputy Chief of Naval Operations  
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Head, Research, Development, and  
Studies Branch (Op-115)  
1812 Arlington Annex  
Washington, D.C. 20350

Director  
Civilian Personnel Division (OP-14)  
Department of the Navy  
1803 Arlington Annex  
Washington, D.C. 20350

Deputy Chief of Naval Operations  
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Director, Human Resource Management  
Plans & Policy Branch (OP-150)  
Department of Navy  
Washington, D.C. 20350

LIST 4 NAVMAT & NPRDC

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Personnel, and Training  
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800 N. Quincy Street  
Arlington, VA 22217

Naval Material Command  
Management Training Center  
NAVMAT 09M32  
Jefferson Plaza, Bldg #2, Rm 150  
1421 Jefferson Davis Highway  
Arlington, VA 20360

Naval Material Command  
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Crystal Plaza #5  
Room 632  
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Monterey, CA 93940

U.S. Naval Academy  
ATTN: Chairman, Department of  
Leadership and Law  
Stop 7-B  
Annapolis, MD 21402

LIST 7 HRM

Officer in Charge  
Human Resource Management Division  
Naval Air Station  
Mayport, FL 32228

Human Resource Management School  
Naval Air Station Memphis (96)  
Millington, TN 38054

Commanding Officer  
Human Resource Management School  
Naval Air Station Memphis  
Millington, TN 38054

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Code RD-1  
Washington, D.C. 20380

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GAO  
Washington, D.C. 20548

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Washington, D.C. 20550

Office of Personnel Management  
Office of Planning and Evaluation  
Research Management Division  
1900 E. Street, N.W.  
Washington, D.C. 20415

LIST 11 ARMY

Technical Director (3)  
Army Research Institute  
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Alexandria, VA 22333

Head, Department of Behavior  
Science and Leadership  
U.S. Military Academy, New York 10996

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LSE 76-443  
Maxwell AFB, AL 36112

Head, Department of Behavioral  
Science and Leadership  
U.S. Air Force Academy, CO 80840

LIST 13 MISCELLANEOUS

Mr. Luigi Petruzzo  
2431 North Edgewood Street  
Arlington, VA 22207

LIST 14 CURRENT CONTRACTORS

Dr. Janet L. Barnes-Farrell  
Department of Psychology  
University of Hawaii  
2430 Campus Road  
Honolulu, HI 96822

Dr. Lawrence R. James  
School of Psychology  
Georgia Institute of Technology  
Atlanta, GA 30332

Jeanne M. Brett  
Northwestern University  
Graduate School of Management  
2001 Sheridan Road  
Evanston, IL 60201

Dr. J. Richard Hackman  
School of Organization & Management  
Box 1A, Yale University  
New Haven, CT 06520

Dr. Terry Connolly  
Georgia Institute of Technology  
School of Industrial & Systems  
Engineering  
Atlanta, GA 30332

Dr. Frank J. Landy  
The Pennsylvania State University  
Department of Psychology  
417 Bruce V. Moore Building  
University Park, PA 16802

Dr. Richard Daft  
Texas A&M University  
Department of Management  
College Station, TX 77843

Dr. Bibb Latane  
The University of North Carolina  
at Chapel Hill  
Manning Hall 026A  
Chapel Hill, NC 27514

Dr. Randy Dunham  
University of Wisconsin  
Graduate School of Business  
Madison, WI 53706

Dr. Edward E. Lawler  
University of Southern California  
Graduate School of Business Administration  
Los Angeles, CA 90007

Dr. William H. Mobley  
College of Business Administration  
Texas A&M University  
College Station, TX 77843

Dr. Thomas M. Ostrom  
The Ohio State University  
Department of Psychology  
116E Stadium  
404C West 17th Avenue  
Columbus, OH 43210

Dr. Robert Rice  
State University of New York at Buffalo  
Department of Psychology  
Buffalo, NY 14226

Dr. Benjamin Schneider  
Department of Psychology  
University of Maryland  
College Park, MD 20742

Dr. H. Wallace Sinaiko  
Program Director, Manpower Research  
and Advisory Services  
Smithsonian Institution  
801 N. Pitt Street, Suite 120  
Alexandria, VA 22314

Dr. Richard M. Steers  
Graduate School of Management  
University of Oregon  
Eugene, OR 97403

Dr. Harry C. Triandis  
Department of Psychology  
University of Illinois  
Champaign, IL 61820

Dr. Anne S. Tsui  
Duke University  
The Fuqua School of Business  
Durham, NC 27706

Andrew H. Van de Ven  
University of Minnesota  
Office of Research Administration  
1919 University Avenue  
St. Paul, MN 55104

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