

Evolving Workforce Demographics: Federal Agency Action and Reaction



A Report to the President and the Congress of the United States
by the U.S. Merit Systems Protection Board



U.S. MERIT SYSTEMS PROTECTION BOARD
Washington, D.C. 20419

November 1993

The President
President of the Senate
Speaker of the House of Representatives

Sirs:

In accordance with the requirements of the Civil Service Reform Act of 1978, it is an honor to submit this U.S. Merit Systems Protection Board report titled "Evolving Workforce Demographics: Federal Agency Action and Reaction."

Predictions of dramatic demographic changes in the U.S. labor force were widely discussed in the late 1980's and made a strong impression on private and public sector employers. This report examines several of those predictions and discusses the extent to which they have influenced Federal human resources programs.

The actual experience of Federal agencies suggests that some projected demographic changes are not occurring in the manner or to the extent predicted. Rather than disregard demographic projections, however, this study reinforces the importance of workforce planning that is regularly updated based on individual agency needs and using the best data available.

The report discusses the implications of these findings for public personnel policymakers, and offers recommendations to ensure that agencies understand and respond appropriately to workforce changes. I believe you will find this report useful as you consider issues affecting the Federal civil service.

Respectfully,

Ben L. Erdreich
Chairman

Jessica L. Parks
Vice Chairman

Antonio C. Amador
Member

A Special Study

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Executive Summary

In the late 1980's a vision of changing workforce demographics beginning in the nineties and continuing into the 21st century was popularized by publications such as "Workforce 2000." This view of the future included worker shortages; an aging workforce; dramatic increases in the numbers of minorities in the workforce; and mismatches between worker skills and job requirements. Some of these projections have come into question, although they have continued to be accepted by many both within and outside the Government. This report looks at what the experts have predicted, the degree to which Federal agencies are expecting or actually experiencing the predicted demographic changes, and what, if anything, they are doing to address them. Finally, recommendations are offered for agencies to consider in dealing with current demographic realities and possible future workforce changes.

The predictions of demographic changes presented in the reports "Workforce 2000" and "Civil Service 2000" made a strong impression, judging by the amount of attention the reports received in the years following their publication in the late 1980's. Since that time, a number of the predictions have come into question, and economic circumstances and international political events, such as the end of the Cold War, have had far-reaching effects on workforce issues that the authors of these earlier demographics studies could not have foreseen.

Concerns about how the Federal Government is managing Federal workforce changes have been expressed both by those who are anxious that the Government do whatever is necessary today to transition smoothly into the workforce of the next century, and by those who caution against expending resources to address problems that may never materialize.

To shed light on what Federal agencies have actually experienced with respect to these demographic predictions, the U.S. Merit Systems Protection Board (Board) conducted a study in

which Federal agencies were asked to describe the degree to which some of the projected changes actually were occurring (or were expected to occur) in their workforces. The agencies also were asked to describe the actions they were taking to address the changes.

The predictions the Board concentrated on were: (1) declining numbers of qualified applicants for entry-level jobs; (2) the rise in the average age of the workforce; (3) an increase in the proportion of minorities entering the workforce; and (4) increases in job skill and education requirements.

Findings

The Board's major findings, based on responses to questionnaires directed to agency directors of personnel, interviews with staff members of several agencies, and a review of relevant literature, are as follows:

- ❑ **Federal agencies' experiences with the demographics of their own workforces suggest that some of the changes predicted by "Workforce 2000" have not come to pass,**

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don't appear to be imminent, or are not resulting in the problems originally anticipated. Although "Workforce 2000" and "Civil Service 2000" findings and conclusions have been useful in focusing public attention on important demographic issues, there is sufficient evidence now to demonstrate that some of those conclusions were misleading, and others have simply been overtaken by events.

- ❑ **Overall, Federal agencies did not report any significant resource commitment or personnel program changes intended solely to address the changing demographic projections.** Federal agencies face a paradoxical situation in dealing with long-range demographic projections—they are expected to develop appropriate long-range plans and programs in response to these projections yet their operational demands, budget constraints, and shifts in mission priorities almost force a continual short-term focus. Consequently, while most Federal agencies acknowledge the long-range workforce projections, specific, forceful action is not their typical response. In recent times unanticipated developments such as a downturn in the national economy and increased unemployment in the private sector have minimized any negative consequences to the Government for its relative lack of long-range planning in this area. However, the lack of negative consequences cannot be expected to continue indefinitely.
- ❑ **Almost all Federal agencies reported that they were not yet experiencing the predicted decline in entry-level applicants.** Not surprisingly, this was attributed primarily to the current economic situation, unemployment in the private sector, and downsizing in the public sector. The positive effects of legislation to close the gap between Federal and private sector pay, and improvement in the image of the Federal worker were also cited by agencies as reasons for the absence of recruiting problems. Recruiting programs reported by Federal agencies tended to be ongoing, established recruitment programs rather than ones devised specifically to address possible shortages in the workforce of 2000.
- ❑ **Most Federal agencies agreed that projections regarding higher average workforce age do apply to them.** However, they had not yet experienced problems associated with an older workforce, nor had they undertaken major programs designed to deal with potential negative effects of the aging workforce, such as worker dissatisfaction with lack of advancement possibilities, or difficulties motivating older workers who have occupied their jobs for many years.
- ❑ **Federal employers continue to emphasize affirmative recruiting as their primary response to the increasing numbers of minorities in the U.S. civilian labor force.** These efforts have resulted in a positive trend towards higher representation of minorities as a whole in the Federal Government, although Hispanic men and women continue to be underrepresented in the Federal workforce. Less frequently reported were efforts to respond to the increase in minorities with affirmative advancement programs aimed at raising minority representation at higher grades and organizational levels.
- ❑ **Federal agencies' two most frequently reported skills concerns involved (1) the growing number of jobs that require computer literacy or use of automation as a job tool; and (2) the growing number of employees and applicants who have basic skills deficiencies.** The majority of agencies agreed that skill and education requirements for Federal jobs will rise. However, in describing their actual experiences with job requirements, agencies for the most part did not discuss occupations in which they believed that increasing complexity or substantive technical content would result in skills

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gaps or staffing problems. Automation and literacy were their chief concerns. A substantial amount of training in the use of automation and expansion of remedial and basic skills training are occurring as a result of these needs identified by Federal employers.

Recommendations

Federal agency managers and personnel staffs balance multiple concerns with regard to workforce planning and their responses to changing workforce demographics. They must concentrate most of their attention and resources on the day-to-day tasks that get the job done. Yet they also must watch for what may be coming down the road that could affect their continuing ability to do that job and they must plan accordingly. Currently, in trying to maintain that balance, too few Federal agencies devote sufficient attention to the development of long-range workforce plans tailored to their unique organizational needs. The impact of this lack of attention will be accentuated as Federal agencies are given more control over their human resource management programs through increased delegation, decentralization, and deregulation of the Federal personnel system. To address this situation, Federal agencies should take the following actions:

1. **Given continual changes in the social, economic, and international environments in which they operate, Federal agencies need to (1) regularly update their assumptions about the demographic changes that may affect them, and (2) modify agency personnel plans and programs accordingly.** Periodically, either some Governmentwide trends or projections will not apply to a specific Federal agency or events will occur that alter or invalidate some of those workforce projections. Rather than obviating the need for long-range workforce planning, such situations highlight the obligation of individual Federal departments and agencies to accept greater responsibility for long-range workforce planning. Doing so should allow them to respond forcefully to demographic shifts that are likely to have a significant impact on their own workforce. Waiting until a problem occurs is not an acceptable response in today's environment.
2. **Federal agencies should resist becoming complacent about the current ease with which they are recruiting high-quality job candidates.** Congress, OPM, and individual Federal departments and agencies should strive to ensure that Federal service remains an attractive career by maintaining competitive pay and benefits and a family-friendly workplace, and by promoting public regard for the Federal civil service.
3. **Federal agencies should increase their attention to issues related to an older workforce.** In the interests of maintaining their own continuing effectiveness as well as sustaining workforce morale, agencies should identify the needs and desires of their older employees. In examining these issues agencies should review their positions on quality of worklife, job content, advancement, and retention of senior workers. Where appropriate, these programs should be adapted to enhance productivity and motivation among older workers.
4. **Federal agencies should expand their efforts to develop and advance the careers of minorities in order to achieve full representation at all grade levels and should intensify recruitment of Hispanic men and women.** Many Federal managers still regard the growing minority population in the U.S. labor force and minority representation in their own workforce as primarily a recruitment issue to be addressed through affirmative hiring programs. For Hispanic men and women, who are the most underrepresented minority group in the Federal workforce, this emphasis on affirmative recruitment programs should

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continue to be stressed. However, for both Hispanics and other employees who are already on board, it's time to expand our attention to career development and enhancement in order to assure full representation at all grade levels in the future.

5. **In maintaining a balance between long-term demographic perspectives and short-term workforce needs, Federal agencies should give particular attention to training, retraining, and development of their employees.** Given the concerns they expressed about skills deficiencies in the workforce, agencies must take care not to lose sight of the training needs of employees, particularly as the size of

the workforce is reduced. To foster productivity, effectiveness, and good morale in the workforce that remains after downsizing, agencies may have to invest in more internal training for current employees and outreach activities that prepare future workers for future vacancies. Although competition for scarce resources is intense, among the possible sources of support for such an investment are the resources not currently being used for recruiting. Because of the current lower turnover and greater ease in finding good candidates for vacancies, there may be time and money not now committed to recruiting that could be used for employee development activities.

Introduction

The study reported on here by the U.S. Merit Systems Protection Board examines some well-known demographic predictions and Federal agencies' responses to those predictions and to the demographic changes they have begun to experience. First we present background information on the demographic projections that were studied and the influence they have had on Federal human resources programs. The next four chapters cover specific predictions that we asked agencies about, summarizing the views of the experts on the topics and the agencies' responses to the questions we asked. The final chapter presents our conclusions and recommendations.

Background

The topic of change has been alluded to so often and discussed in such a variety of settings, that talking about change has become as much of a constant as living through it. Whether it's embraced or opposed, there's nothing about change, or the change-watching that accompanies it, that's an original human experience. And in an organization like the Federal Government, where some degree of change can be expected every 2 (or 4 or 6 or 8) years, coping with it is a familiar ritual.

At the same time, those who are in the business of making projections and those who must respond to change usually differ in terms of the degree of change they believe is likely in a given period and the actions they think people should take to deal with it. Depending on where, when, and to whom it's happening, the appropriate reaction to change can vary greatly.

The Federal Government reflects this pattern in its approach to the human resources issues anticipated for the 1990's, particularly with

respect to demographic shifts that prognosticators say will drive changes in the way Federal agencies will do business in the years ahead. Both those who predict unprecedented, dramatic change and those who predict change of a more gradual nature are being heard and heeded in the Federal Government today.

In 1987, the publication of "Workforce 2000,"¹ a Hudson Institute study sponsored by the Department of Labor, drew public attention to coming changes in work, workers, and the workplace. The following year, "Civil Service 2000,"² published by the Office of Personnel Management (OPM) and also prepared by the Hudson Institute, intensified the public sector's interest and concern with these issues. Among other predictions, the Hudson Institute anticipated that in the 1990's the national labor force³ would grow more slowly and the number of young workers would decline, resulting in worker shortages; the average age of the workforce would rise; and minorities would make up a larger share of those entering the workforce. Within the Federal

¹ William B. Johnston, "Workforce 2000: Work and Workers for the 21st Century," Hudson Institute, Indianapolis, June 1987.

² William B. Johnston et al., "Civil Service 2000," U.S. Office of Personnel Management, June 1988. The Director of OPM submitted this report to Congress to respond to a requirement that OPM report on future Federal workforce needs. The requirement was included in the report that accompanied OPM's 1988 Appropriations Act.

³ The term "labor force" refers to people 16 years and older who are working or seeking work.

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Government, even higher skill and education levels would be needed in the already highly skilled Federal workforce.

These and other projections contained in the two Hudson Institute studies have been influential in both the Government and the private sector. The significance of the projected changes and the implication of gloomy outcomes for the unprepared stimulated considerable discussion among Federal human resources officials.

Recommendations from participants in a 1989 conference of Federal personnel directors prompted OPM to develop a strategic plan for human resources management that would serve as a guide to maintaining a responsive personnel management system in a changing environment. The plan that OPM created called the management of change of the magnitude suggested in the Hudson Institute reports "an awesome task," requiring strategic thinking. The role of information gathering in developing the plan also was cited:

The process of strategic planning should begin with gathering information about the future from various sources. OPM has completed significant information gathering as shown in the Hudson Institute report Civil Service 2000.⁴

The plan goes on to list important workforce changes that the Hudson Institute reports predicted would change significantly the pool of workers from whom the Government draws employees.⁵ Clearly, the Hudson Institute studies affected the way OPM—the Government's

personnel manager—approached long-range planning for human resources management.

In the several years since publication of "Workforce 2000" and "Civil Service 2000," other researchers have begun to question the reports' conclusions. In a paper published by the Economic Policy Institute (EPI), for example, predictions of a turn-of-the-century labor shortage and a widening gap between job requirements and employee skills are strenuously challenged.⁶ Also, the Hudson Institute projections about increasing numbers of minorities in the U.S. labor force, while not refuted, are criticized for presenting a distorted view of the racial and ethnic makeup of the coming workforce.⁷ While a greater percentage of minorities in the workforce is indeed expected, the EPI findings suggest that the change will be a continuation of existing trends rather than a radical shift in workforce composition.

In another study that questioned the widespread acceptance of the Hudson Institute findings, the General Accounting Office (GAO) reviewed a sizable body of literature that addressed many of the same issues as "Workforce 2000" and "Civil Service 2000."⁸ GAO found disagreement among the experts about the predicted labor shortage and skills mismatch. While acknowledging that the demographic composition of the Nation's labor supply is changing, GAO stressed that agencies shouldn't exaggerate those changes. An important message in the report was that the Federal Government should be cautious about committing resources to planning and policies that respond to the predictions of the experts when there are substantial and significant areas of disagreement among the experts.

⁴ U.S. Office of Personnel Management, Personnel Systems and Oversight Group, "Strategic Plan for Federal Human Resources Management," PSO 216, November 1990, p. 3.

⁵ Ibid.

⁶ Lawrence Mishel and Ruy A. Teixeira, "The Myth of the Coming Labor Shortage: Jobs, Skills, and Incomes of America's Workforce 2000," Economic Policy Institute, Washington, DC, 1991, pp. 1-6.

⁷ Ibid., p. 31.

⁸ U.S. General Accounting Office, "The Changing Workforce: Demographic Issues Facing the Federal Government," GAO/GGD-92-38, March 1992.

Purpose and Methodology

To shed light on what Federal agencies actually are doing in response to the predictions about demographic changes described in "Workforce 2000" and "Civil Service 2000," the Merit Systems Protection Board conducted a study in which agencies were asked to describe the degree to which they were expecting and experiencing some of the changes that had been predicted, and the actions, if any, they were taking to address the changes.

The study was undertaken in connection with the Board's statutory responsibility to provide the President and Congress with periodic reports on the health of the Federal civil service. The intent of the report is to give Government policymakers a broad view of the Federal response to important demographic projections and to provide the Board's recommendations as to what else should be done. The information can be used in making decisions about how Federal human resources planning should be conducted to address changes in workforce demographics.

The Board did not ask the agencies it contacted to provide specific numerical data to support their responses, although some agencies provided a generous amount of statistical materials and reports. Rather, we sought from experienced agency human resources officials, a general picture of the situation in their agencies and their reactions to popular projections and current realities.

This report summarizes the agencies' responses to our questions about demographic change and suggests areas where additional or more forceful action might be needed. We did not evaluate the quality and effectiveness of the programs described by agency respondents but instead focused on reporting the amount of change

agencies say they are facing and the level of activity the changes have provoked.

In preparing this report we relied on reviews of relevant literature, interviews with staff members of several agencies, and information we received from Federal departments and agencies in response to a questionnaire about how they were managing changes believed to be occurring because of shifting demographics and the evolving nature of Federal jobs. The questionnaire cited several of the changes predicted in "Workforce 2000" and "Civil Service 2000" (and noted in OPM's strategic plan), and asked the agencies to describe the extent to which they were anticipating or experiencing each of those changes and what actions they were taking to deal with each change. The issues the Board focused on were:

- ☐ A decline in the number of qualified applicants for entry-level jobs;
- ☐ A rise in the average age of the workforce;
- ☐ An increase in the proportion of minorities entering the national labor force; and
- ☐ An increase in job skill and education requirements.

The Board sent the questionnaire to directors of personnel at the 22 largest Federal departments and agencies, and received responses from all of them. Because three departments (Defense, Justice, and Treasury) provided individual responses of a number of their subordinate agencies and bureaus rather than an overall departmental response, the total number of individual agency, bureau, and departmental responses was 35. The organizations that responded to the questionnaire are listed in the appendix. They provided their responses during the period December 1991-February 1992.

Entry-Level Applicants

What the Experts Predicted

The analysts who produced "Civil Service 2000" warned that recruiting and retaining well-qualified workers in the Federal Government during the 1990's would become more and more difficult. A number of factors were seen as contributing to this situation, including a slower growing labor force which would create tight labor markets for Federal employers, especially those in competition with private sector employers who have the resources to bid more for well-educated workers.

Some experts expressed the belief that the economic growth of the eighties coupled with that decade's decrease in new entrants to the workforce and a leveling off of women entrants would result in shortages of workers in the nineties. One researcher, contrasting the realities of the 1980's with projections for the 1990's wrote:

A surplus of skilled and unskilled workers dominated the early 1980s. Recessionary conditions, the last tail of the baby boom coming to the job market and the increasing numbers of working women contributed to double digit unemployment rates and a feeling of despair * * *. Companies were looking for ways to reduce the size of their work force, and early retirement programs became a popular strategy to cut costs * * *. Shortages of human talent rather than surpluses will dominate the 1990s.⁹

Labor shortages may or may not be on the horizon later in this decade, but it is interesting to note how well portions of this description of the early eighties describe similar circumstances in the early nineties. Indeed, since these alarms were raised in the late 1980's, a number of analysts have come to different conclusions about prospects for recruiting entry-level workers.

In its 1992 review of demographic issues facing the Government, GAO collected the opinions of many experts about this topic and found that the majority of them disputed the earlier warnings to some extent. For example, the Economic Policy Institute paper cited earlier rejects the notion of a labor shortage, which it contends is not an incapable result of slower labor force growth. True, the rate at which people enter the labor force will decrease in the 1990's; the experts agree on this. However, slower population growth and the resulting smaller numbers of entry-level workers also suggest a slow-down in the demand for goods and services—and the workers who produce them.¹⁰

Forecasts developed by the Bureau of Labor Statistics (BLS) imply a compatible view.¹¹ While projecting economic and labor force growth slower than in the 1980's, BLS maintains that this doesn't signal much of a change in overall job prospects for individuals in the period 1990 through 2005.¹² The reduced rate at which the Nation's supply of workers rises would be balanced by a corresponding drop in the demand

⁹ Wayne Wendling, "Responses to a Changing Work Force," Personnel Administrator, November 1988, p. 50.

¹⁰ Mishel and Teixeira, op. cit., pp. 28-30.

¹¹ The Bureau of Labor Statistics projections used in this report reflect that agency's moderate scenario, rather than its high growth or low growth scenarios.

¹² U. S. Department of Labor, "Outlook: 1990-2005," Occupational Outlook Quarterly, Fall 1991, vol. 35, No. 3, p. 3.

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for workers. For the Federal Government, these projections suggest that, in general, agencies might not have to confront such a tight labor market and the accompanying recruiting problems some analysts expected during this decade.

Whether or not agencies expect difficulties in recruiting for the entry level and whichever analysis of labor force projections they say they accept, we found a number of situations and circumstances surrounding entry-level recruiting that they have in common.

What the Agencies Have Experienced

Federal agencies reported experiences about the availability of entry-level (and higher) applicants that generally did not support the late 1980's predictions about worker shortages in the nineties. Although a slower growing national labor force does affect the number of people who seek Government employment, and the growth of the labor supply has indeed been slowing, this has not resulted in an inadequate supply of workers. As agencies undergo staff reductions and as employees, aware of diminishing job prospects in the private sector, hold on to their Government jobs, the demand for new Federal workers has also slowed. And many Federal employers are enjoying the infrequent luxury of having more than enough candidates to choose from for jobs that in the past have attracted too few qualified applicants.

Of the 35 individual departments and agencies that commented on availability of candidates for their entry-level jobs, 28 reported that they were not yet experiencing an applicant decline. Four agencies commented on entry-level worker shortages that they expect in the future, but did not indicate a current problem with applicant shortages. Two of the responding agencies did not say whether they were experiencing or expecting an entry-level applicant shortage. One of these, a military department, had so dramatically reduced the number of entry-level jobs it

was filling that it wasn't possible to accurately comment on entry-level applicant shortages.

Only the Immigration and Naturalization Service reported experiencing a downward trend in the number of applicants for its entry-level jobs. They attributed the situation in part to increased competition with State and local law enforcement organizations and a general perception that in today's climate law enforcement work has become more dangerous. None of the other law enforcement agencies that commented identified this as a problem.

Several agencies reported they actually were experiencing an increase in entry-level applications. Others indicated that the generally good recruitment situation was somewhat mitigated by applicant shortages in certain occupations or locations, usually those for which it traditionally had been difficult to find high-quality candidates. For example, the Department of Agriculture reported continuing difficulty in finding high-quality candidates for food inspector positions in large metropolitan areas. Similarly, although their professional, administrative, and clerical positions in general have not suffered a shortage of applicants, the Department of Veterans Affairs continues to face keen competition in recruiting a high-quality health care workforce.

Despite some of these continuing recruitment challenges, however, the general consensus remains that entry-level worker shortages have yet to materialize. Among the range of factors cited as reasons for this situation, agencies generally agreed about these four:

Economic situation. The reason for the ample applicant supply cited most frequently by agencies responding to our questionnaire was the economy. This is what some of them told us:

[N]ow that the economy has dropped off, a lot of folks who had jobs in private industry are coming seeking work with us * * *. In my general discussions with my

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recruitment managers in our agencies, [they say] they're getting anywhere from 5 to 10 [qualified] applicants per job they're filling.

Department of Agriculture

Until the recent economic downturn, entry-level candidates had declined a bit both in numbers and quality. However, that has recently changed. How long the improvement lasts will depend on the competitiveness of the Federal Government as an employer.

Defense Logistics Agency

The number of applications received * * * does not appear to have declined. We believe that this is due in part to the current economic environment. In fact, with few exceptions, the Department has been successful in attracting well-qualified applicants for entry-level positions.

Department of Energy

Although the agencies we queried have generally not performed much research to examine the causes for the upward trend in the labor supply, the relationship between the lagging economy and the enlarged candidate pool for Government jobs appears to be taken for granted among Federal recruiters, at least for now. Other factors are also cited by the agencies as contributing to this positive recruiting situation, but the economy stood out clearly as the most significant reason in the minds of agency officials.

Downsizing. Another factor addressed by several agencies in discussing the relative ease of locating entry-level candidates is the prevalence

of downsizing in both defense and nondefense agencies. Agencies experiencing staff reductions do not usually need to hire as many entry-level workers as they did previously. In addition, agencies where hiring has not decreased are finding (or expect to find) that Federal employees laid off elsewhere are available to fill entry-level and other vacancies. Both situations have the effect of enlarging the labor supply and were cited by some respondents to our questionnaire.

Pay reform. Several agencies also pointed to the salutary effects of pay reform on their recruitment activities. The Federal Employees Pay Comparability Act, which was signed into law in late 1990, was designed to close the gap between private sector and Federal white-collar pay. The law changes the way pay is set for white-collar workers, moving from a nationwide system to one that bases pay, at least in part, on the geographic area in which the worker is employed. Other provisions of the law include lump sum financial incentives such as recruitment and relocation bonuses, and hiring top candidates above the customary minimum pay rates.

The Pay Comparability Act allows Federal managers to offer the new financial incentives to current and prospective employees to make Government employment more attractive. A number of agencies reported that they were using or planned to use the flexibilities offered by the law in their recruitment programs, particularly for mission-critical and hard-to-fill positions.

Although it was too soon for the agencies responding to our questionnaire to have gathered data or performed studies on the impact of white-collar pay reform on their recruitment programs, they were generally optimistic that the reform was beginning to improve their ability to recruit top talent for entry-level jobs. The consensus was that the economic incentives provided by the pay reform legislation have given Federal managers a valuable and welcome set of tools with which to make Federal employment more inviting to high-quality candidates.

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Nevertheless, the extent to which these tools are successful as aids to recruitment will depend heavily on whether or not there will be sufficient money to pay for them. When agency officials responded to our questionnaire, the optimism with which they viewed pay reform was understandably tempered by the price tag on the lump sum financial incentives, and even more so on the locality raises that are central to achieving pay comparability. Since that time, the prospect of postponed locality raises and questions about methods used to compute pay adjustments have made full implementation of the pay comparability act even more doubtful.

Government's image. During the 1980's the image of the Federal employee suffered attacks from within and outside the civil service. The deteriorating image of the Federal worker coupled with salaries that were not, in many areas, keeping up with nonfederal pay made the prospect of Government employment easy for talented job-seekers to resist. Federal workers themselves affirmed these negative feelings about the Government as an employer: a 1989 MSPB survey of Federal employees indicated that only 49 percent of them would recommend the Federal Government as a place to work.¹³

In the late 1980's Federal leaders began to bolster the civil servant's image. In the agencies, internal morale-boosting activities and external image building through a variety of recruitment programs began to popularize a more positive vision of the Federal worker. Accordingly, several agencies responding to our questionnaire cited the improved image of the civil service among the reasons contributing to the ample supply of entry-level candidates. And Federal employees felt better about their employer, too. The proportion of Federal workers who said they'd recommend the Federal Government had risen to 67 percent by 1992.¹⁴

There was general agreement that Federal workers are better appreciated than they were a decade ago. But that progress is seen by some as rather delicate, and easily eroded.

At the same time, concern about preserving the progress that's been made in improving the image of Federal employees and Federal employment also surfaced as a common issue among the agencies responding to our questionnaire. There was general agreement that Federal workers are better appreciated and more highly regarded now than they were a decade ago. But that progress is seen by some as rather delicate, and something that could be easily eroded. One human resources official described the important role agency recruiters have in creating a positive public opinion about the Government and thereby contributing to the supply of high-quality job candidates: "If we let up on our image building, college relations, public relations programs, if we don't keep up even in these times when we don't have a problem, we will have some *severe* problems when the economy recovers."

What Agencies Are Doing About Entry-Level Recruitment

Agency Plans

Given the relatively rosy picture that many agencies painted about current candidate availability, one might expect their outlook on future conditions in Federal recruitment to be equally sanguine. However, in agencies where the number of entry-level candidates had increased, the human resources officials who responded to

¹³ U.S. Merit Systems Protection Board, "Working for America: A Federal Employee Survey," June 1990, p. 26.

¹⁴ U.S. Merit Systems Protection Board, unpublished data from the 1992 Merit Principles Survey.

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our questions were generally skeptical about the staying power of the labor supply increase. One agency official observed, "The current supply of experienced, highly trained applicants is an aberration in what had been a gradual diminishing of the number of well-qualified applicants. We expect this situation to exist as long as the recession continues."

This wariness about the future seems generally to have kept agencies from relaxing their efforts to expand and improve recruitment programs. Most of the agencies were not explicit about the reasons for their belief in a future entry applicant shortage, but there was an implied acceptance of the "Civil Service 2000" predictions in most of the responses.

For example, several of these agencies described strategic plans they had implemented to manage staffing of their future workforces. The plans tended to base objectives and activities on a relatively austere vision of the future labor pool, one in which competition for high quality workers would be more severe than it is today. In other words, their vision was similar to that articulated in "Civil Service 2000." Despite the fact that Federal employers generally did not report feeling the effects of an entry applicant decline, in a number of agencies strategic planning for human resources appears to be based on the premise that such a decline eventually will occur.

This is not universally the case, however. Some agencies have begun to translate revised thinking about workforce demographics into revised plans for achieving agency goals. For example, the Air Force recently published the third version of its civilian personnel strategic plan, known as PALACE Agenda, which incorporates new initiatives to respond to changes in the worldwide political and economic environment. The plan clearly addresses the issues of budget and resource reductions (and the attendant workforce

reorganizations and consolidations) that flow from these changes.

Similarly, in a December 1992 memo addressed to Federal directors of personnel, OPM announced its intention to update its strategic plan, noting, "We need to consider how a number of significant changes in the external environment may affect the Plan. Foremost among these is the general decline in demand for labor and the downsizing of the Department of Defense."

Agency Actions

We asked agencies whether they were considering or using any new initiatives or existing programs to address the issue of entry-level worker shortages. Whether or not coming demographic changes will include a tight labor market, all the agencies responding to our questionnaire described recruitment programs that will be used to address entry-level applicant shortages should they occur. For the most part, these are established programs that have been in operation for some time and that can be emphasized or deemphasized depending on the problems at hand.

There is a certain irony that runs through the Federal Government's entry-level recruiting situation as expressed by the agencies that responded to our questions. While agencies are enjoying a better supply of candidates (in terms of both quantity and quality, they tell us), they nevertheless say they fear future shortages. At the same time, while they express concern over tomorrow's tight labor market, there has not been a notable Federal-wide effort to meet future recruitment challenges with concrete activities, timetables, and commitment of people and dollars. As mentioned above, recruitment programs in place are the established ones. Recruitment strategies tend to rely on these long-standing programs and to be supplemented by inventive tactics that vary by agency and by location, to deal with specific and immediate recruitment problems.

Entry-Level Applicants

Based on what the agencies reported to us, strategies that involve establishing relationships with schools that are potential sources of candidates appear to be the tools of choice for recruiting entry-level workers. These recruitment approaches (none of which are uniquely developed to deal with Civil Service 2000-type concerns) are discussed below.

Student Employment and Partnerships With Schools. A variety of Governmentwide programs that permit students to combine education and work experience are used by agencies for a number of reasons. Hiring students, training them, and indoctrinating them into the organization's culture is an excellent way to develop future employees who are familiar with the organization and whose abilities become well-known to management before permanent jobs are ever offered.

Another reason agencies say they use student employment programs is to help to meet equal employment opportunity objectives. Many agencies have well-established relationships with colleges and universities with high minority enrollments and, through student employee programs, use these institutions as a regular source of future employees. In fiscal year 1991, nearly 36 percent of the 16,809 Cooperative Education Program students were minorities, 49 percent of the 1,240 Federal Junior Fellowship Program participants were minority students, and 66 percent of the 13,088 Stay-in-School students were minorities.¹⁵

At the same time, however, intake of graduates of student employment programs does not constitute a particularly large share of overall intake in any given year. In 1992, for example, Co-operative Education Program graduates represented less than 5 percent of total intake into professional and administrative jobs, according to data from OPM's central personnel data file.¹⁶

Nevertheless, the agencies responding to our questionnaire cited the Cooperative Education, or Co-op, Program most often as a significant entry-level recruitment device for the present and for the future. Some 23 of the 35 agencies that commented identified the Cooperative Education Program as a mechanism they use regularly for staffing entry-level jobs, one official calling the program "our bread and butter."

It's little wonder that the program is attractive to employers and students alike. The Co-op Program covers students in high school, college, and

In 1991, 36 percent of Co-op students, 49 percent of Junior Fellows, and 66 percent of Stay-in-School students were minorities

graduate and professional schools. To participate, an agency enters into a written agreement with a school to provide paid, supervised work experience related to the students' academic studies or career goals. Once students have completed their academic requirements for a diploma, degree, or certificate, and have acquired enough experience, the agency may hire the students for permanent career positions with the Government. This conversion to a permanent job is done noncompetitively—without tests, vacancy announcements, registers of eligibles, consideration of veterans preference, or other devices frequently associated with getting a Federal job.

In describing recruiting programs, agencies also cited activities aimed at strengthening their candidate pools through establishing partnerships with schools. Among the objectives of programs like these (e.g., adopt-a-school, tutoring

¹⁵ U.S. Office of Personnel Management, Federal Equal Opportunity Recruitment Program Annual Report to Congress, CE-104, January 1993, p. 5.

¹⁶ The effect on minority representation of this and other methods of entry into professional and administrative jobs is discussed in more detail in the Board's upcoming report, "Entering Professional Positions in the Federal Government." Publication is expected in late 1993.

Entry-Level Applicants

programs, Government installation tours) is to establish awareness of the agencies as future employers and eventually to sell the students on careers in those agencies. Other initiatives, such as college curriculum development programs, are intended to influence student coursework so that subjects will be taught that prepare students to enter occupations for which the agencies expect to recruit entry-level workers, especially in job categories they've traditionally found hard to fill.

Other Recruiting Strategies. Agencies reported that in addition to student outreach and employment programs, their entry-level recruitment strategies include using economic incentives to attract candidates and offering scheduling and workplace flexibilities to make jobs more appealing to potential employees.

Among the economic incentives are special pay rates, which are widely used by a number of agencies. The Department of Veterans Affairs, for example, reported using more than 1,400 special rate authorizations for health care workers at some 150 different facilities. Other examples include special rates for some clerical workers and for law enforcement agents in a number of U.S. cities, and an 8-percent interim geographic adjustment for employees in New York, San Francisco, and Los Angeles (considered "interim" until locality pay is implemented). Although there is now (as noted above) a widespread concern about the future of pay reform, a number

of agencies indicated that they were looking forward to full implementation of the Federal Employees Pay Comparability Act to give them more flexibility in devising attractive compensation packages.

Flexible work situations also have been recognized as a useful recruitment incentive. In a 1991 report that examined how the Federal Government deals with the personal and family needs of its workforce, the Board observed that the Government would be at a competitive disadvantage in attracting a highly qualified workforce if it failed to adequately respond to the changing needs of workers in balancing their work and family lives.¹⁷ One way to do that, suggested by the report, is to offer flexible hours or worksites to employees who need alternatives to traditional work situations.

Nearly half the agencies that responded to our questionnaire identified flexible sites and scheduling as programs that they were using or planning to use. According to OPM, over half of Federal employees are currently on some form of alternative work schedule.¹⁸ Flexible worksites are less common, and their utility as a recruiting device remains to be seen. As of January 1993, 13 agencies employed about 700 Federal workers who were participating in the Government's flexible workplace pilot program, and OPM believed the program to be ready for Governmentwide implementation.¹⁹

¹⁷ U.S. Merit Systems Protection Board, "Balancing Work Responsibilities and Family Needs: The Federal Civil Service Response," November 1991, p. xi.

¹⁸ In surveying Federal employees, OPM found that the work schedule of nearly 40 percent of them lets them choose their starting time, vary their hours, and/or earn credit hours. An additional 14 percent of employees work according to a compressed schedule that allows them to work longer than 8 hours a day in order to work fewer days per week or per biweekly pay period (U.S. Office of Personnel Management, "Special Report of the Survey of Federal Employees (SOFÉ)," Personnel Research Highlights, May 1992, p. 15).

¹⁹ Wendell Joice, "The Federal Flexible Workplace Pilot Project Work-at-Home Component," executive summary of final report, U.S. Office of Personnel Management, January 1993, pp. iv, vii.

Rising Age of the Workforce

What the Experts Predicted

While researchers may differ about some demographic projections, there's general agreement about the fact that the Nation's workforce is aging. The baby boomers of the late forties, fifties, and early sixties make up a huge portion of the working population, and they have not been followed into the workforce by equal numbers of younger workers. The children of the baby boomers have only begun to enter the workforce, so their presence has not yet had a significant effect on this trend, although as the decade wears on, the number of younger workers will increase.²⁰

Both Hudson Institute reports, as well as OPM's strategic plan, cite the aging of the pool of workers from which Federal employees are drawn and the decline in the number of younger workers as being among the most important demographic changes expected during the 1990's.²¹ Indeed, the share of the workforce represented by baby boomers and their elders is significant. In 1990, individuals aged 35 and above represented about 54 percent of the Nation's labor force. And the Federal workforce tends to be older than the U.S. labor force in general. In 1990 over 53 percent of Federal executive branch employees were over 40. BLS projections for the U.S. labor force in 2005 put the 35-and-over age group at almost 63 percent (or 95 million of a projected 151 million member labor force), and it is likely that the

Federal workforce as a whole will experience a comparable rise in this older group.²²

The aging of the workforce can have very positive effects. An older population implies a more stable, experienced, and reliable workforce, one that might be expected to produce goods and services at a higher level than a younger group. However, some researchers see a negative side to the situation. "Workforce 2000," for example, suggests that older workers may be less flexible and adaptive, perhaps less responsive to the changing needs and circumstances in their organizations. They also may be less likely to welcome innovations in the workplace, less likely to express interest in training for changing occupations, and less prone to be mobile, either because of personal inclination or because of personal, financial, and other commitments that tend to increase with age and tie a person to a given location.²³ (It should be noted that mobility is considered a positive attribute for some occupations, but has by no means been proven necessary to successful performance for most Federal jobs.)

Another aspect of an aging labor force that could be considered negative is the presence in the workforce of many people at midcareer level whose working lives may stretch out 10, 20, even 30 more years. Not only can these workers become frustrated by their lack of advancement, but their presence can block the advancement of younger workers eager to get ahead. Such

²⁰ U.S. Department of Labor, "Outlook: 1990-2005," *Occupational Outlook Quarterly*, Fall 1991, vol. 35, No. 3, p. 11.

²¹ "Workforce 2000," p. xiii; "Civil Service 2000," pp. 17-18; Strategic Plan for Federal Human Resources Management, p. 5. (See this report's footnotes 1, 2, and 4, respectively, for full citations.)

²² U.S. Department of Labor, "Outlook: 1990-2005," *Occupational Outlook Quarterly*, Fall 1991, vol. 35, No. 3, p. 11.

²³ "Workforce 2000," pp. 81-85.

Rising Age of the Workforce

situations may be exacerbated by the trend towards flatter organizations that currently is getting the attention of both public and private sector managers. Doing away with layers of management to lower costs, improve communications, and empower employees can also mean the disappearance of managerial jobs for workers who are waiting to move up.

This type of "plateauing" phenomenon can have other negative consequences. Some older workers could become less productive because they have remained too long in a grade or organizational level (plateau) at which they no longer find their work satisfying. These people may be thoroughly familiar with all aspects of their jobs, but unlikely or unable to find new ones.

Some workers will delay retirement as long as the private sector doesn't offer ready employment to those who wish to retire from the Federal service but continue to work.

Although plateauing can be a problem for younger workers, too, older employees are more likely to be affected. "Civil Service 2000" describes the situation this way: "In light of the inherent difficulty of motivating workers in large public bureaucracies, it will be imperative that Federal managers focus great energy on training and inspiring their aging workforce."²⁴

In other words, the aging of their workforces is challenging organizations to find ways to keep plateaued workers productively employed doing satisfying work. This could mean training workers in a succession of occupations; creating nonhierarchical career paths; or finding ways to make even downward organizational movement a desirable and valid option contributing to

overall personal and career growth. It could mean redefining the whole concept of career growth and what a successful career really is.

What the Agencies Have Experienced

When we asked agencies about the rise in the average age of the workforce, most of them agreed that projections of higher average workforce age did apply to them. Of the 32 agencies that responded to the question, 25 said their workforce average age is increasing. Only seven indicated that they were not seeing a change in the age of their workforce or that they did not expect such an increase.

Among the agencies that expected their workforces to continue to increase in average age there were a few common issues related to the aging trend. First, several agencies pointed out that the reduced employment levels that they are expecting will result in a decrease in recruitment of younger people into the workforce. In addition, reductions in force, currently a given in the defense agencies, but anticipated in others as well, tend to displace more younger workers than older workers because of the role tenure plays in the process. Finally, a number of agencies related the aging of their workforces to the national economy. Some workers, they believe, will delay retirement as long as the private sector doesn't offer ready employment to those who wish to retire from the Federal service but continue to work. All of these factors contribute to the aging of the workforce in Federal agencies.

Generally speaking, the organizations not anticipating an aging workforce are law enforcement agencies. There, the mandatory retirement age for law enforcement personnel is 57 (having risen in 1991 from 55). This age requirement serves to depress the overall average age in the agencies, although the non-law-enforcement staff (for whom there is no mandatory retirement age) could be affected by the trend towards an older workforce.

²⁴ "Civil Service 2000," p. 27.

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As "Civil Service 2000" noted, the pattern of aging is uneven across agencies.²⁵ However the general trends reported by the agencies that responded to our questions appear to be consistent with the trends suggested by the "Workforce 2000" and "Civil Service 2000" scenarios.

What Agencies Are Doing About the Aging Workforce

We asked agencies whether they were contemplating or using any programs intended to address issues related to a rise in the average age of the workforce. Examples of such programs include training for workers whose skills have become obsolete and need to be brought up to date; retraining for workers who want to change occupational fields; programs to motivate workers who have occupied the same position or grade level for a long time and for whom advancement is unlikely. We found a fairly low level of agency activity geared specifically towards counteracting the potential negative aspects of the aging workforce, and almost no reported activity to take advantage of the positive aspects of the older workforce.

Whether this indicates that the agencies reporting to us aren't experiencing the negative aspects of an aging workforce, or that they simply haven't done anything about it is not clear. What we found suggests that if there *are* problems, they have not become sufficiently serious and widespread to cause a surge in agency programs designed to address older workers' issues. It may simply be too soon for Federal employers to have felt any ill effects from the aging of the workforce.

In "Workforce 2000," Hudson Institute analysts expressed the belief that "it is difficult to overestimate the impacts that this maturing of the population and the workforce will have on the society and the economy."²⁶ At the same time, the

analysts pointed out that the positive aspects of workforce aging (e.g., experience and reliability) would probably be most prominent in the early 1990's, but that the negatives associated with an aging workforce (resistance to change, employee burnout) may have a greater effect as the decade wears on and more baby boomers head for their 50th birthdays.

Problems associated with an older workforce may not have become sufficiently serious and widespread to cause a surge in agency programs to deal with them.

Given the relatively low level of program activity that seems to have been prompted by issues tied to the aging of the workforce, this scenario may describe what's happening in the Federal workforce today. Another, more unsettling, possibility is that with all the other problems competing for attention in an environment of declining resources, agencies are deferring action on problems associated with the older workforce until they become critical.

Some 15 of the 33 agencies that responded to our question about the existence of programs related to a rise in the average age of the workforce reported that they do use such programs. An additional 6 reported considering or planning such initiatives, and 12 said they had not established any programs to deal with the issue of an older workforce. Few agencies had created any programs specifically to respond to long-term projections that the workforce will continue to age through the 1990's. As with recruiting issues, the agencies tend to use established programs (such as normal training activities) rather than devising new ones especially to tackle problems or seize opportunities created by an older workforce.

²⁵ Ibid., pp. 21-22.

²⁶ "Workforce 2000," p. 81.

Rising Age of the Workforce

Common Approaches

Among the various approaches agencies reported taking to address the rising average age of the workforce, several emerged as the most common across the agencies we queried. One of these is health or wellness programs. These initiatives, generally part of established employee assistance programs, are intended for all employees, regardless of age. However, some agencies recognize that as we approach the end of the decade and the proportion of older employees increases, maintaining a vital workforce requires particular attention to the health concerns of mature employees. These agencies cited wellness programs among those that they use specifically in relation to the rise in the age of the workforce, the intention being to keep employees healthy, motivated, and productive for a longer time. The programs typically include counseling, health promotion, disease prevention, and fitness activities.

Flexibility in scheduling and worksites is another approach several agencies share in addressing issues related to the aging workforce. In this context, the programs are beneficial to agencies and employees alike. Flexibilities such as part-time schedules and work at home can extend an

Training of older workers tends to be a byproduct of training in general or training for other purposes.

employee's working life and contributions to the Federal service, and at the same time ease the employee's transition into retirement. These programs may also change a "burnt-out" worker's view of the work environment, possibly raising morale and productivity.

Perhaps the most commonly reported agency response to the aging of the workforce were the various kinds of training and retraining that

agencies use to update obsolete skills and to rekindle employee interest and enthusiasm. Again, these are not programs created specifically as an answer to demographic change. We did not find managers focusing extra energy on training and inspiring their older workers, as "Civil Service 2000" called for. Rather, training of older workers tends to be a byproduct of training in general or training for other purposes.

For example, several agencies described programs that permit managers to fill positions with employees who have been reassigned from different occupations. These workers are then trained to perform the new job, in what amounts to a career change. The employees in such programs are selected not for their experience, but with an eye to their potential to do the job, and they frequently have formal training plans to accomplish a successful transition.

Programs such as these are not limited to older workers, and they may well be used to provide opportunities for younger employees more often than for the older worker. Nevertheless, the programs certainly can be useful in motivating seasoned employees who find their old jobs uninteresting; whose opportunities for upward mobility in their old jobs are too limited; or who have learned everything there is to know about the old job and want to learn something new.

Less Common Approaches

We also found some less typical arrangements that address the issues related to the aging of the workforce. A very successful program at NASA's Ames Research Center brings together groups of junior and senior administrators, engineers, and scientists to work in an informal environment on projects and topics primarily of their own choosing. The program—called Interactive Development for Engineers (IDEAS), although it is not limited to engineers—has been operating for over 7 years. Participants meet in a residential setting five times in the course of a year. They

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focus on team building and fostering good communications between the generations of workers (communication that might not otherwise be established).

The NASA program takes advantage of the presence of the older workers who, in the course of the training, impart formal and informal corporate knowledge to the less senior participants. The senior employees are involved in the program as participants rather than leaders, and they describe the experience as "rejuvenating." This is an arrangement that makes the most of the positive aspects of a mature workforce by drawing upon the experience of the agency's older employees. It improves communication in general and is a morale booster for all who take part.

The Department of Labor, recognizing that many people whose careers have peaked may have many years of employment ahead before they retire, has developed a course for employees who find themselves at a plateau in their careers. The

2-day seminar is intended to help employees identify factors that contribute to their job satisfaction, discover aspects of themselves that motivate and challenge them to be productive, and set achievable goals to increase their productivity. The topic of career change is addressed, but is not the purpose of the training. The course prepares participants for job satisfaction discussions with their supervisors, who are offered a companion course, "Opening Avenues of Productivity."

The supervisors' course reviews techniques for maintaining morale and personal satisfaction. It examines many of the same issues as the employees' course and prepares supervisors for formal, results-oriented discussions with their employees. Supervisors and their employees are encouraged to attend their respective courses concurrently and meet to discuss the issues afterwards. The seminars have been well received and consideration is being given to marketing the program to achieve very broad participation throughout the Department.

Growing Racial and Ethnic Diversity in the Workforce

What the Experts Predicted

One of the most publicized of the Hudson Institute predictions about the future American workforce concerns its racial and ethnic composition. Over the decade of the nineties, the labor force from which the Federal Government will replace departing employees and hire new entry-level workers will become increasingly nonwhite. This is a prediction that is not at all in dispute, although it may not be realized in quite so dramatic a fashion as many seem to have inferred from the Hudson Institute studies.

In "Workforce 2000," the growing share of minorities entering the labor force was cited among the five most important demographic facts about the Nation's workers and jobs at the end of the decade. This idea was embraced and disseminated by educators, business leaders, journalists, and others who freely quoted the report and raised the American consciousness about the importance of attending to the current and coming changes in labor force demographics.

In the realm of equal employment opportunity and human resources management, the effect was widely felt, and intense interest in workforce diversity, diversity management, and the diversity management business developed. In the foreword to a recent well-received book on diversity management, the chief executive officer of a major U.S. corporation, citing "Workforce 2000," identified the "stark facts of demograph-

ics" as an urgent reason for the interest in diversity management and the boom in the diversity business. He wrote:

The growth in the U.S. labor force now and for the foreseeable future will be largely composed of women, minorities, and immigrants * * *. Companies now realize that they must attract, retain, and promote this full spectrum of people just to keep the business running. So great is their need that advice on the management of diversity has suddenly become a growth industry.²⁷

Other diversity experts shared these sentiments:

* * * many realize that "Workforce 2000" is already here. Significant changes in the composition of the labor force are already occurring and have far reaching implications for the ways that public and private institutions are to be led and managed in the future.²⁸

Clearly, the demographic information presented in "Workforce 2000" gave diversity a strong push into mainstream management thinking and practices in both business and Government. At the same time, the report, which presented a number of different measures of demographic change in the workforce, emphasized one particular measure that turned out to be somewhat

²⁷ R. Roosevelt Thomas, Jr., "Beyond Race and Gender: Unleashing the Power of Your Total Workforce by Managing Diversity," AMACOM, New York, 1991, Foreword, p. ix.

²⁸ Marilyn Loden and Ronnie Hoffman Loeser, "Working Diversity: Managing the Differences," *The Bureaucrat*, Spring 1991, vol. 20, No. 1, p. 21.

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misleading. While "Workforce 2000" reported the projected size of the U.S. labor force in the year 2000 (140.4 million) and the projected nonwhite share of that labor force (15.5 percent)²⁹, the number of *net new* entrants to the labor force was given more emphasis in the report and received more attention from the press and public.

Thus, the report contained the now rather famous projection that "White males * * * will comprise only 15 percent of the net additions to the labor force between 1985 and 2000."³⁰ Unfortunately, in the report's executive summary the word "net" was omitted from the statement and this error compounded a popular impression that the racial and ethnic makeup of the workforce was about to undergo a rapid and radical change. Both private and public sector employers took note, and the push was on to develop programs to ensure that organizations were ready for the assumed deluge of minorities and women into the labor force.

Research conducted since the publication of "Workforce 2000" suggests less dramatic conclusions. Further, there is agreement among some analysts that calculation of "net additions" should be used guardedly. According to one researcher:

It is necessary to interject a word of caution about *net entrants* to the labor force, that is the number of entrants minus the number of leavers. * * * The total number of entrants minus leavers * * * is small compared with the total number in the labor force * * *.³¹

Economic Policy Institute analysts also found the "Workforce 2000" approach misleading, noting:

[T]he focus on net entrants distorts the picture, ignoring the many [mostly white male] workers who simply replace those exiting from the workforce * * *. This is the reason, for example, why white males make up such a small proportion of workforce entrants, calculated on a net basis.³²

In its report on demographic issues facing the Federal Government, GAO echoed these concerns, noting, "Although it is important to recognize that the demographic composition of the labor force is changing, it is also important not to overstate those changes." The report went on to explain that BLS projections show a U.S. labor force at the turn of the century that is much more similar to today's labor force than "Workforce 2000" findings implied.³³

The predicted similarity can be illustrated by comparing the current proportions of whites and minorities in the national civilian labor force to projected future proportions. Figure 1 depicts this comparison. The figures there show the percentage of the labor force occupied by whites dropping from 78.5 percent in 1990 to 73 percent in 2005. Over the same period, the proportion of minority members of the labor force is projected to increase from 21.5 to 27 percent.

Although these changes are indeed significant (in the year 2005, each percentage point would represent about 1.5 million people), they are not

²⁹ "Workforce 2000," p. 89. The most recent BLS information projects the size of the labor force in the year 2005 at 150.7 million with a nonwhite proportion of 16.6 percent. Note that in presenting these data, BLS reports that persons of Hispanic origin may be of any race. (Howard N Fullerton, Jr., "Labor force projections: the baby boom moves on," Monthly Labor Review, vol. 114, No. 11, November 1991, table 1, p. 33.)

³⁰ "Workforce 2000," p. 95.

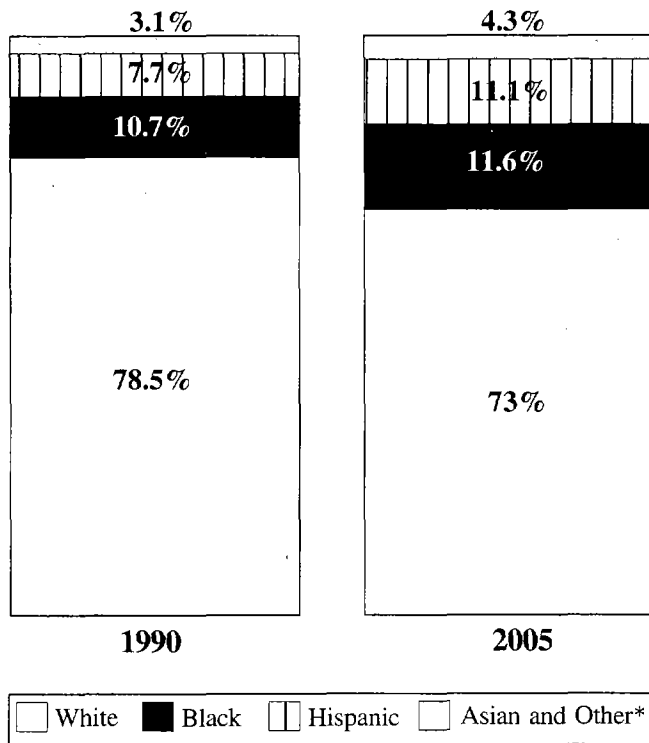
³¹ Phyllis Barnum, "Misconceptions about the Future U.S. Work Force: Implications for Strategic Planning," Human Resource Planning, 1991, vol. 14, No. 3, p. 212.

³² Mishel and Teixeira, op. cit., p. 31.

³³ U.S. General Accounting Office, op. cit., pp. 32-34.

Growing Racial and Ethnic Diversity in the Workforce

**Figure 1. Race or National Origin,
U.S. Civilian Labor Force
1990 and Projected to 2005**



* The Department of Labor uses the term "Asian and other" for the group that includes Asians and Pacific Islanders, and American Indians and Alaskan natives.

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Monthly Labor Review," November 1991, vol. 114, No. 11, p. 41.

unique status of each group within each agency. As we have learned, one size doesn't fit all—and that includes our approach to the recruitment and advancement of minorities.

What the Agencies Have Experienced

The changes in the composition of the American labor force are reflected in the racial and ethnic composition of the Federal workforce. Federal law requires the Government to conduct programs to eliminate situations in which the proportion of each minority group in the civil service is less than that group's share of the U.S. labor force.³⁴ Therefore, as the minority demographics of the labor force change, the Government must ensure that the racial and ethnic makeup of the Federal workforce keeps pace.

Agencies have had affirmative employment programs for a long time to ensure a representative workforce composed of various racial and ethnic groups. At the end of fiscal year 1992, minorities accounted for over 28 percent of the Federal workforce. (Compared with the 23 percent minority share in the U.S. civilian labor force.)³⁵

Agency by agency examination of minority representation also reveals a fairly positive picture. Of the 22 agencies we contacted in connection with this study, 16 had minority representation at least equal to that of the civilian labor force (although only two—Air Force and Justice—had Hispanic representation that met or exceeded that target). Nearly half the agencies had minority representation considerably higher than the civilian labor force, ranging from 31 to 46 percent of agency workforces. In only four agencies minority employees represented less than 20 percent of the agency's workforce.³⁶

startling. The relatively gradual nature of change in the racial and ethnic composition of the U.S. labor force argues against a sudden shift in resources to respond to a sudden change in demographics. Instead, the Federal Government needs to give unfaltering attention to programs that foster minority intake and advancement and promote good human relations. In addition, since we also know that demographic changes will not be uniform across all racial and ethnic groups, these programs must be tailored to the

³⁴ 5 U.S.C. 7201.

³⁵ Federal Equal Opportunity Recruitment Program Annual Report to Congress, p. 36. (See full citation in footnote 15.)

³⁶ U.S. Office of Personnel Management, unpublished CPDF (central personnel data file) data, October 1992.

Growing Racial and Ethnic Diversity in the Workforce

Although these results show improvement, the law further requires that minority representation in the Federal workforce be viewed in terms of minority share of employment categories such as occupational, professional, or grade-level groupings. Thus, overall minority share of the workforce tells only part of the story, and focusing on it can divert attention from areas where inequities still exist.

percent of that workforce, occupied about 35 percent of the GS 1 through 10 positions but only about 19 percent of GS 11-13, 12 percent of the GS 14-15, and about 8 percent of the SES jobs.³⁷

Thus, although the overall representation of minorities in the Federal workforce exceeds that of the U.S. civilian labor force, the disproportionate share of lower level jobs held by minority workers suggests a possible lack of equal oppor-

Table 1. Race or National Origin: Federal vs. U.S. Civilian Labor Force, Sept. 1992

Category	All Workers		Men		Women	
	Federal	U.S. Civilian	Federal	U.S. Civilian	Federal	U.S. Civilian
White	71.8 %	77.0 %	43.8 %	42.1 %	28.0 %	34.9 %
Black	17.2	10.6	6.7	5.2	10.5	5.4
Hispanic	5.6	8.9	3.3	5.4	2.3	3.5
Asian/Pacific Islander	3.5	2.6	2.1	1.4	1.4	1.2
Native American	1.9	0.9	0.9	0.5	1.0	0.4
Total Minority	28.2	23.0	13.0	12.5	15.2	10.5

Source: U.S. Office of Personnel Management, "Federal Equal Opportunity Recruitment Program Annual Report to Congress," January, 1993, p. 37.

For example, when minority statistics for the Federal workforce are broken down by specific minority group, the results are generally positive—most minority groups have a higher share of Government jobs than their share of the U.S. labor force. However, the numbers also show that not all minority groups are well represented. Table 1 shows these proportions by race and gender. Note that Hispanic men and women are the only minority group members who remain underrepresented in the Federal workforce.

Similarly, racial and ethnic representation data by grade range, shown in figure 2, also suggest an imbalance. In 1992, while whites made up about 74 percent of the nonpostal, executive branch white-collar workforce, they occupied 88 percent of GS 14 and 15 jobs, and 92 percent of Senior Executive Service (SES) jobs. Minorities, at 26

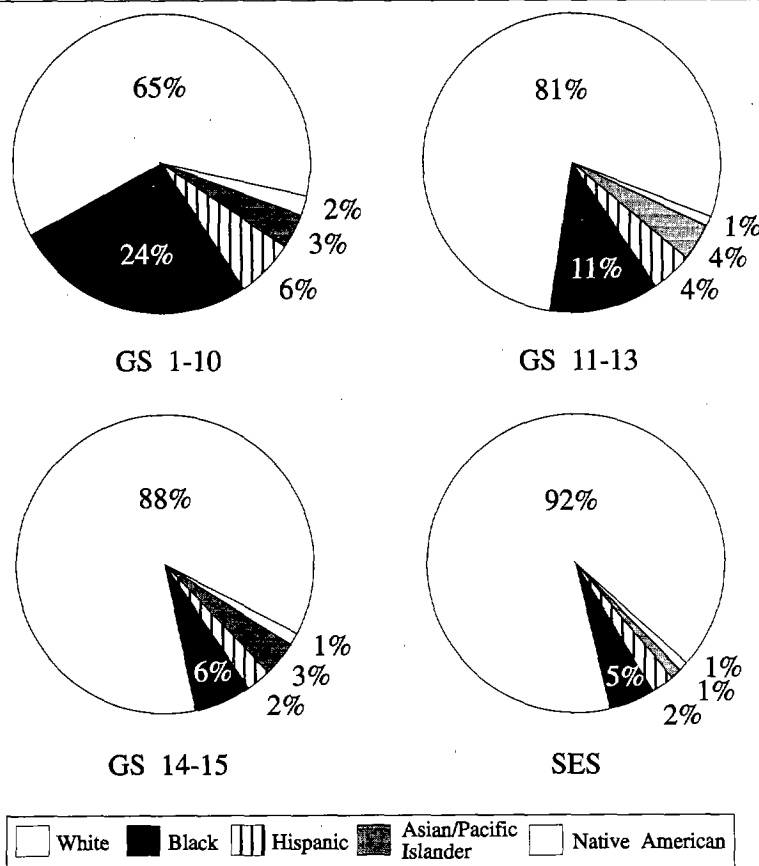
tunity in patterns of hiring and advancement. The situation requires the continued, resolute attention of Federal employers to ensure that all employees are able to progress in their careers without nonmerit factors limiting their opportunities. The lack of minority representation in some parts of some agencies and the degree of underrepresentation at higher grade levels suggest that targeted affirmative employment needs continued support and attention.

At the same time, we should not assume that affirmative employment cannot be redefined somewhat to give stronger emphasis to affirmative advancement and promotion programs. Although priority emphasis on Hispanic *intake* should continue, some of the attention currently concentrated on increasing minority intake could well be refocused on *advancement* of under-

³⁷ Ibid.

Growing Racial and Ethnic Diversity in the Workforce

Figure 2. Federal White Collar Distribution by Grade Range and Race or National Origin, Oct. 1992



Source: U.S. Office of Personnel Management, CPDF, October 1992

Note: Percentages may not total 100 due to rounding.

represented groups, to include the training and developmental activities that are most likely to lead to promotion.³⁸

The way Federal agencies apply remedies for minority underrepresentation can be compared to the situation identified in the Board's study on women and the glass ceiling in the Federal Government. That study showed that contrary to the conventional wisdom, women are not promoted at a lower rate than men at senior grade levels—GS 13 and above. Rather, the lower promotion rates for women come at the "gate-

way" grades of GS 9 and 11.³⁹ Thus, concentrating resources on moving women into the senior grades rather than on getting women into and beyond the gateway grades may not be the best way to shatter the glass ceiling.

Likewise, Federal agencies' heavier concentration on minority intake than on minority advancement may not be the most effective way to achieve a fully representative workforce. Equal—or greater—emphasis is needed on moving minorities into the specific occupations and grades where underrepresentation still exists. As noted above, strong emphasis on Hispanic intake, as well as advancement, is also needed.

In the case of both women and minorities, as progress is made in achieving representation in some occupations and grade levels, the Government should continually refocus its affirmative employment objectives to keep up with current realities and to assure that resources are concentrated where they're most needed.

What Agencies Are Doing About Diversity in the Workforce

The concern of Federal agencies about minority representation is evident from their responses to our questions about increased numbers of minorities in the workforce. When asked whether they believed minorities would represent a larger share of their agencies' new hires during the nineties, 30 of the 31 agencies that responded replied that they anticipate an increase in minority new hires and a growth in the minority share of the workforce. A number of the responding agencies attributed this expectation as much to

³⁸ Publication of an MSPB study addressing in detail the representation of minorities in the workforce is expected in 1994.

³⁹ U.S. Merit Systems Protection Board, "A Question of Equity: Women and the Glass Ceiling in the Federal Government," October 1992, p. x.

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their own intense efforts to increase the diversity within their organizations as to the changing makeup of the national labor force from which new hires are drawn. These agencies not only expect the number of minorities to increase, they want to do everything they can to assure that this happens.⁴⁰

The agencies that responded to our questionnaire all expressed commitment to increasing minority representation in the workforce, and they all have some form of affirmative recruitment program to bring this about. In fact, when asked to discuss their programs that deal specifically with issues related to the increasing ethnic diversity of the workforce, 25 of the 33 agencies that responded described their affirmative recruitment programs. There seemed to be greater emphasis on affirmative employment than on other diversity-related initiatives. As noted above, overall representation

Many agencies appeared to be concentrating more on increasing the intake of minorities than on strong programs for advancement of minorities who already are members of the Federal workforce.

of minorities in the Federal Government exceeds that of the U.S. civilian labor force, while distribution of minority group members throughout the grade levels is unbalanced. Nevertheless, many agencies appeared to be concentrating more on increasing the intake of minorities than on strong programs for advancement of minorities who already are members of the Federal workforce. (Emphasis on intake is, of course, appropriate in the case of Hispanic men and women who, as noted above, are underrepresented in the Federal workforce.)

Only six of the agencies that described their programs to deal with diversity reported specific, formal programs that address the advancement of minorities already in the workforce. We did not specifically ask agencies about their advancement programs, so this is not to suggest that similar programs do not exist elsewhere in the Government, or have not been implemented since we first inquired. These, however, were the activities brought to our attention by the departments and agencies themselves in their responses to our questionnaire. In the agencies that reported them, advancement programs include actions such as creating career paths and identifying candidates for development; providing training or other activities that help minorities acquire the skills and contacts that lead to career progression; and surveying underrepresented groups to identify barriers to advancement.

The agencies also told us about other programs they're using to address diversity issues, although, again, none appear to receive as much attention as affirmative recruitment. Twenty agencies reported that they provide diversity training or "valuing diversity" programs. A number of agencies are requiring cultural diversity training for all members of their organizations; some are requiring it as part of standard supervisory development programs. Much of the training focuses on sensitivity to cultural differences. Such training depicts cultural differences as positive characteristics rather than as factors that limit employees' ability to contribute or their potential for rising in the organization.

(Neither the quality of this training nor the extent to which it is believed to be a success were addressed in this study, nor did the agencies responding to our questionnaire offer any assessments of their programs. However, these matters are extremely important, and given the proliferation of diversity training and the sensitivity of the issues surrounding workforce diversity and

⁴⁰ In February 1993, MSPB sponsored a symposium on diversity in which officials from Federal agencies, employee organizations, and academia discussed issues surrounding diversity in the Federal sector. The report of those proceedings, "The Changing Face of the Federal Workforce" (September 1993), provides additional insights into agency perspectives on diversity.

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training, it would be prudent for agencies to closely monitor the results of these programs.)

Finally, several agencies described programs that go beyond traditional affirmative outreach, which, for entry level positions, typically consists of organizations approaching minority-dominated schools and trying to hire their graduates.

More young minority group members have to be persuaded, first, to stay in school, and second, to focus on subjects that provide the appropriate background for jobs where minorities are underrepresented.

The agencies that have gone beyond this approach have concluded that full representation of minority groups in all occupations and at all grade levels will not be achieved by relying solely on current levels of minority presence in, for example, engineering, science, and math curricula.

Rather, more young minority group members have to be persuaded, first, to stay in school, and second, to focus on subjects that provide the appropriate background for jobs where minorities are underrepresented. These agencies have, therefore, forged links with minority schools through programs like adopt-a-school, apprenticeships, scholarships or other financial support, and similar relationships that motivate students to remain in school, encourage studies that relate to agency missions, and teach students and their teachers about the Federal Government in general and the participating agency in particular. The agencies hope that through such programs they can help to keep future members of the American labor force in school acquiring the skills that are going to be needed in the Federal workforce in the years ahead.

Intake efforts should continue, particularly for underrepresented groups (Hispanics and white women), and for occupations that offer these employees the potential to reach higher grades. But more emphasis needs to be given to the advancement of underrepresented groups in the workforce. Intensifying efforts to advance minorities could take many forms, and may vary by agency. For example, agencies and their subelements can identify the job-related attributes and experiences (over and above job qualification requirements) that typically lead to career success in their specific organizational cultures. Training needs assessments can be undertaken to determine the areas in which employees need help in acquiring the attributes and experiences associated with successful careers. This knowledge can help agencies devise development plans geared to the minority employees' particular needs and agency environments.

Another element in these development programs could be formalized or expanded mentoring programs. A number of agencies told us about successful mentoring programs they have established for students and for student employees, and a few mentioned programs that included mentoring relationships for employees in management development programs (usually at the GS 12-14 levels). Agencies did not report wide

The same kind of enthusiasm agencies use to persuade students to stay in school should be applied to current employees to encourage self-development.

use of mentoring programs for lower graded workers, but these may be excellent programs to extend to employees at lower grade levels and to those who are not associated with any particular "fast-track" program.

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Agencies would do well to examine some of their successful minority intake programs and adapt the elements that can apply to on-board employees for use in internal advancement programs. The same kind of enthusiasm agencies use to

persuade students to stay in school or to pursue a particular curriculum should be applied to current employees to encourage self-development and other activities that will help them develop the qualities that will aid in their career progress.

Increase in Skill and Education Requirements

What the Experts Predicted

Among the four key trends that "Workforce 2000" tells us will shape the last years of the 20th century is the rise in the level of skill required to do the new jobs that will be created during those years.⁴¹ The report predicts that between the late 1980's and the end of the century, a majority of all new jobs will require postsecondary education. Professional, technical, and sales jobs will grow the fastest, and very few new jobs will be created for people who can't read and use mathematics. At the same time, the fastest growing segment of the labor force is expected to comprise people who are educationally disadvantaged. Thus, the "Workforce 2000" analysts foresaw a gap between the skills needed for the fastest growing new occupations and the skills the fastest growing group of new workers will bring to the job.

In focusing on the Federal sector, "Civil Service 2000" repeated and amplified this prediction, noting that "[b]ecause the Federal government employs relatively more managers, professionals, and technicians than other U.S. employers, the skills required of Federal workers are greater, on average, than those of employees in the nation as a whole."⁴² Federal jobs, the study reported, are shifting towards higher skills at a rapid rate. The jobs that will be created in the largest numbers will be in professional and technical occupations, while the jobs most likely to disappear are clerical and blue-collar positions. "Civil Service 2000" acknowledged that needs will differ from agency to agency, but observed that for the Federal

Government as a whole, the addition of more highly skilled workers will be the "overriding requirement" during the 1990's.

According to Hudson Institute analysts, this situation is expected to translate, for Federal employers, into a need for concentrating training on new workers in the lowest level jobs and on more tenured, highly skilled employees in rapidly evolving fields. The first group of employees may need basic skills and remedial training, while the second group, to keep up with scientific and technical advances, will need continuing development and upgrading of knowledge and skills. About this higher level group, "Civil Service 2000" states:

If agencies are to maintain an up-to-date skill base comparable with private industry (and this skill base will be essential to deal adequately with contractors), they will be forced to reinvest continuously in their senior-level technical workforces.⁴³

Economists and statisticians from BLS have developed projections to the year 2005 showing trends in job growth for the Nation's workforce by occupational area. Their findings support expectations that employment growth will be greater in occupations that require higher levels of training or education than in jobs that require less formal preparation. However, BLS projections do not sustain the sense of urgency about increasing skill requirements that is conveyed by "Workforce 2000" and "Civil Service 2000."

⁴¹ "Workforce 2000," p. xiii.

⁴² "Civil Service 2000," p. 10.

⁴³ Ibid, p. 13.

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To illustrate, from 1975 to 1990 U.S. civilian labor force employment in the executive/administrative/managerial job category grew just over 83 percent, and growth in the professional specialty category (including engineers, scientists, doctors, lawyers, and teachers) was nearly 60 percent. (See table 2.) During the same period, employment in administrative support occupations (including clerical jobs) grew less—about 34 percent. The latest published BLS projections set the growth between 1990 and 2005 at about 27 percent for executive and managerial jobs, 32 percent for professional specialties, and 13 percent for administrative support jobs.

Thus, there's no question that available figures forecast faster growth in jobs that demand more education. At the same time, it's clear that this is not a new phenomenon and, further, that the rates of increase are expected to be slower between 1990 and 2005 than they were in the previous 15-year period.⁴⁴

growth in jobs requiring more education. For example, should professional jobs increase by 32 percent between 1990 and 2005, as BLS projects, they will make up about 11 percent of the jobs in the U.S. civilian labor force, or about 16 million jobs. Over the same period, administrative/clerical jobs, which are expected to grow by only 13 percent, would still represent more than 17 percent of the labor force in 2005, or around 24.8 million jobs.

Further tempering the concern about the consequences of a skills increase is the surplus of college graduates that BLS projects will occur through 2005. According to BLS analyses regarding the supply and demand for college graduates over the next decade, there appears to be little evidence that employers will face a serious general shortage of college graduates.⁴⁵

In the years between 1990 and 2005, about 9 million new jobs requiring a college degree are expected to be created, and an estimated 4.7 million college-level jobs will have to be filled to replace workers who leave (e.g., retire, become disabled, die), for a total of nearly 14 million jobs requiring higher level skills.⁴⁶ (These jobs include executive, administrative, and management occupations, professional occupations, technicians, and sales representatives and supervisors.)

The Department of Education's National Center for Education Statistics estimates that during that same period more than 17 million bachelors degrees will be awarded.⁴⁷ That represents a projected surplus of

**Table 2. Growth in Selected Occupational Groups
(U.S. Civilian Labor Force)**

Occupational Group	1975-1990	1990-2005
Executive, admin., managerial	83 %	27 %
Professional specialty	60	32
Technicians and related	76	37
Admin. support, clerical	34	13
Operators, laborers, fabricators	7	4

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Monthly Labor Review," November 1991, vol. 114, No. 11, p. 65.

It's also worth noting that the very large numbers of jobs that require less education balance to some extent the larger percentage of employment

⁴⁴ George Silvestri and John Lukasiewicz, "Occupational employment projections," *Monthly Labor Review*, November 1991, vol. 114, No. 11, p. 65.

⁴⁵ This discussion uses the BLS "moderate" employment growth projections and "middle" National Center for Education Statistics degree projections.

⁴⁶ Kristina J. Shelley, "The future of jobs for college graduates," *Monthly Labor Review*, vol. 115, No. 7, July 1992, pp. 15-16.

⁴⁷ U.S. Department of Education, National Center for Education Statistics, "Projections of Education Statistics to 2003," December 1992, p. 59, and Kristina J. Shelley, "More College Graduates May Be Chasing Fewer Jobs," *Occupational Outlook Quarterly*, vol. 36, No. 2, Summer 1992, p. 10.

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college graduates of over 3.5 million for the period. Further, a significant proportion of today's college students—31 percent—graduate with majors in scientific and technical areas, an important consideration for the Federal Government, which employs many workers in these fields and which traditionally has cited science and engineering as hard-to-fill occupational categories.⁴⁸

While these mitigating circumstances don't alter the fact that jobs requiring higher skills are on the increase (and at a faster pace than lower skill jobs), they do lend strength to the argument that the changes taking place are gradual rather than precipitous, the effects will be moderate rather than extreme, and plans formulated to deal with the changes need to incorporate all these considerations.

What the Agencies Have Experienced

Just as some of the experts differ in their views about a coming increase in the skills that will be required in the U.S. labor force, Federal agencies' responses reflect mixed opinions about the degree and nature of increased requirements the Government will face. From the agencies' response to our question about the likelihood of higher skill and education requirements in the nineties, we perceived a fairly widely held belief that the rapid advance of technology will result in higher skill requirements. But some agencies disagreed, noting that their requirements were already quite high and that the current level of demand for highly skilled workers is simply expected to continue throughout the decade.

Of the 33 agencies that responded to our question about education and skills levels, 24 indicated that they foresee higher skill requirements for their own workforces. Most did not provide specific examples of the kinds of job upgrading they anticipate; a few cited rapidly advancing scientific and technological occupations as the cause of the upgrading. Several pointed out that increasing

legislative demands and the broadening global scope of some jobs would require a higher level of analytical expertise. Nine agencies responded that they did not believe their jobs would require higher skill or education levels.

Some agencies described direct experience with the increasing skill requirements. NASA, for example, cited the case of scientists and engineers who previously needed flight systems design skill, but now must combine that skill with a knowledge of structural mechanics to function properly in their positions. Other agencies, apparently not convinced of the inevitability of rising skill requirements in their organizations, pointed out that their scientists were already very highly educated. When these scientists depart their current positions they're not likely to be replaced by employees with more education than the Ph.D.'s who already occupy the jobs.

Although the majority of agencies said they anticipate the need for higher skill levels, we did not find substantial anecdotal evidence or objective data to support either side of this issue. Neither a move towards higher substantive skill and education requirements nor an absence of change in skill requirements emerged as the overriding trend reported by Federal agencies. A few agencies that told us they anticipate the need

Given the opportunity to tell us about increasing skill and education requirements, a number of agencies chose to discuss automation skills and basic skills.

for higher skill levels in coming years also pointed out that the need for greater job expertise shouldn't necessarily be construed as a requirement for higher formal education. The needed knowledge may be attainable exclusively on the

⁴⁸ National Science Board, "Undergraduate Science, Mathematical and Engineering Education," March 1986, p. 9.

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job through increasing depth of subject matter expertise and examining and analytical skills.

What we did find were two aspects of workforce skill requirements where some agencies *have* begun to notice gaps—or potential gaps—between what is needed and what employees have to offer. Given the opportunity to tell us about increasing skill and education requirements, a number of agencies chose to discuss automation skills and basic skills. These two areas received the most comment from the agencies that responded to our questionnaire, and are discussed below.

Automation

According to a number of the responding agencies, skill requirements *are* rising, at least to the extent that Government functions are becoming more automated, and to the degree that automation equates to the need for higher skill or education levels. More than a third of the agencies indicated that in their organizations, increasing education and skill level requirements relate to the need for knowledge of automated processes and the ability to use computers as a tool. This is true across occupational lines and in blue-collar as well as white-collar professions.

Many of the agencies that commented on the pervasiveness of automation told us that because so many administrative functions are being automated, administrative professionals and support workers will not be able to function effectively without computer skills. But the issue goes far beyond administrative workers and their support staffs. Medical support people in the Departments of Defense and Veterans Affairs need to be able to assist professionals using computers in health care delivery systems. Automotive workers in the Department of the Army need skills that enable them to understand computerized systems on vehicles they repair. Printers at the Treasury Department's Bureau of Engraving and Printing must deal with a trade that is increasingly automated, with high levels of electronic process control skills required. And

managers everywhere in the Government should be skilled in the use of computers to take full advantage of information contained in automated data bases that will help them make informed decisions.

There's hardly a job in the Federal sector today that isn't touched by automation. Agencies are sensitive to this fact, and in addressing the issue of rising skill levels in the workforce, they mentioned computer literacy and computer skills more than any other area of expertise. Federal employees' own assessment of the situation is consistent with agency officials' views. In the Board's 1992 Merit Principles Survey of the Federal workforce, 47 percent of respondents indicated that they need technology (computer) training to perform their current jobs better.⁴⁹

However, there's another side of this computer coin that bears consideration. While the need for greater sophistication in using computers is increasingly necessary in most jobs, automation is, arguably, a tool to help do a job better, and for many jobs (particularly clerical), once minimum proficiency is achieved, automation can make the job simpler rather than more difficult. In addition, the job of training workers to use computers will change as younger people enter the workforce. The older baby boomers, who are such a large share of the workforce today, generally had to learn about computers on the job. Entry-level employees, especially those coming from colleges and universities, increasingly arrive on the job with computer skills, as previously people came with knowledge of other tools such as typewriters or calculators or adding machines. Even below the college level, exposure to computers is increasing.

Thus, while making sure that agency workforces are trained in the automated tools they need to make their jobs easier, and in the latest developments in computer software, agencies may in the future need to devote less time and fewer resources to computer literacy. Whether this fond hope becomes reality remains to be seen. In the meantime, today's widespread concern about the

⁴⁹ U.S. Merit Systems Protection Board, March 1993, unpublished data from the 1992 Merit Principles Survey.

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nearly universal need for employees to be proficient in the use of automation appears to be well founded.

Basic Skills

Another area in which responding agencies indicated concern about mismatches between jobs and workers is in basic reading, writing, and calculating skills. A commonly held belief among a number of agencies is that even where skills needed for the job have remained constant, applicants with basic literacy and math skills are becoming more scarce. Although agencies generally haven't collected data to confirm this, human resources officials from various agencies had misgivings in common:

The lack of basic skills is a serious employment barrier. * * * [O]ur public schools are not producing enough functionally literate students to meet agency needs with skills tailored to the technologies of the future.

Immigration and Naturalization Service

We have a harder and harder time finding applicants who have a sound foundation in the basic skills in writing and math. * * * So while the level of our skill need may not increase significantly, we need to raise the skill levels of the country's students and population in general.

Department of Housing and Urban
Development

[T]he problem is not in the skills of older workers; rather there appear to be basic skill deficiencies in employees newly entering the workforce.

Department of the Treasury

Although a number of agencies identified literacy as a problem, their concerns apply primarily to entry-level clerical or administrative support workers, an occupational grouping that is growing more slowly than any other in the U.S. civilian workforce, and has actually decreased in the Federal workforce.⁵⁰ Further, data from the Board's 1992 Merit Principles Survey offer little support for the contention that basic skills deficiencies are a critical problem in the Federal workforce.

While not the most objective judges, as discussed below, employees themselves generally report that they neither need nor are receiving basic skills training. Only 0.5 percent of respondents reported basic skills training in areas such as math or English as the most recent training they had completed in the past year. And, asked about additional types of training they need to perform their current jobs, only 4.6 percent of total survey respondents cited basic skills. When narrowed down to entry level and clerical workers the proportions of employees who believe they need basic skills training are higher. Eleven percent of clerical workers and 8 percent of employees at GS grades 1 through 8 reported that they need additional basic skills training to do their jobs better.⁵¹

Government managers no longer assume that employees who have completed high school come to the workplace fully prepared to read, write, and compute.

The contrast between what agencies said they are experiencing and what the 1992 Merit Principles Survey data suggest, is perhaps a subject for further study. The Office of Personnel Manage-

⁵⁰ U.S. Office of Personnel Management, "Occupations of Federal White-Collar and Blue-Collar Workers," Sept. 30, 1991, p. 8. The clerical workforce in the Federal Government declined 7.1 percent between September 1989 and September 1991.

⁵¹ U.S. Merit Systems Protection Board, March 1993, unpublished data from the 1992 Merit Principles Survey.

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ment has, in fact, introduced a test to assess literacy levels of Federal employees and offers the test to agencies as a diagnostic tool. In a project they have undertaken jointly with the Department of Defense, OPM is collecting data that will permit comparisons between the basic skill levels of a Federal workforce sample and those of the non-Federal civilian labor force.⁵² The civilian labor force data that OPM will use was collected in the National Adult Literacy Survey, a project sponsored by the Department of Education and conducted by the Educational Testing Service.⁵³

In the meantime, it is possible to speculate on some of the factors that may contribute to the apparent disparity between the 1992 Merit Principles Survey data and what agencies have told us about workers' basic skills deficiencies. Important among these factors is employees' sensitivity about their skill levels. Employees are embarrassed to admit that they can't read, write, or compute, or that they don't do these things very well. And it can be difficult for employers to identify workers with these problems because many employees become good at hiding their deficiencies.

Some Federal organizations have found that imbedding basic skills instruction in other kinds of courses such as general clerical or "communications improvement" classes is one answer to employee reluctance to enroll in courses marketed as basic skills and literacy training. In the 1992 Merit Principles Survey, employees said that they needed training in communications (16 percent), and human relations (12 percent).⁵⁴ Among clerical workers

specifically, the percentage who reported that they need communications and human relations training were 36 percent and 14 percent, respectively. It's likely that employees are receiving basic skills instruction in the course of some of this training.⁵⁵

To the extent that a literacy problem exists, the Government shares it with the private sector. American companies are investing a considerable amount of time and money in programs they have established to rescue workers and society from the problems caused by a lack of basic skills. According to the study of adult literacy mentioned above, approximately 90 million of the 191 million adults in the United States are deficient in their ability to read and write.⁵⁶ The Commerce Department has estimated the cost to the Nation in lost productivity to be between \$140 billion and \$300 billion a year.⁵⁷

Part of that cost is, of course, borne by those Federal agencies that have workers with basic skills deficiencies. Like their counterparts in the private sector, Federal managers suffer lost productivity due to these problems. Also like the private sector, the Federal Government in many instances has accepted the role of tutor and established basic skills programs (see below). Government managers no longer assume that employees who have completed high school come to the workplace fully prepared to read, write, and compute at the levels needed for most entry-level jobs, and a number of the agencies that commented on the issue reported having established programs to train employees in basic skills.

⁵² Marilyn K. Gowing and Sandra S. Payne, "Assessing the Quality of the Federal Workforce: A Program to Meet Diverse Needs," chapter in "Diversity in the Workplace," Susan E. Jackson and Associates, New York, 1992; also, discussions with Sandra S. Payne, April 1993.

⁵³ U.S. Department of Education, National Center for Education Statistics, "Adult Literacy in America," September 1993.

⁵⁴ U.S. Merit Systems Protection Board, March 1993, unpublished data from the 1992 Merit Principles Survey. One additional factor bearing on the survey results is that it is unlikely that employees who are severely deficient in reading skills responded to the survey at all, so it's probable that we do not have data on the kinds of training that members of this group believe they need.

⁵⁵ George Milite, "Literacy Training: Avoiding the Myths," *Supervisory Management*, September 1991, and Dana Priest, "Employees Upgrade Basic Skills," *the Washington Post*, July 27, 1992.

⁵⁶ U.S. Department of Education, National Center for Education Statistics, "Adult Literacy in America," *op. cit.*, pp. xiii-xxi.

⁵⁷ Theresa Minton-Eversole, "Books," review of "Closing the Literacy Gap in American Business: A Guide for Trainers and Human Resources Specialists," in *Training and Development*, September 1992, p. 99.

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What Agencies Are Doing About Future Skills Needs

We asked agencies whether they were using any programs or had adopted any initiatives to deal with issues related to a rising level of skill and education requirements. As expected, we were informed that there's a great deal of training and development going on in the departments and bureaus of the Federal Government. All agencies either formally or informally assess individual employees' training needs and provide training that enhances employee performance or provides missing skills or education.

But most agencies responding to our questionnaire reported no programs that had been designed specifically to address some clearly identified shortfall between the ability of the workforce to do the job and an expected higher level of job requirements. Although most of the agencies that commented expressed the general belief that in the future jobs would require greater skill or more education, they have not followed up with programs that methodically identify the occupations in which higher skills will be required and that provide training accordingly.

This is not to say that jobs aren't changing or agencies aren't responding capably to occupational changes. But agencies' responses tend to be on a case-by-case or occupation-by-occupation basis, rather than part of broader strategy initiated to deal with a series of projected changes in job requirements.

In response to our question, most agencies described one or more of three general categories of training/development programs in operation:

- ❑ Involvement with schools;
- ❑ Training in areas that support employee job performance and that agencies identified as being of particular concern (i.e., automation and basic skills); and

- ❑ Mission-related training for employees.

Like some of the programs agencies reported using to address other types of change, the training and development programs the agencies described typically are not new initiatives, but proven programs of long standing. These programs are discussed below.

Involvement with Schools

The partnerships that many Federal agencies have established with schools serve not only as recruitment programs but also as components of a strategy that would help students become the kinds of employees the Government wants to hire for the high skill jobs some see in their future. While relationships with high schools, colleges, and universities are intended to result in ready sources of entry-level employees, the partnerships also are seen as ways to influence, in the long run, the quality of those entry-level employees. Among the actions that Federal agencies are taking are:

- ❑ Use of work-study programs such as Stay-in-School and cooperative education arrangements;
- ❑ Encouraging employees to participate in community education activities such as tutoring and student mentoring;
- ❑ Participating in curriculum-building projects, in which Government experts work with college and university officials to develop curricula that will supply students with skills and knowledge that are essential for particular occupational areas important in the Government.

Basic Skills and Automation Training

Basic skills and use of computers on the job are two areas of universal applicability and concern among Federal employers. No matter what the duties, reading, writing, and math skills are

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required in practically all Federal jobs. Although some employees do get by without possessing basic skills, their performance and contributions would be of a higher quality if they had those skills. Likewise, automation is part of an ever-growing number of occupations and if it is not yet part of a job, it's apt to become so in the future. To the extent that automation is already available as a job tool but remains unused, productivity and performance quality are likely to suffer.

Agencies have expressed considerable concern about these issues, and training to teach employees to use the automated tools available or necessary for their jobs is widespread. The training takes all the usual forms. Computer training is both in-house and obtained from commercial vendors. Much of it is also learned on the job or is self-taught in one of the information resources centers to which employees have access at a number of agencies. Keeping people up-to-date is a big job, but there has been progress: over 44 percent of respondents to the 1992 Merit Principles Survey indicated that they were being trained to use new technology as it is brought into the office. In the same survey 17.3 percent of respondents cited technology (computer) training as the type they'd most recently completed, making it the second most common type of recent training (after job-related skills training) for those respondents.

Basic skills or remedial training tends to be inhouse and can be presented as a part of other kinds of instruction. Several agencies have developed fairly formal and systematic programs that address basic skills needs. The Department of Labor, for example, described a clerical support program that offers a helping hand to young employees who may be disadvantaged by training them to fill clerical vacancies in the agency.

Both management and participants are enthusiastic about the program, which has expanded with management's demand for more graduates.

Likewise, the Department of Transportation cited its "Futures" program, intended to form a bridge between high school skills and employers' needs. At the Department of Commerce, a clerical and administrative skills development institute provides training for remedial and skills enhancement purposes. These are just a few of a number of such programs sponsored by Federal agencies.

Mission-Related Training

Among the mission-related training that agencies told us about, the most future-oriented tended to be occurring, not surprisingly, in agencies with scientific or engineering missions. Changes in skill requirements foreseen for administrative and clerical jobs tended to center around the addition or increased use of automated tools for performing the job. In the more technical occupations, however, the situation is somewhat different.

The majority of training remains a reaction to change that is plainly imminent or has already happened.

According to a Department of Energy (DOE) official, for example, new fields are emerging that will (and already do) require the addition of skills to the workforce. Mission changes and the need for up-to-date knowledge in certain areas are prompting some DOE offices to look at external programs such as accelerated degree programs at the master's degree level in environmental engineering and waste management. Similarly,

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agencies such as the Food Safety and Inspection Service of the Department of Agriculture see a particular need to keep employees abreast of new developments. This organization has joined with Texas A&M University to provide training for food inspectors and veterinary medical officers (the predominant occupations in the agency).

As agencies look for ways to assure that their employees can continue to function well in their positions, the trend towards certification in various kinds of jobs has emerged. Certification typically involves on-the-job training, formal classroom training, developmental assignments, and other activities that provide employees the experiences and opportunities to acquire the skills of a well-qualified journey-level employee.

Certification of secretaries and clerical workers by their agencies has become fairly common, but certification also can be found in more directly mission-related occupations. For example, the General Services Administration's certification program covers over 90 percent of its occupations. Participants in the program typically are the less experienced employees who have not yet been promoted to the full-performance grade level of their occupations, but the agency also encourages people at the full-performance grade level to participate. Likewise, the Department of Housing and Urban Development (HUD) has begun a training program which requires HUD

appraisers to complete a specified course curriculum and pass a State appraisers exam resulting in certification. The program satisfies statutory requirements for certification of appraisers.

In general, training related to accomplishing agencies' missions continues much the same as it always has. As missions are modified, as staffs turn over, as new objectives are undertaken, appropriate training—funds permitting—typically accompanies the change. The training is as varied as the missions and agencies where it occurs. But, as a practical matter, the majority of Government training remains a reaction to change that is plainly imminent or has already happened, rather than an element in a strategic plan to respond to projected upgrades in skill requirements.

This is not to suggest that the only good way to deal with a potential skills gap is to make special training activities part of a formal strategic plan. It may well be that the case-by-case approach is the most economically sound and responsive way to meet training needs that are prompted by changing skill requirements. If this is the case, however, adoption of a case-by-case approach should be based on a conscious decision by agency human resource planners about the extent and probability of skills changes within various occupations and in the workforce in general.

Summary, Conclusions, and Recommendations

Summary and Conclusions

In examining Federal agency responses to certain demographic changes predicted in the late 1980's, we found that some of the changes are not coming to pass in the dramatic manner originally forecast (worker shortages and influxes of minority workers); others are happening quietly and without a great deal of attention (the aging workforce); and the jury is still out on the effects and severity of others (skills mismatches and rising job requirements). A majority of the agencies we queried expressed a general acceptance of the demographic predictions we focused on in this study but did not describe situations in their own workforces that serve as compelling evidence that major changes have begun to—or are about to—occur.

Still, after their publication and wide dissemination, the predictions of demographic change did gain acceptance as the conventional wisdom in many agencies. This has prompted some concern about the Government's support of programs that respond to projections that may never materialize. The GAO's 1992 report on demographic issues facing the Federal Government noted:

*** it is also important not to spend time and effort on changes that may not occur. If labor economists and other experts disagree on whether tight labor markets, skills mismatches, and demographic changes will occur, any planning and

policy changes predicated on those conditions may have little practical value in the long run.⁵⁸

These words express an understandable concern, given the Government's early acceptance of the "Civil Service 2000" predictions and the doubts about those predictions that have surfaced since then. However, the Board found no indication that substantial portions of agency resources had been committed to addressing the projected changes. Agencies do not appear to be devoting unwarranted amounts of time, energy, and money to developing new programs to deal with the shortages, mismatches, and other critical situations that were forecast but have now come into question.

While it's good news that agencies have not unnecessarily expended resources to address situations that may not come to pass, the fact remains that Federal agencies can't afford to become lax about workforce planning, regular evaluation of workforce demographics, and appropriate responses to the demographic changes that are occurring.

Federal agencies face a paradoxical situation in dealing with long-range demographic projections—they are expected to develop appropriate long-range plans and programs in response to these projections yet their operational demands, budget constraints, and shifts in mission priorities almost force a continual short-term focus.

⁵⁸ U.S. General Accounting Office, *op. cit.*, p. 15.

Summary, Conclusions, and Recommendations

Consequently, while most Federal agencies acknowledge the long-range workforce projections, specific, forceful action is not their typical response. In recent times unanticipated developments such as the downturn in the national economy and increased unemployment in the private sector have minimized any negative consequences to the Government for its relative lack of long-range planning in this area. However, the lack of negative consequences cannot be expected to continue indefinitely.

Accordingly, the Board believes that there are actions that agencies should be considering to address demographic changes that are happening or that can reasonably be expected to occur. Our recommendations follow.

Recommendations

1. Given continual changes in the social, economic, and international environments in which they operate, Federal agencies need to (1) regularly update their assumptions about the demographic changes that may affect them, and (2) modify agency personnel plans and programs accordingly. Periodically, either some Governmentwide trends or projections will not apply to a specific Federal agency or events will occur that alter or invalidate some of those workforce projections. Rather than obviating the need for long-range workforce planning, such situations highlight the obligation of individual Federal departments and agencies to accept greater responsibility for long-range workforce planning. Accordingly, agencies should develop or refine mechanisms for gauging their own demographic positions and should incorporate ways to accommodate demographic changes as they plan their human resources programs. Doing so should allow them to respond forcefully to demographic shifts that are likely to have a significant impact on their own workforce. Waiting until a problem occurs is not an acceptable response in today's environment.

It's important that the gradual nature of the changes that are occurring not result in inaction on the part of Federal employers. The subtlety of demographic changes is itself a challenge—the gradual pace of the changes means their implications can be overlooked, their importance unrecognized, and plans not made to address them. Preserving, unaltered, the human resources programs of the past is not the way to face an uncertain future. A thoughtful, realistic assessment of the degree and probable impact of changing demographics, methodical planning to address those changes, and corresponding, timely shifts in program focus or resources will ease the ongoing transition to the Federal workforce of the next century.

2. Federal agencies should resist becoming complacent about the current ease with which they are recruiting high-quality job candidates. Congress, OPM, and Federal departments and agencies should strive to ensure that Federal service remains an attractive career by maintaining competitive pay and benefits and a family-friendly workplace, and by promoting public regard for the Federal civil service.

For many Federal employers a positive side of the current economic situation has been low worker turnover, greater ease in identifying job candidates, and a general availability of interested college graduates for entry-level positions. But it would be a mistake to let the economic situation result in the Government's relaxing its drive to hire superior candidates or to market the Government as a worthy and rewarding career. Agencies should continue to perfect their recruiting programs and should make the most of the negative economic situation not only by hiring excellent people, but also by positive actions to keep those employees, including providing compensation packages that are as attractive as resources permit, and work situations that accommodate the family needs and responsibilities of the workers.

Summary, Conclusions, and Recommendations

Agencies should make Government work attractive enough so that as economic times improve, their excellent employees will feel it's in their best interest to continue to serve. National leaders should publicly express their regard for the Federal civil service as a national asset that must not be squandered or misused. Given the time and money invested in hiring and training Federal workers, there is no logic that could persuade us that once hired and trained, these employees—their contributions, their needs, and their morale—can reasonably be neglected.

3. Federal agencies should increase their attention to issues related to an older workforce. The aging of the Federal workforce is an inexorable fact that "Civil Service 2000" recognized and that is not in dispute. It remains to be seen what impact the aging of the workforce will have on productivity and mission accomplishment in the Federal service. The issue is not one that agencies have indicated any particularly serious problems with as yet. Consequently, making work attractive to older workers, motivating them, and keeping them productive are areas that have yet to receive great attention from the Federal human resources community.

Nevertheless, the inevitability of plateauing (especially given popular trends towards reducing layers within organizations) is something that is very real today, and will begin to get the attention of agency human resource professionals when unprecedented numbers of baby boomers settle into their plateaus. The issues this implies have always existed in organizations; the size of the group facing the issues is what makes this a situation that needs attention. Therefore, in the interests of maintaining their own continuing effectiveness as well as sustaining workforce morale, Federal agencies should survey their older workers to determine what they need and want to remain productive. Where it's appropri-

ate, concrete programs to deal with older workers' issues should be undertaken. And agencies should examine the possibility of redefining the concept of career growth and creating non-hierarchical career paths.

4. Federal agencies should expand their efforts to develop and advance the careers of minorities in order to achieve full representation at all grade levels and should intensify recruitment of Hispanic men and women. Many Federal managers still regard the growing minority population in the U.S. labor force and minority representation in their own workforce as primarily a recruitment issue to be addressed through affirmative hiring programs. For Hispanic men and women, who are the most underrepresented minority group in the Federal workforce, this emphasis on affirmative recruitment should continue to be stressed.

In fact, the growing numbers of minorities in the Federal workforce is a positive trend, and maintaining sound affirmative employment programs should help ensure that as minority representation in the U.S. labor force grows, the minority share of the Federal workforce keeps pace.

However, for both Hispanics and other employees who are already on board, it's time to expand our attention to career development and enhancement in order to assure full representation at all grade levels in the future. In responding to changing racial and ethnic demographics, agencies need to be more sensitive to the specific areas in their workforces where representation of various minority groups is lagging. Overall representation of minority men and women in the Federal workforce is higher in some cases than overall minority representation in the U.S. labor force. But intake of Hispanics and white females and advancement of underrepresented groups into higher grade and organizational levels are actions that demand increased effort by Federal employers.

Summary, Conclusions, and Recommendations

Whether this lack of representation is caused by local labor market conditions or failures of affirmative action, it argues for continued support and attention to affirmative employment policies. At the same time, however, the intensity of affirmative hiring that helped the Federal establishment achieve its current level of minority representation should be expanded to include more emphasis on programs that advance the careers of minorities already in the workforce. Agencies should monitor closely and target more exclusively the areas—occupationally and organizationally—in which underrepresentation exists.

This may also require that we consider a reallocation of scarce resources in order to increase our investment in our current workforce. In looking for possible sources of support, agencies could consider identifying occupational and organizational areas where it might be appropriate to transfer some resources from affirmative recruitment to fund intensified affirmative advancement activities.

5. In maintaining a balance between long-term demographic perspectives and short-term workforce needs, Federal agencies should give particular attention to training, retraining, and development of their employees. Given the concerns they expressed about skills deficiencies

in the workforce, agencies must take care not to lose sight of the training needs of employees, particularly as the size of the workforce is reduced. To foster productivity, effectiveness, and good morale in the workforce that remains after downsizing, agencies may have to invest in more internal training for current employees and outreach activities that prepare future workers for future vacancies.

Among the possible sources of support for such an investment are the resources not currently being used for recruiting. The predicted entry-level worker shortage hasn't yet come to pass, and if some analysts are to be believed, may not happen in the near future. Thus, this situation presents an opportunity in the form of time and money not being devoted to recruiting that could be spent on other projects. Naturally, in today's environment, many good causes compete for available resources. Further, training and development activities aren't usually the winners in the competition for scarce resources. However, given the concern agencies expressed about future increases in job skill requirements and about basic skill deficiencies among current workers and job candidates, an excellent place to apply those resources would be in the areas of training and joining in partnerships with schools to prepare young people to enter the workforce.

Appendix

Agencies That Provided Information for This Study

The departments and agencies that responded to the MSPB questionnaire regarding demographic changes are:

- Department of Agriculture
- Department of the Air Force
- Department of the Army
- Department of Commerce
- Department of Education
- Department of Energy
- Department of Health and Human Services
- Department of Housing and Urban Development
- Department of the Interior
- Department of Labor
- Department of the Navy
- Department of State
- Department of Transportation
- Department of Veterans Affairs
- Environmental Protection Agency
- General Services Administration
- National Aeronautics and Space Administration
- Office of Personnel Management
- Small Business Administration.

The departments that furnished the individual responses of subordinate components are:

- Department of Defense
 - Defense Finance and Accounting Service
 - Defense Logistics Agency
 - Defense Mapping Agency

Appendix

Department of Justice

- Drug Enforcement Agency
- Federal Bureau of Investigation
- Immigration and Naturalization Service
- Headquarters office

Department of the Treasury

- Bureau of Alcohol, Tobacco and Firearms
- Bureau of Engraving and Printing
- Customs Service
- Federal Law Enforcement Training Center
- Internal Revenue Service
- Office of the Comptroller of the Currency
- Office of Thrift Supervision
- Secret Service
- Headquarters office

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