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EO Oversight: Functional Study of GAO's Career Ladder Promotional Process



PERSONNEL APPEALS BOARD

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MEMORANDUM FOR THE GENERAL COUNSEL

Subject: Report on the EEO Oversight Functional Study of the GAO
Career Ladder Promotion Process

Pursuant to the "Policy on EEO Oversight of the Personnel Appeals Board," the Board has reviewed the subject report for technical accuracy and for evidence that the conclusions and recommendations were adequately conceived and supported. The report is hereby accepted and you should take the necessary steps to publish it.


Jonathan E. Kaufmann
Chairman

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Abbreviations

EEO	equal employment opportunity
EOD	entry on duty date
GAO	U.S. General Accounting Office
GS	General Schedule
OPF	Official Personnel Folder
PAB	Personnel Appeals Board, U.S. General Accounting Office
SCD	service computation date

Summary of Findings

This study reviews career ladder promotions throughout the agency from 1980 through 1985, within each unit and agency-wide. Analyses of unit career ladders were, for the most part, limited to evaluator career ladders. This was due to the fact that, generally, only evaluator career ladders met the study requirements of a minimum of 15 promotion actions per group. When we aggregated unit career ladders, meaningful agency-wide analyses were possible in five different career ladders:

Evaluator,
Evaluator-related,
Attorney,
Writer-Editor, and
"Administrator" (GS-5 through GS-12).¹

The analysis of career ladders within units and agency-wide was intended to address two issues:

- (1) whether there were "significant"² differences between the rates at which protected groups were promoted within the various career ladders and
- (2) whether there were "significant" differences in the time protected groups spent in grade prior to a career ladder promotion.

In short, the analysis was intended to determine whether a protected class in any group was not proportionally receiving career ladder promotions and whether any group was being promoted at a "significantly" slower pace than any other group.

As to the first issue, we found no "significant" differences in the rates at which individuals in the various protected groups were being promoted; in other words, there was no evidence that a substantial number of individuals in any protected group were being denied career ladder promotions when compared to another protected class.

As to the issue regarding the time that the protected groups spent in grade, however, we did find some "significant" differences. In comparing the time-in-grade across gender or race by unit, we only found three units in which there were "significant" differences. We then aggregated the unit career ladders for

¹"Administrator" is not an official job series, but rather ageneric term. See page 14 at footnote 2 for a complete listing of the official job series included under this term.

²Throughout this report, we will use the terms "significant" and "significantly" in quotation marks to refer to the concept of "statistical significance". This concept is explained in the text at page 12.

agency-wide analyses. In agency-wide analyses of the time spent in grade by male and female employees, we found no "significant" differences. On the other hand, in agency-wide analyses of the time spent in grade by the various racial groups, we did find "significant" differences. Of the four career ladders, for which agency-wide analyses were performed, "significant" differences between races appeared only in the evaluator career ladder. The findings of the agency-wide analyses across races may be summarized as follows: Among those eventually promoted, Black evaluators spent "significantly" more time in grade than did White evaluators.³

We also made comparisons using race and gender simultaneously (i.e., White male versus White female; Black female versus White female; etc.). We found the same patterns as in the above-described gender comparisons and race comparisons. In short, the disparities in the agency-wide race/gender comparisons occurred between racial groups (e.g., Black females and White females) rather than between genders (e.g., White males and White females).

The study concludes that between 1980 and 1985 there were statistical disparities associated with race in evaluator career ladder promotions. The disparities were particularly evident in comparisons between Black and White evaluators.

In responding to the draft report, GAO described positive actions it is already pursuing regarding the career ladder promotion process. These actions include creating a GAO Order that will establish overall policy for career ladder promotions, establishing programs and processes designed to ensure that GAO is fully using the talents and capabilities of all groups of the workforce, and developing an agency-wide data base that will allow it to monitor career ladder promotions. GAO also stated that some evidence exists which suggests that in recent years the conditions noted in the report may have changed. Therefore, GAO plans to conduct its own analysis to determine whether the career ladder disparities described in this report still exist.

In light of both the suggestion that the identified disparities may no longer exist and the decision of GAO to continue to monitor career ladder promotions, the report requests that the agency's analysis and supporting data for agency-wide career ladder promotions for fiscal years 1986 through 1987 be provided as soon as possible to the PAB General Counsel for review as part of

³Agency-wide analysis also showed that Hispanic evaluators spent more time in grade than did White evaluators, but the level of statistical significance was .09. See the text at page 12 for a discussion of "statistical significance" and of the meaning of a finding at the .09 level.

his oversight responsibility. The report also requests that such analysis and supporting data be provided to the PAB General Counsel annually until the Board determines that the disparities revealed in this report no longer exist. In the event that the agency's analysis for fiscal years 1986 through 1987 finds "significant" disparities, then the report recommends that the agency take steps to identify the possible problem areas and, to the extent possible, to correct them.

Scope of This Functional Study

The GAO Personnel Act of 1980 (P.L. 96-191) provides that the Personnel Appeals Board (the Board) shall have authority for oversight of equal employment opportunity at the U. S. General Accounting Office. Primary responsibility for conducting Oversight Reviews has been assigned by the Board to its General Counsel. Under the Board's Policy Statement on EEO Oversight, the General Counsel is to conduct an agency-wide oversight review every 5 years and "functional studies" in the intervening years. While the agency-wide oversight review is to be extremely broad and far reaching in scope, the functional studies are limited to more specific issue areas and are intended to be more detailed studies. One purpose of the agency-wide oversight review is to identify issue areas that deserve closer attention during the functional studies.

In July 1985 the Board published a report by the Board's General Counsel on the Agency-wide Oversight Review. Based in large part upon the findings of the Agency-wide Review, the Board selected the agency's career ladder promotion process as the initial subject for a functional study. The General Counsel developed a plan for the study, and in accordance with the Board's Policy Statement on EEO Oversight, submitted it to the agency and employee group representatives for comment. After receiving comments, the General Counsel issued the plan for the functional study and executed it. This report is the final product of the functional study.

Overview of the Career Ladder Promotion Process

The term "career ladder" refers to positions that have one or more grade levels below the full performance level. Appointment to a career ladder position is accomplished through a competitive process. Thereafter, promotion can be made from the lower grade levels of the career ladder up to the full performance grade level without further competition by the employee. For example, an entry level evaluator, job series 347, is appointed competitively at grade levels GS-7 or GS-9, depending upon education and/or experience, and the career ladder allows for promotion without further competition to grade levels GS-9, GS-11, and GS-12. Promotion beyond GS-12 must be through a competitive process.

There are three restrictions on the promotion of employees within the career ladder. First, employees must meet the minimum qualifications requirements for the next grade level. Usually, this means that an employee must have one year quality of experience at the next lower grade level of that particular position. Second, for promotions at GS-6 and above, time-in-grade regulations

require one year of service at the next lower grade.¹ Third, the employee must demonstrate the ability to perform in a satisfactory manner at the higher grade level. After meeting the above requirements, an employee may be promoted at the discretion of agency management without competition.

Two facts make analysis of career ladder promotions important with regard to equal employment opportunity. First, most positions in GAO have a career ladder. Examples of job categories with career ladders include evaluator, attorney, administrative, clerical and secretarial positions. Appendix I provides a list of the primary career ladders in the agency. Second, as described above, non-competitive promotions provide managers with an opportunity to exercise considerable discretion in their decisions. From the viewpoint of equal employment opportunity, it is important to ensure that such discretionary decisions do not operate to the detriment of any protected group.

Not all positions in the agency with a career ladder are amenable to a statistical study such as this one. Usually the term career ladder refers to a job series that consists of specific entry level positions and a specific full performance level. Thus, as described above, an entry level evaluator in job series 347 is appointed at grade levels GS-7 or GS-9, depending upon education and/or experience, and the career ladder allows for non-competitive promotion to grade levels GS-9, GS-11, and GS-12. On the other hand, job series 303 includes a variety of clerical positions. The career ladder is set for each position when the position is created. The grade levels in this series range from GS-3 to GS-9. No one position, however, covers that entire range of grade levels. One position may be created for grade levels GS-3, GS-4, and GS-5; another for GS-4, GS-5, and GS-6; another for GS-5, GS-6, and GS-7; etc. Thus, for some positions GS-5 may represent the top of the career ladder, while for other positions GS-5 may be an intermediate grade level or the entry level in the career ladder. The available computerized data did not reasonably allow us to distinguish between the various career ladder options that are available under this job series. Therefore, this study does not deal with series GS-303.

Review of Data for Accuracy

We reviewed the data in two separate stages for accuracy. In the first stage, our objective was to determine whether the data was sufficiently complete

¹The one year "quality of experience" requirement and the one year "time-in-grade" requirement are similar, but distinguishable. For example, an employee serving one year as a GS-7 evaluator would meet the "time-in-grade" requirement for promotion to a GS-9 employee relations specialist position. However, a year's experience as an evaluator would not meet the "quality of experience" requirement for promotion to a GS-9 employee relations specialist position.

and accurate to permit analysis. A computer-generated report identified 340 personnel actions having at least one data element missing. Review of this report established that the bulk of missing data occurred in three categories: the entry on duty date (EOD); the service computation date (SCD); and the title of the personnel action. The first two categories were easily resolved. Since there were several personnel actions for each person, a missing EOD or SCD on one action could be found on another and thus would not create an analytic problem. Resolution of the third category required a review of Official Personnel Folders. Each personnel action in the computerized file carried a title (e.g., promotion, reassignment, etc.) and a corresponding code number. After reviewing more than 125 Official Personnel Folders, we confirmed that even when the title was not recorded, the code number properly identified the personnel action. Thus, it was concluded that missing titles posed no problems for this analysis. The computerized data was sufficiently complete for analytic purposes.

To determine whether the data was sufficiently accurate, we requested that the agency provide us a random sample of 400 Official Personnel Folders, representing approximately 10 percent of the individuals in the data file. Slightly more than 25 percent of the sample folders were unavailable because the person had left the agency. In approximately 270 folders that were available for review, we discovered only a few errors and we found no race or gender pattern in the errors. On the basis of this information, we concluded that the error rate in the data was not dependent upon race or gender and was sufficiently low to conclude that the data was accurate enough to warrant analysis. The first stage of the data review was, therefore, completed with the conclusion that the data was sufficiently complete and sufficiently accurate to warrant analysis.

The second stage of data review involved checking the data for unusual patterns and resolving them. For example, we noted that almost 300 career ladder promotions had been accomplished in less than 1 year. As discussed above, career ladder promotions usually cannot be made in less than 365

days. The Official Personnel Folders were reviewed and a legitimate explanation was found for each such promotion.² To ensure that these unique promotions did not affect the analysis, we deleted from the data all promotions that were preceded by less than 365 days time-in-grade.

The other major example of unusual patterns in the data were promotions that were preceded by unusually long times-in-grade. We reviewed the Official Personnel Folders and determined that in the vast majority of cases there was no explanation for these unusually long times-in-grade. However, in a small percentage, we found two explanatory factors in the review of the Folders: (1) the computer generated time-in-grade for some individuals was incorrect and (2) the employees were part-time or had been on extended leave without pay.³ As a result of reviewing these Official Personnel Folders, times-in-grade were corrected, promotions for all part-time employees were deleted from consideration, and employees with leave without pay in excess of 30 days were deleted from consideration.

As the report was being prepared, the findings and data were shared with the agency and with employee group representatives. In that process, it was determined that employees who had been in more than one unit during their years in the career ladder were having all of their promotions attributed to their most recent unit. This led to two alterations in the data. First, the data was reviewed to insure that promotions were recorded in the unit that awarded the promotion. Second, when an employee transferred to another unit prior to a career ladder promotion, that promotion was deleted from consideration. This was necessary since the time-in-grade for such a promotion could not be properly attributed to the gaining unit or to the losing unit.

Also in the process, some of the units reported that their data on time-in-grade occasionally differed from the central agency data file, which we were using. The number of differences was minor and did not substantially affect

²There were three types of explanations. Some were individuals who were hired laterally from another agency and who were promoted in less than 365 days from their entry on duty at GAO. The computer did not have data on their time-in-grade at the previous agency. However, in all such situations, the Official Personnel Folder confirmed that the individual's time-in-grade at GAO and at their prior agency exceeded the statutory requirement of 365 days. Second, the computer occasionally incorrectly read the data relating to a co-operative education student creating the appearance that the time-in-grade was less than 365 days. In fact, review of the Official Personnel Folder invariably revealed that the one year time-in-grade requirement had been met. Finally, some of the promotions that were made with less than 365 days were for grade levels GS-1, GS-2, GS-3 or GS-4, for which the 365 day requirement does not apply.

³Part-time employees must spend the equivalent of a full-time year in grade before they are eligible for promotion. Likewise, days spent on leave without pay in excess of 30 days are not creditable toward the required one year time-in-grade. In both cases, the employee appears to have been in grade longer than is actually the case.

the overall results. We, therefore, confined the analyses in this report to the central agency data file.

Analytic Methodology for Time-In-Grade Comparisons

Initially, comparisons were for individual grade levels within a career ladder within each unit (i.e., division, region, or office). Thus, the first analysis considered time-in-grade within each unit for each separate career ladder at each grade level from 1980 through 1985.⁴ We determined that the number of employees who could be compared at this level was generally too small (i.e., less than 15 promotions for each group being compared) to allow meaningful comparisons.

In order to create larger pools for analysis purposes, we made comparisons of time-in-grade for all promotions within each career ladder within each unit.⁵ Recognizing that different criteria might apply for promotions to different grade levels within a career ladder, we standardized the time-in-grade. By standardizing the time-in-grade, we were able to allow for the different criteria that might apply to promotions to different grade levels within a career ladder.⁶ By aggregating a unit's promotions within each career ladder, we were able to make meaningful comparisons in some unit career ladders based upon race, gender, and race/gender.

In addition to analyzing the career ladder promotion process by unit, we aggregated career ladders agency-wide to measure the overall time-in-grade for each career ladder by race, by gender, and by race/gender combinations.⁷ Again recognizing that promotion criteria may differ from unit to unit

⁴For example, this phase would compare the time spent in grade in the Chicago Regional Office for males versus females who were promoted in the evaluator career ladder from grade level GS-7 to grade level GS-9 between 1980 through 1985.

⁵To continue the example in the previous footnote, this phase would compare the time spent in grade in the Chicago Regional Office by males versus females who were promoted in the evaluator career ladder from grade level GS-7 to grade level GS-9, from GS-9 to GS-11, or from GS-11 to GS-12 between 1980 through 1985.

⁶Following is a description of the process we used to standardize the time-in-grade. Within each subgroup, for each individual time-in-grade for each promotion, a standardized score was computed equal to the individual time-in-grade minus the mean time-in-grade of the subgroup divided by the standard deviation of the time-in-grade in the subgroup. Thus, the mean of the standardized time-in-grade within each subgroup is zero and the variance of the standardized time-in-grade within each subgroup is one.

⁷To continue the example in footnotes 4 and 5, this phase would compare the time spent in grade by males versus females who were promoted in the evaluator career ladder throughout the agency from grade level GS-7 to grade level GS-9, from GS-9 to GS-11, or from GS-11 to GS-12 between 1980 and 1985

and, within a unit, from grade level to grade level, we standardized time-in-grade.⁸

Use of the Term "Statistical Significance"

Throughout this study we use the terms "significant" or "significantly" as abbreviations for the concept of "statistical significance." An appreciation of the meaning of "statistical significance" is important to properly understand the findings in this report.

The concept of statistical significance arises in dealing with the formal statistical procedure of hypothesis testing. In simplest terms, an hypothesis is formulated and data examined under the assumption that the hypothesis is true. For our purposes the format of the hypothesis may be thought of, for example, as, "The proportion of Blacks and Whites achieving a specified grade level are the same" or "The means of the times-in-grade for the Black and White populations are the same". Similar hypotheses may be formulated in terms of other races, gender, or simultaneous race and gender comparisons.⁹

Under the assumed hypothesis, if we determine that the observed data is sufficiently unusual (i.e., a result at least as extreme as the one which occurred has sufficiently low probability), then we say that the result is statistically significant at a level equal to the probability of a result at least that extreme. Thus, for example, in testing the hypothesis that the means for the times-in-grade for the Black and White populations are the same, if we find that there is 4 percent probability of observing a result at least as extreme as that actually obtained, then we conclude that the result is "statistically significant at the .04 level." Note that such a result would also be significant at the ".05 level" or any other higher level.

In many areas of application, a level of statistical significance of .05 is commonly used to state results. This is to a great extent due to tradition, and one should be aware of the meaning of the level of statistical significance as opposed to using the figure .05 mechanically in all circumstances. Recognizing that findings at or below the .05 level of statistical significance are commonly accorded immediate deference, we will focus our discussion on such findings. However, since the object of oversight is to focus on potential EEO problems in the personnel management system, we report findings in this study at the

⁸See footnote 6 above for a description of the method by which the standardized scores were established.

⁹We note that statisticians refer to these as "null" hypotheses and that the description provided corresponds to what statisticians refer to as a "two-tail" test.

.10 level or below. In other words, findings between the .05 level and the .10 level are cited in order to call possible areas of concern to the attention of the agency. For convenience of presentation, we shall use the terms "significant" or "significantly" to refer to results that are statistically significant at or below the .05 level, unless otherwise stated. Levels of statistical significance are presented in the Appendixes.

"Difference in Means" and "Statistical Significance"

Some of the Appendixes show the "difference in means" in days for each grade level and the corresponding level of statistical significance. During the review of the draft report, one commentator questioned the occasional lack of correlation between the level of statistical significance and the difference in means. In one instance, for example, a difference in means of 106 days time-in-grade was not statistically significant at the .10 level. However, in another comparison, a difference in means of 80 days was statistically significant at the .05 level. Thus, the question was raised as to how 80 days could be statistically significant while 106 days was not.

The explanation for what might appear to be a contradiction lies in the fact that the level of statistical significance in a two sample comparison is a function of six variables: two sample sizes, two sample variances and two sample means. These six variables must be considered simultaneously, which the finding of statistical significance does. The report presents in the appendixes only the difference in means to permit the reader to determine whether the magnitude of the difference is meaningful, not to permit the reader to re-determine whether the difference is statistically significant.

Analysis of Time-In-Grade Based Upon Gender Comparisons

Analysis of career ladders within each unit revealed no unit in which there was a “significant” difference in time-in-grade between males and females. Likewise, our analysis of career ladders agency-wide found no gender based pattern throughout the agency career ladder promotion process.

Within Units by Gender

Using gender as a comparative factor, we found 15 comparisons met the standard for meaningful analysis (i.e., 15 promotions per group). The 15 comparisons involved 3 different career ladders and 15 different units. Thirteen of the comparisons were in the evaluator career ladder, one was in an attorney career ladder and one was in an evaluator-related career ladder. Appendix II contains a list of these comparisons. When we compared the time-in-grade differences across gender for these 15 comparisons, we found no “significant” difference in any unit.¹

Agency-Wide by Gender

When all career ladders were aggregated for agency-wide analysis based upon gender, we found four career ladders met the standard for meaningful analysis: (1) evaluator; (2) evaluator-related; (3) attorney; and (4) “administrator” (GS-5 through GS-12).² No “significant” differences were found in any of the comparisons.³

¹In one unit, we found that White male evaluators had more time-in-grade than White female evaluators. However, the level of statistical significance was .09. The details of this finding appear in Appendix III.

²“Administrator” is not an official job series, but rather a generic term adopted specifically for this study. For this reason, we will use it throughout the report in quotation marks. The term represents a collection of similar job series with career ladders that run from grade level GS-5 to GS-12. The job series included under this heading are EEO specialist, GS-160; Counseling Psychologist, GS-180; Personnel Management Specialist, GS-201; Position Classification Specialist, GS-221; Employee Relations Specialist, GS-230; Employee Development Specialist, GS-235; Management Analyst, GS-343; Budget Analyst, GS-560; Visual Information Specialist, GS-1084; Training Evaluation Specialist, GS-1701; and Instructional Systems Specialist, GS-1750. We attempted to analyze subgroups of this collection. However, none of the subgroups had enough promotions per protected group to allow meaningful analysis.

³Furthermore, no differences were found to be “significant” at the .10 level.

Analysis of Time-In-Grade Based Upon Race Comparisons

In making race comparisons by unit, we found four units in which there were sufficient promotions of Black evaluators to allow meaningful analysis. In two of those units, Black evaluators had "significantly" higher time-in-grade than did White evaluators. Our analysis of career ladders agency-wide revealed that Black evaluators had "significantly" higher time in grade than did White evaluators.

Within Units by Race

Using race (Black versus White)¹ as the comparative factor, 4 comparisons in 4 different units met the standard for meaningful analysis. All of the comparisons were in the evaluator career ladder. Appendix IV contains a list of these comparisons. When we compared the time-in-grade across races for each of the 4 units, we found the difference to be "significant" in two units. In both units, Black evaluators had "significantly" higher times-in-grade than did White evaluators. The details of these findings appear in Appendix V.

We also made comparisons within units between all Minority employees and White employees in each career ladder. Eleven comparisons met the standard for meaningful analysis. The 11 comparisons involved 2 different career ladders and 11 different units. Ten of the comparisons were in the evaluator career ladder, and one was in an attorney career ladder. Appendix IV contains a list of the comparisons. We found the difference in time-in-grade between Minority and White employees to be "significant" in three units — two of these units were the two units that showed a "significant" difference between Black and White evaluators. Likewise, in this comparison, the time-in-grade for Minority evaluators was "significantly" higher than for White evaluators. The details of these findings appear in Appendix V.

Agency-Wide by Race

Under the heading of race, pairwise comparisons were made between all the protected races (Black versus White, Hispanic versus White, Black versus Hispanic, etc.). Comparisons were also made between all "non-White" (Minority) and White employees. One or more comparisons met the standard for meaningful analysis in three career ladders: (1) evaluator; (2) "administrator" (GS-5

¹None of the units had the 15 promotion actions that were necessary for meaningful analysis for any racial minority other than Black. Thus, the only meaningful comparisons that were possible within units were for Black employees versus White employees and for all non-White (Minority) employees versus White employees.

through GS-12); and (3) attorney. Appendix VI contains a list of these comparisons. Of these three career ladders, "significant" differences in the race comparisons appeared only in the evaluator career ladder. In this analysis, we determined that non-White (Minority) evaluators had "significantly" more time-in-grade than did White evaluators. However, when we compared the time spent in grade for Asian evaluators and White evaluators, we found no "significant" differences. In comparisons between Hispanic and White evaluators, we found Hispanic evaluators had "significantly" more time-in-grade than White evaluators, but the level of significance was .09. The most "significant" difference we found was in the comparison of Black evaluators versus White evaluators. In that comparison we found a .0000 level of significance. The details of these findings appear at Appendix VII.

In these comparisons, there were enough promotions to allow meaningful analysis of the time-in-grade at each of the three grade levels in the evaluator career ladder. Therefore, Appendix VII also shows the level of statistical significance by career ladder and by each grade level within the career ladder.

Analysis of Time-In-Grade Based Upon Race/Gender Comparisons

We also analyzed career ladders using race and gender simultaneously (e.g., White male versus White female; Black female versus White female; Black female versus Black male; Black male versus White male; etc.). We discovered essentially the same patterns as those in the gender comparisons and in the race comparisons. In other words, the agency-wide patterns we found confirmed that there were no "significant" differences based upon gender, but that there were "significant" differences based upon race.

Within Units by Race/Gender

When we used race and gender simultaneously as comparative factors at the unit level, we found 23 comparisons in 13 units that met the standard for meaningful analysis. One of the comparisons involved an attorney career ladder, and one involved an evaluator-related career ladder. The other 21 comparisons involved the evaluator career ladder in 11 different units. Appendix VIII contains a list of these comparisons.

Although there were three comparisons in which we found a "significant" difference in the time-in-grade between two groups, two of those three comparisons were in one unit.¹ Therefore, as with the earlier analysis of career ladders within units, we found only limited instances of "significant" differences in these comparisons. The details of this analysis appear in Appendix IX.

Agency-Wide by Race/Gender

When we aggregated unit career ladders for agency-wide analysis across race/gender comparisons, we found 19 comparisons in the evaluator career ladder that met the standard for meaningful analysis; 2 in the "administrator" career ladder; and 1 each in the evaluator-related career ladder and in the attorney career ladder. Appendix X contains a list of these comparisons. It was only in the evaluator career ladder that we found "significant" differences. The pattern of disparities was again based upon race and not gender. In other words, there were no "significant" differences in race/gender comparisons when race was the same for both groups (e.g., Black male versus Black female or White male versus White female). The disparities occurred in comparisons in which race was different and sex was the same. Thus, Black and Minority female evaluators moved "significantly" slower through career ladder promotions than did White female evaluators. Likewise, Black and Minority

¹We also found in that same unit "significant" differences between the .05 and .10 levels in three other comparisons. The details of this analysis appear in Appendix IX.

male evaluators moved "significantly" slower than did White male evaluators. However, it should be noted that we found no "significant" disparities in comparisons with Hispanic or Asian males and females versus the corresponding White males and females. The details of these findings appear in Appendix XI.

In the comparisons in which we did find "significant" differences, there were enough promotions to allow meaningful analysis of the time-in-grade at each of the three grade levels in the evaluator career ladder. Therefore, Appendix XI shows the level of statistical significance by career ladder and by each grade level within the career ladder.

Conclusions and Recommendations

We conclude from our analysis that between 1980 and 1985 there were statistical disparities associated with race in evaluator career ladder promotions. While there were "significant" differences between the time Minority evaluators spent in grade compared to White evaluators, this does not necessarily mean that each of the minority races was similarly affected. In the agency-wide analyses, we found no "significant" difference between Asian and White evaluators. Furthermore, the difference between Hispanic and White evaluators was "significant," but at the .09 level. Likewise, in comparisons between Asian and Hispanic males and females versus the corresponding White males and females, we found no "significant" differences. Quite dramatic differences were found in comparisons between Black and White evaluators and between Minority and White evaluators. This suggests that the findings of "significant" difference between Minority and White evaluators may actually be a result of the difference we observed between Black and White evaluators.

We also conclude that other principal career ladders in the agency showed no "significant" disparities in the various protected groups' time-in-grades. However, the conclusion that only the operation of the evaluator career ladder is brought into question by this report requires a caveat. It must be noted that statistical analysis does not rule out the possibility that disparities actually exist in other career ladders. First, as explained at page 8 above, none of the secretarial/clerical career ladders met our criteria for statistical analysis. Thus, we draw no conclusions with regard to those career ladders. Second, for some career ladders with sufficient numbers to allow meaningful analysis, the number of promotions may not have been large enough for us to detect actual differences. In statistical analysis, the ability to detect a specific difference increases with the number of observations. Note that when we analyzed evaluator career ladders across race by unit, eleven units had enough observations (i.e., promotions) to allow meaningful analysis, and in only three of those units did we find "significant" differences based upon race. However, when we increased the number of observations by aggregating all evaluator career ladder promotions throughout the agency, we found very "significant" disparities between Minority and White evaluators. This suggests that our failure to find "significant" disparities in many individual units may not have been due to the absence of an actual difference, but to the relatively small number of promotions in the units. In other words, other units may have actual differences between time-in-grade for Minority and White evaluators, but with numbers of promotions which are not large enough for our analysis to detect those differences. Likewise, our failure to find "significant" differences in other career ladders, which are smaller than the evaluator

career ladder (i.e., evaluator-related, attorney, writer-editor, and "administrator"), means one of two things: either that the disparities, which we have reason to believe exist in the evaluator career ladder, are not present in these other career ladders or that they are present, but these other career ladders have too few promotions for our analysis to detect them. We have no way of knowing for certain which is the case.

Our sole reason for stating the above caveat is that there were relatively extreme findings of statistical significance in comparisons between Black and White evaluators (see Appendixes VII and XI). Such findings suggest that caution should be exercised in drawing conclusions about the neutral operation of other career ladders. Therefore, while the agency should focus attention on the implementation of the evaluator career ladder in the particular units that revealed "significant" disparities and agency-wide, it may not be the case that the potential problems are restricted either to those particular units or to the evaluator career ladder.

In responding to the draft report, GAO described positive actions it is already pursuing regarding the career ladder promotion process. These actions include a new GAO Order, which will be published soon. It will establish overall policy for noncompetitive promotions and will include guidelines for assessing individual performance and potential. The Order will also establish time-in-grade benchmarks and a procedure for identifying and addressing developmental needs of employees whose time-in-grade exceeds these benchmarks. On an issue related to career ladder promotions, GAO stated that its Office of Affirmative Action Programs is working with units to develop ways to ensure that job assignments are made in a consistently fair and evenhanded manner. Furthermore, GAO is developing an agency-wide data base that, among other things, will allow it to monitor career ladder promotions.

Also in its response to the draft report, GAO observed that it had some reason to believe that the disparities identified in this study have been eliminated in the last few years. This was based upon analysis of the career ladder promotion process during fiscal years 1986 and 1987 in one unit that was identified in the report as having "significant" differences in the time-in-grade for Black and White evaluators. Therefore, GAO replied that it plans to conduct its own analysis to determine whether the career ladder disparities described in this report still exist.

The recommendations in the draft report were based upon the premise that possible EEO problems existed in the implementation of the career ladder promotion process. In light of both the suggestion that the identified disparities may no longer exist and the decision of GAO to continue to monitor career

ladder promotions, it is requested that the agency's analysis and supporting data for agency-wide career ladder promotions for fiscal years 1986 through 1987 be provided to the PAB General Counsel for review as part of his oversight responsibility. Until the Board determines that the disparities revealed in this report no longer exist, a revised report and supporting data should be provided to the PAB General Counsel at the close of each successive fiscal year.

In the event that the agency's analysis for fiscal years 1986 through 1987 finds "significant" disparities, the agency should take steps to better define the possible problem areas and, to the extent possible, to correct them. For example, the agency should review the career ladder promotion process with three objectives in mind: (1) identification of any artificial barriers or impediments that may be responsible for the disparities described in this study, (2) identification of whether the criteria used by units in making career ladder promotion decisions are appropriate, and (3) consideration of the development of an EEO training course for managers and supervisors who make decisions that affect the career ladder promotion process.

Agency Career Ladders

The following job series, which were taken from GAO Order 2335.6, paragraph 13 (April 3, 1986), were considered in the study:

Title	Series	Career Ladder
1. Evaluator	GS-347	7,9,11,12
2. Evaluator-related		
Social Science Analyst	GS-101	7,9,11,12
Economist	GS-110	7,9,11,12
Auditor	GS-510	7,9,11,12
Systems Accountant	GS-510	7,9,11,12
Accountant	GS-510	7,9,11,12
3. Attorney (Advisor)	GS-905	11,12,13,14,15
4. Writer-Editor	GS-1082	5,7,9,11
Writer-Editor (OGC)	GS-1082	5,7,9
5. Secretarial/clerical ^a		
Personnel Clerk	GS-203	3,4,5,6
Admin. Ops. Asst.	GS-303	5,6,7
Admin. Ops. Spec.	GS-303	7,8,9
Info. Control Tech.	GS-303	5,6,7
Info. Processing Cl.	GS-303	4,5
Legal Office Asst.	GS-303	4,5,6
Mail Clerk	GS-305	2,3,4
Mail & File Clerk	GS-305	2,3,4
Clerk-Typist	GS-322	2,3,4
Cost & Travel Serv.Cl.	GS-501	2,3,4
Acct. Clerk/Tech.	GS-525	3,4,5,6
Voucher Examiner	GS-540	3,4,5
Payroll Clerk	GS-544	2,3,4,5
Arts & Info. Aid	GS-1001	2,3,4
Editorial Asst.	GS-1087	3,4,5
Purchasing Agent	GS-1105	3,4,5,6
Library Tech.	GS-1411	3,4,5
Travel Clerk	GS-2132	3,4,5
6. Administrators ^b		
Security Specialist	GS-080	5,7,9,11
Organ. Devel Sp	GS-101	7,9,11,12
EEO Specialist	GS-160	5,7,9,11,12
Counseling Psych.	GS-180	5,7,9,11,12
Personnel Mgt. Sp.	GS-201	5,7,9,11,12
Personnel Staff. Sp.	GS-212	5,7,9,11
Pos. Class. Sp.	GS-221	5,7,9,11,12

(continued)

Appendix I
Agency Career Ladders

Title	Series	Career Ladder
Employee Rel. Sp.	GS-230	5,7,9,11,12
Employee Devel. Sp.	GS-235	5,7,9,11,12
Management Analyst	GS-343	5,7,9,11,12
Budget Analyst	GS-560	5,7,9,11,12
Paralegal Specialist	GS-950	5,7,9
Adjudicator	GS-950	5,7,9,11
Audiovisual Prod. Sp.	GS-1071	7,9,11,12
Visual Info. Sp.	GS-1084	5,7,9,11,12
Librarian	GS-1410	7,9,11,12
Tech. Info. Sp.	GS-1412	5,7,9,11
Training Eval. Sp.	GS-1701	5,7,9,11,12
Instructional Sys. Sp.	GS-1750	5,7,9,11,12

^aUnder the "Secretarial/clerical" heading, no individual series or reasonable grouping of series had at least 15 promotions for two different protected groups except for series GS-303. Thus, no meaningful comparisons were possible for the secretarial/clerical series except for the GS-303 series. Meaningful comparisons were not feasible for the GS-303 series for quite a different reason. As explained in the text on page 8, series 303 is not a typical career ladder. We concluded that meaningful comparisons would not be possible since this series lacks a uniform career ladder.

^bNo single series under this heading had at least 15 promotions for two different protected groups. However, by aggregating all the series under this heading that had a career ladder from GS-5 through GS-12, we identified at least 15 promotions for two or more protected groups and were able to make meaningful comparisons. In the report these comparisons are referred to with the following phrase — "administrator" (GS-5 through GS-12).

Unit Career Ladders Susceptible to Analysis by Gender Comparisons

Evaluator

Atlanta Regional Office
Chicago Regional Office
Dallas Regional Office
Denver Regional Office
Los Angeles Regional Office
New York Regional Office
San Francisco Regional Office
Washington Regional Office
General Government Division
Human Resources Division
Information Management and Technology Division
National Security and International Affairs Division
Resources, Community, and Economic Development Division

Evaluator-Related

Accounting and Financial Management Division

Attorney

Office of the General Counsel

Findings of Statistical Significance Within Units by Gender Comparisons

The following findings were statistically significant between .05 and .10.¹

	Promotion	Difference In Means ^a	Number of Comparisons ^b
In the Washington Regional Office Male evaluators moved slower than Females (statistical significance of .09).	GS-7 to GS-9	7 days	18 M 32 F
	GS-9 to GS-11	10 days	46 M 43 F
	GS-11 to GS-12	49 days	38 M 26 F
			102 M 101 F

^aBecause these comparisons of time-in-grade were made using standardization to combine across grade levels, no single number accurately summarizes the differences in time-in-grade between the two groups. The differences in days presented in this report are based upon our determination that the most simple, meaningful summary will be to consider the mean differences and corresponding number of observations at each grade level.

^bThis portion of the table indicates the number of promotions for each group in each comparison.

¹As explained at pages 12-13 above, findings of statistical significance at or below .05 are commonly accorded immediate deference. This finding at the .09 level is reported for oversight purposes to call an area of possible concern to the attention of the agency.

Unit Career Ladders Susceptible to Analysis by Race Comparisons

Black versus White Comparisons

Evaluator

Atlanta Regional Office
Los Angeles Regional Office
Washington Regional Office
General Government Division

Minority versus White Comparisons

Evaluator

Atlanta Regional Office
Dallas Regional Office
Los Angeles Regional Office
New York Regional Office
Norfolk Regional Office
San Francisco Regional Office
Washington Regional Office
General Government Division
Human Resources Division
Resources, Community, and Economic Development Division

Attorney

Office of the General Counsel

Findings of Statistical Significance Within Units by Race Comparisons

Black Evaluators versus White Evaluators

	Promotion	Difference In Means ^a	Number of Comparisons ^b
In the Los Angeles Regional Office Black evaluators moved slower than Whites (statistical significance of .001).	GS-7 to GS-9	22 days	4 B 14 W
	GS-9 to GS-11	28 days	5 B 31 W
	GS-11 to GS-12	117 days	6 B 24 W
			15 B 69 W
In the Washington Regional Office Black evaluators moved slower than Whites (statistical significance of .01).	GS-7 to GS-9	40 days	11 B 39 W
	GS-9 to GS-11	22 days	12 B 69 W
	GS-11 to GS-12	75 days	9 B 51 W
			32 B 159 W

^aBecause these comparisons of time-in-grade were made using standardization to combine across grade levels, no single number accurately summarizes the differences in time-in-grade between the two groups. The differences in days presented in this report are based upon our determination that the most simple, meaningful summary will be to consider the mean differences and corresponding number of observations at each grade level.

^bThis portion of the table indicates the number of promotions for each group in each comparison.

Minority Evaluators versus White Evaluators

	Promotion	Difference In Means ^a	Number of Comparisons ^b
In the Los Angeles Regional Office Minority evaluators moved slower than Whites (statistical significance of .01).	GS-7 to GS-9	34 days	11 M 14 W
	GS-9 to GS-11	7 days	14 M 31 W
	GS-11 to GS-12	56 days	12 M 24 W
			37 M 69 W
In the Norfolk Regional Office Minority evaluators moved slower than Whites (statistical significance of .008).	GS-7 to GS-9	89 days	8 M 9 W
	GS-9 to GS-11	126 days	6 M 6 W
	GS-11 to GS-12	61 days	3 M 3 W
			17 M 18 W
In the Washington Regional Office Minority evaluators moved slower than Whites (statistical significance of .002).	GS-7 to GS-9	40 days	11 M 39 W
	GS-9 to GS-11	26 days	20 M 69 W
	GS-11 to GS-12	71 days	13 M 51 W
			44 M 159 W

^aBecause these comparisons of time-in-grade were made using standardization to combine across grade levels, no single number accurately summarizes the differences in time-in-grade between the two groups. The differences in days presented in this report are based upon our determination that the most simple, meaningful summary will be to consider the mean differences and corresponding number of observations at each grade level.

^bThis portion of the table indicates the number of promotions for each group in each comparison.

Agency-Wide Career Ladders Susceptible to Analysis by Race Comparisons

Evaluator

Asian versus Black
Asian versus Hispanic
Asian versus White
Black versus Hispanic
Black versus White
Hispanic versus White
Minority versus White

"Administrator" (GS-5 through GS-12)

Black versus White
Minority versus White

Attorney

Minority versus White

Findings of Statistical Significance Agency-Wide by Race Comparisons

	Promotion	Level of Stat. Sig.	Difference In Means ^a	Number of Comparisons ^b
Black evaluators moved slower than Whites (overall statistical significance of .0000).	GS-7 to GS-9	.08	50 days	61 B 224 W
	GS-9 to GS-11	.008	34 days	93 B 406 W
	GS-11 to GS-12	.001	71 days	76 B 364 W
				230 B 994 W
Minority evaluators moved slower than Whites (overall statistical significance of .0000).	GS-7 to GS-9	.01	36 days	91 M 224 W
	GS-9 to GS-11	.02	22 days	155 M 406 W
	GS-11 to GS-12	.0003	59 days	112 M 364 W
				358 M 994 W

The following findings were statistically significant between .05 and .10.¹

	Promotion	Level of Stat. Sig.	Difference In Means ^a	Number of Comparisons ^b
Hispanic evaluators moved slower than Whites (overall statistical significance of .09).	GS-7 to GS-9	*	5 days	19 H 224 W
	GS-9 to GS-11	*	8 days	34 H 406 W
	GS-11 to GS-12	.04	63 days	16 H 364 W
				69 H 994 W

* In this study, we report only levels of statistical significance at or below .10. An asterisk means that the level of statistical significance was above .10.

^aBecause these comparisons of time-in-grade were made using standardization to combine across grade levels, no single number accurately summarizes the differences in time-in-grade between the two groups. The differences in days presented in this report are based upon our determination that the most simple, meaningful summary will be to consider the mean differences and corresponding number of observations at each grade level

^bThis portion of the table indicates the number of promotions for each group in each comparison.

¹As explained at pages 12-13 above, findings of statistical significance at or below .05 are commonly accorded immediate deference. This finding at the .09 level is reported for oversight purposes to call an area of possible concern to the attention of the agency.

Unit Career Ladders Susceptible to Analysis by Race/ Gender Comparisons

White female versus White male
Evaluator

Atlanta Regional Office
 Chicago Regional Office
 Dallas Regional Office
 Los Angeles Regional Office
 New York Regional Office
 Washington Regional Office
 General Government Division
 Human Resources Division
 Information Management and Technology Division
 National Security and International Affairs Division
 Resources, Community, and Economic Development Division

Black female versus Black male
Evaluator

Washington Regional Office

Black female versus White Female
Evaluator

Washington Regional Office

Black male versus White male
Evaluator

Washington Regional Office

White female versus White male
Evaluator-Related

Accounting and Financial Management Division

White female versus White male
Attorney

Office of the General Counsel

Minority/sex versus White/sex
Evaluator

Los Angeles Regional Office (Min.F/Min.M)
 Los Angeles Regional Office (Min.F/WF)
 Los Angeles Regional Office (Min.M/WM)
 Washington Regional Office (Min.F/Min.M)
 Washington Regional Office (Min.F/WF)
 Washington Regional Office (Min.M/WM)
 General Government Division (Min.F/WF)

Findings of Statistical Significance Within Units by Race/Gender Comparisons

	Promotion	Difference In Means ^a	Number of Comparisons ^b
In the Washington Regional Office Minority Female evaluators moved slower than White Females (statistical significance of .02).	GS-7 to GS-9	35 days	5 MF 27 WF
	GS-9 to GS-11	19 days	9 MF 34 WF
	GS-11 to GS-12	157 days	5 MF 21 WF
			19 MF 82 WF
Minority Male evaluators moved slower than White Males (statistical significance of .04).	GS-7 to GS-9	45 days	6 MM 12 WM
	GS-9 to GS-11	31 days	11 MM 35 WM
	GS-11 to GS-12	13 days	8 MM 30 WM
			25 MM 77 WM
In the Los Angeles Regional Office Minority Male evaluators moved slower than White Males (statistical significance of .03).	GS-7 to GS-9	26 days	7 MM 7 WM
	GS-9 to GS-11	22 days	6 MM 18 WM
	GS-11 to GS-12	53 days	5 MM 14 WM
			18 MM 39 WM

The following findings were statistically significant between .05 and .10.¹

	Promotion	Difference In Means ^a	Number of Comparisons ^b
In the Washington Regional Office Black Female evaluators moved slower than White Females (statistical significance of .07). ^c	GS-7 to GS-9	35 days	5 BF 27 WF
	GS-9 to GS-11	5 days	6 BF 34 WF
	GS-11 to GS-12	157 days	4 BF 21 WF
			15 BF 82 WF
Black Male evaluators moved slower than White Males (statistical significance of .09).	GS-7 to GS-9	45 days	6 BM 12 WM
	GS-9 to GS-11	39 days	6 BM 35 WM
	GS-11 to GS-12	14 days	5 BM 30 WM
			17 BM 77 WM
White Male evaluators moved slower than White Females (statistical significance of .07).	GS-7 to GS-9	-3 days ^d	12 WM 27 WF
	GS-9 to GS-11	6 days	35 WM 34 WF
	GS-11 to GS-12	76 days	30 WM 21 WF
			77 WM 82 WF

¹As explained at pages 12-13 above, findings of statistical significance at or below .05 are commonly accorded immediate deference. This finding at the .10 level is reported for oversight purposes to call an area of possible concern to the attention of the agency.

Appendix IX
Findings of Statistical Significance Within Units by
Race/Gender Comparisons

^aBecause these comparisons of time-in-grade were made using standardization to combine across grade levels, no single number accurately summarizes the differences in time-in-grade between the two groups. The differences in days presented in this report are based upon our determination that the most simple, meaningful summary will be to consider the mean differences and corresponding number of observations at each grade level.

^bThis portion of the table indicates the number of promotions for each group in each comparison.

^cIt should be noted that this group of promotions for Black females included time-in-grade for one promotion that was substantially longer than any other Black female's time-in-grade in this unit. Deleting that person from the analysis resulted in a level of statistical significance above .10. If it were determined that the delay in that person's promotion was for legitimate reasons, then this finding would not be statistically significant.

^dThe minus sign indicates that White Male evaluators spent 3 days less time-in-grade for promotion to GS-9 than did White Female evaluators.

Agency-Wide Career Ladders Susceptible to Analysis by Race/Gender Comparisons

Evaluator

Asian Females and Asian Males
Black Females and Black Males
Hispanic Females and Hispanic Males
White Females and White Males
Asian Females and White Females
Asian Females and Black Females
Asian Females and Hispanic Females
Black Females and White Females
Black Females and Hispanic Females
Hispanic Females and White Females
Asian Males and White Males
Asian Males and Black Males
Asian Males and Hispanic Males
Black Males and White Males
Black Males and Hispanic Males
Hispanic Males and White Males
Minority Females and Minority Males
Minority Females and White Females
Minority Males and White Males

"Administrator" GS-5 through GS-12

White Females and White Males
Minority Females and White Females

Evaluator-related

White Females and White Males

Attorney

White Females and White Males

Findings of Statistical Significance Agency-Wide by Race/Gender Comparisons

	Promotion	Level of Stat. Sig.	Difference In Means ^a	Number of Comparisons ^b
Black Female evaluators moved slower than White Females (statistical significance of .0004).	GS-7 to GS-9	*	14 days	37 BF 142 WF
	GS-9 to GS-11	.02	29 days	58 BF 199 WF
	GS-11 to GS-12	.009	69 days	49 BF 160 WF
				144 BF 501 WF
Black Male evaluators moved slower than White Males (statistical significance of .004).	GS-7 to GS-9	*	106 days	24 BM 82 WM
	GS-9 to GS-11	*	44 days	35 BM 207 WM
	GS-11 to GS-12	.05	80 days	27 BM 204 WM
				86 BM 493 WM
Minority Female evaluators moved slower than White Females (statistical significance of .0002).	GS-7 to GS-9	.08	15 days	50 MF 142 WF
	GS-9 to GS-11	.03	19 days	85 MF 199 WF
	GS-11 to GS-12	.01	54 days	64 MF 160 WF
				199 MF 501 WF
Minority Male evaluators moved slower than White Males (statistical significance of .001).	GS-7 to GS-9	.07	63 days	41 MM 82 WM
	GS-9 to GS-11	*	26 days	70 MM 207 WM
	GS-11 to GS-12	.005	69 days	48 MM 204 WM
				159 MM 493 WM

^a Because these comparisons of time-in-grade were made using standardization to combine across grade levels, no single number accurately summarizes the differences in time-in-grade between the two groups. The differences in days presented in this report are based upon our determination that the most simple, meaningful summary will be to consider the mean differences and corresponding number of observations at each grade level.

^b This portion of the tables indicates the number of promotions for each group in each comparison.

*In this study, we report only levels of statistical significance at or below .10. An asterisk means that the level of statistical significance was above .10.

Comments by the Advisory Council on Civil Rights

Note: The PAB General Counsel's comments supplementing those in the report text appear at the end of this appendix.

GAO

United States
General Accounting Office

Memorandum

AUG 3 1987

To: General Counsel, PAB - Carl D. Moore

From: ACCR, Chair *for* *Bayle Condon*
Ruben Green

Subject: Comments on the PAB EEO Oversight Draft Report

Thank you for the opportunity to comment on the Personnel Appeals Board's Draft EEO Oversight Report on the GAO career ladder promotion process. We believe your Report makes a useful contribution to EEO by highlighting existing problems in certain units, and potential problems in other units, that GAO needs to address.

The ACCR concurs that the findings of statistical significance for the three units identified is an indication that the current implementation of the career ladder promotion process allows significant disparities based on race to occur in the career ladder. However, we would like to suggest that your recommendation language on page 3 of the draft be strengthened to say "that the agency take appropriate steps to identify and correct the problem areas". We are concerned that the current language which includes the phrase "to the extent possible" could create the perception that the current situation does not need to be fully resolved.

Our review of unit implementation of GAO's 1986 Affirmative Action Plan showed a perception among some unit managers that all employees (on the Best Qualified Lists) eligible for competitive promotions (GS-13 and above) were not equally qualified. Several unit heads said they would not select a minority, even where they had established an affirmative action goal, if they felt a nonminority was better qualified. This is consistent with GAO's merit selection plan. However, it is difficult to determine whether management's subjective judgment on who is better qualified contains some bias. We believe the above example is not inconsistent with the PAB

See Comment 1.

Appendix XII
Comments by the Advisory Council on Civil Rights

See Comment 2.

Now on p. 10.

Now on p. 21.

finding that managers are slower in initiating promotions for minorities within the career ladder, or the fact that PAB's review of Official Personnel Folders showed that "in the vast majority of cases, there was no explanation for these unusually long times-in-grade" (page 9).

The PAB Report (page 24) presents three objectives that GAO should use in reviewing the career ladder promotion process. We concur with the objectives. Moreover, we believe they should be addressed at the agency level, i.e., GAO should review some or all units, as appropriate, to identify reasons for the disparities and to determine if unit criteria used in career ladder promotion decisions is proper and objective. Units should not be asked to review and report on their own processes because it is unlikely that they will be self-critical. For example, in the area of job assignments, our review of GAO's 1986 Affirmative Action Plan implementation in eight units shows that in reviewing their 1986 job assignment processes nearly all unit heads specifically stated that they felt their processes were fair and equitable. The ACCR has continuing feedback through its representatives that this perception is not generally shared by minority staff. However, units do not have adequate processes or information systems in place (automated staff tracking systems or individual development processes) to validate either view point.

The third objective would have GAO consider developing an "EEO training course for managers and supervisors who make decisions that affect the career ladder promotion process". This is similar to the EEO education requirement of the Fogel-Mason settlement agreement. GAO was initially required to complete development of an EEO training course by February 1987, but the deadline was extended to March 1987 and the course was pilot tested in May 1987. It is not clear how the EEO course recommended by the PAB will relate to or differ from the course developed under the settlement agreement. Therefore, we suggest that the PAB clarify the objectives and focus of the EEO course recommended in its oversight report.

The ACCR believes that GAO needs to devote more of its resources to monitoring EEO and affirmative action within its organizational units. This function is within the scope of the Office of Affirmative Action Plans, but the current resource level including the Director and one permanent staff member, is not sufficient to effectively assess affirmative action problems or address needed corrective actions. Has the PAB considered recommending that GAO expand its efforts and resources in this area?

This concludes our comments. We appreciate the opportunity to provide comments and we hope our input will be helpful to you in finalizing your report.

General Counsel's Comment

The following is the General Counsel's comment on the letter dated August 3, 1987, from the GAO Advisory Council on Civil Rights.

1. Our recommendations include the statement that "the agency take steps to identify the possible problem areas and, to the extent possible, to correct them." The phrase, "to the extent possible," recognizes that the identified causes, whatever they may be, could be beyond the control of the agency or could be the result of "business necessity," as the courts have used that term in EEO case law.

2. In discussing promotions that were preceded by unusually long times-in-grade, the report states that during a review of Official Personnel Folders (OPFs) we determined that "in the vast majority of cases there was no explanation for these unusually long times-in-grade." The comment of the Council seems to draw more from this statement than was intended. The report went on to cite legitimate explanatory factors for a few of the "unusually long times-in-grade." As a result, the data base was corrected where appropriate to reflect some of these legitimate considerations. Thus, the sole purpose of reviewing OPFs was to assure an accurate data base. Except in the type of unique examples such as those cited in the report, we would not expect to find in the OPFs explanations for unusually long times-in-grade.

Comments by the 13-14 Council



United States
General Accounting Office

Memorandum

Date: August 11, 1987
To: General Counsel, Personnel Appeals Board
From: Chairman, 13/14 Council - Edwin J. Soniat
Subject: Feedback on the EEO Oversight Report

As requested in your June 30, 1987 transmittal memo, the council reviewed the EEO Oversight Report. The council steering committee found the numerous analyses in the report to be somewhat overwhelming. The council supports the Board's recommendation to review the career ladder promotion process. There is a fairly strong feeling regarding career ladder promotions that the criteria are not clear, time-in-grade as a sole criteria is not adequate, and implementation is inconsistent across units. Problems with the career ladder promotion process need to be clearly analyzed, described and directly remedied. We also feel that on a case-by-case basis in those units where significant time-in-grade differences did occur, a more focused problem analysis should take place.

We appreciate the opportunity to comment on this report and look forward to providing feedback in the future.

Comments From the Women's Advisory Council

Note: The PAB General Counsel's comments supplementing those in the report text appear at the end of this appendix.

GAO

United States
General Accounting Office

Memorandum

Date: April 15, 1987

To: General Counsel, Personnel Appeals Board -
Carl Moore

THRU : President, Women's Advisory Council -
Chris Kopocis *Chris Kopocis*

From: Women's Advisory Council, PAB Liaison -
Carol L. Kolarik *Carol L. Kolarik*

Subject: Comments on PAB's Draft EEO Oversight Report

Members of the Women's Advisory Committee (WAC) have the following comments regarding the February 6, 1987, draft EEO Oversight Report.

--The number of personnel folders actually reviewed for the report (after folders of former employees were eliminated from the sample) seems very low in relation to the number of GAO employees represented by the study. Was the sample statistically significant?

--The analysis of time in grade does not take into account such factors as performance ratings and educational background of employees. Was there a discrepancy between the time spent in grade for employees with similar credentials?

Also, attached are comments prepared by a member of WAC's personnel committee. As she put a great deal of thought and effort into these comments, they are attached in their entirety.

WAC appreciates the opportunity to comment on this draft report. We trust our comments will be given due consideration. Should you wish to discuss our views and recommendations, please feel free to call me on 275-8904.

Attachment

See Comment 1.

See Comment 2.

COMMENTS ON THE PERSONNEL APPEALS BOARD
OVERSIGHT REVIEW REPORT ON CAREER LADDER PROMOTIONS

I have reviewed the Personnel Appeals Board Report. While I was not surprised by the findings and have no major concerns with the overall conclusions and recommendations, I do have problems with some of the methodology and explanation of this methodology. My concerns are outlined below:

Administrative Officer Career Ladder (GS-5 through GS-12)

The footnote (number 1) at the bottom of page 15 defining the administrative officer career ladder is both misleading and inaccurate. It is misleading because it leads one to believe that there is no single administrative officer occupational series, but rather that "administrative officer" is a catchall for a variety of occupational series. This is simply not true. A quick review of OPM's handbook of occupational groups and series of classes reveals that there is, in fact, a specific administrative officer occupational series, GS-341. Moreover, it is a series that is well known and is used throughout this agency. The term "administrative officer" is also recognized by GAO managers and employees alike as representing the various administrative staff in divisions and offices--including administrative operations specialists, administrative programs specialist, administrative operations clerks, administrative assistants and the like in the GS-301, 303, and 341 series. To use the term administrative officer as it is referred to repeatedly in this report would be highly confusing to most, if not all GAO readers.

Defining administrative officer as a collection of similar job series and then listing such series EEO Specialist, Counseling Psychologist, Budget Analyst, Training Evaluation Specialist, Visual Information Specialist also leads one to challenge the validity of the word "similar." One would be hard pressed to argue that the duties and responsibilities of a counseling psychologist are "similar" to those of a budget analyst. While there may be some natural groupings of series within those listed in the footnote (such as the personnel-related occupations--personnel management specialist, position classification specialist, employee relations specialist, and employee development specialist), to combine such disparate occupational series as visual communications specialist (graphics designer/artist) with management analyst defies logic and casts considerable doubt upon the meaningfulness of any analysis using such a seemingly artificial grouping. It appears that the "administrative officer career ladder" was generated by simply combining all remaining professional occupational series (from those previously cited--i.e., evaluator, evaluator-related, etc.) which have a career ladder to a GS-12.

The citation for the listing of job series--GAO Order 2335.6, Chapter 7, is also incorrect. It should be, GAO Order 2335.6, paragraph 13 (dated April 13, 1986). The report is referring to a superceded order. I would recommend that all references to the "administrative officer career ladder" be deleted and substituted by some terminology that makes it clear

Now on p. 14, fn. 2.
See Comment 3.

See Comment 4.

See Comment 5.

Appendix XIV
Comments From the Women's Advisory Council

that certain nonevaluator related professional series with career ladders were grouped together and that these series are not necessarily similar. I would also recommend that the rationale behind combining these series be explained as well as an explanation offered as to how the combination presents a "meaningful comparison" for the purpose of this study.

Statistical Significance

The discussion on statistical significance (pp. 12 - 14) is somewhat confusing and contradictory, particularly the last paragraph which appears on p. 14. After explaining the concept of statistical significance, the authors of the report set up the reader to accept the argument that in EEO matters, a statistical significance of .10 (or 90% probability) is more meaningful than the commonly used .05 (or 95% probability). But then they quickly "turn the tables" to state they will use the .05 level of significance because the .05 level of significance is accorded immediate deference. Why set the reader up for a broader .10 level and then retreat to the .05 level. I would agree that in EEO matters the .10 level or below is more meaningful given the object of oversight--to encourage management to focus on potential problems. This "bait and switch" is particularly troublesome in that the body of the report addresses only statistical findings of .05 or less. Yet, the appendixes include data where the significance is .10 or less. Why the vacillation here?

Overall, I believe that the statistical methodology section needs to be rewritten so that it is more readily comprehensible. I doubt that many GAO managers are statistical literates and feel that the significance of the statistical findings would be more meaningful if presented in a clearer manner. What I found particularly revealing in the Appendixes--and to me more meaningful--were the mean differences in the number of days for promotions between whites and minorities. For example, I found the data for HRD in Appendix V more troublesome and greater cause for management concern than that for LARO or WRO, (7 months for promotion from 11 to 12 for HRD Blacks vs 3.6 months in LARO and 3.3 months in WRO). Yet, HRD is not cited in the narrative of this report because the statistical significance was .07 (93% probability), or greater than .05. These are the sorts of statistical issues I feel should be addressed in the report.

Now on pp. 12-13.
See Comment 6.

See Comment 7.

General Counsel's Comment

The following is the PAB General Counsel's comment on the letter dated April 15, 1987, from the GAO Women's Advisory Council:

1. This comment from the Women's Advisory Council essentially asks whether the sample was too low in relation to the number of GAO employees in the study. For the populations studied, the accuracy of the sampling results is a function of the sample size, not the proportion of the population that is being studied. The sample size was adequate to determine the accuracy of the computerized data.
2. In designing the study, we concluded that the computerized data on such factors was not sufficiently reliable.
3. We changed the reference in the final report to "administrator," stated that it is a generic term, and always used it in quotation marks.
4. As stated in the footnote, no single job series or reasonable grouping of series in our "administrator" collection had enough promotions per protected group to allow meaningful analysis. There were two controls used that we believe insured the integrity of the analysis of the "administrator" category. First, the category was restricted to career ladders that had identical grade level intervals. This means that, while the substantive duties and responsibilities of the positions may differ, they are judged by job classifiers to be equivalent in terms of the level of the knowledge, skills and abilities required at each grade level. Second, the time-in-grade was standardized for individual series (see Chapter 2 at footnote 6) in recognition of the fact that different criteria might apply to promotions in different offices. Thus, even if different criteria are applied to career ladder promotions of Employee Relations Specialists in Personnel as compared to EEO Specialists in the Civil Rights Office, the standardization process insures that such differences do not affect the analysis.
5. Comment noted and appropriate revision made.
6. We revised the wording to insure that our intent was clear. Contrary to the suggestion in this comment, we were not suggesting that the .10 level of statistical significance is more meaningful in EEO matters than the commonly accepted .05 level. It is well settled that .05 is the commonly used level of statistical significance in EEO matters as well. However, as the draft stated, "since the object of oversight is to focus on potential EEO problems ..., we report findings in this study at the .10 level and below in order to call possible

areas of concern to the attention of the agency." Thus, references to levels of statistical significance at or below .05 are in the text of the report and findings between .05 and .10, for the most part, appear in the footnotes or in the appendixes.

7. During review of the draft report, corrections were made to the data base that resulted in some different units and times-in-grade than those reflected in this comment. We also note that the comment mistakenly focuses on the differences in mean time-in-grade rather than on the statistical significance of the differences. In response to a similar point of misunderstanding, we added a discussion of the "difference in means" to Chapter 2.

Comments by the General Accounting Office

Note: The PAB General Counsel's comments supplementing those in the report text appear at the end of this appendix.



Assistant Comptroller General
of the United States

Washington, D.C. 20548

August 20, 1987

Mr. Carl Moore
General Counsel
GAO Personnel Appeals Board

Dear Mr. Moore:

Thank you for the opportunity to provide agency comments on the draft EEO Oversight Report addressing career-ladder promotions during fiscal years 1980 to 1985. Our reactions consist of the general comments discussed here and the enclosed detailed comments.

The report demonstrates the value of continuously examining promotion data to identify statistical disparities associated with race, ethnicity, and gender. We are pleased that the report found no evidence that members of any protected groups were denied promotions in comparison to other groups. We recognize, however, that the draft demonstrates that significant time-in-grade disparities existed during the 1980-85 time period. The information in your report will serve as a basis for continuing internal review and analysis to ensure that GAO's promotion practices are fair and equitable.

Although the report presents valuable data on an important issue, we do not believe that the draft's overall conclusion--that GAO's career-ladder promotion process has allowed racial disparities to occur--is fully supported. We agree that these disparities are a cause for concern. We do not agree, however, that the disparities noted in the study were necessarily based on racial differences. Rather, it can only be said with certainty that the study revealed disparities associated (or correlated) with race. Further analysis must be conducted to determine if these disparities were caused by racial differences or by factors other than race (such as non-discriminatory evaluation of individual job performance and promotion potential). If continued monitoring indicates that disparities still exist, GAO will take appropriate additional steps to explore and address them.

We also have reservations regarding the report's speculation, on pages 22-24, that for some career ladders, the number of promotions was not large enough to reveal time-in-grade disparities. In fact, the number of promotions in these career ladders did meet the study's test for meaningful analysis yet no significant differences were detected. Speculation regarding the effect of a larger sample appears unsupported by the study's methodology.

Now on pp. 19-20.
See Comment 1.

GAO is strongly committed to a program of monitoring to ensure that an equal employment opportunity environment exists for all staff. Because the study covers the fiscal year 1980-85 period, however, its data are not really current. Indeed, some of the information in the report is over 7 years old. We plan to conduct our own analysis to determine whether the career-ladder disparities described in your report still exist. As discussed in the enclosed detailed comments, an updated analysis of one large unit's promotion patterns suggests that the conditions described in your report may have improved. We are in the process of developing an agency-wide data base which will allow us to monitor career-ladder promotions, as well as other personnel actions.

GAO is also dedicated to eliminating any artificial or inappropriate barriers which may have contributed to the disparities identified in the report. We believe the Office has taken several significant actions recently which address not only the career-ladder promotion process, but other important areas of employment as well. Several of these recent initiatives are described below.

- The evaluator career-ladder process has been closely examined and, as a result, a draft GAO Order on career-ladder promotions for evaluator and evaluator-related positions has been circulated for comment to divisions, offices, and employee groups. It will soon be issued in final form. The draft Order establishes an overall policy on noncompetitive promotions, and includes guidelines for assessing individual performance and potential. It also establishes agency-wide time-in-grade benchmarks which will be reviewed and revised as necessary. Additionally, the Order establishes procedures for identifying and addressing any developmental needs of employees whose time-in-grade exceeds the agency benchmarks. In these cases, management will develop strategies to address the needs of these employees.
- A new EEO training program will be introduced in FY 1988. This program, to be presented to all GS-13 and above staff, will cover the legal aspects of EEO and also emphasize the importance of incorporating EEO and affirmative action into our managers' day-to-day actions. In addition, all other managerial and supervisory training programs are being reviewed with the objective of including EEO-related segments as necessary.
- GAO's recently-created Office of Affirmative Action Plans (OAAP) is implementing a number of programs and

processes designed to ensure that GAO is fully using the talents and capabilities of all groups of our society. Of particular interest to career-ladder staff, OAAP is working with the divisions and regions to develop ways to ensure that job assignments are made in a consistently fair and evenhanded manner. Each division and region has already submitted an initial assessment of its job assignment process to OAAP. OAAP is currently conducting follow-up discussions with each unit. Preliminary guidance was issued in June, based on discussions with 15 units. This initiative will continue into FY 1988.

We believe that these actions demonstrate GAO's active commitment to EEO and affirmative action. We appreciate the opportunity to comment on the draft report and we look forward to analyzing and working on the important issues it raises.

Sincerely,



Ira Goldstein
Assistant Comptroller General
for Operations

Enclosure

ENCLOSURE

DETAILED AGENCY COMMENTS
DRAFT EEO OVERSIGHT REPORT
BY THE PAB GENERAL COUNSEL

The detailed comments discussed below are keyed to the appropriate sections of the draft report. As noted on page 10 of the report, GAO assisted in verifying the accuracy of certain time-in-grade data and some discrepancies were identified. However, we did not verify all data used in the study. The agency's comments, therefore, are based on the premise that the report data are sufficiently accurate to support its statistical findings.

I. Summary of Findings

Page 2 of the report states that: "Among those eventually promoted, Black evaluators and, to a lesser extent, Hispanic evaluators spent 'significantly' more time in grade than did White evaluators."

This conclusion is somewhat misleading, because the study did not show that Hispanics spent significantly more time-in-grade than Whites. The report notes (on page 14) that the study's standard for "statistical significance" is a difference at or below the .05 level. The level of Hispanic disparity, however, was found to be .09 (page 34), which is above the criterion for significance. We believe that this discussion (which also appears on page 17) should be modified to more accurately reflect the study's results.

The report's summary also states (page 3): "The study concludes that the current implementation of the career-ladder promotion process has allowed disparities based on race to occur. . . ."

This statement needs to be clarified. Because the study covers the fiscal year 1980-85 period, its data are not really current--some of the information in the report is over 7 years old. The conditions discussed in the report may have changed since the 1980-85 time period.

In an effort to analyze more current data, the Washington Regional Office (WRO) reviewed its evaluator career-ladder promotions for fiscal years 1986 and 1987 (through July 19, 1987). During this period, 109 staff members received career-ladder promotions (67 female, 42 male; 81 White, 14 Black, 14 other Minority). The WRO analysis utilized the same methodology as the oversight study.

See Comment 2.

Now on p. 13.

Now on p. 29.

Now on p. 15.

Now on p. 5.

Two WRO comparisons (White versus Minority and White female versus Minority female) contained enough promotions (15 in each group) to meet the PAB's test for meaningful analysis. For these two comparisons, the draft report identifies significant promotion disparities in WRO from 1980-85. WRO's updated analysis, however, concluded that there were no significant promotion differences between these groups (differences exceeded the .10 level of statistical significance) during FY 1986-87.

We recognize that analysis of one unit's current promotion practices does not conclusively demonstrate that the disparities noted in the report no longer exist. It does suggest, however, that the conditions noted in the draft may have changed. As discussed in our general comments, we will be conducting more comprehensive analyses to determine the current overall career-ladder promotion situation.

The cited report statement on page 3 goes on to conclude that the career-ladder promotion process has allowed racial disparities to occur. As discussed in our general comments, this statement is questionable. We believe that the study's statistical conclusions can be more accurately summarized as follows: "The study concludes that between 1980-85 there were statistical disparities associated with race in evaluator career-ladder promotions, with 'significant' differences occurring overall between Black and White evaluators." Additionally, in light of the age of some of the information, we believe an appropriate recommendation would be that GAO determine whether disparities are still present and, if they are, take steps to eliminate any artificial barriers which may be causing them.

IV. Analysis of Time-in-Grade Based Upon Race Comparisons

On page 16, this section of the report begins by noting that, in three units, Minority evaluators spent significantly more time-in-grade than White evaluators. This is one of several places where the report combines data on Black, Hispanic, and Asian evaluators to produce an overall Minority finding of statistically significant disparity. On pages 19 and 21, however, the report states that there were no significant differences between Hispanics and Whites or between Asians and Whites. Based on these conclusions, it appears that promotions of Blacks, which represent 64 percent (230 of 358) of the Minority promotions in the study, account for the Minority disparities. For purposes of accuracy, we believe that the discussion of White-Minority disparities should be deleted, or at least fully explained.

Now on p. 5.
See Comment 3.

Now on p. 15.
See Comment 4.

Now on pp. 16 and 18.

V. Conclusions and Recommendations

On page 22, the report notes that in statistical analysis the ability to find differences increases with the number of observations. This comment supports the statement that: "... for some career ladders with sufficient numbers to allow meaningful analysis, the number of promotions may not have been large enough for us to detect 'significant' differences that were in fact present." This conclusion conflicts with the study's analytic methodology--that 15 promotions are enough for "meaningful" analysis of differences. Since the study uses this standard for analysis, it is not appropriate to question findings of "no significance" based on the number of promotions. In fact, the number of promotions in these career ladders did meet the study's test for meaningful analysis, and no significant differences were detected. It is speculation to project that a larger number of promotions could have revealed significant disparities. We recommend that the report omit this entire line of speculation by deleting the sections on pages 22-24 which suggest that significant differences may have been present even though meaningful comparisons did not reveal them.

Now on p. 19.
See Comment 1.

Now on pp. 19-20.

Comments

The following is the General Counsel's comment on the General Accounting Office's August 11, 1987, letter.

1. We made revisions in the discussion at pages 18-19 to insure that our intended purpose was communicated clearly. The agency comment notes that the study required a minimum of 15 promotions to insure "meaningful" analysis of the differences. The comment then suggests that it is inappropriate for the report to question a finding of "no statistical significance" when the minimum number of promotions were present.

It should be noted that the purpose of the minimum number of promotions was to assure that the methodology employed was appropriate. Once that is done, there are two possible errors to be considered. One is that a true hypothesis is rejected. The other is that a false hypothesis is not rejected (in any real situation, only one error could actually occur because it must be the case that the hypothesis being investigated is either true or false). Statistical analysis generally decides to focus on the probability of the first type of error leaving the probability of the second type of error (which differs according to the alternative considered) uncontrolled. The probability of the first type of error is, in fact, the level of significance of the test. Since the probability of the second type of error is uncontrolled and, therefore, possibly quite large against a relevant alternative to the hypothesis, it is permissible to suggest that the finding of no "significant" difference might be incorrect. Had there been no unusual outside factors involved, we would not have raised any question about the reliability of the conclusion that might be drawn from the findings of no statistical significance. However, when the most populous minority group in the largest career ladder showed statistical significance consistently below the .01 level, it is reasonable to caution, as the report does, that the cause for that occurrence, may be present, but undetected, in other career ladders.

Thus, the object of the discussion in the report was to draw the agency's attention to this possible area of concern and to insure that, as causes are explored within the evaluator career ladder, some attention is given to determining whether those same causes could be present in other agency career ladders.

2. Comment noted and appropriate revision made.
3. Comment noted and appropriate revision made.
4. Comment noted and appropriate revision made.