

**UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA
CIRCUIT**

Segar v. Smith

238 U.S. App. D.C. 103 (D.C. Cir. 1984) · No. Nos. 82-1541, 82-1590 · Decided June 26, 1984

OPINION

PER CURIAM.

738 F.2d 1249 35 Fair Empl.Prac.Cas. 31, 34 Empl. Prac.Dec. P 34,488,238 U.S.App.D.C. 103 Henry W. SEGAR, et al.v.William French SMITH, Attorney General, et al., Appellants.Henry W. SEGAR et al., Cross-Appellantsv.William French SMITH, Attorney General, et al. Nos. 82-1541, 82-1590. United States Court of Appeals,District of Columbia Circuit. Argued Sept. 8, 1983.Decided June 22, 1984.As Amended June 26, 1984.

Appeal and Cross-Appeal from the United States District Court for the District of Columbia (D.C.Civil Action No. 77-00081). Robert C. Seldon, Asst. U.S. Atty., and Charles Cooper, Deputy Asst. Atty. Gen., Washington, D.C., with whom Stanley S. Harris, U.S. Atty., Washington, D.C., at the time the briefs were filed, and Royce C. Lamberth and R. Craig Lawrence, Asst.

U.S. Attys., Washington, D.C., were on the brief, for appellants in No. 82-1541 and cross-appellants in No. 82-1590. William T. Lake, Washington, D.C., with whom Thomas J. Sugrue and Stephen W. Kidder, Washington, D.C., were on the brief, for appellees in No. 82-1541 and cross-appellants in No. 82-1590.

Before WRIGHT, WALD, and EDWARDS, Circuit Judges. Opinion for the court filed by Circuit Judge J. SKELLY WRIGHT. Concurring opinion filed by Circuit Judge HARRY T. EDWARDS. J. SKELLY WRIGHT, Circuit Judge: 1 Title VII of the Civil Rights Act of 1964¹ proclaims one of this nation's most fundamental, if yet unrealized, principles: a person shall not be denied full equality of employment opportunity on account of race, color, religion, sex, or national origin.

Title VII bars both intentional discrimination and artificial, arbitrary, or unnecessary barriers to equal opportunity.² In this case we review a decision of the United States District Court for the District of Columbia, *Segar v. Civiletti*, 508 F.Supp. 690 (D.D.C.1981), holding that the federal Drug Enforcement Agency (DEA) had engaged in a pattern or practice of discrimination against its black agents in violation of Title VII.

A class comprising black agents initiated this suit in 1977 and the case came to trial in 1979. Finding that DEA had discriminated against black agents in salary, promotions, initial (GS) grade assignments, work assignments, supervisory evaluations, and imposition of discipline, 508 F.Supp. at 711-715, the District Court ordered a comprehensive remedial scheme consisting of a

class-wide backpay award, promotion goals and timetables to ensure that qualified black agents received promotions to the upper levels of DEA, and a class-wide frontpay award to compensate such qualified agents while they awaited the promotions they deserved.

In the course of the proceedings the court also denied plaintiffs' request for prejudgment interest and issued a preliminary injunction barring transfer or demotion of Carl Jackson (the Jackson injunction), a black agent who was the subject of adverse employment decisions immediately after his testimony for plaintiffs in this lawsuit. ² On appeal DEA challenges the liability determination, the remedial scheme, and the Jackson injunction.

Plaintiffs cross-appeal the denial of prejudgment interest. As to the liability determination, DEA urges that the trial court erred in finding that plaintiffs had presented sufficient probative evidence to support any inference of discrimination at DEA, and urges that DEA had in any event effectively rebutted plaintiffs' showing.

As to the remedial scheme, DEA argues that class-wide relief was inappropriate and that imposition of promotion goals and timetables both exceeded the court's remedial authority under Title VII and violated the equal protection component of the Fifth Amendment Due Process Clause. DEA also argues that Carl Jackson did not make a showing of retaliation sufficient to justify the preliminary injunction.

³ To resolve this appeal we have had to plumb some of the deepest complexities of Title VII adjudication. After careful review, we affirm the District Court's liability determination in its entirety. We also affirm the trial court's decision to use a class-wide backpay remedy, but we vacate the backpay formula imposed and remand for reformulation of the particular backpay award.

We also vacate the part of the District Court's remedy that mandates promotion goals and timetables. We do not hold that such remedies exceed a court's remedial authority under Title VII. Nor do we hold that such remedies violate the Constitution. Nonetheless, we find that the District Court's particular order of goals and timetables was not appropriate on the current factual record.

Because the frontpay remedy was specifically linked to the promotion goals and timetables, we vacate that part of the remedial order as well, and remand to the District Court for further consideration of appropriate remedies.³ We affirm the preliminary injunction against demotion or transfer of Carl Jackson and we expect the District Court to undertake resolution of the status of the Jackson injunction on remand.

We affirm the trial court's denial of prejudgment interest. I. BACKGROUND ⁴ DEA, an agency formed in 1973 within the Justice Department, enforces this nation's federal criminal laws concerning the illegal sale, distribution, and use of drugs. Establishing DEA, the federal

government sought to consolidate drug enforcement efforts that had theretofore been spread among several agencies.

"Special agents" carry on the bulk of DEA's criminal investigative work. DEA employs about 2,000 such agents, and as of 1978 seven percent were black. Special agents perform surveillance of suspected drug dealers, transact "buys" of drugs as evidence for prosecutions, do related undercover work, develop cases for prosecution by United States Attorneys, and, depending on their rank, supervise other special agents.

Findings of Fact (Findings) paragraphs 1-2, 508 F.Supp. at 693-695. 5 The District Court made extensive findings of fact concerning DEA's employment practices. See Findings paragraphs 1-51, 508 F.Supp. at 692-711. Though we need not rehash the factual context of this case in its entirety, we will review the facts particularly pertinent to the issues on appeal.

A. DEA's Personnel Requirements 6 Hiring. The Civil Service Commission Handbook establishes the minimum entry level requirements for special agents. Depending on qualifications, special agents will enter at either GS-7 or GS-9.

The requirements for entry at GS-7 are three years of general experience and one year of specialized experience. The requirements for GS-9 are three years of general experience and two years of specialized experience.⁴ In addition, special agents are defined as criminal investigators, and this classification requires that one year of their prior specialized experience be in law enforcement or comparable work.⁵ 7 Work Assignments.

Special agents carry out the variety of assignments described above. Race influences the location of an agent's assignment. All other things being equal, DEA will assign black agents to areas where a large percentage of the suspected violators are black. Race also influences the type of work agents receive. Black agents tend to perform a disproportionately large amount of undercover work.

DEA generally infiltrates drug networks from the bottom up, and operates on the assumption that black agents will be more readily able to infiltrate organizations consisting primarily of blacks. The nature of an agent's work assignments will have an important bearing on the agent's prospects for promotion. Though some undercover work is desirable, a surfeit of such work injures an agent's promotion opportunities because the agent is unable to obtain the breadth of experience needed for promotions.

Findings p 23, 508 F.Supp. at 705. 8 Promotions. At DEA promotions from GS-7 to GS-9, from GS-9 to GS-11, and from GS-11 to GS-12 are noncompetitive. A special agent receives a promotion upon completion of one year of service in grade, recommendation by the agent's group supervisor, concurrence by a second level supervisor, and approval by a DEA regional director.

9 Promotions from GS-12 up through GS-18, the highest GS level at DEA, are competitive agency-wide. To receive such a promotion an agent must satisfy the minimum in-grade requirement, be placed on the "best qualified" list by the appropriate rating and ranking board, and be selected by the appropriate selecting official.

In making determinations the rating and ranking boards rely primarily on the agent's most recent performance appraisal, information on disciplinary action within the last two years, and the agent's application and profile sheet. Those agents chosen for the best qualified list are then ranked numerically on a series of performance factors.⁶ Rating and ranking boards have not been provided with any particular guidance for assigning numerical values to various aspects of an agent's performance.

Findings p 4, 508 F.Supp. at 695. B. This Lawsuit 10 In January 1977 two black special agents of DEA, and an association representing all black special agents, brought suit alleging that DEA had engaged in a pattern or practice of racial discrimination against black special agents in violation of Title VII of the Civil Rights Act of 1964, 42 U.S.C. Sec. 2000e et seq., as amended by the Equal Employment Opportunity Act of 1972, 42 U.S.C. Sec. 2000e-16 (1976 & Supp. V 1981).

These agents alleged discrimination in recruitment, hiring, initial grade assignments, salary, work assignments, evaluations, discipline, and promotions. See Complaint, Joint Appendix (JA) 22. 11 On September 9, 1977 the trial court, pursuant to Federal Rule of Civil Procedure 23(b)(2), certified the class of all blacks who then served or had had been discharged as special agents at DEA, and who had applied for positions or would in the future apply.

Order of Class Certification, September 9, 1977, JA 37. Before trial the parties settled the claims involving discriminatory recruitment and hiring, but could not come to terms on the other issues. See Stipulation of Settlement of Plaintiffs' Claims of Discrimination in Recruiting and Hiring of Special Agents, JA 44.

As is common in Title VII class actions, the District Court bifurcated the trial into separate liability and remedial phases. After lengthy discovery, the liability issues came to trial in April 1979. The trial was in large measure a duel of experts armed with sophisticated statistical means of proof. 12 1.

The plaintiffs' case. The plaintiffs presented a range of statistical and anecdotal evidence of discrimination. The statistical evidence included several multiple linear regression analyses as well as a number of studies considering the effects of particular employment practices. 13 Multiple regression is a form of statistical analysis used increasingly in Title VII actions that measures the discrete influence independent variables have on a dependent variable such as salary levels.

See *Valentino v. U.S. Postal Service*, 674 F.2d 56, 70 (D.C.Cir.1982). Typically the independent variables in Title VII cases will be race, age, education level, and experience levels. The first step in a multiple regression analysis is specification of the independent (or explanatory) variables thought likely to affect significantly the dependent variable.

The choice of proper explanatory variables determines the validity of the regression analysis. A coherent theory, devised prior to observation of the particular data, must be employed to select the relevant explanatory variables. See *Vuyanich v. Republic Nat'l Bank of Dallas Vuyanich I*, 505 F.Supp. 224, 269 (N.D.Tex.1980), vacated on other grounds, 723 F.2d 1195 (5th Cir.1984).

When the proper variables have been selected, the multiple regression analysis is conducted, generally by a computer. In essence, the regression measures the impact of each potential explanatory variable upon the dependent variable by holding all other explanatory variables constant.

The analysis yields figures demonstrating how much of an observed disparity in salaries can be traced to race, as opposed to any of the other potential explanatory variables. ¹⁴ The computer analysis will generally also yield two other measurements that assist in evaluation of the explanatory power of the regression.

The first is "T-Ratio." The T-Ratio measures the probability that the result obtained could have occurred by chance.⁷ The second is R². The R² figure measures, to a certain extent, the degree to which a multiple regression analysis taken as a whole explains observed disparities in a dependent variable. ¹⁵ Having observed an average disparity in salary of about \$3,000 between white and black special agents at DEA, plaintiffs' experts, Professors Bergmann and Straszheim,⁸ formulated a regression analysis to discover whether and to what extent race explained the observed salary disparity.

The experts based their analysis on a "human capital model." A widely accepted approach, the model builds on labor economists' findings that the human capital an employee brings to a job--such as education and experience--in large measure determines the employee's success. See Note, *Beyond the Prima Facie Case in Employment Discrimination Law: Statistical Proof and Rebuttal*, 89 HARV.L.REV.

387, 408 n. 90 (1975); *Vuyanich I*, supra, 505 F.Supp. at 265-267. ¹⁶ Plaintiffs' experts selected education, prior federal experience, prior nonfederal experience, and race as the four independent variables that might explain the salary differential. Information regarding these independent variables came from the computerized JUNIPER personnel information tapes of the Department of Justice.

Findings p 7a-b, 508 F.Supp. at 696. Professors Bergmann and Straszheim then ran the regressions. They first evaluated the causes of salary disparities among all agents as of five dates:

the first of January in 1975, 1976, 1977, and 1978 and the first of October in 1978. This study generated the following results: 17 RACE DATE COEFFICIENT T-RATIO 1/1/75 -\$1,628 4.65 1/1/76 -\$1,744 5.37 1/1/77 -\$1,119 5.15 1/1/78 -\$1,934 5.15 10/1/78 -\$1,877 4.50 18 Findings p 7b, 505 F.Supp. at 696.

19 The race coefficient measures the salary disparities between white and black agents when education and prior experience are held constant. The T-Ratio figures here correspond to standard deviations of four or five. See D. BALDUS & J. COLE, STATISTICAL PROOF OF DISCRIMINATION 297 n. 14 (1980) (hereinafter "D. Baldus & J. Cole"). Since a standard deviation level higher than three indicates that the odds are less than one in a thousand that an observed result could have occurred by chance, these figures indicate that the odds are far less than one in a thousand that the observed disparities for any year could have occurred by chance.

A study is generally considered to be statistically significant when the odds that the result occurred by chance are at best one in 20. See D. Baldus & J. Cole, *supra*, at 297. 20 Professors Bergmann and Straszheim then ran a second regression to measure salary disparities over the same time frame for agents hired after 1972. They intended this study to generate some measure of the effects of race discrimination at DEA after 1972.

Title VII applies to DEA in this action only as of that date.⁹ Because the first regression measured disparities in the salaries of all black agents, including those hired before 1972, the race coefficient in that study may have reflected disparities resulting from the continuing effects of discrimination that occurred prior to 1972, rather than actionable post-1972 discrimination.

This second regression generated the following results: 21 Findings p 7d, 508 F.Supp. at 696. 22 Again a significant salary disparity between agents with comparable education and experience was revealed. The T-Ratios indicate that for every year, save 1975, the possibility that the result could have occurred by chance was at most one in 20. Though these figures are not at as high a level of significance as were those of the first regression, they still meet the generally accepted test for statistical significance.

The second regression, moreover, tends to understate the amount of post-1972 discrimination at DEA. Because the post-1972 study measures discrimination among newer agents, the study focuses on the speed with which the new recruits make their way through the lower levels of DEA. Promotions at these levels are relatively automatic, and discrimination thus has less opportunity to work its effects.

Discrimination will most adversely affect older agents contending for upper level positions; promotion decisions at these levels incorporate far more discretionary elements and leave more room for bias. See Part I-A *supra*.

The study does not measure any post-1972 discrimination against those hired before 1972. Since these agents would have been the ones contending for the upper level positions during the time frame studied, they would have been the ones on whom discrimination would have been most likely to operate.

The problem is particularly severe with respect to the 1975 race coefficient. Almost half of those studied to obtain this figure were hired in 1974. Findings p 7c, 508 F.Supp. at 696. Since they were in their first year at the time of the study, they would not yet have been eligible for a grade promotion. 23 Having uncovered evidence of significant discrimination in salary levels, plaintiffs' experts undertook a more exacting inquiry into DEA's employment practices to pinpoint where discrimination was taking place.

They first examined DEA's initial grade assignment practices. Through regression analyses they determined at a sufficient level of statistical significance that blacks were 16 percent less likely than comparably qualified whites to have been hired at GS-9 rather than GS-7.

For those hired after 1972, blacks were 12 percent less likely to be hired at GS-9. Findings p 9, 508 F.Supp. at 698-699. The experts then evaluated work assignments, supervisory evaluations, and discipline. In all three categories statistical analysis revealed significant levels of discrimination against black agents. Findings paragraphs 12, 14, 15, 508 F.Supp. at 698-700.

Finally, plaintiffs' experts studied promotions at DEA. Promotions up to the GS-11 level were found to be relatively automatic. The promotion rate from GS-11 to GS-12 was 70 percent for blacks and 82 percent for whites. This differential met generally accepted levels of statistical significance. Differentials in promotion rates for positions above GS-12 were also found, but--largely because of the small sample size--these differentials did not achieve statistical significance at generally accepted levels.

Findings p 16, 508 F.Supp. at 701-702. 24 To buttress the statistical proof plaintiffs introduced anecdotal testimony of discrimination. This evidence consisted of accounts by several black agents of perceived discrimination against them in initial grade assignments, work assignments, supervisory evaluations, and discipline. These agents also testified about their general perceptions of racial hostility at DEA.

25 2. Defendant DEA's case. DEA responded to plaintiffs' case in several ways. The rebuttal consisted of expert testimony attacking the methodological integrity and explanatory value of plaintiffs' statistics, alternative statistical analyses tending to show an absence of discrimination, testimonial evidence concerning DEA's equal employment opportunity programs, and cross-examination of plaintiffs' anecdotal accounts of individual discrimination.

26 DEA's first expert was Dr. J. Wanzer Drane, an associate professor of statistics at Southern Methodist University. In his testimony he attacked the methodology of plaintiffs' statistical

analyses. He asserted that plaintiffs had failed in their analysis to account for the relevant explanatory variable of prior law enforcement experience, and that the explanatory power of plaintiffs' salary studies (the R2 and the T-Ratio) was too low.

He also presented a more generalized critique of the suitability of the regression methodology for measurement of discrimination in the present situation. Findings p 7f-n, 508 F.Supp. at 696-697; see Trial Transcript (Tr.) 1850-1871; brief for appellants at 36-38. 27 To supplement this critique DEA offered an alternative statistical analysis that tended to show an absence of discrimination.

This study--prepared by Dr. B.C. Spradlin, a consultant--was not a regression but an alternative statistical methodology known as cohort analysis. Under this approach all employees who start together at the same level are surveyed over the course of an observation period and their comparative progress in salary and promotion is evaluated. Evaluating promotion and salary disparities among DEA agents who started at the same year and grade level, Dr. Spradlin's cohort analysis suggested significant discrimination in four of 15 groups.

These four groups were broken into subgroups. Discrimination was found in two of the subgroups. DEA then examined the personnel files of those in the subgroups showing discrimination and found that three individuals had been misclassified. When these three were properly classified, the study showed no significant discrimination. Findings p 8, 508 F.Supp. at 697-698; see Tr. at 1909-1913.

28 Testimonial evidence buttressed DEA's statistical rebuttal. DEA presented extensive general testimony on its efforts to establish equal opportunity programs and implement equal opportunity goals at the agency. Through cross-examination of plaintiffs' witnesses, DEA also sought to rebut every particular anecdotal account of discrimination. C. The District Court Decision 29 1.

The liability determination. Judge Robinson held that DEA had discriminated against black special agents in violation of Title VII across a range of employment practices. The court found that the salary differentials between white and black agents were a result of race discrimination, and that DEA had discriminated against black agents in grade-at-entry, work assignments, supervisory evaluations, and promotions.

508 F.Supp. at 712-715. The finding of discrimination in promotions extended to promotions above the GS-12 level, even though the court did not credit plaintiffs' statistical evidence of discrimination at that level because the statistics had not achieved acceptable levels of statistical significance.

The court based its finding of discrimination at the upper levels on inferences from proven discrimination at the immediately preceding levels and discrimination in the factors that bear most directly on promotions (work assignments, evaluations, and discipline). 508 F.Supp. at 714-715.

30 To make these determinations the District Court credited the bulk of plaintiffs' statistical evidence¹⁰ and rejected both DEA's critique of this evidence and DEA's alternative statistics.

In particular, the court rejected DEA's claims that plaintiffs' statistics did not possess sufficient explanatory power, that the failure to account for prior law enforcement experience skewed the studies, and that DEA's cohort analysis rebutted plaintiffs' showing of discrimination.

As to the alleged failure to account for law enforcement experience, the court held that DEA's objection was "speculative and incapable of rebutting plaintiffs' statistical showing." *Id.* at 712. Moreover, the court found that the "cohort analysis was irreparably flawed," primarily because the methodology focused on groups too small to generate statistically significant evidence of discrimination.

Id. at 698, 712. Since DEA had hinged its defense on this effort to rebut plaintiffs' showing of race-related disparities, the District Court's findings were dispositive against DEA. 31 2. The remedies determination.

Having found pervasive discrimination at DEA, the District Court--in a separate remedial proceeding--set out to formulate an appropriate remedial plan.¹¹ The essential elements of the plan were class-wide backpay, promotion goals and timetables, and class-wide frontpay. See Memorandum Opinion (Mem.Op.) and Order (Remedial Order), February 17, 1982, JA 114. 32 Class-wide Backpay.

Rather than order individualized relief hearings, see *Int'l Brhd of Teamsters v. United States*, 431 U.S. 324, 361-362, 97 S.Ct. 1843, 1867-1868, 52 L.Ed.2d 396 (1977), the District Court ordered a class-wide award of backpay for members of the plaintiff class.

For successive one-year periods beginning in July 1972, a class-wide backpay pool figure would be calculated. The calculations would derive from plaintiffs' first salary regression study (which measured disparities among all agents including those hired before 1972).

For every year for which figures were available--1975 to 1979--the class-wide pool figure would be the race coefficient multiplied by the number of black special agents. For the years before 1975 and after 1979 the race coefficient would be derived by extrapolating backward and forward from the available figures, and this extrapolated coefficient would be multiplied by the number of black agents.

33 The annual backpay pool would be distributed evenly among eligible black agents. Only agents above the GS-9 level during the year in question were made eligible. The court excluded agents at GS-7 and GS-9 because most discrimination was found to occur at the higher levels of DEA.

The court did, however, permit individual plaintiffs to come forward and seek backpay for discrimination suffered in initial grade assignment (*viz.* assignment to GS-7 instead of GS-9). Any

such individual awards would be subtracted from the class-wide pool in order to prevent double liability. Mem.Op. at 3, JA 116. 34 Promotion Goals and Timetables. Finding discrimination at the upper levels of DEA, the District Court ordered remedial promotion goals and timetables.

Since black agents made up at least 10 percent of agents at every level through GS-12 the court held that a 10 percent goal was appropriate for all levels above GS-12. Mem.Op. at 4, JA 117. To meet this goal the court ordered DEA to promote one black agent for every two white agents until 10 percent black representation had been met at GS-13 and above (or until five years had passed).

Id. 35 Class-wide Frontpay. To compensate black agents awaiting promotion under the goals and timetables plan the court established a class-wide frontpay formula. Frontpay pool calculations were also based on extrapolations from the salary regression, but the pool was to be adjusted to reflect progress DEA had made under the promotions goals and timetables.

Remedial Order at 9-12, JA 126-129. The pool was to be distributed to all black agents at GS-12 for at least two years and all black agents above GS-12. 36 3. Other issues. In the course of the proceeding two other issues arose. Plaintiffs sought and were refused an award of prejudgment interest on the backpay awards. See Mem.Op. at 3 n. 4, JA 116 n.4. Also, during the time between the liability and remedial determinations the court issued a preliminary injunction barring demotion or transfer of black special agent Carl Jackson.

See Memorandum Opinion and Order of May 5, 1981, JA 101. Shortly after Jackson had testified at trial in this case he became the target of harassment and eventually of adverse employment actions including demotion and transfer.

The District Court concluded that there was a high likelihood that these actions were in retaliation for Jackson's testimony, and therefore preliminarily enjoined Jackson's demotion or transfer. 37 D. The Appeal. 38 DEA appeals several aspects of both the liability and the remedial determinations, and also challenges the Jackson injunction. Plaintiffs cross-appeal from the denial of prejudgment interest.

We will consider separately DEA's challenges to the liability decision, the remedial decision, and the Jackson injunction. We will then consider plaintiffs' claim for prejudgment interest. II. THE LIABILITY DETERMINATION A. Framework for Analysis 39 A plaintiff in a Title VII action can prove liability under two theories: disparate treatment or disparate impact.

In a disparate treatment claim a plaintiff seeks to prove that an employer intentionally "treats some people less favorably than others because of their race, color, religion, sex, or national origin." *Teamsters*, supra, 431 U.S. at 335 n. 15, 97 S.Ct. at 1854 n. 15. Proof of illicit motive is essential, but, especially in cases alleging class-wide discrimination, illicit motive may be inferred from a sufficient showing of disparity between members of the plaintiff class and comparably qualified members of the majority group.

Id. Such class-wide allegations of discrimination are commonly referred to as "pattern or practice" cases. In *Teamsters*, supra, the Supreme Court noted that "the question whether the company engaged in a pattern or practice of discriminatory [action] * * * involves controlling legal principles that are relatively clear," id. at 334-335, 97 S.Ct. at 1854, and went on to characterize the case as one of disparate treatment.

A claim that the sum of an employer's practices results in less favorable treatment of members of the plaintiff class than of comparably qualified whites or males may justify an inference that "discrimination was the company's standard operating procedure--the regular rather than the unusual practice." Id. at 336, 97 S.Ct. at 1855. This is because a disparity in treatment of the comparably qualified is "the expected result of a regularly followed discriminatory policy."

Id. at 361 n. 46, 97 S.Ct. at 1867 n. 46. 40 In a disparate impact claim a plaintiff challenges "employment practices that are facially neutral in their treatment of different groups but that in fact fall more harshly on one group than another and cannot be justified by business necessity." Id. at 336 n. 15, 97 S.Ct. at 1855 n. 15.

To prevail on a disparate impact theory a plaintiff need not prove illicit motive; "Congress directed the thrust of the Act to the consequences of employment practices, not simply the motivation." *Griggs v. Duke Power Co.*, 401 U.S. 424, 432, 91 S.Ct. 849, 854, 28 L.Ed.2d 158 (1971) (emphasis in original). This disparate impact concept may be relevant in two ways to a case involving allegations of class-wide discrimination.

First, in addition to bringing a pattern or practice disparate treatment claim, plaintiffs may well challenge the disparate impact of specific employment practices and thus force the employer to prove the job-relatedness of those practices. See *Griggs*, supra, 401 U.S. at 432, 91 S.Ct. at 854.

Second, plaintiffs' pattern or practice disparate treatment challenge to the employment system as a whole may also implicate disparate impact analysis. A pattern or practice disparate treatment case shares with a typical disparate impact suit the allegation that an employer's practices have had a systemic adverse effect on members of the plaintiff class. See *Teamsters*, supra, 431 U.S. at 336 n. 15, 97 S.Ct. at 1855 n. 15 ("Either theory may, of course, be applied to a particular set of facts."); *Vuyanich v. Republic Nat'l Bank of Dallas Vuyanich II*, 521 F.Supp. 656, 663 (N.D.Tex.1981), vacated on other grounds, 723 F.2d 1195 (5th Cir.1984).

Though a plaintiff class will initially seek to show a disparity among the comparably qualified in order to prove disparate treatment, an employer may seek to defend by pointing to a specific, arguably nondiscriminatory, employment practice as the cause of the observed disparity.

In such situations the defendant may appropriately be required to demonstrate the business necessity of the practices causing the disparity because the court will have before it all the elements of a traditional disparate impact claim. See Part II-A-2 infra. 41 Proceeding under the

disparate treatment theory, plaintiffs in this case allege a pattern or practice of illegal discrimination at DEA.

Proceeding under the disparate impact theory, plaintiffs also challenge a number of DEA's specific employment practices--initial grade assignments, work assignments, supervisory evaluations, discipline, and promotions decisions.

Thus plaintiffs challenge both the entirety of DEA's employment system and several specific components of that system. To establish a framework for analysis of these allegations, we will first examine the sequence and allocation of proof in a class action alleging a pattern or practice of disparate treatment and alleging disparate impact with respect to specific employment practices.

We will then locate within that framework the approach that the parties have taken in joining the liability issue in this case. 42 1. Sequence and allocation of proof. Functionally the disparate treatment and disparate impact models have different aims, and the proof sequences associated with each reflect these differences. Disparate treatment aims at discovery and elimination of intentional discrimination.

On the disparate treatment claim the "ultimate burden of persuading the trier of fact that the defendant intentionally discriminated against the plaintiff remains at all times with the plaintiff." *Texas Dep't of Community Affairs v. Burdine*, 450 U.S. 248, 253, 101 S.Ct. 1089, 1093, 67 L.Ed.2d 207 (1981). Since the plaintiff class will likely try to meet this ultimate burden by proving a disparity sufficient to permit an inference of discrimination, plaintiff must carry the burden of persuasion as to the existence of the disparity.

Disparate impact aims at discovery and elimination of facially neutral employment practices that adversely affect minorities and cannot be justified as necessary to an employer's business. On the disparate impact claim plaintiffs bear the burden of persuasion as to the existence of a race-related disparity caused by an employment practice, but, once plaintiffs have made this showing, the employer bears the burden of persuasion as to the business necessity of the practice.

See *Vuyanich II*, *supra*, 521 F.Supp. at 660. 43 Though allocations of proof differ in this crucial way, an important point of convergence exists in class actions like the present case. Both pattern or practice disparate treatment claims and disparate impact claims are attacks on the systemic results of employment practices.

The pattern or practice claim amounts to an allegation that an observed disparity is the systemic result of an employer's intentionally discriminatory practices. The disparate impact claim amounts to an allegation that an observed disparity is the systemic result of a specific employment practice that cannot be justified as necessary to the employer's business.

Consequently the proof of each claim will involve a showing of disparity between the minority and majority groups in an employer's workforce. These two factors--the difference in ultimate burden of proof and the similarity in proof of disparity--must inform our understanding of the intermediate burdens that the parties to such an action face.¹² 44 A plaintiff class seeking to show a pattern or practice of disparate treatment must "carry the initial burden of offering evidence adequate to create an inference that" employment decisions were "based on a discriminatory criterion illegal under the Act."

Teamsters, supra, 431 U.S. at 358, 97 S.Ct. at 1866. This usually means providing evidence--often in statistical form--of a disparity in the position of members of the plaintiff class and comparably qualified whites. Similarly, on the disparate impact challenges to specific employment practices the plaintiff class must present evidence that the practices have a disproportionately adverse effect on the plaintiffs.

How far this *prima facie* showing will carry the plaintiff toward its ultimate burden of persuasion depends on both the strength of the plaintiffs' evidence and the nature of the defendant's response. 45 A defendant must tailor its response to the nature of the plaintiff's proof. *Teamsters*, supra, 431 U.S. at 360 n. 46, 97 S.Ct. at 1867 n. 46.

In general, though, the response will follow two paths. The employer can endeavor to refute the plaintiffs' claim that a disparity exists. Alternatively, the employer can offer an explanatory defense; such a defense amounts to a claim that an observed disparity has not resulted from illegal discrimination.

The nature of these defenses, and the burdens associated with them, differ in important ways. 46 a. Challenges to the plaintiffs' proof. Challenging the accuracy or significance of plaintiffs' proof, a defendant seeks to show that the alleged disparity on which plaintiffs' case is bottomed does not exist. Such a defense can of course be raised against both a disparate treatment and a disparate impact claim.

Typically the challenge will focus on the integrity of the plaintiffs' statistical methodology and the significance of the results shown. Often the defendant will supplement the critique with alternative statistical analyses tending to refute the plaintiffs' evidence of disparity.

The defendant need not carry the burden of persuasion as to the nonexistence of a disparity; on the disparate treatment claim "the ultimate burden of persuading the trier of fact that the defendant intentionally discriminated against the plaintiff remains at all times with the plaintiff," *Burdine*, supra, 450 U.S. at 253, 101 S.Ct. at 1093, and on the disparate impact claims the plaintiffs must persuade the trier of fact that a disparity exists.

47 The defendant's rebuttal must, however, at least raise a genuine issue of material fact concerning the accuracy of the picture painted by the plaintiffs' statistics. And introduction of

evidence sufficient to raise a genuine issue of material fact does not necessarily vindicate the defendant. *Burdine*, supra, 450 U.S. at 254-255, 101 S.Ct. at 1094. Rather, the strength of the evidence the defendant must produce to prevent the plaintiff from carrying the burden of persuasion as to disparity depends, as in any case, on the strength of the plaintiffs' proof. "[T]he defendant's evidence must do more than merely raise an issue of fact. * * * It must cast sufficient doubt on the plaintiff's proof to cause the trier of fact to conclude that the plaintiff has not proved discrimination by a preponderance of the evidence."

Vuyanich II, supra, 521 F.Supp. at 663. 48 b. The explanatory defense. Alternatively, a defendant can attempt to show that any observed disparities between plaintiffs and the majority group did not result from discrimination violative of Title VII.

The requirements of such a rebuttal will vary according to the type of claim the defendant seeks to rebut. To rebut a disparate impact challenge to a specific employment practice causing a disparity the employer must prove the business necessity of the practice. See *Albemarle Paper Co.*, supra, 422 U.S. at 425, 95 S.Ct. at 2375.

To rebut a disparate treatment challenge the employer can argue that the observed disparity between the plaintiff class and the majority group does not support an inference of intentional discrimination because there is a legitimate, nondiscriminatory explanation for the disparity.

For example, the defendant might come forward with some additional job qualification--not sufficiently perceptible to plaintiffs to have permitted them to account for it in their initial proof--that the plaintiff class lacks, thus explaining the disparity. 49 The nature of the burden that the defendant bears on such a defense is not entirely free of doubt.

The defendant must at least make a "clear and reasonably specific showing," based on admissible evidence, that the alleged nondiscriminatory explanation in fact explains the disparity. *Burdine*, supra, 450 U.S. at 253-255, 101 S.Ct. at 1093-1095.

In the context of an individual plaintiff's claim of disparate treatment, the Court in *Burdine* suggested that a defendant need do no more than make such an articulation. *Id.* at 253-254, 101 S.Ct. at 1093-1095. Though the principles on which *Burdine* is based are fully applicable to pattern or practice cases, the specific definition of the rebuttal burden on an employer in an individual plaintiff's disparate treatment case should not be unthinkingly applied to class actions such as the present case.

50 In an individual case a defendant's nondiscriminatory explanation serves only to undermine the inference of discriminatory intent arising from plaintiff's proof. Since plaintiff bears the burden of persuasion on the issue of intentional discrimination, the defendant should not have to persuade the trier of fact that plaintiff was treated less well for a nondiscriminatory reason.

The defendant is required only to present evidence sufficient to permit the trier of fact legitimately to decline to infer discrimination from the plaintiff's proof. In the context of an individual's suit, the bare articulation of a legitimate nondiscriminatory explanation generally suffices to undermine a plaintiff's initial proof in this way because the plaintiff's prima facie case will typically consist of the low-threshold showing of *McDonnell Douglas Corp. v. Green*, 411 U.S. 792, 93 S.Ct.

1817, 36 L.Ed.2d 668 (1973).¹³ 51 When a defendant in a pattern or practice class action offers such an explanation, the circumstances differ in two crucial ways. First, to make an initial showing of disparate treatment in such cases the plaintiff class will typically have presented statistical evidence showing pervasive disparities and eliminating most, if not all, potential nondiscriminatory explanations for the observed disparities.

See *Vuyanich II*, supra, 521 F.Supp. at 663; Part II-A-1 supra.¹⁴ Though the employer is not required to meet a burden of persuasion in rebutting the disparate treatment claim, the nondiscriminatory explanation must cast sufficient doubt on the plaintiffs' proof to permit the trier of fact legitimately to decline to draw an inference of discrimination from that proof.

The bare articulation of a nondiscriminatory explanation, while sufficient to rebut an individual plaintiff's low-threshold *McDonnell Douglas* showing, generally will not suffice as a rebuttal to a typical class-wide showing of pervasive discrimination. *Burdine* made this much clear: 52 In saying that the presumption [of discrimination] drops from the case, we do not imply that the trier of fact no longer may consider evidence previously introduced by the plaintiff to establish a prima facie case.

A satisfactory explanation by the defendant destroys the legally mandatory inference of discrimination arising from the plaintiff's initial evidence. Nonetheless, this evidence and inferences properly drawn therefrom may be considered by the trier of fact on the issue of whether the defendant's explanation is pretextual. Indeed, there may be some cases where the plaintiff's initial evidence, combined with effective cross-examination of the defendant, will suffice to discredit the defendant's explanation.

53 450 U.S. at 255 n. 10, 101 S.Ct. at 1095 n.10 (emphasis added). The typical pattern or practice case is closely analogous to the situation the Court envisions in the last sentence of the quoted passage: the plaintiffs' initial offer of evidence will have been so strong that the bare articulation of a nondiscriminatory explanation will not suffice to rebut it.

Thus in both individual and class action contexts the defendant faces the same rebuttal burden; it must present sufficient evidence to permit the trier of fact to decline to draw the inference of discrimination from the plaintiffs' proof. But in the class action pattern or practice case the strength of the evidence sufficient to meet this rebuttal burden will typically need to be much higher than the strength of the evidence sufficient to rebut an individual plaintiff's low-threshold

McDonnell Douglas showing.¹⁵ 54 Second, the employer's effort to rebut the pattern or practice claim by articulating a legitimate nondiscriminatory explanation may have the effect of putting before the court all the elements of a traditional disparate impact case.

By its explanation of an observed disparity the employer will typically pinpoint an employment practice (or practices) having a disparate impact on a protected class. And to rebut plaintiffs' case the employer will typically be required to introduce evidence showing that the employment practice in fact caused the observed disparity. See *Burdine*, supra, 450 U.S. at 258, 101 S.Ct. at 1096 ("defendant will normally attempt to prove the factual basis for its explanation").

In this situation, between the plaintiffs' prima facie showing of disparity and the defendant's rebuttal explanation of the disparity, the essential elements of a disparate impact case will have been placed before the trier of fact. Such a case is ripe for resolution using disparate impact analysis.¹⁶ Though the plaintiffs in a disparate treatment case bear the burden of persuasion as to the existence of a disparity, the defendant bears the burden of proving the business necessity of the practices causing the disparity.¹⁷ *Albemarle Paper Co.*, supra, 422 U.S. at 425, 95 S.Ct. at 2375.

Thus when an employer defends a disparate treatment challenge by claiming that a specific employment practice causes the observed disparity, and this defense sufficiently rebuts the plaintiffs' initial case of disparate treatment, the defendant should at this point face a burden of proving the business necessity of the practice. Accord *Vuyanich II*, supra, 521 F.Supp. at 662-663; see *Bartholet*, Application of Title VII to Jobs in High Places, 95 HARV.L.REV.

945, 1004-1006 (1982). 55 The only difference between this situation and the traditional disparate impact case is that in the latter the plaintiff articulates the employment practice causing the adverse impact and forces the employer to defend it, while in the former the employer articulates the employment practice and must then go on to defend it. Accord *Vuyanich II*, supra, 521 F.Supp. at 663.

Some case law from other circuits has expressed a reluctance to apply disparate impact analysis in this situation. Two concerns fuel this reluctance: (1) the perceived unfairness of placing on the defendant the dual burden of articulating which of its employment practices caused the adverse impact at issue and proving the business necessity of the practice, see, e.g., *Pouncy v. Prudential Ins.*

Co. of America, 668 F.2d 795, 800 (5th Cir.1982) (plaintiff required to point to specific employment practice causing adverse impact "in order to allocate fairly the parties' respective burdens of proof at trial"); and (2) the risk that an employer will be forced to justify the entire range of its employment practices when a plaintiff shows only that a disparity exists, see *Rivera v. City of Wichita Falls*, 665 F.2d 531, 539 (5th Cir.1982).

These concerns are, however, unpersuasive and difficult to harmonize with the purposes of Title VII. 56 As a practical matter, this issue arises in a context that renders such concerns largely irrelevant. An employer will face the justificatory burden only after a plaintiff class has shown a disparity in the positions of members of the class and the majority group who appear to be comparably qualified; if plaintiffs fail to make their *prima facie* case, the employer never faces this justificatory burden.

But if the plaintiffs have made their *prima facie* case, the employer, to avoid liability under the disparate treatment theory, will have to advance some nondiscriminatory explanation for the disparity. An employer's claim that it cannot isolate the cause of the disparity will be unlikely to deflect the force of the inference of discrimination from plaintiffs' proof.

The defendant will in all likelihood point to a specific job qualification or performance/evaluation rating as the explanation for the observed disparity. Thus application of disparate impact in this situation will not, the fears of the Pouncy court notwithstanding, place on the employer any additional burden of articulation; to rebut the disparate treatment claim the employer will have had to articulate which employment practices cause an observed disparity.

Nor will the employer be forced to justify all of its employment practices. The employer will be required to show the job relatedness of only the practice or practices identified as the cause of the disparity. 57 The concerns of Pouncy and Rivera are no more compelling on the theoretical level.

The employer will possess knowledge far superior to that of the plaintiff as to precisely how its employment practices affect employees. This fact, as the Fifth Circuit noted in Pouncy, 668 F.2d at 801, traditionally justifies placing on the defendant the burden of proving the business necessity of an employment practice. So too it justifies the lesser burden of requiring the employer to articulate which of its employment practices adversely affect minorities.¹⁸ A rule placing this justificatory burden on the employer advances the purposes of Title VII far better than would the contrary result.

"What is required by Congress is the removal of artificial, arbitrary, and unnecessary barriers to employment when the barriers operate invidiously to discriminate on the basis of racial or other impermissible classification." Griggs, *supra*, 401 U.S. at 430-431, 91 S.Ct. at 853; accord *Connecticut v. Teal*, 457 U.S. 440, 451, 102 S.Ct. 2525, 2533, 73 L.Ed.2d 130 (1982) ("Title VII strives to achieve equality of opportunity by rooting out 'artificial, arbitrary, and unnecessary' employer-created barriers to professional development"); *Teamsters*, *supra*, 431 U.S. at 364, 97 S.Ct. at 1869 ("a primary objective of Title VII is prophylactic: to achieve equal employment opportunity and to remove barriers that have operated to favor white male employees over other employees"); *Albemarle Paper Co.*, *supra*, 422 U.S. at 417, 95 S.Ct. at 2371.

This purpose is not well served by a requirement that the plaintiff in every case pinpoint at the outset the employment practices that cause an observed disparity between those who appear to be comparably qualified. Such a requirement in effect permits challenges only to readily perceptible barriers; it allows subtle barriers to continue to work their discriminatory effects, and thereby thwarts the crucial national purpose that Congress sought to effectuate in Title VII.

"It is abundantly clear that Title VII tolerates no discrimination, subtle or otherwise." *McDonnell Douglas Corp.*, supra, 411 U.S. at 801, 93 S.Ct. at 1824. Thus when unnecessary employer-created barriers have been brought into the open through adjudication of a pattern or practice disparate treatment claim, these barriers should be evaluated under the disparate impact theory, as Congress intended them to be.^{19 58 2.}

Locating this controversy within the analytical framework. Plaintiffs, utilizing disparate treatment analysis, challenge the entirety of DEA's employment system, and, utilizing disparate impact analysis, challenge several particular employment practices in that system (DEA's procedures for initial grade assignments, discipline, supervisory evaluations, and promotion).

In their disparate impact claims plaintiffs seek to show that these specific practices have an adverse effect on black agents, and thereby to force DEA to prove the business necessity of the challenged practices. In their disparate treatment claim plaintiffs seek to show that they are treated less well than comparably qualified white agents. Evidence of overall salary disparities, buttressed by evidence of the specific places in DEA's employment system where discrimination occurs, supports this challenge.

Whether this overall challenge will also raise disparate impact issues beyond those already raised by plaintiffs' challenges to several specific DEA employment practices depends on the nature of DEA's defense. See Part II-A-1-b supra. 59 DEA has channelled the bulk of its efforts into an attempt to show that plaintiffs' proof of disparity is either inaccurate or insignificant.

DEA has bifurcated this attack into separate claims that plaintiffs' statistical proof is deficient and that DEA's proof in any event refuted plaintiffs' attempt to show race-related disparities. Though made separately, both arguments go to the question whether plaintiffs have met their burden of persuasion as to the existence of race-related disparities. 60 Subsumed in DEA's rebuttal are several specific legal issues.

DEA claims that plaintiffs' initial case is deficient as a matter of law for two reasons. First, the regression analyses on which plaintiffs' case is bottomed do not account for all "minimum objective qualifications" for the special agent positions at issue. See *Davis v. Califano*, 613 F.2d 957, 964 (D.C.Cir.1979).

Second, because plaintiffs failed to produce any creditable anecdotal evidence of specific instances of discrimination, their statistical proof was required to, and failed to, meet the enhanced

evidentiary threshold of showing "gross disparities" in treatment. See *Hazelwood School District v. United States*, 433 U.S. 299, 307-308, 97 S.Ct. 2736, 2741-2742, 53 L.Ed.2d 768 (1977).

Even if plaintiffs' proof is not insufficient as a matter of law for these reasons, DEA claims, that proof would have been found unable to stand up to DEA's evidence had the trial court properly evaluated that evidence. One purported error DEA cites is the trial court's misstep in placing on DEA a burden of persuasion of nondiscrimination, instead of the proper burden of coming forward with credible rebuttal evidence.

See *Burdine*, supra, 450 U.S. at 248, 101 S.Ct. at 1089. Another claim of error involves the trial court's purported abuse of discretion in failing to admit into evidence the alternative regression analyses that DEA offered at the remedial phase of the proceeding. DEA also claims that the trial court gave insufficient weight to its cohort analysis.⁶¹ Preferring to rely on a direct attack on the evidence showing race-related disparities, DEA has offered little in the way of explanation for the observed disparities.

Thus DEA's defense to both the disparate treatment and disparate impact allegations in large measure stands or falls with its arguments as to the nonexistence of the disparities that plaintiffs have sought to show. One aspect of DEA's challenge to plaintiffs' proof does, however, amount to an effort to provide a legitimate nondiscriminatory explanation for the observed disparity.

DEA argues that plaintiffs' statistical analysis will not support an inference of discrimination because the observed disparity was caused by a lack in the plaintiff class of a particular job qualification. Though DEA makes this argument in the context of an attack on the legal sufficiency of plaintiffs' prima facie disparate treatment case, the claim can also be styled as a possible nondiscriminatory explanation for the disparity, and will be analyzed as such.

To the extent the claim implicates a disparate impact analysis, see Part II-A-1-b supra, that analysis will also be undertaken. B. Analysis of the Liability Issues⁶² For the sake of clarity and congruence with the form of argument presented to us, we will separate our analysis along the lines suggested by the parties' arguments.

First we will examine the sufficiency of plaintiffs' offer of proof in light of DEA's attack on the methodology and results of plaintiffs' statistical analyses. Then we will examine the strength of DEA's evidence, and consider DEA's allegations of error. Both lines of inquiry must, however, lead us toward resolution of the ultimate issue: In weighing all the evidence, did the trial court correctly conclude that plaintiffs carried their burden of persuasion as to the existence of illegal discrimination at DEA.²⁰ Also, to the extent DEA's rebuttal raises issues as to the business necessity of its employment practices, we will resolve these issues in accordance with *Griggs* and its progeny.

63 1. The sufficiency of plaintiffs' initial case. A "general principle" of disparate treatment adjudication requires the plaintiff to "carry the initial burden of offering evidence adequate to create an inference that an employment decision was based on a discriminatory criterion illegal under the Act." *Teamsters*, supra, 431 U.S. at 358, 97 S.Ct. at 1866.

Because "[t]he facts necessarily will vary in Title VII cases," *McDonnell Douglas Corp.*, supra, 411 U.S. at 802 n. 13, 93 S.Ct. at 1824 n. 13, a specific test for the sufficiency of a plaintiff's initial proof is not possible. *Teamsters*, supra, 431 U.S. at 358, 97 S.Ct. at 1866. Rather, a plaintiff's initial proof must be measured against the more generalized functional standard that the Supreme Court has elaborated in *Teamsters*, supra, 431 U.S. at 358, 97 S.Ct. at 1866; *Furnco Construction Corp. v. Waters*, 438 U.S. 567, 577, 98 S.Ct.

2943, 2949, 57 L.Ed.2d 957 (1978), and *Burdine*, supra, 450 U.S. at 253-254, 101 S.Ct. at 1093-1094. These cases hold that a sufficient prima facie case is made out when the plaintiff shows a disparity in the relative position or treatment of the minority group and has eliminated "the most common nondiscriminatory reasons" for the observed disparity. *Burdine*, supra, 450 U.S. at 253-254, 101 S.Ct. at 1093-1094; accord *Furnco*, supra, 438 U.S. at 579-580, 98 S.Ct. at 2951 (A prima facie case "is simply proof of actions taken by the employer from which we infer discriminatory animus because experience has proved that in the absence of any other explanation it is more likely than not that those actions were bottomed on impermissible considerations").

64 The present case typifies class actions alleging a pattern or practice of discrimination in that the plaintiffs' argument is largely bottomed on statistical evidence comparing the percentage and distribution of minorities in the employer's workforce to the percentage of minorities in the labor pool from which the employer is able to draw.

To be legally sufficient these statistics must show a disparity of treatment, eliminate the most common nondiscriminatory explanations of the disparity, and thus permit the inference that, absent other explanation, the disparity more likely than not resulted from illegal discrimination. *Teamsters*, supra, 431 U.S. at 368, 97 S.Ct. at 1871. 65 A pattern or practice case challenges a host of employment decisions over time; in effect, it challenges an employment system.

The most common nondiscriminatory explanation for a systemic disparity in treatment is a lack of qualifications among the minority group members. A plaintiff's statistical evidence must therefore focus on eliminating this nondiscriminatory explanation by showing disparities in treatment between individuals with comparable qualifications for the positions at issue.

Hazelwood School District, supra, 433 U.S. at 308 n. 13, 97 S.Ct. at 2742 n. 13; *DeMedina v. Reinhardt*, 686 F.2d 997, 1007 (D.C.Cir.1982) (quoting *D. Baldus & J. Cole*, supra, at 120). 66 Once the plaintiffs' analysis has focused on the proper groups for comparison, it must yield results that meet generally accepted standards of statistical significance.

In other words, both the methodology and the explanatory power of the statistical analysis must be sufficient to permit an inference of discrimination. 67 a. Methodology: minimum objective qualifications. To ensure that a plaintiff's methodology has eliminated the common nondiscriminatory explanation of a lack of qualifications, this circuit has developed a requirement that statistical evidence of disparities account for the minimum objective qualifications for the positions at issue.

DeMedina, *supra*, 686 F.2d at 1003; Valentino, *supra*, 674 F.2d at 71; Davis v. Califano, *supra*, 613 F.2d at 964. This requirement greatly aids evaluation of regression analyses such as those used here. Regressions seek to prove race discrimination by testing possible alternative explanations for an observed disparity between blacks and whites, and typically these alternative explanations will be particular employee traits such as prior experience or education.

The minimum objective qualification approach should not, however, be read as a hard and fast rule; tests for the sufficiency of a Title VII *prima facie* case must not be applied in a "rigid, mechanistic, or ritualistic" way. Furnco, *supra*, 438 U.S. at 577, 98 S.Ct. at 2949.

The minimum objective qualification approach is not a quick litmus test, but an analytic method to ensure that a plaintiff's statistics measure disparities among comparably qualified workers, rather than disparities in qualifications.

The ultimate test of sufficiency must remain that of Burdine, Teamsters, and Furnco: did the plaintiffs offer evidence "adequate to create an inference that * * * employment decision[s] * * * [were] based on a discriminatory criterion illegal under the Act." Teamsters, *supra*, 431 U.S. at 358, 97 S.Ct. at 1866. Accord Burdine, *supra*, 450 U.S. at 253-254, 101 S.Ct. at 1093-1094; Furnco, *supra*, 438 U.S. at 577, 98 S.Ct. at 2949; Valentino, *supra*, 674 F.2d at 74 (statement of Wald, J. on denial of rehearing) ("In each case, the critical question is whether there is a reasonable basis for inferring disparate treatment.").

68 In the present case DEA has challenged plaintiffs' salary regression analyses on the ground that they fail to account for a minimum objective qualification: specialized prior experience in criminal investigations.

The burden of DEA's argument is that the failure to include this factor skewed all of plaintiffs' studies because the lower salaries and less rapid promotions of black agents can in large measure be traced to the fact that black agents lack prior criminal investigative experience and therefore enter DEA at a lower grade level. This court must determine whether the failure of plaintiffs' analyses to account specifically for this factor precludes an inference of discrimination under the functional test of Burdine, Teamsters, and Furnco.

Although we review the trial court's findings of fact on the clearly erroneous standard, Albemarle Paper Co., *supra*, 422 U.S. at 424, 95 S.Ct. at 2374, the issue whether a Title VII plaintiff has

included necessary variables in statistical proof "trigger[s] a more careful examination * * *." Trout v. Lehman, 702 F.2d 1094, 1101 (D.C.Cir.1983), vacated on other grounds, --- U.S. ---, 104 S.Ct.

1404, 79 L.Ed.2d 732 (1984). We must therefore delve somewhat deeply into DEA's initial grade assignment practices. 69 Special agents enter DEA at either the GS-7 or the GS-9 level. The requirements for the two entry levels are set forth in the Civil Service Commission Handbook, x-118, and have been summarized in a stipulation of the parties, Joint Exhibit I, JA 39.

The requirements for GS-7 are three years of general experience and one year of specialized experience. JA 39. The requirements for GS-9 are three years of general experience and two years of specialized experience. Id. General experience is defined as: 70 [P]rogressively responsible experience which has required (1) ability to work or deal effectively with individuals or groups of persons; (2) skill in collecting and assembling pertinent facts; (3) ability to prepare clear and concise reports; and (4) ability and willingness to accept responsibility.

Id. Specialized experience is defined as: 71 [P]rogressively responsible investigative experience which demonstrates (1) initiative, ingenuity, resourcefulness, and judgment required to collect, assemble and develop facts and other pertinent data; (2) ability to think logically and objectively, to analyze and evaluate facts, evidence, and related information, and arrive at sound conclusions; (3) skill in written and oral reports and presentation of investigative findings in a clear and concise manner; and (4) tact, discretion, and capacity for obtaining the cooperation and confidence of others.

72 Id. at 40. In addition, special agents at both GS-7 and GS-9 are criminal investigators, JA 41, and one year of their prior specialized experience must be in criminal investigative work or other comparable work. JA 40. 73 Extrapolating, we see, first, that every special agent hired, whether at GS-7 or GS-9, must have at least one year of prior specialized experience in criminal investigative work, and, second, that the only difference between those hired at GS-7 and those hired at GS-9 is one additional year of specialized experience as defined above.

According to the stipulation, this additional year need not be in criminal investigations. 74 These facts severely undermine DEA's argument. The claim that plaintiffs' statistics have wholly failed to account for prior experience in criminal investigations is inaccurate. Plaintiffs studied only those whom DEA had already hired. Every one of them must have met the basic Civil Service requirement of one year of prior criminal investigative experience to have been hired even at the GS-7 level.

Thus DEA's claim that plaintiffs' studies "took no account of basic experiential requirements," brief for appellants at 60, is incorrect according to the facts to which DEA stipulated. Plaintiffs' studies did not specifically account for criminal investigative experience over and above this one

year that all special agents possess. But--again according to the stipulated facts--criminal investigative experience above the one year minimum is not a requirement for entry at GS-9 instead of GS-7.

Rather, the additional requirement for entry at GS-9 is a second year of "specialized experience" as defined in the Civil Service Commission Handbook. Plaintiffs' failure explicitly to account for additional years of prior criminal investigative experience therefore cannot be viewed as an omission of a minimum objective qualification.⁷⁵ The only possible omission of a minimum objective qualification in this case would be plaintiffs' failure to account specifically for the requirement of an additional year of "specialized experience," as defined in the Civil Service Commission Handbook.

For three reasons, we hold that the District Court's approval of plaintiffs' decision to exclude this variable from their analyses was not erroneous.⁷⁶ First, the operative Civil Service definition of "specialized experience" is highly subjective. It measures such intangibles as "ingenuity," "resourcefulness," "ability to arrive at sound conclusions," "tact," and "discretion."

JA 40. The law is clear that a plaintiff's proof must account for objective qualifications; exclusion of subjective requirements, such as those encompassed in the definition of "specialized experience," is entirely proper. See *Davis v. Califano*, *supra*, 613 F.2d at 964.

The reason for exclusion is equally clear. Such subjective criteria may well serve as a veil of seeming legitimacy behind which illegal discrimination is operating. If so, measurement of the relation of such a factor to an observed disparity would simply amount to a measure of the amount of discrimination operating through application of the factor. See *Vuyanich I*, *supra*, 505 F.Supp. at 277; *James v. Stockham Valve & Fitting Co.*, 559 F.2d 310, 331-333 (5th Cir.1977); Finklestein, *The Judicial Reception of Multiple Regression Studies in Race and Sex Discrimination Cases*, 80 COLUM.L.REV.

737, 738-742 (1980). Cf. *Valentino*, *supra*, 674 F.2d at 73 n. 30 (failure to include (GS) grade level as a variable in regression analysis is proper; "absent clear, affirmative evidence that promotions were made in accordance with neutral, objective standards consistently applied, there is no assurance that level or rank is an appropriate explanatory variable untainted by discrimination").

⁷⁷ Second, plaintiffs were not realistically able to account for the application of so amorphous a criterion as the Civil Service definition of "specialized experience." This circuit has recognized that "[t]he appropriate degree of refinement of the plaintiffs' statistical analysis * * * may depend on the quality and control of the available data." *Trout v. Lehman*, *supra*, 702 F.2d at 1101.

Plaintiffs here relied on the objective evidence available to them--the Justice Department's JUNIPER tapes--to construct their analytical models. Based on this and other evidence reasonably available to them, they could not possibly have quantified the applicable Civil Service

requirement of "specialized experience" in a manner that would have made the requirement amenable to statistical analysis.

Perhaps DEA has distilled objective proxies for "specialized experience"--such as prior police experience--that might have been quantifiable, but the record is devoid of any evidence that DEA has in fact done so. Both the policies underlying Title VII and general principles of evidence suggest that the burden of production of such evidence must rest with the defendant.

See *Trout v. Hidalgo*, 517 F.Supp. 873, 883 & n. 33 (D.D.C.1981) ("[o]ne clear purpose of discrimination law is to force employers to bring their employment processes into the open"), *aff'd*, 702 F.2d 1094 (D.C.Cir.1983), vacated on other grounds, --- U.S. ----, 104 S.Ct. 1404, 79 L.Ed.2d 732 (1984); *EEOC v. Radiator Specialty Co.*, 610 F.2d 178, 185 n. 8 (4th Cir.1979) (Title VII case following "principle of allocation of proof to the party with the most ready access to the relevant information"); *DeMedina*, *supra*, 686 F.2d at 1008, 1009 & n. 7.

78 Third, even if we accept *arguendo* that a second year of specialized experience--or, for that matter, of criminal investigative experience--is a minimum objective qualification, DEA's objections would still fall short in a crucial respect. A strong argument exists that plaintiffs' regressions have implicitly accounted for this variable. Apart from the unsubstantiated declamations of DEA's appellate attorneys, nothing in the record so much as hints that black special agents are less likely than white special agents to possess this qualification.

The labor pool that plaintiffs' experts studied comprised only those whom DEA had already hired. All of these individuals had at least one year of prior criminal investigative experience. There is simply no reason to assume that the blacks in such a group of trained, experienced law enforcement officials are less likely than the whites in the same group to have had a second year of "specialized experience" or prior criminal investigative experience.

Nor has DEA "articulated * * * [a] basis for the assumption that such skills are in fact unevenly distributed * * *." *DeMedina*, *supra*, 686 F.2d at 1008. In an analogous situation the court in *DeMedina* established a "rebuttable presumption of an equal distribution of the relevant * * * skills." *Id.* (emphasis in original). Such a presumption is equally appropriate here.

79 This high degree of homogeneity of qualifications among those in the labor pool distinguishes the present case from *Valentino*, *supra*, where the court did not employ a presumption of equal qualifications. In *Valentino* the court found that "[i]n the setting [of the case] it would be irrational to assume 'equal qualifications' to fill engineering or secretarial vacancies among persons educated the same number of years and employed by the government for the same length of time."

674 F.2d at 71 (footnotes omitted). In other words, the heterogeneity of the labor pool that plaintiff defined precluded any presumption of equal qualifications. In the present setting, by contrast, it would be irrational to assume unequal qualifications. 80 Since DEA has presented no admissible

evidence that black agents are more likely than white agents to lack a second year of requisite experience, plaintiffs' failure to account for this variable does not dilute the force of their statistical analysis; in the language of the statistician, absent any reason to conclude that the omitted factor correlates with race, the omission of the variable will not affect the validity of the race coefficient in plaintiffs' regression analysis.

See D. Baldus & J. Cole, *supra*, at 273; Vuyanich I, *supra*, 505 F.Supp. at 274. 81 Though any one of the above reasons would have justified plaintiffs' decision to exclude "specialized experience" as a variable, we note the multiplicity of proper objections to use of this criterion in order to highlight the weakness of this aspect of DEA's challenge.

In sum, plaintiffs' statistical proof cannot be faulted for any failure to focus on a population that "closely approximates the characteristics" of those eligible for the positions at issue. DeMedina, *supra*, 686 F.2d at 1007. By studying only those whom DEA had already hired, plaintiffs' experts ensured in this case that the group analyzed would possess a relatively similar composite of skills and experience.

Thus, on the methodological level, the District Court correctly concluded that plaintiffs' evidence meets the functional test of *Teamsters*, *Furnco*, and *Burdine*. 82 b. Explanatory power. DEA also challenges the explanatory power of plaintiffs' statistical evidence.

As a threshold matter DEA argues that because the trial court did not credit any of plaintiffs' specific anecdotal accounts of discrimination, see Part I-C & n. 10 *supra*, plaintiffs could not make out a *prima facie* case unless their statistics showed "gross disparities" of treatment. See *Hazelwood School District*, *supra*, 433 U.S. at 307-308, 97 S.Ct. at 2742.

We must therefore decide at the outset whether plaintiffs' lack of anecdotal evidence triggers a requirement that plaintiffs show gross disparities of treatment. Beyond this threshold issue DEA argues that plaintiffs' statistics do not show sufficient actionable post-1972 discrimination at sufficient levels of statistical significance to support an inference of discrimination.

Thus we must also decide whether the District Court properly found that plaintiffs had made a sufficient showing of actionable discrimination, both in terms of the magnitude of actionable disparities and in terms of the level of statistical significance. 83 i. The effect of a lack of anecdotal evidence. Anecdotal testimony recounting personal experiences of discrimination plays an important role in Title VII litigation.

"Such testimony may '[bring] the cold numbers convincingly to life.' " Valentino, *supra*, 674 F.2d at 68 (quoting *Teamsters*, *supra*, 431 U.S. at 338-339, 97 S.Ct. at 1856). The presence of anecdotal testimony bolsters a plaintiff's case, and may become crucial when "the statistical evidence does not adequately account for 'the diverse and specialized qualifications necessary for [the positions

in question].' " Valentino, *supra*, 674 F.2d at 69 (quoting *Wilkins v. University of Houston*, 654 F.2d 388, 410 (5th Cir.1981)).

84 DEA urges that the converse is equally true; when anecdotal evidence is lacking, statistical evidence must show, as a matter of law, not merely disparities in treatment, but "gross disparities." This argument derives from one sentence in *Hazelwood School District*, *supra*: "Where gross statistical disparities can be shown, they alone may in a proper case constitute *prima facie* proof of a pattern or practice of discrimination."

433 U.S. at 307-308, 97 S.Ct. at 2742. Drawing from this sentence a fixed rule that only "gross" disparities suffice absent anecdotal testimony, DEA reads the words for all they are worth, and more. 85 Neither *Hazelwood* nor any other Supreme Court precedent supports a rule that statistical proof of the kind presented in this case is insufficient absent anecdotal evidence.

To make a *prima facie* case plaintiffs must meet the functional standard of *Teamsters*, *Burdine*, and *Furnco*; they must present evidence sufficient to support an inference of discrimination. All evidence that a plaintiff presents can contribute to this inference, and should therefore be considered as cumulative. *EEOC v. American National Bank*, 652 F.2d 1176, 1188 (4th Cir.1981) (reliance on "cumulation of evidence including statistics, patterns, practices, general policies or specific instances of discrimination"), *cert. denied*, 459 U.S. 923, 103 S.Ct.

235, 74 L.Ed.2d 186 (1982). Though anecdotal evidence might bolster a plaintiff's case or reduce the need for strong statistical proof, see *Valentino*, *supra*, 674 F.2d at 69, neither the presence nor the absence of specific anecdotal accounts alters the standard that a plaintiff's initial case must meet. 86 Read in context the language in *Hazelwood* on which DEA places so much weight will not bear the meaning DEA seeks to impose on it.

In the immediately preceding passage the Court, quoting from *Teamsters*, stated: "Evidence of longlasting and gross disparity between the composition of a workforce and that of the general population may thus be significant * * *." 433 U.S. at 307, 97 S.Ct. at 2741 (quoting *Teamsters*, *supra*, 431 U.S. at 340 n. 20, 97 S.Ct. at 1856 n. 20) (emphasis added).

The language to which DEA points refers back to this preceding sentence. Thus, if the Court intended any specific rule by the "gross disparity" language, the Court meant that rule to apply when a plaintiff relies on general population/workforce comparisons and lacks anecdotal evidence. Such a requirement might be appropriate because a population/workforce comparison will usually yield only rough evidence of discrimination; the method is not finely tuned to the population of those eligible for and interested in the positions at issue.

Absent anecdotal evidence, an inference of discrimination is less secure when such statistics show only slight disparities. When, however, statistical evidence is more finely tuned to the relevant labor pool, gross disparities need not be shown to permit an inference of discrimination. See *B.*

SCHLET & P. GROSSMAN, EMPLOYMENT DISCRIMINATION LAW 1371 (1983). 87 Statistics, of course, "are not irrefutable," *Teamsters*, supra, 431 U.S. at 340, 97 S.Ct. at 1856, but when a plaintiff's statistical methodology focuses on the appropriate labor pool and generates evidence of discrimination at a statistically significant level, no sound policy reason exists for subjecting the plaintiff to the additional requirement of either providing anecdotal evidence or showing gross disparities.

Such a rule would reflect little more than a superstitious hostility to statistical proof, a preference for the intuitionistic and individualistic over the scientific and systemic. It is not difficult to understand that discrimination might exist even when affected individuals can point to no specific instances of an employer's discriminatory conduct.

The days of Bull Connor are largely past; discrimination now works more subtly. Yet its effects are no less pernicious. " 'In many cases the only available avenue of proof is the use of racial statistics to uncover clandestine and covert discrimination * * *.' " *Teamsters*, supra, 431 U.S. at 340 n. 20, 97 S.Ct. at 1856 n. 20 (quoting *United States v. Ironworkers Local 86*, 443 F.2d 544, 551 (9th Cir.1971)).

Statistical proof, crucial to advancing the purposes of Title VII, must not be encumbered with requirements such as those DEA urges here. 88 In the present case plaintiffs rely on statistical evidence that has been demonstrated to be fine-tuned to the relevant labor pool. See Part II-B-1-a supra. This case is, in other words, a far cry from *Hazelwood*. If plaintiffs' statistical proof standing alone permits an inference that DEA's employment decisions were more likely than not based on race, then this proof suffices irrespective of the presence of supporting anecdotal evidence.

Moreover, were we to require anecdotal evidence plaintiffs would still meet their prima facie burden. Although DEA adequately rebutted most testimony regarding specific instances of discrimination, 508 F.Supp. at 690, 713, the trial court credited much of plaintiffs' nonstatistical evidence, including the testimony of several agents about disparate treatment in disciplinary procedures and supervisory evaluations, and about black agents' general perceptions that DEA was a discriminatory environment.

Id. at 708-711. 89 ii. The sufficiency of plaintiffs' showing of disparities. Although plaintiffs need not show enhanced or "gross" disparities, they must present evidence that permits an inference of discrimination under the test of *Burdine*, *Teamsters*, and *Furnco*. DEA raises two issues with respect to the sufficiency of plaintiffs' showing under this test.

The first issue involves the magnitude of actionable discrimination shown in plaintiffs' statistics; DEA argues that the District Court improperly relied on nonactionable pre-1972 discrimination reflected in the statistics in finding a prima facie case of discrimination.

The second issue involves the statistical significance of the disparities in plaintiffs' regressions. 90 The magnitude of actionable disparity. DEA has made a very cursory argument that appellees' statistical showing is flawed because the statistics in part reflect pre-1972 discrimination.

The brevity of DEA's analysis offers little clue as to the import of this alleged "flaw." We do not understand DEA to be contending that the District Court based its finding of discrimination on the erroneous legal premise that pre-1972 discrimination was independently actionable, for the court explicitly indicated that "Title VII is applicable to DEA only for post-1972 discrimination."

Findings p 7d, 508 F.Supp. at 696. Nor do we understand DEA to be contending that statistical evidence reflecting both pre-1972 discrimination and post-1972 discrimination cannot, as a matter of law, suffice to support an inference of post-1972 discrimination. See *Valentino*, supra, 674 F.2d at 71 n. 26 ("[F]ailure to factor out time-barred discrimination [does not] discredit the analyses.

Statistics tuned to the proper time period are more probative than statistics not so tuned, but categorical rejection of the latter is not warranted"[.]); *Movement for Opportunity and Equality v. General Motors Corp.*, 622 F.2d 1235, 1258 (7th Cir.1980).

Finally, DEA has not even suggested that the District Court did not base its liability determination independently on evidence that did not reflect pre-1972 discrimination. 91 Despite the shortcomings of DEA's analysis, we have considered with care the possibility that erroneous consideration of pre-1972 discrimination may have infected the lower court's liability determination.

This question commands our attention in light of the Supreme Court's recent decision in another Title VII case, *Lehman v. Trout*, --- U.S. ---, 104 S.Ct. 1404, 79 L.Ed.2d 732 (1984). In *Trout* the Court vacated this circuit's affirmance of a District Court finding of discrimination based largely on evidence reflecting both pre- and post-1972 discrimination.

To understand the relevance of the Supreme Court's holding to the present case we must trace the course of the court decisions in *Trout*. 92 Though the plaintiffs' statistics in *Trout* reflected both pre- and post-1972 discrimination, the District Court found the statistics sufficient to support an inference of post-1972 disparate treatment.

In dismissing the defendants' objection to the use of the pre-1972 data the court indicated, *inter alia*, that "[i]t is likely that such discrimination before 1972, even if coupled with neutral employment practices since then, produced actionable continuing discriminatory effects after 1972 * * *." *Trout v. Hidalgo*, supra, 517 F.Supp. at 880.

On appeal this court held that the District Court's "continuing effects" theory was "flatly inconsistent" with the Supreme Court's earlier pronouncements. *Trout v. Lehman*, supra, 702 F.2d at 1104. However, because the record indicated to us that the District Court had found, in the

alternative, that post-1972 statistics were sufficient to support an inference of disparate treatment, see *Trout v. Hidalgo*, supra, 517 F.Supp. at 879 n. 14, we affirmed the court's liability determination.

93 Although the Supreme Court found no fault with our understanding of Title VII principles in *Trout*, the Court vacated and remanded to this court with instructions to remand "to the District Court for findings of fact, based on new evidence if necessary, on the question what evidentiary value respondents' and petitioners' statistical evidence has in light of the Court of Appeals' conclusions of law concerning employment decisions that are not actionable in this case.

See *Pullman-Standard v. Swint*, 456 U.S. 273, 292, 102 S.Ct. 1781, 1792, 72 L.Ed. 66 (1982)." *Lehman v. Trout*, supra, --- U.S. at ---, 104 S.Ct. at 1404. Though the Court's opinion was exceedingly brief and its citation to *Pullman-Standard* was unexplained, this citation implies that the Court was acting out of an abundance of caution to protect the sanctity of the trial court's factfinding function.

See *Pullman-Standard v. Swint*, supra, 456 U.S. at 292, 102 S.Ct. at 1792. We therefore infer that, in *Trout*, the Court was unsure whether the trial court would have found discrimination absent its erroneous understanding as to the legal significance of "continuing effects." Hence the remand. 94 At least in the context of this case, the message to be gleaned from *Trout* is that we must proceed with caution if the trial court has made an error of law in finding discrimination, lest we invade the factfinding prerogative of the District Court.

If the District Court has found a prima facie case of discrimination "because of an erroneous view of the law," *Pullman-Standard*, supra, 456 U.S. at 292, 102 S.Ct. at 1792 (emphasis added), this court may not take upon itself the task of deciding in the first instance whether the facts nonetheless support an inference of discrimination under a correct understanding of the law.

95 In this case we have no trouble concluding that the teachings of *Pullman-Standard* and *Trout* do not warrant reversal of the District Court on the ground that the court used some statistics that might reflect pre-1972 discrimination. DEA has not argued on appeal that the use of data reflecting pre-1972 discrimination affected any aspect of the District Court's liability determination other than the findings of salary disparities.²¹ Hence, even if DEA's argument were well-placed, most of the District Court's liability determination would remain intact.

Specifically, DEA has not suggested that this argument has any application to the District Court's independent findings that plaintiffs established a prima facie case of discrimination in grade-at-entry, work assignments, supervisory evaluations, discipline, and promotions. See 508 F.Supp. at 712-715. And even with respect to the plaintiffs' prima facie proof of salary disparities further factfinding by the District Court is unnecessary.

It is far from clear whether the court erroneously reasoned that any disparities resulting from the continuing effects of pre-1972 discrimination were actionable.²² However, assuming arguendo that such a legal error was made, it is clear that the trial court did not make its finding of a prima facie case of salary discrimination "because of " any such erroneous view.

Two considerations compel this conclusion. ⁹⁶ First, as we have explained, the court properly could consider evidence that may have reflected pre-1972 discrimination in determining that a prima facie case was established.

In considering plaintiffs' first regression, which included data on employees hired before 1972, the court acknowledged that it was theoretically possible "that pre-1972 discrimination might affect" the regression. Findings p 7h, 508 F.Supp. at 697.

The court, however, expressly found that this effect was unproven²³ and that it might cause the regression to underestimate the extent of post-1972 discrimination.²⁴ The trial court concluded that DEA's failure to test this hypothesis empirically left DEA's criticism "speculative and incapable of rebutting Plaintiffs' statistical showing."²⁵ Moreover, based on the second regression (analyzing agents hired after 1972) the court found that "post 1972 discrimination largely contributed" to the statistical results in the first regression.

Findings p 7i, 508 F.Supp. at 697. ⁹⁷ Given these factual findings the lower court certainly could, and did in fact, permissibly conclude that the first regression established a prima facie case of post-1972 discrimination, and these findings plainly indicate that the District Court did not consider a continuing effects theory to be essential to its finding that a prima facie case of post-1972 discrimination was established.

⁹⁸ Second, the District Court's finding that plaintiffs established a prima facie case of discrimination in salaries was independently based on statistics pertaining only to employees hired after 1972. The court reviewed these statistics and found that the salary disparities were "statistically significant at or below the .05 level for every year since 1975."

Findings p 7d, 508 F.Supp. at 696. It also found that these statistics "tend to downplay the effects of discrimination at DEA because almost half the agents in the 1975 analyses were hired in 1974, and the most serious promotional problems are encountered in the middle and upper grades." Findings p 7e, 508 F.Supp. at 696.

The court concluded that these statistics evidenced gross salary disparities, and that because of these disparities plaintiffs had established a prima facie case of salary discrimination.²⁶ ⁹⁹ In light of the foregoing, we conclude that consideration of some data that might hypothetically reflect continuing effects of pre-1972 discrimination does not dictate reversal of the District Court's liability determination.

The District Court's opinion clearly indicates that the court based this determination independently on evidence that did not reflect such discrimination. DEA has not argued otherwise. In these circumstances, due regard for the trial court's role as finder of fact requires us to respect the independent bases on which the District Court grounded its liability determination.

Accordingly, we conclude that the court's findings are not "infirm because of an erroneous view of the law." Pullman-Standard, *supra*, 456 U.S. at 292, 102 S.Ct. at 1792. 100 The statistical significance of the disparities shown. DEA also argues that plaintiffs' salary regressions did not achieve a level of statistical significance sufficient to permit an inference of discrimination.²⁷ The notion of statistical significance addresses directly the question whether an inference of discrimination is warranted.

Statistical significance is a measure of the probability that the outcome of a statistical analysis would have occurred by chance: The lower the probability that the observed outcome could have occurred by chance, the stronger the inference of discrimination that can be drawn from the data.

For example, a finding that a study is significant at the .10 level indicates that the odds are one in ten that the result could have occurred by chance, and a finding of significance at the .05 level indicates that the odds are one in 20 that the result could have occurred by chance.

Although the law has not set any precise level at which statistical significance can be said to be sufficient to permit an inference of discrimination, social scientists usually accept a study that achieves statistical significance at the .05 level. D. Baldus & J. Cole, *supra*, at 297; cf. F. MOSTELLER, R. ROURKE & G. THOMAS, *PROBABILITY WITH STATISTICAL APPLICATIONS* 310 (2d ed.

1970). In other words, a study is found significant--and the hypothesis of chance is rejected--when there exists at most a one in 20 possibility that the observed result could have occurred by chance. Several courts have adopted the .05 level as sufficient to support an inference of discrimination in Title VII cases. *Vuyanich I*, *supra*, 505 F.Supp. at 271; *Cooper v. University of Texas*, 482 F.Supp. 187, 194 (N.D.Tex.1979).

The Justice Department itself has adopted the .05 standard as sufficient in this area. See Uniform Guidelines on Employee Selection Sec. 14(B)(5), 43 Fed.Reg. 38290, 38301 (1978); 28 C.F.R. Sec. 50.14 (1983).²⁸ 101 Without deciding whether a plaintiff's initial case might suffice even without meeting the .05 level of significance,²⁹ we find that the plaintiffs in this case have presented analyses that meet the generally accepted .05 level of statistical significance.

All findings of plaintiffs' salary regressions meet or exceed the .05 level, except for the showing of discrimination in 1975 against those hired after 1972. As noted above, however, this 1975 finding is skewed by a unique factual circumstance. See Part I-B-1 *supra*.

For every other year the probability that the observed result occurred by chance was less than one in 20; for most years the probability was less than one in a thousand. *Id.* Similarly, plaintiffs' statistical analyses of grade at entry, evaluations, and discipline all achieved results significant at or above the .05 level. *Id.* These levels of significance are certainly sufficient to support an inference of discrimination.

102 Plaintiffs' evidence regarding promotions stands on a somewhat different footing. Disparity was demonstrated at a statistically significant level in promotions from GS-11 to GS-12. This evidence suffices to support the requisite inference of discrimination at the GS-11 to GS-12 level. Statistical evidence purporting to show discrimination in promotions above GS-12 did not achieve acceptable levels of statistical significance.

Thus, as the trial court correctly found, 508 F.Supp. at 714, statistics alone will not permit an inference of discrimination in promotions to positions above the GS-12 level. 103 Nonetheless, we hold that the District Court correctly found that enough other probative evidence exists to permit an inference of discrimination in promotions above the GS-12 level.

In the first place, plaintiffs' evidence regarding promotions above GS-12 was not dispositive either way on the issue of discrimination. Since so few promotions occurred at the higher levels of DEA during the relevant time frame, plaintiffs had to rely on a sample too small to generate statistically significant evidence of discrimination. 508 F.Supp. at 701-702, 714.

This lack of statistical proof does not, however, prove that no discrimination took place. And other probative evidence does suggest discrimination. Plaintiffs made a *prima facie* showing of discrimination in initial grade assignments, work assignments, supervisory evaluations, and discipline. These are precisely the factors that determine a special agent's prospects for discretionary promotions at the higher levels of DEA.

See Part I-A *supra*. With a statistical sample large enough to permit probative results, plaintiffs demonstrated that black agents indeed fared less well in promotions from GS-11 to GS-12, the likely result of discrimination in evaluations, initial grade assignments, work assignments, and discipline.

After finding discrimination in the factors that bear most strongly on promotions, and in promotions at the immediately preceding step, the trial court could and did appropriately draw an inference of discrimination in promotions above GS-12.

Although indirect, the evidence permits an inference that discrimination was more likely than not. 104 2. The insufficiency of DEA's rebuttal case. DEA also claims that the trial court erred in its evaluation of DEA's case on rebuttal. DEA first points to two errors of law that purportedly skewed the trial court's evaluation of DEA's rebuttal case: (1) the trial court erroneously placed on DEA a burden of persuasion instead of a burden of production, and (2) the trial court erroneously

refused to admit into evidence at the remedial stage of the proceeding DEA's alternative regression analyses.

On top of these legal errors, DEA claims, the trial court improperly devalued DEA's rebuttal evidence. DEA contends that in light of these errors and the vulnerability of plaintiffs' initial case, the trial court erred in finding discrimination. 105 a. The trial court's allocation of burdens.

In a Title VII case alleging disparate treatment the "ultimate burden of persuading the trier of fact that the defendant intentionally discriminated against the plaintiff remains at all times with the plaintiff." *Burdine*, supra, 450 U.S. at 253, 101 S.Ct. at 1093. See Part II-A supra. DEA argues that the trial court violated this precept in analyzing the disparate treatment claim in this case.

The controversy turns on the interpretation given the following paragraph in the trial court's opinion: 106 The burden of proof in Title VII litigation always remains on the Plaintiff. After the establishment of a prima facie case, however, the burden of persuasion shifts to the employer. This burden requires the Defendant to "articulate some legitimate, nondiscriminatory reason." * * * If the Defendant meets the rebuttal burden, the Plaintiff has an opportunity to show that the apparently legitimate reason is, in fact, a pretext. * * * 107 508 F.Supp. at 711 (citations omitted).

Read literally, one sentence in this passage would seem to indicate that the trial judge erred; he states that a burden of persuasion shifts to the defendant. But read as a whole, the passage indicates that the judge allocated burdens correctly. He states explicitly that the burden of proof always remains with the plaintiff, and the burden that he labels "persuasion" he defines as one of "articulation."³⁰ 108 A clarification that the trial court issued should remove any doubt on this score.

The Supreme Court decided *Burdine* one month after the trial court issued its opinion in this case. Shortly after the Court issued *Burdine* plaintiffs in this case requested a clarification of the trial court's conclusions of law with regard to the applicable burdens of proof.

The court responded that it had allocated burdens in conformity with *Burdine*. See Order of April 30, 1981, JA 99. 109 This clarification is sufficient reason to distinguish the present case from *Freeman v. Lewis*, 675 F.2d 398 (D.C.Cir.1982).

In *Freeman* a panel of this circuit held that language almost identical to that of the trial court here was an improper allocation of burdens under *Burdine*. We question whether that panel gave the trial court's language a wholly fair reading, but we decide that the later clarification in the present controversy suffices to demonstrate that the trial court's language here, though perhaps initially ambiguous, did comport with *Burdine*'s allocation of burdens.

110 b. The decision not to admit DEA's alternative regression analysis. In deciding the liability issues the trial court admonished DEA for failing to substantiate its attack on plaintiffs' statistics

by reworking their analysis. 508 F.Supp. at 712.

In response DEA sought to introduce at the remedial phase of the trial an alternative regression analysis purporting to demonstrate that race did not explain salary differentials at DEA. Refusing to reopen the question of liability, the trial court rejected this proffer of evidence. See Part I-C-2 & n. 11 supra. 111 DEA argues on appeal as though this rejected evidence were part of the record, see, e.g., brief for appellants at 69-71, but it is not.

Nonetheless we must consider whether the trial court properly excluded the evidence.³¹ 112 In a bifurcated trial the judgment on liability remains interlocutory, and thus subject to the trial court's modification, until the remedial order issues. *Marconi Wireless Telegraph Co. v. United States*, 320 U.S. 1, 47-48, 63 S.Ct. 1393, 1414-1415, 87 L.Ed. 1731 (1943).

This principle applies to bifurcated Title VII actions. *Laffey v. Northwest Airlines, Inc.*, 642 F.2d 578, 584-585 (D.C.Cir.1980). The decision whether to reopen a liability determination is, however, discretionary. On appeal "the critical question is whether there was good cause to do so. Absent a convincing showing that the District Court's answer to this question constituted an abuse of discretion, we will not second-guess its decision."

Trout v. Lehman, supra, 702 F.2d at 1106. 113 *Trout v. Lehman* dealt with the precise issue before us in this case. We found that a trial court had not abused its discretion in refusing a defendant's proffer of rebuttal statistics at the remedial phase of the Title VII trial. Two factors underlay the decision: "the evidence * * * could have been discovered and presented at trial by a duly diligent defendant," and the defendants "offered no good reason whatsoever to explain why their statistical analyses were not produced at trial."

Id. Though the Supreme Court vacated the *Trout* decision, it did so for reasons wholly unrelated to the question of admissibility of liability evidence at the remedial stage. In fact the Court's remand implicitly approved this circuit's holding that the trial court had not abused its discretion in refusing to admit the evidence; while requiring the District Court to make new factual findings with respect to discrimination, the Supreme Court did not require the District Court to consider the evidence defendant proffered at the remedial stage, or any other new evidence.

Lehman v. Trout, supra, --- U.S. at ---, 104 S.Ct. at 1404. 114 In light of the intrinsic strength of the *Trout* reasoning on this point, and the Court's implicit approval of that reasoning, we follow *Trout* here. Plaintiffs filed the complaint in this action in January 1977 and the case came to trial in April 1979. DEA made use of statistical experts, and did offer extensive statistical evidence at the liability phase.

Without a doubt, DEA had the time and the resources to develop and present its alternative regressions then. And DEA's arguments at the remedial hearing and on appeal contain not a word of justification for its failure to do so.

In light of this unjustified omission, the trial court certainly did not abuse its discretion in refusing to admit DEA's alternative regressions. 115 c. The trial court's evaluation of DEA's cohort analysis. Though its regressions were rejected at the remedial stage, DEA did properly introduce during the liability phase a cohort analysis to rebut plaintiffs' showing of disparity.

Cohort analysis is another method to test for race discrimination. Under this approach all employees who start together at the same level are surveyed over the course of an observation period and their comparative progress in salary and promotions is evaluated. DEA's expert divided the special agents into 15 cohort groups, each group comprising agents who started in the same year and at the same initial grade level.

The analysis revealed discrimination in four of the 15 groups. For purposes of further evaluation, these four groups were broken into subgroups. Discrimination was still present in two of the subgroups. After examining the files of agents in these two subgroups, DEA discovered that three agents had been "misclassified." Only when these three agents were excluded did traces of discrimination disappear from the results of the analysis.

See Tr. at 1910-1914; Findings p 8, 508 F.Supp. at 697-698. 116 We would overturn the District Court's evaluation of this evidence only if we were to find that evaluation clearly erroneous. Though the District Court may have overstated a bit when it labeled cohort analysis "an untried method of statistical study, unsupported in any published statistical work or judicial decision," 508 F.Supp. at 698, the court was surely correct to reject this particular cohort analysis.

117 Courts have viewed cohort analysis in this area with a wary eye, see Valentino, *supra*, 674 F.2d at 72-73 n. 30; O'Brien v. Sky Chiefs, Inc., 670 F.2d 864 (9th Cir.1982); Trout v. Hidalgo, *supra*, 517 F.Supp. at 884-885.

The flaws that these courts have perceived were perceived in the present case by the District Court. See Findings p 8, 508 F.Supp. at 697-698. The court noted that by comparing those who started at the same grade level, the analysis fails to account for possible discrimination in initial grade assignments, an important allegation in this case. More importantly, the court found that DEA's use of cohort analysis in this case was methodologically flawed.

The division of the workforce into extremely small segments made it unlikely that this cohort study would detect disparities. Instead of repeatedly disaggregating until groups were too small to generate any statistically significant evidence of discrimination, DEA's expert should have aggregated the significance of the result in each subgroup to derive a test for significance with respect to the class as a whole.

See D. Baldus & J. Cole, *supra*, at 212 & n. 2. In light of this methodological misstep--and the fact that DEA's analysis tended as much to confirm as to refute the presence of discrimination³²--the

District Court properly discounted the probative value of DEA's rebuttal statistics. 118 3. Weighing the evidence.

The analytic application of Title VII's formulaic rules for shifting burdens can come to resemble a furious tennis match. When the volleying is over, however, a Title VII case is like all others: the trier of fact must weigh the plaintiff's proof and the defendant's rebuttal and decide whether plaintiffs have met the ultimate burden of persuasion that the law imposes on them.

See U.S. Postal Service Bd. of Gov. v. Aikens, 460 U.S. 711, 716, 103 S.Ct. 1478, 1482, 75 L.Ed.2d 403 (1983). We have already evaluated DEA's challenges to the particulars that went into the District Court's balance in this case. Since we have found no errors of law or clearly erroneous findings, all that remains is to examine the court's overall assessment of the evidence.

We review with deference. Only if we find the trial court's ultimate decision to be clearly erroneous will we overturn it. Albemarle Paper Co., supra, 422 U.S. at 424, 95 S.Ct. at 2374. 119 Plaintiffs brought in a battery of statistics to prove discrimination at DEA. Their analyses tended to show significant salary disparities between comparably qualified white and black special agents, and discrimination in DEA's initial grade assignments, work assignments, supervisory evaluations, promotions, and imposition of discipline.

In response DEA sought primarily to cast sufficient doubt on the existence of race-related disparities to prevent plaintiffs from carrying their burden of persuasion. 120 To do so DEA argued that plaintiffs were required to show "gross disparities" because they had failed to produce any credited individual anecdotal accounts of discrimination.

We have held that, as a matter of law, plaintiffs were not required to meet this enhanced threshold of "gross disparities." See Part II-B-1-b-i supra. DEA also argued that plaintiffs' salary regressions had failed to show actionable disparities at levels of statistical significance sufficient to permit an inference of discrimination.

We have held that the District Court properly found that the studies did show actionable disparities at sufficient levels of statistical significance. See Part II-B-1-b-ii supra. In any event, this objection went only to plaintiffs' salary regressions and thus failed to rebut the showings of discrimination in initial grade assignments, work assignments, supervisory evaluations, promotions, and imposition of discipline.

The keystone of DEA's defense was the argument that plaintiffs had failed to account for the explanatory variable of prior law enforcement experience. In essence DEA has argued that this variable, not race, explains virtually all of the observed disparities between white and black special agents. DEA styled this argument primarily as an attack on the sufficiency of plaintiffs' prima facie case.

In other words, DEA has argued that because plaintiffs failed to account for this factor their initial offer of proof was insufficient to support an inference of discrimination. We have held that plaintiffs' failure to account explicitly for this variable was not fatal to its prima facie case; the trial court properly found that the evidence plaintiffs did present was sufficient, notwithstanding this omission, to support an inference of discrimination under the functional test of *Teamsters*, *Furnco*, and *Burdine*.

See Part II-B-1-a supra. 121 Even if this argument is insufficient to invalidate plaintiffs' prima facie case, it might nonetheless serve as a legitimate nondiscriminatory explanation for the observed disparities between white and black agents.

In other words, even if plaintiffs' omission did not preclude them as a matter of law from making their initial case, DEA's explanation might serve to preclude the ultimate inference of discrimination against black agents under the disparate treatment theory. Claiming that this factor, not race, explains the disparities, DEA has in effect made such an argument.

To rebut plaintiffs' disparate treatment claim DEA need not carry the burden of persuasion as to this legitimate nondiscriminatory explanation. See *Burdine*, supra, 450 U.S. at 253-254, 101 S.Ct. at 1093-1094. The evidence must, however, cast sufficient doubt on plaintiffs' case to cause the trier of fact not to draw the ultimate inference of discrimination.

See Part II-A-1 supra. 122 The District Court did not find this rebuttal sufficiently strong to preclude the ultimate inference of discrimination. On review we cannot say that the court erred in this assessment. DEA has introduced no admissible evidence that this alleged differential in prior law enforcement experience exists.

As we have noted, there is no reason to assume that black agents in a group with one year of prior criminal investigative experience are more likely than white agents in that group to lack a second year of such experience. See Part II-B-1-a supra. Nor has DEA presented any admissible evidence that the purported differential in law enforcement experience explains the observed disparities.

123 Absent such evidence, we are left, as the trial court noted, with mere speculation and conjecture. See 508 F.Supp. at 712. Of course, "the most effective way to rebut a prima facie case is to present more accurate statistics." *Trout v. Lehman*, supra, 702 F.2d at 1102. A defendant is not absolutely required to rework a plaintiffs' statistics when, as in this case, the omitted variable was allegedly too subjective to admit of quantification.³³ A defendant must, however, make some credible showing that the omission skewed plaintiffs' statistics.

At a minimum the employer must raise a genuine issue of fact as to the veracity of plaintiffs' proof, and "[t]o accomplish this, the defendant must clearly set forth, through the introduction of admissible evidence, the reasons for" the observed disparity. *Burdine*, supra, 450 U.S. at 254-255,

101 S.Ct. at 1094. "Thus the defendant cannot meet its burden merely through * * * argument of counsel."

Id. at 255 n.9, 101 S.Ct. at 1094 n. 9. Because DEA has introduced no evidence to support its purported nondiscriminatory explanation, this rebuttal fails as a matter of law. 124 On balance, we find no reversible error in the District Court's overall assessment of the evidence.

The court properly attributed probative weight to plaintiffs' statistical analyses, and properly rejected the three aspects of DEA's case on rebuttal--the need for gross disparities, the insufficiency of the statistical studies, and the purported failure to account for prior law enforcement experience.

In light of these findings, the court appropriately held that DEA had engaged in a pattern or practice of discrimination against black special agents, 508 F.Supp. at 712, and properly held that DEA's initial grade assignments, work assignments, supervisory evaluations, imposition of discipline, and promotion process had disparate impacts on black agents. Id. at 712-715.³⁴ We therefore affirm the District Court's liability determination in its entirety.

125 4. Disparate impact analysis of DEA's rebuttal evidence. We note finally that even had DEA succeeded in rebutting plaintiffs' disparate treatment case by making a credible showing that the differential in prior law enforcement experience explained the observed disparity, DEA would have done no more than create a situation ripe for resolution under the disparate impact theory.

See Part II-A-1-b *supra*. According to DEA's argument, black special agents appear to do less well throughout the range of DEA's employment system because they tend to start lower in that system as a result of their relative lack of more than one year of prior law enforcement experience. This boils down to a claim that DEA's requirement of a second year of law enforcement experience for entry at GS-9 instead of GS-7 has an adverse impact on blacks because they tend to lack that qualification.

Between plaintiffs' and defendants' proof, the trier of fact would have had before it all the elements of a traditional disparate impact claim: plaintiffs had shown a disparity and defendant had pinpointed the facially neutral employment practice causing the disparity.

In this situation the trial court would properly have applied the disparate impact analysis of *Griggs*, *supra*, and its progeny. Had DEA made a credible showing that the requirement of an additional year of law enforcement experience caused the disparity, DEA would have been required to show the job-relatedness of such a requirement. *Griggs*, *supra*, 424 U.S. at 432, 91 S.Ct. at 854; *Albemarle Paper Co.*, *supra*, 422 U.S. at 425, 95 S.Ct. at 2375.

DEA has not even attempted any such showing. Thus, even had DEA succeeded in its attempt to articulate a legitimate nondiscriminatory explanation, DEA would still have been found in

violation of Title VII under the disparate impact theory. II. THE REMEDIES DETERMINATION
126 Section 706(g) of Title VII empowers a court that has found illegal discrimination to "order such affirmative action as may be appropriate, which may include, but is not limited to, reinstatement or hiring of employees, with or without back pay * * * or any other equitable relief as the court deems appropriate."

42 U.S.C. Sec. 2000e-5(g) (1976). The Conference Report accompanying amendment of Title VII in 1972 noted: 127 The provisions of this subsection are intended to give the courts wide discretion exercising their equitable powers to fashion the most complete relief possible.

In dealing with the present section 706(g) the courts have stressed that the scope of relief under that section of the Act is intended to make the victims of unlawful discrimination whole, and that the attainment of this objective rests not only upon the elimination of the particular unlawful employment practice complained of, but also requires that the consequences and effects of the unlawful employment practice be, so far as possible, restored to a position where they would have been were it not for the unlawful discrimination.

This broad reading of the need for effective remedies * * * is intended to be preserved in this bill * * *. 128 Section-by-Section Analysis of H.R. 1746, accompanying the Equal Employment Opportunity Act of 1972--Conference Report, 118 Cong.Rec. 7166, 7168 (1972).

The Supreme Court has also stressed the breadth of this remedial power. See *Albemarle Paper Co.*, supra, 422 U.S. at 421, 95 S.Ct. at 2373; *Franks v. Bowman Transportation Co.*, 424 U.S. 747, 763-764, 96 S.Ct. 1251, 1263-1264, 47 L.Ed.2d 444 (1976). 129 Having found pervasive discrimination at DEA, the District Court fashioned a tripartite remedial scheme: class-wide backpay for those at GS-11 and above,³⁵ promotion goals and timetables at DEA's upper levels, and class-wide frontpay for those at GS-11 and above.

See Mem.Op. and Remedial Order, JA 114; Part I-C-2 supra. DEA raises three challenges to these remedies. First, the class-wide backpay award impermissibly circumvents the individualized remedial hearings required by *Teamsters*, supra, 431 U.S. at 361-364, 97 S.Ct. at 1867-1869.

Second, the backpay award compensates for nonactionable pre-1972 discrimination. Third, the promotion goals and timetables exceed the court's remedial authority under Section 706(g) and violate the equal protection component of the Fifth Amendment to the Constitution. A. Individualized Hearings 130 DEA objects to the District Court's decision to forego in this case the individualized relief hearings prescribed in *Teamsters*, supra, 431 U.S. at 361, 97 S.Ct. at 1867.

The gravamen of DEA's objection is that class-wide relief may benefit some black agents who were not victims of illegal discrimination. The Court in *Teamsters* stated that when plaintiffs seek relief as "victims of the discriminatory practice, a district court must usually conduct additional proceedings after the liability phase of the trial to determine the scope of individual relief."

Id. In the wake of *Teamsters* individualized hearings have been common features of Title VII class actions. See, e.g., *McKenzie v. Sawyer*, 684 F.2d 62, 75 (D.C.Cir.1982).¹³¹ Though *Teamsters* certainly raises a presumption in favor of individualized hearings, the case should not be read as an unyielding limit on a court's equitable power to fashion effective relief for proven discrimination.³⁶ The language of *Teamsters* is not so inflexible; after stating that individual hearings are "usually" required, *Teamsters*, supra, 431 U.S. at 361, 97 S.Ct. at 1867, the Court went on to note that "[i]n determining the specific remedies to be afforded, a district court is 'to fashion such relief as the particular circumstances of a case may require to effect restitution.'" Id. at 364, 97 S.Ct. at 1869, quoting *Franks*, supra, 424 U.S. at 764, 96 S.Ct. at 1264.

Later courts have often faced situations in which the *Teamsters* hearing preference had to bend to accommodate Title VII's remedial purposes. Primarily, courts have not required hearings when discrimination has so percolated through an employment system that any attempt to reconstruct individual employment histories would drag the court into "a quagmire of hypothetical judgments."

Thompson v. Boyle, 499 F.Supp. 1147, 1170 (D.D.C.1979) (quoting *Pettway v. American Cast Iron Pipe Co.*, 494 F.2d 211, 260 (5th Cir.1974), cert. denied, 439 U.S. 1115, 99 S.Ct. 1020, 59 L.Ed.2d 74 (1979)), aff'd, 678 F.2d 257 (D.C.Cir.1982); *Hamheed v. Int'l Ass'n of Ironworkers*, 637 F.2d 506, 520 (8th Cir.1980). See also *Stewart v. General Motors Corp.*, 542 F.2d 445, 452-453 (7th Cir.1976) (pre-*Teamsters*), cert. denied, 433 U.S. 919, 97 S.Ct.

2995, 53 L.Ed.2d 1105 (1977); *Bowe v. Colgate Palmolive Co.*, 416 F.2d 711, 721 (7th Cir.1969) (same).¹³² Applying these principles to the present controversy, we note at the outset that the District Court did not rush willy-nilly to impose class-wide relief.

The court specifically ordered individual relief hearings where feasible. All claims of backpay for discrimination at levels below GS-11 will be resolved in individualized hearings. See Mem.Op. at 3, JA 116. At these levels individualized hearings are appropriate because a small number of discernible decisions as to initial grade assignment and promotions will be in issue for each agent.

These determinations are akin to those in *Teamsters*, where the required hearings were to involve a single determination as to whether individual plaintiffs had applied and were qualified for particular line driver positions in the trucking industry. 431 U.S. at 371-372, 97 S.Ct. at 1872-1873.¹³³ After careful consideration, the District Court here ordered class-wide relief only for discrimination above GS-11.

The court had found that discrimination impeded black agents at every turn; blacks faced extra hurdles in DEA's initial grade assignments, work assignments, supervisory evaluations, imposition of discipline, and promotions. At the higher levels the cumulative effect of these pervasive

discriminatory practices became severe, and the increased subjectivity in evaluations gave discrimination more room to work its effects.

In such a situation "exact reconstruction of each individual claimant's work history, as if discrimination had not occurred, is not only imprecise but impractical." *Pettway*, supra, 494 F.2d at 262. The District Court here specifically found that "[e]ach major criterion in the promotion process at DEA was tainted by discrimination, making discrimination in the promotion process cumulative.

Any attempt to recreate the employment histories of individual employees absent discrimination would result in mere guesswork." *Mem.Op.* at 2 n. 1, JA 115. Our role in reviewing this determination is limited. "The framing of a remedial decree is left largely in the hands of the district judge, whose assessment of the needs of the situation is a factual judgment reviewable only for clear error * * *."

McKenzie v. Sawyer, supra, 684 F.2d at 75. 134 We perceive no error in the District Court's finding that it would be impossible to reconstruct the employment histories of DEA's senior black agents. Examination of discrete promotion decisions, as difficult as even that might be, will not suffice.

The decisive criteria for promotions decisions--supervisory evaluations, breadth of experience, and disciplinary history, see Part I-A supra--were themselves found to be tainted with illegal discrimination. The court found that discrimination had skewed evaluations of black agents, but the court could have had no way of knowing how much more favorable a particular agent's evaluation should have been, or how a fair evaluation might have affected the agent's chances for obtaining a particular promotion.

Similarly, the court found that discrimination in work assignments--leaving black agents with a disproportionately large share of undercover assignments--had impeded black agents in promotions, but the court could have had no way to divine what other broadening experiences a particular agent might have had, and no way to gauge how this hypothetical additional experience would have affected particular promotion decisions.

And though the court found that black agents have been disciplined more frequently and more severely than white agents committing similar infractions, the court could have had no way of knowing exactly what effect the disproportionate disciplinary sanctions had on a particular agent's chances for particular promotions.

Finally, because promotions at DEA are cumulative, the effects of discrimination in promotions are also cumulative. Denial of promotion to one grade affects the agent's eligibility for later promotions to higher grades. 135 To require individualized hearings in these circumstances would

be to deny relief to the bulk of DEA's black agents despite a finding of pervasive discrimination against them.

In effect, DEA would have us preclude relief unless the remedial order is perfectly tailored to award relief only to those injured and only in the exact amount of their injury. Though Section 706(g) generally does not allow for backpay to those whom discrimination has not injured, this section should not be read as requiring effective denial of backpay to the large numbers of agents whom DEA's discrimination has injured in order to account for the risk that a small number of undeserving individuals might receive backpay.

Such a result cannot be squared with what the Supreme Court has told us about the nature of a court's remedial authority under Title VII. "[T]he scope of a district court's remedial powers under Title VII is determined by the purposes of the Act." *Teamsters*, supra, 431 U.S. at 364, 97 S.Ct. at 1869. A core purpose of Title VII is "to make persons whole for injuries suffered on account of unlawful employment discrimination."

Albemarle Paper Co., supra, 422 U.S. at 418, 95 S.Ct. at 2372. "[F]ederal courts are empowered to fashion such relief as the particular circumstances require to effect restitution, making whole insofar as possible the victims of racial discrimination * * *." *Franks*, supra, 424 U.S. at 764, 96 S.Ct. at 1264; accord *Albemarle Paper Co.*, supra, 422 U.S. at 418, 95 S.Ct. at 2372 (the District Courts have "not merely the power but the duty to render a decree which will so far as possible eliminate the discriminatory effects of the past as well as bar like discrimination in the future"); *Teamsters*, supra, 431 U.S. at 364-365, 97 S.Ct. at 1869-1870.

The trial court found that the particular circumstances of this case required class-wide relief for black agents at GS-11 and above to ensure that they were made whole for the pervasive discrimination they have suffered. If effective relief for the victims of discrimination necessarily entails the risk that a few nonvictims might also benefit from the relief, then the employer, as a proven discriminator, must bear that risk.

See *Stewart v. General Motors Corp.*, supra, 542 F.2d at 452-453. 136 B. The Allegation of Class-wide Overcompensation 137 In calculating the backpay pool the District Court used the race coefficient of the first of plaintiffs' two salary regressions as the measure of average discrimination per agent.

The first regression measured discrimination against all black agents, including those hired before 1972. This study may therefore have reflected the continuing effects of some discrimination occurring prior to 1972. See Parts I-B-1, II-B-1-b supra. Since the actionable period in this case commenced on July 15, 1972, use of the first regression might, according to DEA's argument, amount to compensation for some nonactionable discrimination.^{37 7]} Though the remedial order specifically states that backpay begins to accrue only as of July 15, 1972, see Remedial Order at 3,

JA 121, DEA argues that a portion of the disparities between black and white agents as of that time (and thereafter) was caused by discrimination before 1972, and that DEA is therefore not liable for that portion.

138 The District Court found in the Liability Determination that "while pre-1972 discrimination may have affected the statistics * * *, post 1972 discrimination largely contributed to those statistics." Findings p 7i, 508 F.Supp. at 697.

The court also noted in the Remedial Order that plaintiffs' regressions "provide an accurate measure of the extent to which blacks at DEA were paid less than comparably qualified whites [and] * * * provide an appropriate basis for classwide relief." Mem.Op. at 3, JA 116 (citation omitted).

We are reluctant to disturb the trial court's finding on this factual issue. See *McKenzie v. Sawyer*, supra, 684 F.2d at 75. Nonetheless on the record as it now stands, we cannot affirm the District Court's decision to use the first regression as a basis for calculating the backpay pool. 139 Although the court properly found that the plaintiffs' evidence sufficed to support an inference of actionable discrimination, see Part II-B-1-b supra, the court's reliance on the first regression to determine backpay is problematic.

The court never found that all of that regression's race coefficient reflected actionable post-1972 discrimination.³⁸ To do so the court would have had to find either that all discrimination reflected in the salary disparities occurred after 1972 or that the small portion of "continuing effects" of pre-1972 discrimination reflected in the disparities was the result of a "continuing violation."

See *id.* The court made neither finding, and having found in the Liability Determination that pre-1972 discrimination had been "neither admitted nor proven," 508 F.Supp. at 696, the court cannot plausibly rely on a continuing violation theory in the Remedial Order as grounds for using the first salary regression as a benchmark for the backpay pool. 140 It may be that plaintiffs' first regression does reflect only post-1972 discrimination.

DEA's complete failure to present evidence showing pre-1972 discrimination in the regression certainly supports this view. It may also be that the portion of the disparity that reflects continuing effects of pre-1972 discrimination might be actionable on a continuing violation theory. Or it may be that the small amount of continuing effects cannot plausibly be factored out of the study; if so, and if no more precise methods of ascertaining the amount of actionable discrimination are reasonably available to the court, the court would be faced with using either a mildly overcompensatory formula based on the first regression or a significantly undercompensatory formula based on the second regression.

Use of the first regression under these circumstances might be permissible. 141 We cannot, however, resolve these matters on the present appeal. As the Supreme Court stressed in *Lehman v.*

Trout, *supra*, --- U.S. at ----, 104 S.Ct. at 1404, this court must scrupulously respect the factfinding prerogative of the District Court.

In this case the District Court has not yet determined whether the first regression reflects only post-1972 discrimination, whether a continuing violation occurred that might permit compensation for whatever continuing effects the regression reflects, or whether the small portion of nonactionable continuing effects that might be reflected in the regression cannot be factored out.

On remand, if the District Court is unable to find that any of these three factual circumstances exists, the court must devise a new backpay formula. C. Promotion Goals and Timetables 142 The District Court ordered that one black be promoted for every two whites to positions above GS-12 at DEA until blacks made up 10 percent of all agents at each grade above GS-12 or until five years after the order was entered.

DEA objects to this aspect of the remedy for the same reason that it objects to class-wide backpay: some individual agents might receive promotions they do not deserve. DEA argues that promotion goals and timetables exceed a court's remedial power under Title VII unless every person who potentially benefits from the relief has been individually shown to have been discriminatorily denied a specific promotion.

According to DEA, Section 706(g) mandates this result. See 42 U.S.C. Sec. 2000-5(g) (1976) ("No order of the court shall require the * * * promotion of an individual as an employee, * * * if such individual was refused * * * advancement * * * for any reason other than discrimination * * *."). DEA also argues that such goals and timetables violate the equal protection component of the Fifth Amendment to the Constitution.

143 Though DEA's claims are not without some superficial appeal, Section 706(g) must not be read as requiring an exact fit between those whom an employer's discrimination has victimized and those eligible under promotion goals and timetables.

The language on which DEA relies was aimed at ensuring that Title VII was not read as giving courts authority to remedy racial imbalance as an evil in itself, i.e., absent any finding that illegal discrimination caused the imbalance. See *EEOC v. AT&T*, 556 F.2d 167, 175 (3d Cir.1977), cert. denied, 438 U.S. 915, 98 S.Ct. 3145, 57 L.Ed.2d 1161 (1978).

The language should not be stretched to support a requirement of absolute precision in fashioning promotion goals and timetables when such a requirement would frustrate effective relief for those who were victimized by discrimination.³⁹ Every federal Court of Appeals in this nation has approved remedial use of goals and timetables without requiring that each and every potentially eligible person be shown to have been a victim of discrimination.⁴⁰ Nor can the imposition of

quotas to remedy proven discrimination be said to violate the Constitution's guarantees of equal protection.

Whatever the current status of affirmative action absent a finding of discrimination, the Supreme Court has made clear that such relief is not unconstitutional when used to remedy proven discrimination. See *Swann v. Charlotte-Mecklenburg School District*, 402 U.S. 1, 91 S.Ct. 1267, 28 L.Ed.2d 554 (1971); *Bakke v. Board of Regents of the University of California*, 438 U.S. 265, 302, 98 S.Ct.

2733, 2754, 57 L.Ed.2d 750 (1978) (Powell, J., concurring); *id.* at 363-386, 98 S.Ct. at 2785-2797 (Brennan, White, Marshall and Blackmun, JJ, concurring). 144 Nonetheless promotion goals and timetables--even if as admirably crafted as those at issue here--must be used cautiously. Such relief intrudes into the structure of employment relations and may at times upset the legitimate promotion expectations of individuals in the majority group.

We must take a careful look at the District Court's decision to use goals and timetables in this case. 145 We are persuaded that the District Court's order that one black be promoted for every two whites to positions above GS-12 was not appropriate. Strict goals and timetables should not be imposed when "alternative, equally effective methods could * * * supplant resort to a quota."

Thompson v. Sawyer, *supra*, 678 F.2d at 294. See *Sledge v. J.P. Stevens & Co.*, 585 F.2d 625, 646 (4th Cir.1978), cert. denied, 440 U.S. 981, 99 S.Ct. 1789, 60 L.Ed.2d 241 (1979); *United States v. City of Chicago*, 549 F.2d 415, 437 (7th Cir.1977), cert. denied, 434 U.S. 875, 98 S.Ct. 225, 54 L.Ed.2d 155 (1977); *NAACP v. Allen*, 493 F.2d 614, 621 (5th Cir.1974).

The District Court did not consider whether less severe remedies might prove equally efficacious in this case. We therefore vacate the District Court's imposition of goals and timetables, and remand for additional consideration of the propriety of such remedies in this case. 146 In determining whether less severe remedies might prove equally effective the court must evaluate the likelihood that the employer will implement the remedy in good faith.

See *Firefighters Institute for Racial Equality v. City of St. Louis*, 616 F.2d 350, 364 (8th Cir.1980), cert. denied, 452 U.S. 938, 101 S.Ct. 3079, 69 L.Ed.2d 951 (1981); *NAACP v. Allen*, *supra*, 493 F.2d at 621. One important indicium is the employer's past behavior in implementing equal opportunity programs, either voluntarily or in response to court order. See *Ass'n Against Discrimination In Employment, Inc. v. City of Bridgeport*, 647 F.2d 256, 284 (2d Cir.), cert. denied, 455 U.S. 988, 102 S.Ct.

1611, 71 L.Ed.2d 847 (1981); *Firefighters Institute for Racial Equality*, *supra*, 616 F.2d at 364. This court has some doubt that DEA's past record on equal employment opportunity warrants application of strict goals and timetables. DEA has not been before this court in the past on

identical or related claims of discrimination, and thus has not shown any recalcitrance in remedying discrimination pursuant to court order.

Nor does DEA's overall approach to equal employment matters lead us to conclude that DEA will be unlikely to remedy the proven discrimination in promotions once this court orders it to do so. The record contains significant uncontradicted evidence of DEA's institutional good faith in implementing equal employment opportunity programs (summarized in brief for appellants at 66-67).

Of course, the determination of appropriate relief is for the District Court in the first instance. We also vacate the District Court's order of class-wide frontpay because the frontpay order was premised on the existence of promotion goals and timetables.

The District Court is free to impose a new frontpay order on remand if it deems one appropriate. 147 On remand we encourage the District Court to consider other remedial options to ensure that black agents attain their rightful places at the upper levels of DEA.

We note in particular that a promotion bottleneck appears to exist at the GS-12 level. While black agents manage to arrive at this level eventually, few progress beyond this point. In remedying promotion discrimination at this point and at all levels, the court is of course free to establish promotion guidelines and to monitor DEA's progress in meeting those guidelines, or to fashion any other appropriate relief.

IV. OTHER ISSUES A. The Jackson Injunction 148 During the course of this proceeding the District Court issued a preliminary injunction against the demotion and transfer of plaintiff Carl Jackson. Order of May 5, 1981, JA 113. Special Agent Jackson, the second highest ranking black agent at DEA, had claimed that the demotion and transfer, and other harassment from a few particular white DEA officials, were in retaliation for Jackson's testimony in this case.

It is undisputed that prior to Jackson's testimony his employment history at DEA was exemplary and that after his testimony he was the focus of significant official criticism from these individuals, culminating in his demotion and transfer. 149 The District Court found that Jackson had made a sufficient showing of likelihood of success on the merits of his claim of retaliation in violation of Section 704(a) of Title VII, 42 U.S.C. Sec. 2000e-3(a) ("It shall be an unlawful employment practice for an employer to discriminate against any of his employees * * * because he has opposed any practice made an unlawful employment practice by this subchapter * * *").

The court also found a high likelihood of irreparable harm if the injunctive relief were denied because other black agents, fearful of similar reprisal, would not come forth at the impending relief phase of the proceeding to demand individual relief. 150 DEA makes no claim that the trial court applied an improper legal standard in granting the Jackson injunction.

Rather, DEA makes two factual challenges to the order: (1) the trial court erred in finding that Jackson's testimony caused the subsequent adverse employment action, and (2) the trial court erred in finding that inhibition of other agents at the relief stage constituted irreparable harm.

We review the trial court's factual findings with deference. Only if we are left with the definite and firm conviction that a mistake has been made will we overturn the trial court's determination. 151 Neither of DEA's arguments convinces us that a mistake has been made. DEA's first argument turns primarily on the trial court's evaluation of the credibility of DEA's witnesses.

See brief for appellants at 73-75. We are extremely reluctant to overturn a District Court on a matter of credibility, and we decline to do so here. The District Court, moreover, marshalled extensive evidence to support its finding of causation. See Memorandum Opinion of May 5, 1981 at 3-10, JA 103-111. DEA's second argument is frivolous. DEA argues that irreparable harm could not have been found because the trial court ordered class-wide relief, thus obviating the need for individual black agents to come forward at the relief stage.

This argument grossly misstates the facts; as DEA is well aware, the trial court also ordered individualized hearings for all claims of discrimination below GS-11. Thus the District Court was wholly correct in anticipating harm if black agents were deterred from coming forward at the relief stage. 152 While we affirm the District Court's decision to grant preliminary relief to Special Agent Jackson, we note that his claim of illegal retaliation has not been definitively resolved.

On remand, we expect the District Court to take appropriate action on this matter. 153 B. Prejudgment Interest. 154 Plaintiffs cross-appeal the trial court's denial of prejudgment interest. This circuit dealt with the issue of prejudgment interest in Title VII actions against the federal government in *Blake v. Califano*, 626 F.2d 891 (D.C.Cir.1980).

In that case we followed the principle that, for reasons of sovereign immunity, a court will not award interest against the United States unless a statute specifically authorizes such an award or evinces Congress' intention to do so. See *Smyth v. United States*, 302 U.S. 329, 353, 58 S.Ct. 248, 252, 82 L.Ed. 294 (1937). Plaintiffs ask us to reconsider the decision in *Blake v. Califano* on the ground that Congress modelled Title VII's remedial scheme on the National Labor Relations Act, which permits interest awards.

This argument is without merit. Though Congress did model Title VII's remedial provisions on the NLRA, see *Albemarle Paper Co.*, *supra*, 422 U.S. at 422, 95 S.Ct. at 2373, when Congress did so in 1964 neither the NLRA nor Title VII applied to the federal government.

Thus congressional reliance on the NLRA as a model implies nothing about congressional intent to permit interest awards in Title VII suits against the United States. When Congress amended Title VII in 1972 to bring the federal government under its provisions, Congress evinced no intention to waive sovereign immunity as to interest awards.

Thus we affirm the District Court's denial of prejudgment interest. V. CONCLUSION 155 This case, like many Title VII class actions, has presented a host of complex legal issues. After careful review, we affirm the District Court's liability determination in its entirety.

We also affirm the District Court's remedial use of a class-wide backpay scheme, but vacate the particular calculation of the backpay formula. We vacate the court's imposition of strict promotion goals and timetables, and the class-wide frontpay approach tied to the goals and timetables.

On remand the District Court is to conduct further remedial proceedings consistent with this opinion. 156 The particular evidentiary and procedural requirements that have evolved in Title VII cases can greatly aid resolution of complex questions. Care must be taken, however, to ensure that such requirements are not applied in inflexible ways that thwart the purposes for which they were adopted.

Such requirements as the "minimum objective qualifications" test, the purported need for anecdotal evidence, and the preference for individual remedial hearings must be applied so as to advance Title VII's goals of ferreting out and remedying employment discrimination.

In affirming the District Court's liability determination we stress that tests for the sufficiency of plaintiffs' proof should not be applied in a "rigid, mechanistic, or ritualistic" way. *Furnco, supra*, 438 U.S. at 577, 98 S.Ct. at 2949.

In affirming the District Court's use of class-wide backpay, we stress that the primary duty of a court exercising equitable remedial power under Title VII is to fashion a decree that affords complete relief to those victimized by illegal discrimination. 157 Affirmed in part and vacated and remanded in part. ADDENDUM 158 On June 12, 1984, while the opinion in the instant case was in the printing stage, the Supreme Court issued its decision in *Firefighters Local Union No. 1784 v. Stotts*, --- U.S. ----, 104 S.Ct.

2576, 81 L.Ed.2d 483 (1984). In considering the issues of appropriate remedies on remand, the District Court should, of course, consider the Supreme Court's opinion in *Stotts*, to the extent applicable. See *Tavoulareas v. The Washington Post Co.*, 737 F.2d 1170, 1172 (D.C.Cir. 1984) (In light of recent Supreme Court precedent, " [t] he most efficient course, and the course most respectful of the valid discretion of our district judge, is to remand for reconsideration").

HARRY T. EDWARDS, Circuit Judge, concurring: 159 I am in full accord with the result reached in the majority opinion and with most of its rationale. I write separately to emphasize certain points concerning the parties' burdens in a pattern and practice disparate treatment case.

Although this case presents a complex factual record, the controlling legal principles are clear. There is some potential for confusion only because there are several important and interrelated

legal theories implicated in our analysis. Correctly understood, however, the majority opinion is not only consistent with Supreme Court precedent--it is in fact compelled by that precedent.

160 A. Introduction: Cataloguing Title VII Cases 161 As the majority correctly explains, a plaintiff in a Title VII action can prove liability under two theories: disparate treatment or disparate impact. A disparate treatment claim posits that the employer has intentionally treated the plaintiff less favorably than others because of the plaintiff's race, color, religion, sex, or national origin.

International Brotherhood of Teamsters v. United States, 431 U.S. 324, 335 n. 15, 97 S.Ct. 1843, 1854 n. 15, 52 L.Ed.2d 396 (1977). In cases alleging class-wide disparate treatment, the plaintiffs' case typically relies heavily on a statistical showing that comparably qualified members of the minority group and the majority group are treated unequally. If the statistical showing is strong enough, courts will infer a discriminatory motive from this disparity in treatment, because such a disparity is "the expected result of a regularly followed discriminatory policy."

Id. at 361 n. 46, 97 S.Ct. at 1867 n. 46. Cases of this sort are commonly referred to as "pattern and practice" cases because the crux of the plaintiffs' claim is that "discrimination was the company's standard operating procedure--the regular rather than the unusual practice." *Id.* at 336, 97 S.Ct. at 1855. 162 In a disparate impact case, the plaintiff need not establish discriminatory intent; the focus is on the consequences of an employer's practices, rather than the underlying motive.

Griggs v. Duke Power Co., 401 U.S. 424, 432, 91 S.Ct. 849, 854, 28 L.Ed.2d 158 (1971). Whether the claim of disparate impact is made in an individual suit or in classwide litigation, the court must determine whether the employer utilizes "employment practices that are facially neutral in their treatment of different groups but that in fact fall more harshly on one group than another and cannot be justified by business necessity."

Teamsters, 431 U.S. at 336 n. 15, 97 S.Ct. at 1854 n. 15. See also *Albemarle Paper Co. v. Moody*, 422 U.S. 405, 95 S.Ct. 2362, 45 L.Ed.2d 280 (1975); *Griggs*, 401 U.S. 424, 91 S.Ct. 849. 163 The Supreme Court has established different proof sequences in disparate treatment and disparate impact cases that reflect the functional differences between the two theories.

In *Texas Department of Community Affairs v. Burdine*, 450 U.S. 248, 101 S.Ct. 1089, 67 L.Ed.2d 207 (1981), the Court explicated a scheme for individual disparate treatment cases that is designed "progressively to sharpen the inquiry into the elusive factual question of intentional discrimination." *Id.* at 255 n. 8, 101 S.Ct. at 1094 n. 8.

Although the burden of proving intentional discrimination remains at all times on the plaintiff, *id.* at 253, 101 S.Ct. at 1093, the Court recognized that there are three stages in the typical individual disparate treatment case: 164 First, the plaintiff has the burden of proving by the preponderance of the evidence a *prima facie* case of discrimination.

Second, if the plaintiff succeeds in proving the prima facie case, the burden shifts to the defendant "to articulate some legitimate, nondiscriminatory reason for the employee's rejection." Third, should the defendant carry this burden, the plaintiff must then have an opportunity to prove by a preponderance of the evidence that the legitimate reasons offered by the defendant were not its true reasons, but were a pretext for discrimination.

165 Id. at 252-53, 101 S.Ct. at 1093 (citation omitted). 166 Discriminatory intent need not be proved in a disparate impact case, and the Court has not deemed it necessary to establish shifting intermediate burdens in such cases. Rather, a plaintiff proceeding on a disparate impact theory must prove that the specific employment practice in question "select[s] applicants for hire or promotion in a racial pattern significantly different from that of the pool of applicants."

Albemarle Paper Co., 422 U.S. at 425, 95 S.Ct. at 2375. If this showing is made, the defendant can raise "business necessity" as an affirmative defense, and will prevail if successful in proving that the challenged employment practice has "a manifest relationship to the employment in question." Griggs, 401 U.S. at 432, 91 S.Ct. at 854. 167 B. Pattern and Practice Cases Involving Mixed Claims of Discrimination 168 The plaintiffs in the instant case challenge the DEA's employment system in its entirety and also challenge particular components of that system.

In doing so, they allege both a pattern and practice disparate treatment claim and several disparate impact claims. This Circuit has not heretofore fully articulated the parties' respective burdens in a pattern and practice disparate treatment case. Cf. McKenzie v. Sawyer, 684 F.2d 62, 71 n. 7 (D.C.Cir.1982) (noting that "it remains debatable whether the Burdine holding that the burden of persuasion remains with an individual plaintiff should be applied to a class action suit alleging disparate treatment").

In undertaking this task, we are mindful of the Supreme Court's frequent reminders that its statements regarding the burdens of proof governing particular types of employment discrimination cases should not be interpreted as "inflexible formulation[s]" (Teamsters, 431 U.S. at 358, 97 S.Ct. at 1866 (discussing McDonnell Douglas Corp. v. Green, 411 U.S. 792, 93 S.Ct.

1817, 36 L.Ed.2d 668 (1973)) that are "necessarily applicable in every respect to differing factual situations." McDonnell Douglas Corp., 411 U.S. at 802 n. 13, 93 S.Ct. at 1824 n. 13. See also Burdine, 450 U.S. at 252 n. 5 & 253-54 n. 6, 101 S.Ct. at 1093 n. 5 & 1094 n. 6. Nevertheless, the Court has now considered these burdens in a number of contexts and, in my view, its decisions provide a clear basis for articulating an approach in pattern and practice cases.

169 In applying the Court's decisions to a pattern and practice case, it must be recognized that in some respects a pattern and practice case converges with a disparate impact case. Actions predicated on either theory involve attacks on the systemic results of employment practices. While the plaintiffs in a pattern and practice suit will focus on the intentional discrimination that is

demonstrated by the operation of the system in its entirety, they also may make claims that particular components in the system have a disparate impact.

Moreover, even if the plaintiffs do not concentrate on these components, the employer may deny its discriminatory intent by pointing to a specific, arguably nondiscriminatory, component as the cause of the observed disparity. Hence, either because of the plaintiffs' allegations or because of the employer's defense, the focus of a pattern and practice case may shift or broaden from disparate treatment analysis to include the issue of the employer's liability for specific employment practices that have disparate effects.

170 As the Supreme Court has unequivocally dictated different approaches depending on whether the focus of a case is intentional discrimination or the effects of specific employment practices, our treatment of pattern and practice actions must account for the permutable nature of these actions.

The subsequent discussion delineates the plaintiffs' and defendant's respective burdens in a pattern and practice case, and explains that the nature of these burdens will vary somewhat if the plaintiffs' or defendant's proof implicates disparate impact analysis. 171 C. The Plaintiffs' Prima Facie Case in a Pattern and Practice Suit 172 To establish a prima facie pattern and practice case " [t]he plaintiffs must, by statistical evidence, individual testimony, or a combination of the two, make a showing adequate to raise the inference that employment decisions were predicated on an illegal criterion."

McKenzie, 684 F.2d at 71. Accord *Teamsters*, 431 U.S. at 358, 97 S.Ct. at 1866. In evaluating the plaintiffs use of statistical evidence to support their claims, "a court should not 'require proof to a mathematical certainty,... [because] there is no such requirement [under Title VII]. Deficiencies in the data base 'may, of course, detract from the value of [statistical] evidence,' but ordinarily would not obliterate its evidentiary value.' " *Trout v. Lehman*, 702 F.2d 1094, 1101 (D.C.Cir.1983) (quoting *Detroit Police Officers' Association v. Young*, 608 F.2d 671, 687 (6th Cir.1979) (citations omitted), cert. denied, 452 U.S. 938, 101 S.Ct.

3079, 69 L.Ed.2d 951 (1981)), vacated on other grounds, --- U.S. ----, 104 S.Ct. 1404, 79 L.Ed.2d 732 (1984). In short, "[e]xactness is not required at the prima facie stage." *De Medina v. Reinhardt*, 686 F.2d 997, 1009 (D.C.Cir.1982). 173 At the same time, the plaintiffs are required as part of their prima facie case to "demonstrate to the court's satisfaction that their statistical comparisons are meaningful."

Trout, 702 F.2d at 1101. In particular, we have indicated that such statistics must compare the employer's relevant work force with "the qualified population in the relevant labor market." *Davis v. Califano*, 613 F.2d 957, 963 (D.C.Cir.1979) (as amended Feb. 14, 1980) (footnote omitted).

In some situations--where the "job skill... involved... is one that many persons possess or can fairly readily acquire"--the plaintiffs may rely on general population data to establish the qualified population in the relevant labor market. *Hazelwood School District v. United States*, 433 U.S. 299, 308 n. 13, 97 S.Ct. 2736, 2742 n. 13, 53 L.Ed.2d 768 (1977).

However, in cases in which "special qualifications are required to fill particular jobs, comparisons to the general population (rather than to the smaller group of individuals who possess the necessary qualifications) may have little probative value." *Id.* Although we have held that certain subjective criteria and other qualifications that are not minimum necessary requirements for a position need not be taken into account in the plaintiffs' statistics, *Davis*, 613 F.2d at 964-65, we have suggested that "the minimum objective qualifications necessary for one to be eligible for promotion must be considered in the statistical data presented initially by a plaintiff."

Id. at 964. See also *Valentino v. United States Postal Service*, 674 F.2d 56, 68 (D.C.Cir.1982).¹ 174 Recognizing that plaintiffs "need not present a perfect statistical analysis at the prima facie case stage," *Trout*, 702 F.2d at 1101, our cases have shown some flexibility in considering whether the plaintiffs have adequately accounted for minimum objective qualifications.

In *De Medina*, we held that plaintiffs need not control for specific minimum job qualifications, as long as their data include a reasonable proxy for these qualifications. We explained that "[t]he objective is to define 'a population that closely approximates the characteristics of those who would be likely to apply' and 'meet legitimate threshold qualification requirements.'" *De Medina*, 686 F.2d at 1007 (quoting *D. BALDUS & J. COLE, STATISTICAL PROOF OF DISCRIMINATION* 120 (1980) (emphasis added in *De Medina*)).

See also *Trout*, 702 F.2d at 1103 (indicating that plaintiffs' proxy for computer-related experience qualification provided "a perfectly adequate basis for inferring disparate treatment"). Additionally, if there is no available data that permits the plaintiffs to account for minimum objective qualifications, we have recognized a "rebuttable presumption of an equal distribution of qualifications between minority and majority group applicants."

De Medina, 686 F.2d at 1008 n. 7. 175 Despite these refinements of the minimum objective qualification "rule," the plaintiffs' task in attacking systemic discrimination is not an easy one. It includes important burdens of proof and significant litigation choices. If the plaintiffs proceed on a pattern and practice treatment theory, to establish a prima facie case their proof of a regular pattern of differential treatment must be sufficiently convincing to permit the factfinder to infer a discriminatory motivation.

If the plaintiffs believe that the systemic discrimination is in part the result of minimum objective qualifications or other employment practices having an adverse impact on minorities, they may proceed on a disparate impact theory as well.

In other words, plaintiffs may proceed on either a disparate treatment theory or a disparate impact theory, or both, because either or both may be implicated in a pattern and practice suit. 176 D. The Defendant's Rebuttal in a Pattern and Practice Suit 177 The "ultimate burden of persuading the trier of fact that the defendant intentionally discriminated against the plaintiff remains at all times with the plaintiff."

Burdine, 450 U.S. at 253, 101 S.Ct. at 1093. Because the plaintiffs' proof of a prima facie case provides an adequate basis for inferring disparate treatment, the defendant must respond by coming forward and rebutting this inference. See *Teamsters*, 431 U.S. at 360, 97 S.Ct. at 1867. 178 The defendant's rebuttal in a pattern and practice case can proceed in a number of ways, but must be designed to meet the proof offered by the plaintiffs.

Teamsters, 431 U.S. at 360 n. 46, 97 S.Ct. at 1867 n. 46. Typically an important part of the plaintiffs' proof in such a case will be statistical evidence. The defendant may attempt to discredit the plaintiffs' statistics "by demonstrating flaws in the assumptions, data or analyses presented." *Vuyanich v. Republic National Bank*, 521 F.Supp. 656, 663 (N.D.Tex.1981), vacated on other grounds, 723 F.2d 1195 (5th Cir.1984).

But see *Trout*, 702 F.2d at 1102 ("unquantified, speculative, and theoretical objections to the proffered statistics are properly given little weight by the trial court"). The Supreme Court has also pointed out that if "the employer discerns fallacies or deficiencies in the data offered by the plaintiff, he is free to adduce countervailing evidence of his own."

Dothard v. Rawlinson, 433 U.S. 321, 331, 97 S.Ct. 2720, 2727, 53 L.Ed.2d 786 (1977). See also *Trout*, 702 F.2d at 1102 ("the most effective way to rebut a statistically based prima facie case is to present more accurate statistics").

Finally, the employer can try "to provide a nondiscriminatory explanation for the apparently discriminatory result." *Teamsters*, 431 U.S. at 361 n. 46, 97 S.Ct. at 1867 n. 46. 179 While these propositions are well established, two points are raised in the majority discussion of the defendant's rebuttal that warrant elaboration.

The first is the question of the defendant's burden in rebutting the plaintiffs' prima facie case. While it is clear that the defendant does not have the burden of proof, this does not tell us what is required of the defendant's rebuttal and when this rebuttal will necessitate a response by the plaintiffs.

The second question raised by the majority is whether there are circumstances in which the defendant's rebuttal to a pattern and practice disparate treatment claim provides a sufficient basis for a court to conclude that disparate impact has been established. 1.

The Burden of Defendant's Rebuttal 180 In determining the burden that the defendant must satisfy in rebutting the plaintiffs' prima facie case, we are guided by several Supreme Court decisions rendered over the past decade.

The starting point is the Court's decision in *Teamsters*, as it also involved a pattern and practice claim. In *Teamsters* --a suit brought by the Government--the Court explained that once the Government established a prima facie case "[t]he burden then shifts to the employer to defeat the prima facie showing of a pattern or practice by demonstrating that the Government's proof is either inaccurate or insignificant."

431 U.S. at 360, 97 S.Ct. at 1867 (emphasis added). The Court also indicated that "[i]f an employer fails to rebut the inference that arises from the Government's prima facie case, a trial court may then conclude that a violation has occurred and determine the appropriate remedy." *Id.* at 361, 97 S.Ct. at 1867 (emphasis added).

Because the defendant's proof failed to satisfy this standard in *Teamsters*, the Government was not required to respond with additional proof on behalf of the minority claimants; the evidence initially presented was sufficient for the trial court to conclude that the Government had met its ultimate burden of proving a pattern and practice of discrimination by a preponderance of the evidence.

181 Hence, *Teamsters* indicates that after the plaintiffs present a prima facie pattern and practice case, the defendant's rebuttal must be sufficient to convince the trier of fact that the plaintiffs have not carried their ultimate burden or the plaintiffs will prevail without further evidence. Absent a clear indication from the Supreme Court that we should depart from this "common allocation of burden in a civil suit" (see *Vuyanich*, 521 F.Supp. at 663), the approach employed in *Teamsters* must govern our adjudication of a pattern and practice case.

182 The Court's more recent decision in *Burdine* does delineate a somewhat different, three-stage inquiry to govern individual disparate treatment cases. The Court indicated that at the second stage of this inquiry--i.e., the defendant's rebuttal of the prima facie case--the defendant must produce evidence raising "a genuine issue of fact as to whether it discriminated against the plaintiff."

Burdine, 450 U.S. 254-55, 101 S.Ct. 1094 (footnote omitted). This rebuttal burden can be satisfied if the defendant provides a clear explanation of the nondiscriminatory reasons for its action. *Id.* at 260, 101 S.Ct. at 1097. 183 The nature of the defendant's rebuttal burden in an individual disparate treatment case must, however, be understood as a function of the relatively minimal burden borne by the individual plaintiff in proving a prima facie case.

In *McDonnell Douglas Corp. v. Green*, 411 U.S. 792, 93 S.Ct. 1817, 36 L.Ed.2d 668 (1973), the Court held that this prima facie case can be established if an individual plaintiff shows "(i) that he belongs to a racial minority; (ii) that he applied and was qualified for a job for which the employer

was seeking applicants; (iii) that, despite his qualifications, he was rejected; and (iv) that, after his rejection, the position remained open and the employer continued to seek applicants from persons of complainant's qualifications."

Id. at 802, 93 S.Ct. at 1824 (footnote omitted). A plaintiff providing such proof has eliminated the "two most common legitimate reasons" for his failure to obtain the job, and creates an inference of discrimination unless the defendant comes forward and offers a legitimate explanation for its treatment of the plaintiff. *Teamsters*, 431 U.S. at 358 n. 44, 97 S.Ct. at 1866 n. 44.

In other words, if a plaintiff satisfies the McDonnell Douglas four-prong test, this "creates a rebuttable 'presumption that the employer unlawfully discriminated against' him." *United States Postal Service Board of Governors v. Aikens*, 460 U.S. 711, 103 S.Ct. 1478, 1481, 75 L.Ed.2d 403 (1983) (quoting *Burdine*, 450 U.S. at 254, 101 S.Ct. at 1094).¹⁸⁴ Although the McDonnell Douglas test is a useful framework for initial consideration of a discrimination claim, the presumption that results from the test is relatively weak.

If the plaintiff's evidence does no more than satisfy the four prongs of the test, the plaintiff has only eliminated two of many possible nondiscriminatory explanations for the employer's decision. When the employer responds by clearly articulating a nondiscriminatory reason for the decision, the factfinder has no basis for inferring that discrimination is a more likely explanation.

At this point the legally mandatory presumption of discrimination resulting from the McDonnell Douglas test "drops from the case." *Burdine*, 450 U.S. at 255 n. 10, 101 S.Ct. at 1095 n. 10. The presumption and the defendant's rebuttal have served the useful function of focusing the inquiry on particular explanations for the employer's decision. See *id.* at 255 n. 8, 101 S.Ct. at 1094 n. 8.

The plaintiff must now meet her "ultimate burden of persuading the court that she has been the victim of intentional discrimination. She may succeed in this either directly by persuading the court that a discriminatory reason more likely motivated the employer or indirectly by showing that the employer's proffered explanation is unworthy of credence." *Id.* at 256, 101 S.Ct. at 1095.

¹⁸⁵ *Burdine* established a workable means for the parties' focus to shift away from the McDonnell Douglas inquiry when that inquiry is not dispositive of the ultimate question of intentional discrimination. In some cases, however, the plaintiff's initial showing will go beyond that required by McDonnell Douglas.

In *Burdine* the Court recognized this possibility and explicitly stated that in such cases, the plaintiff may not need to come forward with additional evidence in responding to the defendant's rebuttal:¹⁸⁶ In saying that the presumption drops from the case, we do not imply that the trier of fact no longer may consider evidence previously introduced by the plaintiff to establish a *prima facie* case.

A satisfactory explanation by the defendant destroys the legally mandatory inference of discrimination arising from the plaintiff's initial evidence. Nonetheless, this evidence and inferences properly drawn therefrom may be considered by the trier of fact on the issue of whether the defendant's explanation is pretextual. Indeed, there may be some cases where the plaintiff's initial evidence, combined with effective cross-examination of the defendant, will suffice to discredit the defendant's explanation.

187 *Burdine*, 450 U.S. at 255 n. 10, 101 S.Ct. at 1095 n. 10 (emphasis added). This conclusion is not surprising. The plaintiff's burden is to justify the inference of discrimination by a preponderance of the evidence.

As *Teamsters* indicated, if the defendant does not introduce sufficient evidence in rebuttal to lead the factfinder to conclude that this burden has not been sustained, the plaintiff need not come forward with additional evidence to prevail in the case. 188 A pattern and practice case is analogous to this latter group of cases envisioned in *Burdine*.

The initial proof demanded of plaintiffs in a pattern and practice case typically goes far beyond the minimal showing that is required for an individual to establish a *prima facie* case under *McDonnell Douglas*. In order to establish a *prima facie* pattern and practice case, the plaintiffs must present meaningful statistics or other evidence demonstrating that comparable groups have been consistently treated differently.

In cases such as this--where the "plaintiff class [necessarily] loads overwhelming force into its opening shot," *Vuyanich*, 521 F.Supp. at 661--*Burdine* indicates that the defendant's rebuttal may not require the plaintiffs to present additional evidence at a third stage. This will be so unless the defendant's proof casts "sufficient doubt on the plaintiff's proof to cause the trier of fact to conclude that the plaintiff has not proved discrimination by a preponderance of the evidence."

Vuyanich, 521 F.Supp. at 663. 189 In reaching this conclusion, the *Vuyanich* court correctly observed that the "initial thrust" of the plaintiffs' proof in a pattern and practice case often "combines the first and third steps of the *Burdine* model by demonstrating discrimination against protected groups, and pretext, at the same time." *Id.* In an individual case, significant questions will remain to be addressed if the *McDonnell Douglas* presumption "drops from the case."

However, in a pattern and practice case, the parties usually focus on the ultimate issue from the very beginning, and additional evidence may be unnecessary after the defendant's rebuttal. 190 In some cases it may be unclear whether the defendant's rebuttal casts sufficient doubt on the plaintiffs' evidence; consequently, plaintiffs may choose to respond to the challenges raised by the defendant.

The point worth stressing, however, is that if the defendant has not cast sufficient doubt, plaintiffs are not required to respond in order to prevail in the case. On the other hand, if the defendant's

rebuttal is sufficient, the plaintiffs must respond in an effort to meet their ultimate burden of proof in order to prevail. 191 Finally, it should be noted that the conclusion we reach today is also dictated by the Supreme Court's admonition in *United States Postal Service Board of Governors v. Aikens*, 460 U.S. 711, 103 S.Ct.

1478, 75 L.Ed.2d 403 (1983), that mechanistic attention to the rules governing "the allocation of burdens and order of presentation of proof," *id.* 103 S.Ct. at 1482 (quoting *Burdine*, 450 U.S. at 252, 101 S.Ct. at 1093), must not cause us to either lose sight of what is ultimately at issue or "treat discrimination differently from other ultimate questions of fact."

Id. In *Aikens*, the Court indicated that when a defendant had in fact rebutted an individual plaintiff's proof of discrimination, the district court and an appellate court need no longer focus on whether the plaintiff's *prima facie* case had been established; the focal issue was whether the plaintiff had carried his ultimate burden. *Id.* at 1481, 1482.

In the same manner, in evaluating the defendant's rebuttal in a pattern and practice case, courts must keep in mind that the plaintiffs' ultimate task is to establish their case by a preponderance of the evidence. If this burden is satisfied at the close of the defendant's presentation, the plaintiffs necessarily prevail. 192 I have examined the relevant Supreme Court cases at some length because of the importance of the issue being considered.

I believe that the views expressed are in full accord with the intended rationale in the majority opinion. I also believe that the cited case law uniformly and unequivocally dictates the standard that we have articulated today. 193 2. Defenses that Implicate Disparate Impact Analysis 194 I am in complete agreement with the expressed view in the majority opinion indicating that a court can conclude that an unlawful disparate impact has been established when the following conditions are satisfied: 195 (1) The preponderance of the evidence--whether introduced by the plaintiffs or the defendant --proves that one or more specific employment practices have a disparate impact; 196 (2) either the plaintiffs or defendant argue that the practices have a disparate impact, thereby putting the defendant on notice of the need to prove the business necessity of the practices; and 197 (3) the defendant fails to prove business necessity.

198 When these conditions are met, the majority correctly explains that "the essential elements of a disparate impact case will have been placed before the trier of fact," and the case is "ripe for resolution using disparate impact analysis." *Maj. op.* at 1270 (footnote omitted). See generally *Albemarle Paper Co. v. Moody*, 422 U.S. 405, 95 S.Ct. 2362, 45 L.Ed.2d 280 (1975); *Griggs v. Duke Power Co.*, 401 U.S. 424, 91 S.Ct.

849, 28 L.Ed.2d 158 (1971). So long as the defendant has adequate notice of the need to prove business necessity, it is irrelevant that this duty is prompted by the defendant's, rather than the plaintiffs', proof. 199 Thus, if a defendant merely cites an allegedly neutral employment practice

as a possible explanation for disparities shown in a pattern and practice treatment suit, plaintiffs' case may be expanded to include a theory of disparate impact.

If plaintiffs can then prove that the cited practice has an unlawful impact, or if defendant effectively concedes the presence of unlawful discriminatory effects, then the burden shifts to the defendant to prove that the cited practice is justified by business necessity. See *Albemarle Paper Co.*, 422 U.S. at 425, 95 S.Ct. at 2375; *Griggs*, 401 U.S. at 432, 91 S.Ct. at 854.

200 In resolving complex employment discrimination cases of the sort here at issue, a court should focus on the actual evidence in the record and not on the parties' litigation strategies. In my view, there is no doubt that a suit initially perceived by the parties to be a disparate treatment case may be expanded into a case of mixed claims (including both disparate treatment and disparate impact) or transformed into a case resting on a new single theory (i.e., disparate impact instead of disparate treatment).

It is also clear that these changes may be initiated by virtue of plaintiffs' allegations and proofs or the defendant's defense. However, under *Albemarle* and *Griggs*, a defendant does not have to prove the "business necessity" of an otherwise neutral employment practice absent plaintiffs' proof (or defendant's concession) of its unlawful discriminatory effects.

CONCLUSION 201 I commend the majority opinion for its exhaustive analysis of this case, and for clarifying the law in a manner that benefits plaintiffs and defendants alike. Although I have seen fit to express certain of my views, I am generally in accord with the rationale and holdings of the majority opinion. 1 42 U.S.C. Sec. 2000e et seq. (1976 & Supp. V 1981) 2 Section 703(a) of the Civil Rights Act provides: It shall be an unlawful employment practice for an employer-- (1) to fail or refuse to hire or to discharge any individual, or otherwise to discriminate against any individual with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, sex, or national origin; or (2) to limit, segregate, or classify his employees or applicants for employment in any way which would deprive or tend to deprive any individual of employment opportunities or otherwise adversely affect his status as an employee, because of such individual's race, color, religion, sex, or national origin.

42 U.S.C. Sec. 2000e-2(a). That section applies fully to the federal government, *id.* Sec. 2000e-16.

3 We vacate the frontpay remedy only because the trial court specifically linked it to the promotion timetables, and without prejudice to reinstatement of a new frontpay remedy if the trial court finds such a course appropriate on remand 4 The parties have stipulated as to the Civil Service definitions of general experience and specialized experience.

See Joint Exhibit I (the relevant portions of which are presented at Joint Appendix (JA) 39-43). These definitions are discussed in detail *infra*. See Part II-B-1-a *infra* 5 See Joint Exhibit I, JA 40

6 When the numerical system was first implemented in 1976, point values were as follows: length of experience (20); breadth of experience (40); education and training (10).

In 1978 DEA modified the rating system as follows: breadth of experience (45); performance evaluations (45); training (10). Within the breadth of experience and performance evaluation categories are several subcategories.

Under breadth of experience are: supervisory experience (8); complex investigation experience (6); internal security experience (7); diverse domestic (6) and foreign (7) experience; and special skills (4). Under performance evaluation are: most recent annual rating (25); supervisor's comments (15); and awards (5). Findings p 4, 508 F.Supp. at 695 7 The T-Ratio figure for a particular measure of race-related disparity corresponds to the number of standard deviations for that figure.

D. BALDUS & J. COLE, STATISTICAL PROOF OF DISCRIMINATION 297 n. 14 (1980) 8 Professors Bergmann and Straszheim both hold Ph.D.'s and teach labor economics at the University of Maryland. Findings p 6, 508 F.Supp. at 695 9 Plaintiffs are subject to the statutory limit on the period of actionable discrimination; under Title VII liability may not accrue for a period of more than two years before the date of filing of an administrative complaint with the Equal Employment Opportunity Commission.

42 U.S.C. Sec. 2000e-5(g). In this case the actionable period began on July 15, 1972. See Memorandum Opinion, February 17, 1982, at 3 n. 2, JA 114, 116 n. 2. Although not formally created until 1973, DEA was at its creation a consolidation of other federal agencies engaged in drug enforcement efforts, and agents serving these agencies became DEA agents RACE DATE COEFFICIENT T-RATIO 1/1/75 -\$ 378.84 1/1/76 -\$1,864 2.54 1/1/77 -\$1,119 3.18 1/1/78 -\$ 866 2.07 10/1/78 -\$1,026 2.30 10 The court did, however, refuse to credit most of plaintiffs' anecdotal accounts of specific instances of discrimination.

Findings p 51d, 508 F.Supp. at 710 11 DEA sought at the remedial hearing to introduce its own regression analyses. These regressions purportedly showed an absence of race-related disparity at DEA. The District Court rejected this proffered evidence of DEA's nonliability as untimely. See Memorandum Opinion, supra note 9, at 3, JA 116 12 Typically, Title VII litigation proceeds through a more or less well-defined sequence of shifting intermediate burdens of proof.

See Texas Dep't of Community Affairs v. Burdine, 450 U.S. 248, 253-254, 101 S.Ct. 1089, 1093-1094, 67 L.Ed.2d 207 (1981) (defining sequence for non-class action disparate treatment claim); Albemarle Paper Co. v. Moody, 422 U.S. 405, 425, 95 S.Ct. 2362, 2375, 45 L.Ed.2d 280 (1975) (defining sequence for disparate impact claim). Though these proof sequences are designed to sharpen the inquiry into alleged illegal discrimination, they can confuse more than clarify when they are applied inflexibly.

See *Int'l Brhd of Teamsters v. United States*, 431 U.S. 324, 358, 97 S.Ct. 1843, 1866, 52 L.Ed.2d 369 (1977). Nowhere is this more true than in pattern or practice cases such as the one now before this court. These cases do not fit comfortably into the standard proof sequences. See note 14 *infra* 13 To make out a *prima facie* case under *McDonnell Douglas Corp. v. Green*, 411 U.S. 792, 801-802, 93 S.Ct.

1817, 1823-1824, 36 L.Ed.2d 668 (1973), an individual plaintiff need only show that he or she: (1) is a member of a protected group; (2) applied for the position and was qualified; (3) was rejected; and (4) the job remained open. 411 U.S. at 802, 93 S.Ct. at 1824. Presentation of a clear and reasonably specific explanation of the apparent disparity in treatment, if supported by admissible evidence, generally suffices to rebut the plaintiff's minimal initial showing.

In such cases the burden appropriately shifts back to plaintiff to show that the employer's nondiscriminatory explanation is pretextual. *Burdine*, *supra* note 12, 450 U.S. at 253-254, 101 S.Ct. at 1093-1094 14 This proof will seek to show a disparity between the plaintiff class and the majority group, demonstrate that race explains the disparity by eliminating other possible explanations, and make these showings at high levels of statistical significance 15 Such class actions often can be viewed as collapsing the *prima facie* and pretext stages of a suit involving an individual plaintiff.

See *McKenzie v. Sawyer*, 684 F.2d 62, 71 (D.C.Cir.1982); *Vuyanich v. Republic Nat'l Bank of Dallas*, 521 F.Supp. 656, 662 (N.D.Tex.1981), vacated on other grounds, 723 F.2d 1195 (5th Cir.1984). We do not mean to suggest, however, that plaintiff must rely on its initial proof.

The plaintiff is of course free to--and if the defendant's rebuttal is sufficiently strong may have to--introduce evidence to discredit the rebuttal 16 Not every nondiscriminatory explanation will implicate disparate impact analysis.

For example, an employer might seek to show that an observed disparity resulted from discrimination prior to the date Title VII applied to the employer. But when the employer's explanation amounts to an articulation of a specific employment practice, disparate impact analysis should apply 17 *Burdine* in no way altered this traditional allocation of burdens.

The Court stated that it "recognized that the factual issues, and therefore the character of the evidence presented, differ when the plaintiff claims that a facially neutral employment policy has a discriminatory impact on protected classes." 450 U.S. at 252 n.5, 101 S.Ct. at 1093 n. 5 18 The Supreme Court has recognized that retroactive relief for victims of Title VII violations serves the important purpose of removing barriers to equal opportunity because such relief "provides the spur or catalyst which causes employers and unions to self-examine and to self-evaluate their employment practices and to endeavor to eliminate the last vestiges" of discriminatory barriers.

Albermarle Paper Co. v. Moody, 422 U.S. 405, 417-418, 95 S.Ct. 2362, 2371-2372, 45 L.Ed.2d 280 (1975); accord *Teamsters*, *supra* note 12, 431 U.S. at 364, 97 S.Ct. at 1869. Similarly, plaintiffs' prima facie disparate treatment case spurs an employer's self-evaluation to determine which of its employment practices cause the observed disparity. Once these employment practices with differential impact have been brought into the open, no sound policy reason exists for refusing to apply traditional disparate impact analysis to them.

Indeed, application of disparate impact in this situation speeds the day when we will have rid ourselves of discrimination in its subtle as well as its crass aspect 19 We note further that application of disparate impact analysis when appropriate in a pattern or practice case will not result in disparate treatment analysis swallowing up the whole of disparate impact analysis.

Disparate impact will apply in the pattern or practice case only after plaintiffs have made a sufficient initial showing of disparity between groups that appear to be comparably qualified, and after it has been decided that the employer's explanation rebuts the disparate treatment claim 20 The Supreme Court has recently stated: "Where the defendant has done everything that would be required of him if the plaintiff had properly made out a prima facie case, whether the plaintiff really did so is no longer relevant.

The district court has before it all the evidence it needs [to make the ultimate determination] * * *." *U.S. Postal Service Bd. of Gov. v. Aikens*, 460 U.S. 711, 715, 103 S.Ct. 1478, 1482, 75 L.Ed.2d 403 (1983). We follow the prescribed analysis in this case 21 Pre-1972 discrimination may also have affected the results obtained in some of appellees' grade-at-entry statistics.

However, the trial court found that "[f]or new hires (post 1972) Blacks were 12% less likely than whites to be hired at GS-9, as opposed to GS-7, and this is statistically significant at the .01 level." Findings p 9a, 508 F.Supp. at 698 22 The court's 1979 Liability Determination contains no suggestion that the court thought continuing effects were actionable.

In fact, the court's repeated statements that DEA could have rebutted plaintiffs' statistics by making a showing that the statistics reflected the continuing effects of pre-1972 discrimination dictates the opposite conclusion.

In one isolated sentence in the 1981 Remedial Order the court did state its view that continuing effects of pre-1972 discrimination are actionable under a continuing violation theory. Although this is a correct statement of the law of this circuit, see *Thompson v. Sawyer*, 678 F.2d 257, 291 (D.C.Cir.1982); *Bethel v. Jefferson*, 589 F.2d 631, 636-637 (D.C.Cir.1978), as we indicate *infra* we do not think the record supports a finding that there was a continuing violation here 23 Findings p 7g, 508 F.Supp. at 696 ("It has been neither admitted nor proven that Defendants discriminated against Black special agents prior to 1972."); see 508 F.Supp. at 712.

In this respect the case is quite unlike *Trout*, where the District Court expressly found that pre-1972 discrimination had occurred and that it was likely that such discrimination had "continuing discriminatory effects after 1972." *Trout v. Hidalgo*, 517 F.Supp. 873, 880 (D.D.C.1981), *aff'd*, 702 F.2d 1094 (D.C.Cir.1983), *vacated*, --- U.S. ----, 104 S.Ct. 1404, 79 L.Ed.2d 732 (1984) 24 The court indicated that: Depending on DEA's response to perceived pre-1972 discrimination, said discrimination might have three possible effects on the [relevant] statistics, namely (1) the showing of post-1972 discrimination could be artificially [sic] accentuated because it would include pre-1972 discrimination, (2) the showing could be attenuated by any affirmative action taken by DEA to rectify pre-1972 discrimination, and (3) the showing might actually downplay post-1972 discrimination because any affirmative action by DEA was overresponsive to the pre-1972 discrimination.

No evidence was presented by Defendants indicating that one of the three possibilities was more probable than any of the others. 508 F.Supp. at 697 n. 3 25 508 F.Supp. at 712 (discussing DEA's allegation that plaintiffs' "statistics were insignificant because relevant factors (e.g. pre-1972 discrimination, inflation, and specific types of prior work experience) were omitted from the regression analyses") 26 In the words of the District Court: Plaintiffs have shown gross disparities between the salaries of comparably qualified Black and White agents at DEA.

These disparities are evident in the regression analyses involving all agents for the period 1975-1978, and new hires for the period 1976-1978. Because of the significant level of the disparities shown, Plaintiffs have proven a *prima facie* case of discrimination in salary. * * * 508 F.Supp. at 712 (emphasis added) 27 DEA also argues that plaintiffs' regressions lack probative worth because the R² figures are too low.

R² provides an overall indication of how well the disparity in the dependent variable (salary, in this case) can be explained by all the independent variables. Plaintiffs' first salary regression had R² values ranging from .42 to .52. Plaintiffs' second salary regression had R² values ranging from .21 to .37. Findings p 7n, 508 F.Supp. at 697.

The court found that these values were "not so low as to adversely affect the veracity of Plaintiffs' studies." *Id.* We find no error in this decision, given the high levels of statistical significance that plaintiffs' studies achieved; R² is not a measure of statistical significance and is not a highly precise indicator of the probative value of a statistical study.

See *D. BALDUS & J. COLE*, *supra* note 7, at 273-274; *Vuyanich v. Republic Nat'l Bank of Dallas*, 505 F.Supp. 224, 273 (N.D.Tex.1980), *vacated on other grounds*, 723 F.2d 1195 (5th Cir.1984). 28 DEA has urged that we adopt the "greater than two or three standard deviations" test of statistical significance that the Supreme Court purportedly established in *Casteneda v. Partida*, 430 U.S. 482, 496-497 n. 17, 97 S.Ct.

1272, 1281 n. 17, 51 L.Ed.2d 498 (1977). A level of two standard deviations corresponds to statistical significance at the .05 level, and a level of three standard deviations corresponds to statistical significance at approximately the .001 level.

The huge difference between two and three standard deviations, and the casualness of the Court's language in the footnote DEA points to, together suggest that the Court in *Casteneda* did not intend to fix any specific test for statistical significance. Nor would the court have needed to do so. Since the standard deviations of the statistics used in *Casteneda* ranged from 6 to 12, the Court would have had no reason to fix a precise lower bound for statistical significance.

Thus we decline to interpret *Casteneda* as DEA suggests we should. In any event, almost all of plaintiffs' statistics in this case did achieve statistical significance at the .05 (or 2 standard deviations) level.²⁹ Some courts have suggested that an inference of discrimination might be permissible even if levels of statistical significance fall short of the .05 mark.

See *Vuyanich v. Republic Nat'l Bank of Dallas*, *supra* note 27, 505 F.Supp. at 272.³⁰ The burden of articulation applies to DEA's rebuttal of plaintiffs' disparate treatment claims. To the extent that plaintiffs' evidence, and DEA's rebuttal, implicate disparate impact, DEA of course bears the burden of proving the business necessity of the challenged practices.³¹ The evidence has not been subjected to the rigors of the adversarial process, and its veracity is therefore far from certain.³² When plaintiffs' experts used an undisputed statistical technique to aggregate across DEA's cohort groups, a salary disparity adverse to black agents, and significant at the .001 level, was found.

See Tr. at 1937 (testimony of Dr. Spradlin); *id.* at 2001-2003 (testimony of Professor Straszheim); Plaintiffs' Exhibit 53.³³ Of course, when a defendant claims that a specific factor was sufficiently objective to permit quantification, the defendant's failure to present alternative statistics incorporating the factor will severely undermine its rebuttal.³⁴ Having found disparate impact in these employment practices, the District Court ordered validity studies "in order to implement effective, nondiscriminatory supervisory evaluation, discipline, and promotion systems[.]" 508 F.Supp. at 715.

DEA has not challenged the trial court's application of disparate impact analysis to these specific employment practices. Though these practices arguably encompass some subjective judgments as to agents' performance, we find that disparate impact appropriately applies to them. See Bartholet, *Application of Title VII to Jobs in High Places*, 95 HARV.L.REV. 947, 1005-1008 (1982).

In ordering validity studies the trial court has neither precluded elements of subjective decisionmaking in DEA's practices nor invalidated the propriety of the traits that DEA's current practices seek to measure. Rather, validity studies seek to find ways to provide more specific guidance to discretionary decisionmakers, and to eliminate those elements of discretionary decisionmaking that are shown to affect black agents adversely without any compensatory

showing of business necessity 35 Finding most discrimination took place at GS-11 and above, the court did not order class-wide relief for discrimination against black agents at GS-7 or GS-9 during any given backpay year.

See Mem.Op., *supra* note 9, at 3, JA 116. The court did, however, permit these agents to bring individual claims for relief. Any individual awards at these levels are to be deducted from the class-wide backpay pool distributed to agents at GS-11 and above. See Remedial Order at 6, JA 124 36 *McKenzie v. Sawyer*, 684 F.2d 62 (D.C.Cir.1982), does not mandate individual hearings in every case.

The panel in *Sawyer* affirmed a District Court's decision to require individual relief hearings. When, in an exercise of its remedial discretion, a trial court orders hearings, an appellate court is properly reluctant to interfere with that judgment. But the appellate panel in *Sawyer* was not faced with a trial court's decision that individual hearings would effectively preclude relief for most members of the plaintiff class.

Thus, *Sawyer* 's reiteration of the Teamsters hearing preference should not be taken as implying that class-wide relief in the present context would be improper 37 DEA also makes an argument that use of the first salary regression overcompensates plaintiffs based on the R² values for this study. DEA argues that, because the R² value was roughly .50, only about half of the race coefficient for the years in question actually represents race-related disparity.

This argument reveals a basic misunderstanding of the meaning of R² figures. An R² of .50 does not mean that only half of the race coefficient is attributable to race. Rather, it means that half of the total salary disparity between black and white agents is attributable to the totality of the factors examined in the regression. See generally Fisher, *Multiple Regression in Legal Proceedings*, 80 COLUM.L.REV.

702, 720 (1980). In any event, R² is far from a wholly reliable measure of a study's accuracy. See note 27 *supra*. For these reasons, we hold that DEA's objection based on R² values is without force. 38 Of course, the court need not have found that all of the discrimination reflected in the regression occurred after 1972 in order to find the regression sufficient to make out a *prima facie* case of actionable discrimination.

See Part II-B-1-b; *Valentino v. U.S. Postal Service*, 674 F.2d 56, 71 n. 26 (D.C.Cir.1982) 39 DEA has amassed an array of quotes from Title VII's legislative history in support of its contention that promotion goals and timetables are invalid if they benefit any individuals who are not proven victims of discrimination. See reply brief for appellants at 20-22.

Many in Congress spoke in 1964, and again in 1972 when Title VII was amended, to assure wavering supporters that Title VII could not be applied to grant preferences for those who were not victims of discrimination. These statements are, however, inapposite to the question before us

in this case. Those in Congress who made such statements were not considering the issue whether in affording relief for proven discrimination against a broad class some individual nonvictims might benefit in order to ensure that all actual victims benefitted.

Rather, these statements were made with reference to the question whether Title VII could be used as a mandate to correct overall racial imbalance in an employer's workforce when such an imbalance had not been shown to be the result of discrimination 40 See *Thompson v. Sawyer*, 678 F.2d 257, 294 (D.C.Cir.1982); *Chisolm v. U.S. Postal Service*, 665 F.2d 482 (4th Cir.1981); *United States v. City of Chicago*, 663 F.2d 1354 (7th Cir.1981); *Ass'n Against Discrimination in Employment, Inc. v. City of Bridgeport*, 647 F.2d 256 (2d Cir.), cert. denied, 455 U.S. 988, 102 S.Ct.

1611, 71 L.Ed.2d 847 (1981); *United States v. Lee Way Motor Freight, Inc.*, 625 F.2d 918 (10th Cir.1979); *James v. Stockham Valves & Fittings Co.*, 559 F.2d 310 (5th Cir.1977), cert. denied, 434 U.S. 1034, 98 S.Ct. 767, 54 L.Ed.2d 781 (1978); *United States v. Int'l Union of Elevator Constructors, Local 5*, 538 F.2d 1012 (3d Cir.1976); *Boston Chapter, NAACP, Inc. v. Beecher*, 504 F.2d 1017 (1st Cir.1974), cert. denied, 421 U.S. 910, 95 S.Ct.

1561, 43 L.Ed.2d 775 (1975); *United States v. N.L. Industries, Inc.*, 479 F.2d 354 (8th Cir.1973); *United States v. Ironworkers Local 86*, 443 F.2d 544 (9th Cir.), cert. denied, 404 U.S. 984, 92 S.Ct. 447, 30 L.Ed.2d 367 (1971); *United States v. Int'l Brotherhood of Electrical Workers, Local 38*, 428 F.2d 144 (6th Cir.), cert. denied, 400 U.S. 943, 91 S.Ct. 245, 27 L.Ed.2d 248 (1970) 1 Although we have sometimes stated this rule in terms that go beyond the factual contexts in which it was at issue, these prior pronouncements may not be as all-encompassing as their language suggests.

Hazelwood and *Teamsters* indicate that in cases in which the general population has or can acquire the skills necessary to perform a job, general population comparisons are quite probative. Neither case suggested that the plaintiffs had to consider whether specific qualifications required by an employer were generally satisfied by the comparison group. See *De Medina*, 686 F.2d at 1004, 1007 (discussing *Hazelwood*).

Furthermore, so far as I can determine, this Circuit has never considered a case in which the qualifications themselves were claimed to be imposed in furtherance of a discriminatory motive. See generally B. SCHLEI & P. GROSSMAN, *EMPLOYMENT DISCRIMINATION LAW* 1356-57 (2d ed. 1983) ("some courts have held that the plaintiff need not present data on the qualified labor market where the qualifications themselves are in question") (footnote omitted)

WRIGHT, J.

Opinion for the court filed by Circuit Judge J. SKELLY WRIGHT. Concurring opinion filed by Circuit Judge HARRY T. EDWARDS. J. SKELLY WRIGHT, Circuit Judge: Title VII of the Civil

Rights Act of 1964¹ proclaims one of this nation's most fundamental, if yet unrealized, principles: a person shall not be denied full equality of employment opportunity on account of race, color, religion, sex, or national origin.

Title VII bars both intentional discrimination and artificial, arbitrary, or unnecessary barriers to equal opportunity.² In this case we review a decision of the United States District Court for the District of Columbia, *Segar v. Civiletti*, 508 F.Supp. 690 (D.D.C.1981), holding that the federal Drug Enforcement Agency (DEA) had engaged in a pattern or practice of discrimination against its black agents in violation of Title VII. A class comprising black agents initiated this suit in 1977 and the case came to trial in 1979.

Finding that DEA had discriminated against black agents in salary, promotions, initial (GS) grade assignments, work assignments, supervisory evaluations, and imposition of discipline, 508 F.Supp. at 711-715, the District Court ordered a comprehensive remedial scheme consisting of a class-wide back-pay award, promotion goals and timetables to ensure that qualified black agents received promotions to the upper levels of DEA, and a class-wide frontpay award to compensate such qualified agents while they awaited the promotions they deserved.

In the course of the proceedings the court also denied plaintiffs' request for prejudgment interest and issued a preliminary injunction barring transfer or demotion of Carl Jackson (the Jackson injunction), a black agent who was the subject of adverse employment decisions immediately after his testimony for plaintiffs in this lawsuit. *1259 On appeal DEA challenges the liability determination, the remedial scheme, and the Jackson injunction.

Plaintiffs cross-appeal the denial of prejudgment interest. As to the liability determination, DEA urges that the trial court erred in finding that plaintiffs had presented sufficient probative evidence to support any inference of discrimination at DEA, and urges that DEA had in any event effectively rebutted plaintiffs' showing.

As to the remedial scheme, DEA argues that class-wide relief was inappropriate and that imposition of promotion goals and timetables both exceeded the court's remedial authority under Title VII and violated the equal protection component of the Fifth Amendment Due Process Clause. DEA also argues that Carl Jackson did not make a showing of retaliation sufficient to justify the preliminary injunction.

To resolve this appeal we have had to plumb some of the deepest complexities of Title VII adjudication. After careful review, we affirm the District Court's liability determination in its entirety. We also affirm the trial court's decision to use a class-wide backpay remedy, but we vacate the backpay formula imposed and remand for reformulation of the particular backpay award.

We also vacate the part of the District Court's remedy that mandates promotion goals and timetables. We do not hold that such remedies exceed a court's remedial authority under Title VII. Nor do we hold that such remedies violate the Constitution. Nonetheless, we find that the District Court's particular order of goals and timetables was not appropriate on the current factual record.

Because the front-pay remedy was specifically linked to the promotion goals and timetables, we vacate that part of the remedial order as well, and remand to the District Court for further consideration of appropriate remedies.³ We affirm the preliminary injunction against demotion or transfer of Carl Jackson and we expect the District Court to undertake resolution of the status of the Jackson injunction on remand.

We affirm the trial court's denial of prejudgment interest. I. Background DEA, an agency formed in 1973 within the Justice Department, enforces this nation's federal criminal laws concerning the illegal sale, distribution, and use of drugs. Establishing DEA, the federal government sought to consolidate drug enforcement efforts that had theretofore been spread among several agencies. "Special agents" carry on the bulk of DEA's criminal investigative work.

DEA employs about 2,000 such agents, and as of 1978 seven percent were black. Special agents perform surveillance of suspected drug dealers, transact "buys" of drugs as evidence for prosecutions, do related undercover work, develop cases for prosecution by United States Attorneys, and, depending on their rank, supervise other special agents. Findings of Fact (Findings) ¶¶11-2, 508 F.Supp. at 693-695.

The District Court made extensive findings of fact concerning DEA's employment practices. See Findings ¶¶ 1-51, 508 F.Supp. at 692-711. Though we need not rehash the factual context of this case in its entirety, we will review the facts particularly pertinent to the issues on appeal. A. DEA's Personnel Requirements Hiring.

The Civil Service Commission Handbook establishes the minimum entry level requirements for special agents. Depending on qualifications, special agents will enter at either GS-7 or GS-9. The requirements for entry at GS-7 are three years of general experience and one year of specialized experience.

The requirements for GS-9 are three years of general experience and two years of specialized experience.⁴ In addition, special agents are *1260defined as criminal investigators, and this classification requires that one year of their prior specialized experience be in law enforcement or comparable work.⁵ Work Assignments. Special agents carry out the variety of assignments described above.

Race influences the location of an agent's assignment. All other things being equal, DEA will assign black agents to areas where a large percentage of the suspected violators are black. Race also influences the type of work agents receive. Black agents tend to perform a disproportionately

large amount of undercover work. DEA generally infiltrates drug networks from the bottom up, and operates on the assumption that black agents will be more readily able to infiltrate organizations consisting primarily of blacks.

The nature of an agent's work assignments will have an important bearing on the agent's prospects for promotion. Though some undercover work is desirable, a surfeit of such work injures an agent's promotion opportunities because the agent is unable to obtain the breadth of experience needed for promotions. Findings 11 23, 508 F.Supp. at 705. Promotions. At DEA promotions from GS-7 to GS-9, from GS-9 to GS-11, and from GS-11 to GS-12 are noncompetitive.

A special agent receives a promotion upon completion of one year of service in grade, recommendation by the agent's group supervisor, concurrence by a second level supervisor, and approval by a DEA regional director. Promotions from GS-12 up through GS-18, the highest GS level at DEA, are competitive agency-wide.

To receive such a promotion an agent must satisfy the minimum in-grade requirement, be placed on the "best qualified" list by the appropriate rating and ranking board, and be selected by the appropriate selecting official.

In making determinations the rating and ranking boards rely primarily on the agent's most recent performance appraisal, information on disciplinary action within the last two years, and the agent's application and profile sheet. Those agents chosen for the best qualified list are then ranked numerically on a series of performance factors.⁶ Rating and ranking boards have not been provided with any particular guidance for assigning numerical values to various aspects of an agent's performance.

Findings 114, 508 F.Supp. at 695. B. This Lawsuit In January 1977 two black special agents of DEA, and an association representing all black special agents, brought suit alleging that DEA had engaged in a pattern or practice of racial discrimination against black special agents in violation of Title VII of the Civil Rights Act of 1964, 42 U.S.C. § 2000e et seq., as amended by the Equal Employment Opportunity Act of 1972, 42 U.S.C. § 2000e-16 (1976 & Supp. V 1981).

These agents alleged discrimination in recruitment, hiring, initial grade assignments, salary, work assignments, evaluations, discipline, and promotions. See Complaint, Joint Appendix (JA) 22. On September 9, 1977 the trial court, pursuant to Federal Rule of Civil Procedure 23(b)(2), certified the class of all blacks who then served or had had been discharged as special agents at DEA, and who had applied for positions or would in *1261the future apply.

Order of Class Certification, September 9, 1977, JA 37. Before trial the parties settled the claims involving discriminatory recruitment and hiring, but could not come to terms on the other issues. See Stipulation of Settlement of Plaintiffs' Claims of Discrimination in Recruiting and Hiring of Special Agents, JA 44.

As is common in Title VII class actions, the District Court bifurcated the trial into separate liability and remedial phases. After lengthy discovery, the liability issues came to trial in April 1979. The trial was in large measure a duel of experts armed with sophisticated statistical means of proof. 1.

The plaintiffs' case. The plaintiffs presented a range of statistical and anecdotal evidence of discrimination. The statistical evidence included several multiple linear regression analyses as well as a number of studies considering the effects of particular employment practices. Multiple regression is a form of statistical analysis used increasingly in Title VII actions that measures the discrete influence independent variables have on a dependent variable such as salary levels.

See *Valentino v. U.S. Postal Service*, 674 F.2d 56, 70 (D.C.Cir.1982). Typically the independent variables in Title VII cases will be race, age, education level, and experience levels. The first step in a multiple regression analysis is specification of the independent (or explanatory) variables thought likely to affect significantly the dependent variable.

The choice of proper explanatory variables determines the validity of the regression analysis. A coherent theory, devised prior to observation of the particular data, must be employed to select the relevant explanatory variables. See *Vuyanich v. Republic Nat'l Bank of Dallas (Vuyanich I)*, 505 F.Supp. 224, 269 (N.D.Tex.1980), vacated on other grounds, 723 F.2d 1195 (5th Cir.1984).

When the proper variables have been selected, the multiple regression analysis is conducted, generally by a computer. In essence, the regression measures the impact of each potential explanatory variable upon the dependent variable by holding all other explanatory variables constant.

The analysis yields figures demonstrating how much of an observed disparity in salaries can be traced to race, as opposed to any of the other potential explanatory variables. The computer analysis will generally also yield two other measurements that assist in evaluation of the explanatory power of the regression.

The first is "T-Ratio." The T-Ratio measures the probability that the result obtained could have occurred by chance.⁷ The second is R². The R² figure measures, to a certain extent, the degree to which a multiple regression analysis taken as a whole explains observed disparities in a dependent variable.

Having observed an average disparity in salary of about \$3,000 between white and black special agents at DEA, plaintiffs' experts, Professors Bergmann and Straszheim,⁸ formulated a regression analysis to discover whether and to what extent race explained the observed salary disparity.

The experts based their analysis on a "human capital model." A widely accepted approach, the model builds on labor economists' findings that the human capital an employee brings to a job —

such as education and experience—in large measure determines the employee’s success. See Note, Beyond the Prima Facie Case in Employment Discrimination Law: Statistical Proof and Rebuttal, 89 Harv.L.Rev.

387, 408 n. 90 (1975); Vuyanich I, supra, 505 F.Supp. at 265-267. Plaintiffs’ experts selected education, pri- or federal experience, prior nonfederal experience, and race as the four independent variables that might explain the salary differential. Information regarding these in*1262dependent variables came from the computerized JUNIPER personnel information tapes of the Department of Justice.

Findings 117a-b, 508 F.Supp. at 696. Professors Bergmann and Straszheim then ran the regressions. They first evaluated the causes of salary disparities among all agents as of five dates: the first of January in 1975, 1976, 1977, and 1978 and the first of October in 1978. This study generated the following results: RACE DATE COEFFICIENT T-RATIO 1/1/75 -\$1,628 4.65 1/1/76 -\$1,744 5.37 1/1/77 -\$1,119 5.15 1/1/78 -\$1,934 5.15 10/1/78 -\$1,877 4.50 Findings 117b, 505 F.Supp. at 696.

The race coefficient measures the salary disparities between white and black agents when education and prior experience are held constant. The T-Ratio figures here correspond to standard deviations of four or five. See D. Baldus & J. Cole, Statistical Proof of Discrimination 297 n. 14 (1980) (hereinafter “D. Baldus & J. Cole”). Since a standard deviation level higher than three indicates that the odds are less than one in a thousand that an observed result could have occurred by chance, these figures indicate that the odds are far less than one in a thousand that the observed disparities for any year could have occurred by chance.

A study is generally considered to be statistically significant when the odds that the result occurred by chance are at best one in 20. See D. Baldus & J. Cole, supra, at 297. Professors Bergmann and Straszheim then ran a second regression to measure salary disparities over the same time frame for agents hired after 1972. They intended this study to generate some measure of the effects of race discrimination at DEA after 1972.

Title VII applies to DEA in this action only as of that date.⁹ Because the first regression measured disparities in the salaries of all black agents, including those hired before 1972, the race coefficient in that study may have reflected disparities resulting from the continuing effects of discrimination that occurred prior to 1972, rather than actionable post-1972 discrimination.

This second regression generated the following results: RACE DATE COEFFICIENT T-RATIO 1/1/75 -\$ 378.84 1/1/76 -\$1,864 2.54 1/1/77 -\$1,119 3.18 1/1/78 -\$ 866 2.07 10/1/78 -\$1,026 2.30 Findings IT 7d, 508 F.Supp. at 696. Again a significant salary disparity between agents with comparable education and experience was revealed.

The T-Ratios indicate that for every year, save 1975, the possibility that the result could have occurred by chance was at most one in 20. Though these figures are not at as high a level of significance as were those of the first regression, they still meet the generally accepted test for statistical significance.

The second regression, moreover, tends to understate the amount of post-1972 discrimination at DEA. Because the post-1972 study measures discrimination among newer agents, the study focuses on the speed with which the new recruits make their way through the lower levels of DEA. Promotions at these levels are relatively automatic, and discrimination thus has less opportunity to work its effects.

Discrimination will most adversely affect older agents contending for upper level positions; promotion decisions at these levels incorporate far more discretionary elements and leave more room for bias. See Part I-A *supra*.

The study does not measure any post-1972 discrimination against those hired before 1972. Since these agents *1263 would have been the ones contending for the upper level positions during the time frame studied, they would have been the ones on whom discrimination would have been most likely to operate.

The problem is particularly severe with respect to the 1975 race coefficient. Almost half of those studied to obtain this figure were hired in 1974. Findings ¶ 7c, 508 F.Supp. at 696. Since they were in their first year at the time of the study, they would not yet have been eligible for a grade promotion.

Having uncovered evidence of significant discrimination in salary levels, plaintiffs' experts undertook a more exacting inquiry into DEA's employment practices to pinpoint where discrimination was taking place. They first examined DEA's initial grade assignment practices. Through regression analyses they determined at a sufficient level of statistical significance that blacks were 16 percent less likely than comparably qualified whites to have been hired at GS-9 rather than GS-7.

For those hired after 1972, blacks were 12 percent less likely to be hired at GS-9. Findings ¶ 9, 508 F.Supp. at 698-699. The experts then evaluated work assignments, supervisory evaluations, and discipline. In all three categories statistical analysis revealed significant levels of discrimination against black agents. Findings ¶¶ 12, 14, 15, 508 F.Supp. at 698-700.

Finally, plaintiffs' experts studied promotions at DEA. Promotions up to the GS-11 level were found to be relatively automatic. The promotion rate from GS-11 to GS-12 was 70 percent for blacks and 82 percent for whites. This differential met generally accepted levels of statistical significance. Differentials in promotion rates for positions above GS-12 were also found, but—

largely because of the small sample size— these differentials did not achieve statistical significance at generally accepted levels.

Findings 1116, 508 F.Supp. at 701-702. To buttress the statistical proof plaintiffs introduced anecdotal testimony of discrimination. This evidence consisted of accounts by several black agents of perceived discrimination against them in initial grade assignments, work assignments, supervisory evaluations, and discipline. These agents also testified about their general perceptions of racial hostility at DEA.

2. Defendant DEA's case. DEA responded to plaintiffs' case in several ways. The rebuttal consisted of expert testimony attacking the methodological integrity and explanatory value of plaintiffs' statistics, alternative statistical analyses tending to show an absence of discrimination, testimonial evidence concerning DEA's equal employment opportunity programs, and cross-examination of plaintiffs' anecdotal accounts of individual discrimination.

DEA's first expert was Dr. J. Wanzer Drane, an associate professor of statistics at Southern Methodist University. In his testimony he attacked the methodology of plaintiffs' statistical analyses. He asserted that plaintiffs had failed in their analysis to account for the relevant explanatory variable of prior law enforcement experience, and that the explanatory power of plaintiffs' salary studies (the R2 and the T-Ratio) was too low.

He also presented a more generalized critique of the suitability of the regression methodology for measurement of discrimination in the present situation. Findings II 7f-n, 508 F.Supp. at 696-697; see Trial Transcript (Tr.) 1850-1871; brief for appellants at 36-38.

To supplement this critique DEA offered an alternative statistical analysis that tended to show an absence of discrimination. This study — prepared by Dr. B.C. Spradlin, a consultant — was not a regression but an alternative statistical methodology known as cohort analysis.

Under this approach all employees who start together at the same level are surveyed over the course of an observation period and their comparative progress in salary and promotion is evaluated. Evaluating promotion and salary disparities among DEA agents who started at the same year and grade level, Dr. Spradlin's cohort analysis suggested significant discrimination in four of 15 groups.

These four groups were broken into subgroups. Discrimination was found in two of the subgroups. DEA then examined the personnel files of those in the subgroups showing discrimination and found that three individuals had been misclassified. When these three were properly classified, the study showed no significant discrimination. Findings ¶ 8, 508 F.Supp. at 697-698; see Tr. at 1909-1913.

Testimonial evidence buttressed DEA's statistical rebuttal. DEA presented extensive general testimony on its efforts to establish equal opportunity programs and implement equal opportunity goals at the agency. Through cross-examination of plaintiffs' witnesses, DEA also sought to rebut every particular anecdotal account of discrimination. C. The District Court Decision 1.

The liability determination. Judge Robinson held that DEA had discriminated against black special agents in violation of Title VII across a range of employment practices. The court found that the salary differentials between white and black agents were a result of race discrimination, and that DEA had discriminated against black agents in grade-at-entry, work assignments, supervisory evaluations, and promotions.

508 F.Supp. at 712-715. The finding of discrimination in promotions extended to promotions above the GS-12 level, even though the court did not credit plaintiffs' statistical evidence of discrimination at that level because the statistics had not achieved acceptable levels of statistical significance.

The court based its finding of discrimination at the upper levels on inferences from proven discrimination at the immediately preceding levels and discrimination in the factors that bear most directly on promotions (work assignments, evaluations, and discipline). 508 F.Supp. at 714-715.

To make these determinations the District Court credited the bulk of plaintiffs' statistical evidence¹⁰ and rejected both DEA's critique of this evidence and DEA's alternative statistics. In particular, the court rejected DEA's claims that plaintiffs' statistics did not possess sufficient explanatory power, that the failure to account for prior law enforcement experience skewed the studies, and that DEA's cohort analysis rebutted plaintiffs' showing of discrimination.

As to the alleged failure to account for law enforcement experience, the court held that DEA's objection was "speculative and incapable of rebutting plaintiffs' statistical showing." *Id.* at 712. Moreover, the court found that the "cohort analysis was irreparably flawed," primarily because the methodology focused on groups too small to generate statistically significant evidence of discrimination.

Id. at 698, 712. Since DEA had hinged its defense on this effort to rebut plaintiffs' showing of race-related disparities, the District Court's findings were dispositive against DEA. 2. The remedies determination. Having found pervasive discrimination at DEA, the District Court — in a separate remedial proceeding — set out to formulate an appropriate remedial plan.¹¹ The essential elements of the plan were class-wide backpay, promotion goals and timetables, and class-wide frontpay.

See Memorandum Opinion (Mem.Op.) and Order (Remedial Order), February 17, 1982, JA 114. Class-wide Backpay. Rather than order individualized relief hearings, see Int'l Brhd of Teamsters

v. United States, 431 U.S. 324, 361-362, 97 S.Ct. 1843, 1867-1868, 52 L.Ed.2d 396 (1977), the District Court ordered a class-wide award of backpay for members of the plaintiff class.

For successive one-year periods beginning in July 1972, a class-wide backpay pool figure would be calculated. The calculations would derive from plaintiffs' first salary regression study (which measured disparities among all agents including those hired before 1972).

For every year for which figures were available — 1975 to 1979 — the class-wide pool figure would be the race coefficient multiplied by the number of black special agents. For the years before 1975 and after 1979 the race coefficient would be derived by extrapolating backward and forward from the available figures, and this extrapolated coefficient would be multiplied by the number of black agents.

The annual backpay pool would be distributed evenly among eligible black agents. Only agents above the GS-9 level during the year in question were made eligible. The court excluded agents at GS-7 and GS-9 because most discrimination was found to occur at the higher levels of DEA.

The court did, however, permit individual plaintiffs to come forward and seek backpay for discrimination suffered in initial grade assignment (viz. assignment to GS-7 instead of GS-9). Any such individual awards would be subtracted from the class-wide pool in order to prevent double liability. Mem.Op. at 3, JA 116. Promotion Goals and Timetables. Finding discrimination at the upper levels of DEA, the District Court ordered remedial promotion goals and timetables.

Since black agents made up at least 10 percent of agents at every level through GS-12 the court held that a 10 percent goal was appropriate for all levels above GS-12. Mem.Op. at 4, JA 117. To meet this goal the court ordered DEA to promote one black agent for every two white agents until 10 percent black representation had been met at GS-13 and above (or until five years had passed).

Id. Class-wide Frontpay. To compensate black agents awaiting promotion under the goals and timetables plan the court established a class-wide frontpay formula. Frontpay pool calculations were also based on extrapolations from the salary regression, but the pool was to be adjusted to reflect progress DEA had made under the promotions goals and timetables. Remedial Order at 9-12, JA 126-129.

The pool was to be distributed to all black agents at GS-12 for at least two years and all black agents above GS-12. 3. Other issues. In the course of the proceeding two other issues arose. Plaintiffs sought and were refused an award of prejudgment interest on the backpay awards. See Mem.Op. at 3 n. 4, JA 116 n. 4. Also, during the time between the liability and remedial determinations the court issued a preliminary injunction barring demotion or transfer of black special agent Carl Jackson.

See Memorandum Opinion and Order of May 5, 1981, JA 101. Shortly after Jackson had testified at trial in this case he became the target of harassment and eventually of adverse employment actions including demotion and transfer.

The District Court concluded that there was a high likelihood that these actions were in retaliation for Jackson's testimony, and therefore preliminarily enjoined Jackson's demotion or transfer. D. The Appeal. DEA appeals several aspects of both the liability and the remedial determinations, and also challenges the Jackson injunction. Plaintiffs cross-appeal from the denial of prejudgment interest.

We will consider separately DEA's challenges to the liability decision, the remedial decision, and the Jackson injunction. We will then consider plaintiffs' claim for prejudgment interest. II. The Liability Determination A. Framework for Analysis A plaintiff in a Title VII action can prove liability under two theories: disparate treatment or disparate impact.

In a disparate treatment claim a plaintiff seeks to prove that an employer intentionally "treats some people less favorably than others because of their race, color, religion, sex, or national origin." *Teamsters*, supra, 431 U.S. at 335 n. 15, 97 S.Ct. at 1854 n. 15. Proof of illicit motive is essential, but, especially in cases alleging class-wide discrimination, illicit motive may be inferred from a sufficient showing of disparity between members of the plaintiff class and comparably qualified members of the majority group.

Id. Such class-wide allegations of discrimination are commonly referred to as "pattern or practice" cases. In *Teamsters*, supra, the Supreme Court noted that "the question whether the company engaged in a pattern or practice of discriminatory [action] * * * involves controlling legal principles that are relatively clear," id. at 334-335, 97 S.Ct. at 1854, and went on to characterize the case as one of disparate treatment.

A claim that the sum of an employer's practices results in less favorable treatment of members of the plaintiff class than of comparably qualified whites or males may justify an inference that "discrimination was the company's standard operating procedure — the regular rather than the unusual practice." Id. at 336, 97 S.Ct. at 1855. This is because a disparity in treatment of the comparably qualified is "the expected result of a regularly followed discriminatory policy." Id. at 361 n. 46, 97 S.Ct. at 1867 n. 46.

In a disparate impact claim a plaintiff challenges "employment practices that are facially neutral in their treatment of different groups but that in fact fall more harshly on one group than another and cannot be justified by business necessity." Id. at 336 n. 15, 97 S.Ct. at 1855 n. 15.

To prevail on a disparate impact theory a plaintiff need not prove illicit motive; "Congress directed the thrust of the Act to the consequences of employment practices, not simply the motivation." *Griggs v. Duke Power Co.*, 401 U.S. 424, 432, 91 S.Ct. 849, 854, 28 L.Ed.2d 158

(1971) (emphasis in original). This disparate impact concept may be relevant in two ways to a case involving allegations of class-wide discrimination.

First, in addition to bringing a pattern or practice disparate treatment claim, plaintiffs may well challenge the disparate impact of specific employment practices and thus force the employer to prove the job-relatedness of those practices. See *Griggs*, *supra*, 401 U.S. at 432, 91 S.Ct. at 854.

Second, plaintiffs' pattern or practice disparate treatment challenge to the employment system as a whole may also implicate disparate impact analysis. A pattern or practice disparate treatment case shares with a typical disparate impact suit the allegation that an employer's practices have had a systemic adverse effect on members of the plaintiff class. See *Teamsters*, *supra*, 431 U.S. at 336 n. 15, 97 S.Ct. at 1855 n. 15 ("Either theory may, of course, be applied to a particular set of facts."); *Vuyanich v. Republic Nat'l Bank of Dallas (Vuyanich II)*, 521 F.Supp. 656, 663 (N.D.Tex.1981), vacated on other grounds, 723 F.2d 1195 (5th Cir.1984).

Though a plaintiff class will initially seek to show a disparity among the comparably qualified in order to prove disparate treatment, an employer may seek to defend by pointing to a specific, arguably nondiscriminatory, employment practice as the cause of the observed disparity.

In such situations the defendant may appropriately be required to demonstrate the business necessity of the practices causing the disparity because the court will have before it all the elements of a traditional disparate impact claim. See Part II-A-2 *infra*. Proceeding under the disparate treatment theory, plaintiffs in this case allege a pattern or practice of illegal discrimination at DEA.

Proceeding under the disparate impact theory, plaintiffs also challenge a number of DEA's specific employment practices — initial grade assignments, work assignments, supervisory evaluations, discipline, and promotions decisions.

Thus plaintiffs challenge both the entirety of DEA's employment system and several specific components of that system. To establish a framework for analysis of these allegations, we will first examine the sequence and allocation of proof in a class action alleging a pattern or practice of disparate treatment and alleging disparate impact with respect to specific employment practices.

We will then locate within that framework the approach that the parties have taken in joining the liability issue in this case. 1. Sequence and allocation of proof. Functionally the disparate treatment and disparate impact models have different aims, and the proof sequences associated with each reflect these differences. Disparate treatment aims at discovery and elimination of intentional discrimination.

On the disparate treatment claim the "ultimate burden of persuading the trier of fact that the defendant intentionally discriminated against the plaintiff remains at all times with the plaintiff."

Texas Dep't of Community Affairs v. Burdine, 450 U.S. 248, 253, 101 S.Ct. 1089, 1093, 67 L.Ed.2d 207 (1981). Since the plaintiff class will likely try to meet this ultimate burden by proving a disparity sufficient to permit an inference of discrimination, plaintiff must carry the burden of persuasion as to the existence of the disparity.

Disparate impact aims at discovery and elimination of facially neutral employment practices that adversely affect minorities and cannot be justified as necessary to an employer's business. On the disparate impact claim plaintiffs bear the burden of persuasion as to the existence of a race-related disparity caused by an employment practice, but, once plaintiffs have made this showing, the employer bears the burden of persuasion as to the business necessity of the practice.

See Vuyanich II, *supra*, 521 F.Supp. at 660. Though allocations of proof differ in this crucial way, an important point of convergence exists in class actions like the present case. Both pattern or practice disparate treatment claims and disparate impact claims are attacks on the systemic results of employment practices.

The pattern or practice claim amounts to an allegation that an observed disparity is the systemic result of an employer's intentionally discriminatory practices. The disparate impact claim amounts to an allegation that an observed disparity is the systemic result of a specific employment practice that cannot be justified as necessary to the employer's business.

Consequently the proof of each claim will involve a showing of disparity between the minority and majority groups in an employer's workforce. These two factors — the difference in ultimate burden of proof and the similarity in proof of disparity — must inform our understanding of the intermediate burdens that the parties to such an action face.¹² A plaintiff class seeking to show a pattern or practice of disparate treatment must "carry the initial burden of offering evidence adequate to create an inference that" employment decisions were "based on a discriminatory criterion illegal under the Act." *Teamsters*, *supra*, 431 U.S. at 358, 97 S.Ct. at 1866.

This usually means providing evidence—often in statistical form — of a disparity in the position of members of the plaintiff class and comparably qualified whites. Similarly, on the disparate impact challenges to specific employment practices the plaintiff class must present evidence that the practices have a disproportionately adverse effect on the plaintiffs.

How far this *prima facie* showing will carry the plaintiff toward its ultimate burden of persuasion depends on both the strength of the plaintiffs' evidence and the nature of the defendant's response. A defendant must tailor its response to the nature of the plaintiff's proof. *Teamsters*, *supra*, 431 U.S. at 360 n. 46, 97 S.Ct. at 1867 n. 46.

In general, though, the response will follow two paths. The employer can endeavor to refute the plaintiffs' claim that a disparity exists. Alternatively, the employer can offer an explanatory

defense; such a defense amounts to a claim that an observed disparity has not resulted from illegal discrimination.

The nature of these defenses, and the burdens associated with them, differ in important ways. a. Challenges to the plaintiffs' proof Challenging the accuracy or significance of plaintiffs' proof, a defendant seeks to show that the alleged disparity on which plaintiffs' case is bottomed does not exist. Such a defense can of course be raised against both a disparate treatment and a disparate impact claim.

Typically the challenge will focus on the integrity of the plaintiffs' statistical methodology and the significance of the results shown. Often the defendant will supplement the critique with alternative statistical analyses tending to refute the plaintiffs' evidence of disparity.

The defendant need not carry the burden of persuasion as to the nonexistence of a disparity; on the disparate treatment claim "the ultimate burden of persuading the trier of fact that the defendant intentionally discriminated against the plaintiff remains at all times with the plaintiff," *Burdine*, supra, 450 U.S. at 253, 101 S.Ct. at 1093, and on the disparate impact claims the plaintiffs must persuade the trier of fact that a disparity exists.

The defendant's rebuttal must, however, at least raise a genuine issue of material fact concerning the accuracy of the picture painted by the plaintiffs' statistics. And introduction of evidence sufficient to raise a genuine issue of material fact does not necessarily vindicate the defendant. *Burdine*, supra, 450 U.S. at 254-255, 101 S.Ct. at 1094. Rather, the strength of the evidence the defendant must produce to prevent the plaintiff from carrying the burden of persuasion as to disparity depends, as in any case, on the strength of the plaintiffs' proof. "[T]he defendant's evidence must do more than merely raise an issue of fact. * * * It must cast sufficient doubt on the plaintiff's proof to cause the trier of fact to conclude that the plaintiff has not proved discrimination by a preponderance of the evidence." *Vuyanich II*, supra, 521 F.Supp. at 663. b. The explanatory defense.

Alternatively, a defendant can attempt to show that any observed disparities between plaintiffs and the majority group did not result from discrimination violative of Title VII. The requirements of such a rebuttal will vary according to the type of claim the defendant seeks to rebut.

To rebut a disparate impact challenge to a specific employment practice causing a disparity the employer must prove the business necessity of the practice. See *Albemarle Paper Co.*, supra, 422 U.S. at 425, 95 S.Ct. at 2375.

To rebut a disparate treatment challenge the employer can argue that the observed disparity between the plaintiff class and the majority group does not support an inference of intentional discrimination because there is a legitimate, nondiscriminatory explanation for the disparity.

For example, the defendant might come forward with some additional job qualification—not sufficiently perceptible to plaintiffs to have permitted them to account for it in their initial proof—that the plaintiff class lacks, thus explaining the disparity.

The nature of the burden that the defendant bears on such a defense is not entirely free of doubt. The defendant must at least make a “clear and reasonably specific showing,” based on admissible evidence, that the alleged nondiscriminatory explanation in fact explains the disparity. *Burdine*, supra, 450 U.S. at 253-255, 101 S.Ct. at 1093-1095.

In the context of an individual plaintiff’s claim of disparate treatment, the Court in *Burdine* suggested that a defendant need do no more than make such an articulation. *Id.* at 253-254, 101 S.Ct. at 1093-1095. Though the principles on which *Burdine* is based are fully applicable to pattern or practice cases, the specific definition of the rebuttal burden on an employer in an individual plaintiff’s disparate treatment case should not be unthinkingly applied to class actions such as the present case.

In an individual case a defendant’s nondiscriminatory explanation serves only to undermine the inference of discriminatory intent arising from plaintiffs proof. Since plaintiff bears the burden of persuasion on the issue of intentional discrimination, the defendant should not have to persuade the trier of fact that plaintiff was treated less well for a nondiscriminatory reason.

The defendant is required only to present evidence sufficient to permit the trier of fact legitimately to decline to infer discrimination from the plaintiffs proof. In the context of an individual’s suit, the bare articulation of a legitimate nondiscriminatory explanation generally suffices to undermine a plaintiff’s initial proof in this way because the plaintiff’s *prima facie* case will typically consist of the low-threshold showing of *McDonnell Douglas Corp. v. Green*, 411 U.S. 792, 93 S.Ct.

1817, 36 L.Ed.2d 668 (1973).¹³ When a defendant in a pattern or practice class action offers such an explanation, the circumstances differ in two crucial ways. First, to make an initial showing of disparate treatment in such cases the plaintiff class will typically have presented statistical evidence showing pervasive disparities and eliminating most, if not all, potential nondiscriminatory explanations for the observed disparities.

See *Vuyanich II*, supra, 521 F.Supp. at 663; Part II-A-1 supra.¹⁴ Though the employer is not required to meet a burden of persuasion in rebutting the disparate treatment claim, the nondiscriminatory explanation must cast sufficient doubt on the plaintiffs’ proof to permit the trier of fact legitimately to decline to draw an inference of discrimination from that proof.

The bare articulation of a nondiscriminatory explanation, while sufficient to rebut an individual plaintiff’s low-threshold *McDonnell Douglas* showing, generally will not suffice as a rebuttal to a typical class-wide showing of pervasive discrimination. *Burdine* made this much clear: In saying that the presumption [of discrimination] drops from the case, we do not imply that the trier of fact

no longer may consider evidence previously introduced by the plaintiff to establish a prima facie case.

A satisfactory explanation by the defendant destroys the legally mandatory inference of discrimination arising from the plaintiff's initial evidence. Nonetheless, this evidence and inferences properly drawn therefrom may be considered by the trier of fact on the issue of whether the defendant's explanation is pretextual. Indeed, there may be some cases where the plaintiff's initial evidence, combined with effective cross-examination of the defendant, will suffice to discredit the defendant's explanation.

450 U.S. at 255 n. 10, 101 S.Ct. at 1095 n. 10 (emphasis added). The typical pattern or practice case is closely analogous to the situation the Court envisions in the last sentence of the quoted passage: the plaintiff's initial offer of evidence will have been so strong that the bare articulation of a nondiscriminatory explanation will not suffice to rebut it.

Thus in both individual and class action contexts the defendant faces the same rebuttal burden; it must present sufficient evidence to permit the trier of fact to decline to draw the inference of discrimination from the plaintiff's proof. But in the class action pattern or practice case the strength of the evidence sufficient to meet this rebuttal burden will typically need to be much higher than the strength of the evidence sufficient to rebut an individual plaintiff's low-threshold McDonnell Douglas showing.¹⁵ Second, the employer's effort to rebut the pattern or practice claim by articulating a legitimate nondiscriminatory explanation may have the effect of putting before the court all the elements of a traditional disparate impact case.

By its explanation of an observed disparity the employer will typically pinpoint an employment practice (or practices) having a disparate impact on a protected class. And to rebut plaintiff's case the employer will typically be required to introduce evidence showing that the employment practice in fact caused the observed disparity. See *Burdine*, supra, 450 U.S. at 258, 101 S.Ct. at 1096 ("defendant will normally attempt to prove the factual basis for its explanation").

In this situation, between the plaintiff's prima facie showing of disparity and the defendant's rebuttal explanation of the disparity, the essential elements of a disparate impact case will have been placed before the trier of fact. Such a case is ripe for resolution using disparate impact analysis.¹⁶ Though the plaintiff in a disparate treatment case bears the burden of persuasion as to the existence of a disparity, the defendant bears the burden of proving the business necessity of the practices causing the disparity.¹⁷ *Albemarle Paper Co.*, supra, 422 U.S. at 425, 95 S.Ct. at 2375.

Thus when an employer defends a disparate treatment challenge by claiming that a specific employment practice causes the observed disparity, and this defense sufficiently rebuts the plaintiff's initial case of disparate treatment, the defendant should at this point face a burden of

proving the business necessity of the practice. Accord *Vuyanich II*, supra, 521 F.Supp. at 662-663; see Bartholet, *Application of Title VII to Jobs in High Places*, 95 Harv.L.Rev.

945, 1004-1006 (1982). The only difference between this situation and the traditional disparate impact case is that in the latter the plaintiff articulates the employment practice causing the adverse impact and forces the employer to defend it, while in the former the employer articulates the employment practice and must then go on to defend it. Accord *Vuyanich II*, supra, 521 F.Supp. at 663.

Some case law from other circuits has expressed a reluctance to apply disparate impact analysis in this situation. Two concerns fuel this reluctance: (1) the perceived unfairness of placing on the defendant the dual burden of articulating which of its employment practices caused the adverse impact at issue and proving the business necessity of the practice, see, e.g., *Pouncy v. Prudential Ins.*

Co. of America, 668 F.2d 795, 800 (5th Cir.1982) (plaintiff required to point to specific employment practice causing adverse impact “in order to allocate fairly the parties’ respective burdens of proof at trial”); and (2) the risk that an employer will be forced to justify the entire range of its employment practices when a plaintiff shows only that a disparity exists, see *Rivera v. City of Wichita Falls*, 665 F.2d 531, 539 (5th Cir.1982).

These concerns are, however, unpersuasive *1271 and difficult to harmonize with the purposes of Title VII. As a practical matter, this issue arises in a context that renders such concerns largely irrelevant. An employer will face the justificatory burden only after a plaintiff class has shown a disparity in the positions of members of the class and the majority group who appear to be comparably qualified; if plaintiffs fail to make their prima facie case, the employer never faces this justificatory burden.

But if the plaintiffs have made their prima facie case, the employer, to avoid liability under the disparate treatment theory, will have to advance some nondiscriminatory explanation for the disparity. An employer’s claim that it cannot isolate the cause of the disparity will be unlikely to deflect the force of the inference of discrimination from plaintiffs’ proof.

The defendant will in all likelihood point to a specific job qualification or performance/evaluation rating as the explanation for the observed disparity. Thus application of disparate impact in this situation will not, the fears of the Pouncy court notwithstanding, place on the employer any additional burden of articulation; to rebut the disparate treatment claim the employer will have had to articulate which employment practices cause an observed disparity.

Nor will the employer be forced to justify all of its employment practices. The employer will be required to show the job relatedness of only the practice or practices identified as the cause of the disparity- The concerns of Pouncy and Rivera are no more compelling on the theoretical level.

The employer will possess knowledge far superior to that of the plaintiff as to precisely how its employment practices affect employees. This fact, as the Fifth Circuit noted in *Pouncy*, 668 F.2d at 801, traditionally justifies placing on the defendant the burden of proving the business necessity of an employment practice. So too it justifies the lesser burden of requiring the employer to articulate which of its employment practices adversely affect minorities.¹⁸ A rule placing this justificatory burden on the employer advances the purposes of Title VII far better than would the contrary result. “What is required by Congress is the removal of artificial, arbitrary, and unnecessary barriers to employment when the barriers operate invidiously to discriminate on the basis of racial or other impermissible classification.” *Griggs*, supra, 401 U.S. at 430-431, 91 S.Ct. at 853; accord *Connecticut v. Teal*, 457 U.S. 440, 451, 102 S.Ct.

2525, 2533, 73 L.Ed.2d 130 (1982) (“Title VII strives to achieve equality of opportunity by rooting out ‘artificial, arbitrary, and unnecessary’ employer-created barriers to professional development”); *Teamsters*, supra, 431 U.S. at 364, 97 S.Ct. at 1869 (“a primary objective of Title VII is prophylactic: to achieve equal employment opportunity and to remove barriers that have operated to favor white male employees over other employees”); *Albemarle Paper Co.*, supra, 422 U.S. at 417, 95 S.Ct. at 2371.

This purpose is not well served by a requirement that the plaintiff in every case pinpoint at the outset the employment practices that cause an observed disparity between those who appear to be comparably qualified. Such a requirement in effect permits challenges only to readily perceptible barriers; it allows subtle barriers to *1272continue to work their discriminatory effects, and thereby thwarts the crucial national purpose that Congress sought to effectuate in Title VII. “It is abundantly clear that Title VII tolerates no discrimination, subtle or otherwise.” *McDonnell Douglas Corp.*, supra, 411 U.S. at 801, 93 S.Ct. at 1824.

Thus when unnecessary employer-created barriers have been brought into the open through adjudication of a pattern or practice disparate treatment claim, these barriers should be evaluated under the disparate impact theory, as Congress intended them to be.¹⁹ 2. Locating this controversy within the analytical framework. Plaintiffs, utilizing disparate treatment analysis, challenge the entirety of DEA’s employment system, and, utilizing disparate impact analysis, challenge several particular employment practices in that system (DEA’s procedures for initial grade assignments, discipline, supervisory evaluations, and promotion).

In their disparate impact claims plaintiffs seek to show that these specific practices have an adverse effect on black agents, and thereby to force DEA to prove the business necessity of the challenged practices. In their disparate treatment claim plaintiffs seek to show that they are treated less well than comparably qualified white agents. Evidence of overall salary disparities, buttressed by evidence of the specific places in DEA’s employment system where discrimination occurs, supports this challenge.

Whether this overall challenge will also raise disparate impact issues beyond those already raised by plaintiffs' challenges to several specific DEA employment practices depends on the nature of DEA's defense. See Part II-A-I-b *supra*. DEA has channelled the bulk of its efforts into an attempt to show that plaintiffs' proof of disparity is either inaccurate or insignificant.

DEA has bifurcated this attack into separate claims that plaintiffs' statistical proof is deficient and that DEA's proof in any event refuted plaintiffs' attempt to show race-related disparities. Though made separately, both arguments go to the question whether plaintiffs have met their burden of persuasion as to the existence of race-related disparities. Subsumed in DEA's rebuttal are several specific legal issues.

DEA claims that plaintiffs' initial case is deficient as a matter of law for two reasons. First, the regression analyses on which plaintiffs' case is bottomed do not account for all "minimum objective qualifications" for the special agent positions at issue. See *Davis v. Califano*, 613 F.2d 957, 964 (D.C.Cir.1979).

Second, because plaintiffs failed to produce any creditable anecdotal evidence of specific instances of discrimination, their statistical proof was required to, and failed to, meet the enhanced evidentiary threshold of showing "gross disparities" in treatment. See *Hazelwood School District v. United States*, 433 U.S. 299, 307-308, 97 S.Ct. 2736, 2741-2742, 53 L.Ed.2d 768 (1977).

Even if plaintiffs' proof is not insufficient as a matter of law for these reasons, DEA claims, that proof would have been found unable to stand up to DEA's evidence had the trial court properly evaluated that evidence. One purported error DEA cites is the trial court's misstep in placing on DEA a burden of persuasion of nondiscrimination, instead of the proper burden of coming forward with credible rebuttal evidence.

See *Burdine*, *supra*, 450 U.S. at 248, 101 S.Ct. at 1089. Another claim of error involves the trial court's purported abuse of discretion in failing to admit into evidence the alternative regression analyses that DEA offered at the remedial phase of the proceeding. DEA also claims that the trial court gave insufficient weight to its cohort analysis. Preferring to rely on a direct attack on the evidence showing race-related disparities, DEA has offered little in the way of explanation for the observed disparities.

Thus DEA's defense to both the disparate treatment and disparate impact allegations in large measure stands or falls with its arguments as to the nonexistence of the disparities that plaintiffs have sought to show. One aspect of DEA's challenge to plaintiffs' proof does, however, amount to an effort to provide a legitimate nondiscriminatory explanation for the observed disparity.

DEA argues that plaintiffs' statistical analysis will not support an inference of discrimination because the observed disparity was caused by a lack in the plaintiff class of a particular job qualification. Though DEA makes this argument in the context of an attack on the legal

sufficiency of plaintiffs' prima facie disparate treatment case, the claim can also be styled as a possible nondiscriminatory explanation for the disparity, and will be analyzed as such.

To the extent the claim implicates a disparate impact analysis, see Part II-A-I-b supra, that analysis will also be undertaken. B. Analysis of the Liability Issues For the sake of clarity and congruence with the form of argument presented to us, we will separate our analysis along the lines suggested by the parties' arguments.

First we will examine the sufficiency of plaintiffs' offer of proof in light of DEA's attack on the methodology and results of plaintiffs' statistical analyses. Then we will examine the strength of DEA's evidence, and consider DEA's allegations of error. Both lines of inquiry must, however, lead us toward resolution of the ultimate issue: In weighing all the evidence, did the trial court correctly conclude that plaintiffs carried their burden of persuasion as to the existence of illegal discrimination at DEA.²⁰ Also, to the extent DEA's rebuttal raises issues as to the business necessity of its employment practices, we will resolve these issues in accordance with *Griggs* and its progeny.

1. The sufficiency of plaintiffs' initial case. A "general principle" of disparate treatment adjudication requires the plaintiff to "carry the initial burden of offering evidence adequate to create an inference that an employment decision was based on a discriminatory criterion illegal under the Act." *Teamsters*, supra, 431 U.S. at 358, 97 S.Ct. at 1866.

Because "[t]he facts necessarily will vary in Title VII cases," *McDonnell Douglas Corp.*, supra, 411 U.S. at 802 n. 13, 93 S.Ct. at 1824 n. 13, a specific test for the sufficiency of a plaintiff's initial proof is not possible. *Teamsters*, supra, 431 U.S. at 358, 97 S.Ct. at 1866. Rather, a plaintiff's initial proof must be measured against the more generalized functional standard that the Supreme Court has elaborated in *Teamsters*, supra, 431 U.S. at 358, 97 S.Ct. at 1866; *Furnco Construction Corp. v. Waters*, 438 U.S. 567, 577, 98 S.Ct.

2943, 2949, 57 L.Ed.2d 957 (1978), and *Burdine*, supra, 450 U.S. at 253-254, 101 S.Ct. at 1093-1094. These cases hold that a sufficient prima facie case is made out when the plaintiff shows a disparity in the relative position or treatment of the minority group and has eliminated "the most common nondiscriminatory reasons" for the observed disparity. *Burdine*, supra, 450 U.S. at 253-254, 101 S.Ct. at 1093-1094; accord *Furnco*, supra, 438 U.S. at 579-580, 98 S.Ct. at 2951 (A prima facie case "is simply proof of actions taken by the employer from which we infer discriminatory animus because experience has proved that in the absence of any other explanation it is more likely than not that those actions were bottomed on impermissible considerations").

The present case typifies class actions alleging a pattern or practice of discrimination in that the plaintiffs' argument is largely bottomed on statistical evidence comparing the percentage

and distribution of minorities in the employer's workforce to the percentage of minorities in the labor pool from which the employer is able to draw.

To be legally sufficient these statistics must show a disparity of treatment, eliminate the most common nondiscriminatory explanations of the disparity, and thus permit the inference that, absent other explanation, the disparity more likely than not resulted from illegal discrimination. *Teamsters*, supra, 431 U.S. at 368, 97 S.Ct. at 1871. A pattern or practice case challenges a host of employment decisions over time; in effect, it challenges an employment system.

The most common nondiscriminatory explanation for a systemic disparity in treatment is a lack of qualifications among the minority group members. A plaintiff's statistical evidence must therefore focus on eliminating this nondiscriminatory explanation by showing disparities in treatment between individuals with comparable qualifications for the positions at issue.

Hazelwood School District, supra, 433 U.S. at 308 n. 13, 97 S.Ct. at 2742 n. 13; *DeMedina v. Reinhardt*, 686 F.2d 997, 1007 (D.C.Cir.1982) (quoting *D. Baldus & J. Cole*, supra, at 120). Once the plaintiffs' analysis has focused on the proper groups for comparison, it must yield results that meet generally accepted standards of statistical significance.

In other words, both the methodology and the explanatory power of the statistical analysis must be sufficient to permit an inference of discrimination. a. Methodology: minimum objective qualifications. To ensure that a plaintiff's methodology has eliminated the common nondiscriminatory explanation of a lack of qualifications, this circuit has developed a requirement that statistical evidence of disparities account for the minimum objective qualifications for the positions at issue.

DeMedina, supra, 686 F.2d at 1003; *Valentino*, supra, 674 F.2d at 71; *Davis v. Califano*, supra, 613 F.2d at 964. This requirement greatly aids evaluation of regression analyses such as those used here. Regressions seek to prove race discrimination by testing possible alternative explanations for an observed disparity between blacks and whites, and typically these alternative explanations will be particular employee traits such as prior experience or education.

The minimum objective qualification approach should not, however, be read as a hard and fast rule; tests for the sufficiency of a Title VII prima facie case must not be applied in a "rigid, mechanistic, or ritualistic" way. *Furnco*, supra, 438 U.S. at 577, 98 S.Ct. at 2949.

The minimum objective qualification approach is not a quick litmus test, but an analytic method to ensure that a plaintiff's statistics measure disparities among comparably qualified workers, rather than disparities in qualifications.

The ultimate test of sufficiency must remain that of *Burdine*, *Teamsters*, and *Furnco*: did the plaintiffs offer evidence "adequate to create an inference that * * * employment decisions] * *

[were] based on a discriminatory criterion illegal under the Act.” *Teamsters*, supra, 431 U.S. at 358, 97 S.Ct. at 1866. *Accord Burdine*, supra, 450 U.S. at 253-254, 101 S.Ct. at 1093-1094; *Furnco*, supra, 438 U.S. at 577, 98 S.Ct. at 2949; *Valentino*, supra, 674 F.2d at 74 (statement of Wald, J. on denial of rehearing) (“In each case, the critical question is whether there is a reasonable basis for inferring disparate treatment.”).

In the present case DEA has challenged plaintiffs’ salary regression analyses on the ground that they fail to account for a minimum objective qualification: specialized prior experience in criminal investigations. The burden of DEA’s argument is that the failure to include this factor skewed all of plaintiffs’ studies because the lower salaries and less rapid promotions of black agents can in large measure be traced to the fact that black agents lack prior criminal investigative experience and therefore enter DEA at a lower grade level.

This court must determine whether the failure of plaintiffs’ analyses to account specifically for this factor precludes an inference of discrimination under the functional test of *Burdine*, *Teamsters*, and *Furnco*.

Although we review the trial court’s findings of fact on the clearly erroneous standard, *Albemarle Paper Co.*, supra, 422 U.S. at 424, 95 S.Ct. at 2374, the issue whether a Title VII plaintiff has included necessary variables in statistical proof “trigger[s] a more careful examination * * *.” *Trout v. Lehman*, 702 F.2d 1094, 1101 (D.C.Cir.1983), vacated on other grounds, — U.S. —, 104 S.Ct.

1404, 79 L.Ed.2d 732 (1984). We must therefore delve somewhat deeply into DEA’s initial grade assignment practices. Special agents enter DEA at either the GS-7 or the GS-9 level. The requirements for the two entry levels are set forth in the Civil Service Commission Handbook, x-118, and have been summarized in a stipulation of the parties, Joint Exhibit I, JA 39.

The requirements for GS-7 are three years of general experience and one year of specialized experience. JA 39. The requirements for GS-9 are three years of general experience and two years of specialized experience. *Id.* General experience is defined as: [P]rogressively responsible experience which has required (1) ability to work or deal effectively with individuals or groups of persons; (2) skill in collecting and assembling pertinent facts; (3) ability to prepare clear and concise reports; and (4) ability and willingness to accept responsibility.

Id. Specialized experience is defined as: [P]rogressively responsible investigative experience which demonstrates (1) initiative, ingenuity, resourcefulness, and judgment required to collect, assemble and develop facts and other pertinent data; (2) ability to think logically and objectively, to analyze and evaluate facts, evidence, and related information, and arrive at sound conclusions; (3) skill in written and oral reports and presentation of investigative findings in a clear and concise

manner; and (4) tact, discretion, and capacity for obtaining the cooperation and confidence of others.

Id. at 40. In addition, special agents at both GS-7 and GS-9 are criminal investigators, JA 41, and one year of their prior specialized experience must be in criminal investigative work or other comparable work. JA 40. Extrapolating, we see, first, that every special agent hired, whether at GS-7 or GS-9, must have at least one year of prior specialized experience in criminal investigative work, and, second, that the only difference between those hired at GS-7 and those hired at GS-9 is one additional year of specialized experience as defined above.

According to the stipulation, this additional year need not be in criminal investigations. These facts severely undermine DEA's argument. The claim that plaintiffs' statistics have wholly failed to account for prior experience in criminal investigations is inaccurate. Plaintiffs studied only those whom DEA had already hired. Every one of them must have met the basic Civil Service requirement of one year of prior criminal investigative experience to have been hired even at the GS-7 level.

Thus DEA's claim that plaintiffs' studies "took no account of basic experiential requirements," brief for appellants at 60, is incorrect according to the facts to which DEA stipulated. Plaintiffs' studies did not specifically account for criminal investigative experience over and above this one year that all special agents possess. But— again according to the stipulated facts— criminal investigative experience above the one year minimum is not a requirement for entry at GS-9 instead of GS-7.

Rather, the additional requirement for entry at GS-9 is a second year of "specialized experience" as defined in the Civil Service Commission Handbook. Plaintiffs' failure explicitly to account for additional years of prior criminal investigative experience therefore cannot be viewed as an omission of a minimum objective qualification.

The only possible omission of a minimum objective qualification in this case would be plaintiffs' failure to account specifically for *1276the requirement of an additional year of "specialized experience," as defined in the Civil Service Commission Handbook.

For three reasons, we hold that the District Court's approval of plaintiffs' decision to exclude this variable from their analyses was not erroneous. First, the operative Civil Service definition of "specialized experience" is highly subjective. It measures such intangibles as "ingenuity," "resourcefulness," "ability to arrive at sound conclusions," "tact," and "discretion." JA 40.

The law is clear that a plaintiff's proof must account for objective qualifications; exclusion of subjective requirements, such as those encompassed in the definition of "specialized experience," is entirely proper. See *Davis v. Califano*, *supra*, 613 F.2d at 964.

The reason for exclusion is equally clear. Such subjective criteria may well serve as a veil of seeming legitimacy behind which illegal discrimination is operating. If so, measurement of the relation of such a factor to an observed disparity would simply amount to a measure of the amount of discrimination operating through application of the factor. See *Vuyanich I*, supra, 505 F.Supp. at 277; *James v. Stockham Valve & Fitting Co.*, 559 F.2d 310, 331-333 (5th Cir.1977); Finklestein, *The Judicial Reception of Multiple Regression Studies in Race and Sex Discrimination Cases*, 80 Colum.L.Rev.

737, 738-742 (1980). Cf. *Valentino*, supra, 674 F.2d at 73 n. 30 (failure to include (GS) grade level as a variable in regression analysis is proper; “absent clear, affirmative evidence that promotions were made in accordance with neutral, objective standards consistently applied, there is no assurance that level or rank is an appropriate explanatory variable untainted by discrimination”).

Second, plaintiffs were not realistically able to account for the application of so amorphous a criterion as the Civil Service definition of “specialized experience.” This circuit has recognized that “[t]he appropriate degree of refinement of the plaintiffs’ statistical analysis * * * may depend on the quality and control of the available data.” *Trout v. Lehman*, supra, 702 F.2d at 1101.

Plaintiffs here relied on the objective evidence available to them — the Justice Department’s JUNIPER tapes — to construct their analytical models. Based on this and other evidence reasonably available to them, they could not possibly have quantified the applicable Civil Service requirement of “specialized experience” in a manner that would have made the requirement amenable to statistical analysis.

Perhaps DEA has distilled objective proxies for “specialized experience” — such as prior police experience — that might have been quantifiable, but the record is devoid of any evidence that DEA has in fact done so. Both the policies underlying Title VII and general principles of evidence suggest that the burden of production of such evidence must rest with the defendant.

See *Trout v. Hidalgo*, 517 F.Supp. 873, 883 & n. 33 (D.D.C.1981) (“[o]ne clear purpose of discrimination law is to force employers to bring their employment processes into the open”), aff’d, 702 F.2d 1094 (D.C.Cir.1983), vacated on other grounds, — U.S. —, 104 S.Ct. 1404, 79 L.Ed.2d 732 (1984); *EEOC v. Radiator Specialty Co.*, 610 F.2d 178, 185 n. 8 (4th Cir.1979) (Title VII case following “principle of allocation of proof to the party with the most ready access to the relevant information”); *DeMedina*, supra, 686 F.2d at 1008, 1009 & n. 7.

Third, even if we accept *arguendo* that a second year of specialized experience — or, for that matter, of criminal investigative experience — is a minimum objective qualification, DEA’s objections would still fall short in a crucial respect. A strong argument exists that plaintiffs’ regressions have implicitly accounted for this variable. Apart from the unsubstantiated

declamations of DEA's appellate attorneys, nothing in the record so much as hints that black special agents are less likely than white special agents to possess this qualification.

The labor pool that plaintiffs' experts studied comprised only those whom DEA had already hired. All of these individuals had at least one year of prior criminal investigative experience. There is simply no reason to assume that the blacks in such a *1277 group of trained, experienced law enforcement officials are less likely than the whites in the same group to have had a second year of "specialized experience" or prior criminal investigative experience.

Nor has DEA "articulated * * * [a] basis for the assumption that such skills are in fact unevenly distributed * * *." DeMedina, *supra*, 686 F.2d at 1008. In an analogous situation the court in DeMedina established a "rebuttable presumption of an equal distribution of the relevant * * * skills." *Id.* (emphasis in original). Such a presumption is equally appropriate here.

This high degree of homogeneity of qualifications among those in the labor pool distinguishes the present case from Valentino, *supra*, where the court did not employ a presumption of equal qualifications. In Valentino the court found that "[i]n the setting [of the case] it would be irrational to assume 'equal qualifications' to fill engineering or secretarial vacancies among persons educated the same number of years and employed by the government for the same length of time." 674 F.2d at 71 (footnotes omitted).

In other words, the heterogeneity of the labor pool that plaintiff defined precluded any presumption of equal qualifications. In the present setting, by contrast, it would be irrational to assume unequal qualifications. Since DEA has presented no admissible evidence that black agents are more likely than white agents to lack a second year of requisite experience, plaintiffs' failure to account for this variable does not dilute the force of their statistical analysis; in the language of the statistician, absent any reason to conclude that the omitted factor correlates with race, the omission of the variable will not affect the validity of the race coefficient in plaintiffs' regression analysis.

See D. Baldus & J. Cole, *supra*, at 273; Vuyanich I, *supra*, 505 F.Supp. at 274. Though any one of the above reasons would have justified plaintiffs' decision to exclude "specialized experience" as a variable, we note the multiplicity of proper objections to use of this criterion in order to highlight the weakness of this aspect of DEA's challenge.

In sum, plaintiffs' statistical proof cannot be faulted for any failure to focus on a population that "closely approximates the characteristics" of those eligible for the positions at issue. DeMedina, *supra*, 686 F.2d at 1007. By studying only those whom DEA had already hired, plaintiffs' experts ensured in this case that the group analyzed would possess a relatively similar composite of skills and experience.

Thus, on the methodological level, the District Court correctly concluded that plaintiffs' evidence meets the functional test of *Teamsters*, *Furnco*, and *Burdine*. b. Explanatory power. DEA also challenges the explanatory power of plaintiffs' statistical evidence.

As a threshold matter DEA argues that because the trial court did not credit any of plaintiffs' specific anecdotal accounts of discrimination, see Part I-C & n. 10 *supra*, plaintiffs could not make out a *prima facie* case unless their statistics showed "gross disparities" of treatment. See *Hazelwood School District*, *supra*, 433 U.S. at 307-308, 97 S.Ct. at 2742.

We must therefore decide at the outset whether plaintiffs' lack of anecdotal evidence triggers a requirement that plaintiffs show gross disparities of treatment. Beyond this threshold issue DEA argues that plaintiffs' statistics do not show sufficient actionable post-1972 discrimination at sufficient levels of statistical significance to support an inference of discrimination.

Thus we must also decide whether the District Court properly found that plaintiffs had made a sufficient showing of actionable discrimination, both in terms of the magnitude of actionable disparities and in terms of the level of statistical significance. i. The effect of a lack of anecdotal evidence. Anecdotal testimony recounting personal experiences of discrimination plays an important role in Title VII litigation. "Such testimony may '[bring] the cold numbers convincingly to life.'" *Valentino*, *supra*, 674 F.2d at 68 (quoting *Teamsters*, *supra*, 431 U.S. at 338-339, 97 S.Ct. at 1856).

The presence of anecdotal testimony bolsters a plaintiff's case, and *1278 may become crucial when "the statistical evidence does not adequately account for 'the diverse and specialized qualifications necessary for [the positions in question].'" *Valentino*, *supra*, 674 F.2d at 69 (quoting *Wilkins v. University of Houston*, 654 F.2d 388, 410 (5th Cir.1981)). DEA urges that the converse is equally true; when anecdotal evidence is lacking, statistical evidence must show, as a matter of law, not merely disparities in treatment, but "gross disparities." This argument derives from one sentence in *Hazelwood School District*, *supra*. "Where gross statistical disparities can be shown, they alone may in a proper case constitute *prima facie* proof of a pattern or practice of discrimination." 433 U.S. at 307-308, 97 S.Ct. at 2742.

Drawing from this sentence a fixed rule that only "gross" disparities suffice absent anecdotal testimony, DEA reads the words for all they are worth, and more. Neither *Hazelwood* nor any other Supreme Court precedent supports a rule that statistical proof of the kind presented in this case is insufficient absent anecdotal evidence.

To make a *prima facie* case plaintiffs must meet the functional standard of *Teamsters*, *Burdine*, and *Furnco*; they must present evidence sufficient to support an inference of discrimination. All evidence that a plaintiff presents can contribute to this inference, and should therefore be considered as cumulative. *EEOC v. American National Bank*, 652 F.2d 1176, 1188 (4th Cir.1981)

(reliance on “cumulation of evidence including statistics, patterns, practices, general policies or specific instances of discrimination”), cert. denied, 459 U.S. 923, 103 S.Ct.

235, 74 L.Ed.2d 186 (1982). Though anecdotal evidence might bolster a plaintiff’s case or reduce the need for strong statistical proof, see Valentino, *supra*, 674 F.2d at 69, neither the presence nor the absence of specific anecdotal accounts alters the standard that a plaintiff’s initial case must meet. Read in context the language in Hazel-wood on which DEA places so much weight will not bear the meaning DEA seeks to impose on it.

In the immediately preceding passage the Court, quoting from Teamsters, stated: “Evidence of longlasting and gross disparity between the composition of a workforce and that of the general population may thus be significant * * 433 U.S. at 307, 97 S.Ct. at 2741 (quoting Teamsters, *supra*, 431 U.S. at 340 n. 20, 97 S.Ct. at 1856 n. 20) (emphasis added).

The language to which DEA points refers back to this preceding sentence. Thus, if the Court intended any specific rule by the “gross disparity” language, the Court meant that rule to apply when a plaintiff relies on general population/workforce comparisons and lacks anecdotal evidence. Such a requirement might be appropriate because a population/workforce comparison will usually yield only rough evidence of discrimination; the method is not finely tuned to the population of those eligible for and interested in the positions at issue.

Absent anecdotal evidence, an inference of discrimination is less secure when such statistics show only slight disparities. When, however, statistical evidence is more finely tuned to the relevant labor pool, gross disparities need not be shown to permit an inference of discrimination. See B. Schlet & P. Grossman, *Employment Discrimination Law* 1371 (1983). Statistics, of course, “are not irrefutable,” Teamsters, *supra*, 431 U.S. at 340, 97 S.Ct. at 1856, but when a plaintiff’s statistical methodology focuses on the appropriate labor pool and generates evidence of discrimination at a statistically significant level, no sound policy reason exists for subjecting the plaintiff to the additional requirement of either providing anecdotal evidence or showing gross disparities.

Such a rule would reflect little more than a superstitious hostility to statistical proof, a preference for the intuitionistic and individualistic over the scientific and systemic. It is not difficult to understand that discrimination might exist even when affected individuals can point to no specific instances of an employer’s discriminatory conduct.

The days of Bull Connor are largely past; discrimination now works more subtly. Yet its effects are no less pernicious. “ ‘In *1279many cases the only available avenue of proof is the use of racial statistics to uncover clandestine and covert discrimination * * ’ Teamsters, *supra*, 431 U.S. at 340 n. 20, 97 S.Ct. at 1856 n. 20 (quoting *United States v. Ironworkers Local 86*, 443 F.2d 544, 551 (9th Cir.1971)).

Statistical proof, crucial to advancing the purposes of Title VII, must not be encumbered with requirements such as those DEA urges here. In the present case plaintiffs rely on statistical evidence that has been demonstrated to be fine-tuned to the relevant labor pool. See Part II-B-I-a supra. This case is, in other words, a far cry from *Hazelwood*. If plaintiffs' statistical proof standing alone permits an inference that DEA's employment decisions were more likely than not based on race, then this proof suffices irrespective of the presence of supporting anecdotal evidence.

Moreover, were we to require anecdotal evidence plaintiffs would still meet their prima facie burden. Although DEA adequately rebutted most testimony regarding specific instances of discrimination, 508 F.Supp. at 690, 713, the trial court credited much of plaintiffs' nonstatistical evidence, including the testimony of several agents about disparate treatment in disciplinary procedures and supervisory evaluations, and about black agents' general perceptions that DEA was a discriminatory environment.

Id. at 708-711. ii. The sufficiency of plaintiffs' showing of disparities. Although plaintiffs need not show enhanced or "gross" disparities, they must present evidence that permits an inference of discrimination under the test of *Burdine*, *Teamsters*, and *Furnco*. DEA raises two issues with respect to the sufficiency of plaintiffs' showing under this test.

The first issue involves the magnitude of actionable discrimination shown in plaintiffs' statistics; DEA argues that the District Court improperly relied on non-actionable pre-1972 discrimination reflected in the statistics in finding a prima facie case of discrimination.

The second issue involves the statistical significance of the disparities in plaintiffs' regressions. The magnitude of actionable disparity. DEA has made a very cursory argument that appellees' statistical showing is flawed because the statistics in part reflect pre-1972 discrimination.

The brevity of DEA's analysis offers little clue as to the import of this alleged "flaw." We do not understand DEA to be contending that the District Court based its finding of discrimination on the erroneous legal premise that pre-1972 discrimination was independently actionable, for the court explicitly indicated that "Title VII is applicable to DEA only for post-1972 discrimination." Findings 117d, 508 F.Supp. at 696.

Nor do we understand DEA to be contending that statistical evidence reflecting both pre-1972 discrimination and post-1972 discrimination cannot, as a matter of law, suffice to support an inference of post-1972 discrimination. See *Valentino*, supra, 674 F.2d at 71 n. 26 ("[F]ailure to factor out time-barred discrimination [does not] discredit the analyses. Statistics tuned to the proper time period are more probative than statistics not so tuned, but categorical rejection of the latter is not warranted[.]"); *Movement for Opportunity and Equality v. General Motors Corp.*, 622 F.2d 1235, 1258 (7th Cir.1980).

Finally, DEA has not even suggested that the District Court did not base its liability determination independently on evidence that did not reflect pre-1972 discrimination. Despite the shortcomings of DEA's analysis, we have considered with care the possibility that erroneous consideration of pre-1972 discrimination may have infected the lower court's liability determination.

This question commands our attention in light of the Supreme Court's recent decision in another Title VII case, *Lehman v. Trout*, — U.S. —, 104 S.Ct. 1404, 79 L.Ed.2d 732 (1984). In *Trout* the Court vacated this circuit's affirmance of a District Court finding of discrimination based largely on evidence reflecting both pre- and post-1972 discrimination.

To understand the relevance of the Supreme Court's holding to *1280the present case we must trace the course of the court decisions in *Trout*. Though the plaintiffs' statistics in *Trout* reflected both pre- and post-1972 discrimination, the District Court found the statistics sufficient to support an inference of post-1972 disparate treatment.

In dismissing the defendants' objection to the use of the pre-1972 data the court indicated, *inter alia*, that "[i]t is likely that such discrimination before 1972, even if coupled with neutral employment practices since then, produced actionable continuing discriminatory effects after 1972 * * *Trout v. Hidalgo*, *supra*, 517 F.Supp. at 880.

On appeal this court held that the District Court's "continuing effects" theory was "flatly inconsistent" with the Supreme Court's earlier pronouncements. *Trout v. Lehman*, *supra*, 702 F.2d at 1104. However, because the record indicated to us that the District Court had found, in the alternative, that post-1972 statistics were sufficient to support an inference of disparate treatment, see *Trout v. Hidalgo*, *supra*, 517 F.Supp. at 879 n. 14, we affirmed the court's liability determination.

Although the Supreme Court found no fault with our understanding of Title VII principles in *Trout*, the Court vacated and remanded to this court with instructions to remand "to the District Court for findings of fact, based on new evidence if necessary, on the question what evidentiary value respondents' and petitioners' statistical evidence has in light of the Court of Appeals' conclusions of law concerning employment decisions that are not actionable in this case.

See *Pullman-Standard v. Swint*, 456 U.S. 273, 292, 102 S.Ct. 1781, 1792, 72 L.Ed. 66 (1982)." *Lehman v. Trout*, *supra*, — U.S. at —, 104 S.Ct. at 1404. Though the Court's opinion was exceedingly brief and its citation to *Pullman-Standard* was unexplained, this citation implies that the Court was acting out of an abundance of caution to protect the sanctity of the trial court's factfinding function.

See *Pullman-Standard v. Swint*, *supra*, 456 U.S. at 292, 102 S.Ct. at 1792. We therefore infer that, in *Trout*, the Court was unsure whether the trial court would have found discrimination absent its erroneous understanding as to the legal significance of "continuing effects." Hence the remand. At

least in the context of this case, the message to be gleaned from *Trout* is that we must proceed with caution if the trial court has made an error of law in finding discrimination, lest we invade the factfinding prerogative of the District Court.

If the District Court has found a *prima facie* case of discrimination “because of an erroneous view of the law,” *Pullman-Standard*, *supra*, 456 U.S. at 292, 102 S.Ct. at 1792 (emphasis added), this court may not take upon itself the task of deciding in the first instance whether the facts nonetheless support an inference of discrimination under a correct understanding of the law.

In this case we have no trouble concluding that the teachings of *Pullman-Standard* and *Trout* do not warrant reversal of the District Court on the ground that the court used some statistics that might reflect pre-1972 discrimination. DEA has not argued on appeal that the use of data reflecting pre-1972 discrimination affected any aspect of the District Court’s liability determination other than the findings of salary disparities.²¹ Hence, even if DEA’s argument were well-placed, most of the District Court’s liability determination would remain intact.

Specifically, DEA has not suggested that this argument has any application to the District Court’s independent findings that plaintiffs established a *prima facie* case of discrimination in grade-at-entry, work assignments, supervisory evaluations, discipline, and promotions. See 508 F.Supp. at 712-715. And even with respect to the plaintiffs’ *prima facie* proof of salary disparities further factfinding by the District Court is unnecessary.

It is far from clear whether the court erroneously reasoned that any disparities resulting from the continuing effects of pre-1972 discrimination were actionable.²² However, assuming *arguendo* that such a legal error was made, it is clear that the trial court did not make its finding of a *prima facie* case of salary discrimination “because of” any such erroneous view.

Two considerations compel this conclusion. First, as we have explained, the court properly could consider evidence that may have reflected pre-1972 discrimination in determining that a *prima facie* case was established.

In considering plaintiffs’ first regression, which included data on employees hired before 1972, the court acknowledged that it was theoretically possible “that pre-1972 discrimination might affect” the regression. Findings ¶ 7h, 508 F.Supp. at 697.

The court, however, expressly found that this effect was unproven²³ and that it might cause the regression to underestimate the extent of post-1972 discrimination.²⁴ The trial court concluded that DEA’s failure to test this hypothesis empirically left DEA’s criticism “speculative and incapable of rebutting Plaintiffs’ statistical showing.”²⁵ Moreover, based on the second regression (analyzing agents hired after 1972) the court found that “post 1972 discrimination largely contributed” to the statistical results in the first regression.

Findings ¶ 7i, 508 F.Supp. at 697. Given these factual findings the lower court certainly could, and did in fact, permissibly conclude that the first regression established a prima facie case of post-1972 discrimination, and these findings plainly indicate that the District Court did not consider a continuing effects theory to be essential to its finding that a prima facie case of post-1972 discrimination was established.

Second, the District Court's finding that plaintiffs established a prima facie case of discrimination in salaries was independently based on statistics pertaining only to employees hired after 1972. The court reviewed these statistics and found that the salary disparities were "statistically significant at or below the .05 level for every year since 1975." Findings ¶ 17d, 508 F.Supp. at 696.

It also found that these statistics "tend to downplay the effects of discrimination at DEA because almost half the agents in the 1975 analyses were hired in 1974, and the most serious promotional problems are encountered in the middle and upper grades." Findings ¶ 7e, 508 F.Supp. at 696.

The court concluded that these statistics evidenced gross salary disparities, and that because of these disparities plaintiffs had established a prima facie case of salary discrimination.²⁶ In light of the foregoing, we conclude that consideration of some data that might hypothetically reflect continuing effects of pre-1972 discrimination does not dictate reversal of the District Court's liability determination.

The District Court's opinion clearly indicates that the court based this determination independently on evidence that did not reflect such discrimination. DEA has not argued otherwise. In these circumstances, due regard for the trial court's role as finder of fact requires us to respect the independent bases on which the District Court grounded its liability determination.

Accordingly, we conclude that the court's findings are not "infirm because of an erroneous view of the law." *Pullman-Standard*, supra, 456 U.S. at 292, 102 S.Ct. at 1792. The statistical significance of the disparities shown. DEA also argues that plaintiffs' salary regressions did not achieve a level of statistical significance sufficient to permit an inference of discrimination.²⁷ The notion of statistical significance addresses directly the question whether an inference of discrimination is warranted.

Statistical significance is a measure of the probability that the outcome of a statistical analysis would have occurred by chance: The lower the probability that the observed outcome could have occurred by chance, the stronger the inference of discrimination that can be drawn from the data.

For example, a finding that a study is significant at the .10 level indicates that the odds are one in ten that the result could have occurred by chance, and a finding of significance at the .05 level indicates that the odds are one in 20 that the result could have occurred by chance.

Although the law has not set any precise level at which statistical significance can be said to be sufficient to permit an inference of discrimination, social scientists usually accept a study that achieves statistical significance at the .05 level. D. Baldus & J. Cole, *supra*, at 297; cf. F. Mosteller, R. Rourke & G. Thomas, *Probability With Statistical Applications* 310 (2d ed.

1970). In other words, a study is found significant — and the hypothesis of chance is rejected— when there exists at most a one in 20 possibility that the observed result could have occurred by chance. Several courts have adopted the .05 level as sufficient to support an inference of discrimination in Title VII cases. *Vuyanich I*, *supra*, 505 F.Supp. at 271; *Cooper v. University of Texas*, 482 F.Supp. 187, 194 (N.D.Tex.1979).

The Justice Department itself has adopted the .05 standard as sufficient in this area. See Uniform Guidelines on Employee Selection § 14(B)(5), 43 Fed.Reg. 38290, 38301 (1978); 28 C.F.R. § 50.14 (1983).²⁸ Without deciding whether a plaintiff's initial case might suffice even without meeting the .05 level of significance,²⁹ we find that the plaintiffs in this case have presented analyses that meet the generally accepted .05 level of statistical significance.

All findings of plaintiffs' salary regressions meet or exceed the .05 level, except for the showing of discrimination in 1975 against those hired after 1972. As noted above, however, this 1975 finding is skewed by a unique factual circumstance. See Part I-B-I *supra*.

For every other year the probability that the observed result occurred by chance was less than one in 20; for most years the probability was less than one in a thousand. *Id.* Similarly, plaintiffs' statistical analyses of grade at entry, evaluations, and discipline all achieved results significant at or above the .05 level. *Id.* These levels of significance are certainly sufficient to support an inference of discrimination.

Plaintiffs' evidence regarding promotions stands on a somewhat different footing. Disparity was demonstrated at a statistically significant level in promotions from GS-11 to GS-12. This evidence suffices to support the requisite inference of discrimination at the GS-11 to GS-12 level. Statistical evidence purporting to show discrimination in promotions above GS-12 did not achieve acceptable levels of statistical significance.

Thus, as the trial court correctly found, 508 F.Supp. at 714, statistics alone will not permit an inference of discrimination in promotions to positions above the GS-12 level. Nonetheless, we hold that the District Court correctly found that enough other probative evidence exists to permit an inference of discrimination in promotions above the GS-12 level.

In the first place, plaintiffs' evidence regarding promotions above GS-12 was not dispositive either way on the issue of discrimination. Since so few promotions occurred at the higher levels of DEA during the relevant time frame, plaintiffs had to rely on a sample too small to generate statistically significant evidence of discrimination. 508 F.Supp. at 701-702, 714.

This lack of statistical proof does not, however, prove that no discrimination took place. And other probative evidence does suggest discrimination. Plaintiffs made a prima facie showing of discrimination in initial grade assignments, work assignments, supervisory evaluations, and discipline. These are precisely the factors that determine a special agent's prospects for discretionary promotions at the higher levels of DEA.

See Part I-A supra. With a statistical sample large enough to permit probative results, plaintiffs demonstrated that black agents indeed fared less well in promotions from GS-11 to GS-12, the likely result of discrimination in evaluations, initial grade assignments, work assignments, and discipline.

After finding discrimination in the factors that bear most strongly on promotions, and in promotions at the immediately preceding step, the trial court could and did appropriately draw an inference of discrimination in promotions above GS-12.

Although indirect, the evidence permits an inference that discrimination was more likely than not. 2. The insufficiency of DEA's rebuttal case. DEA also claims that the trial court erred in its evaluation of DEA's case on rebuttal. DEA first points to two errors of law that purportedly skewed the trial court's evaluation of DEA's rebuttal case: (1) the trial court erroneously placed on DEA a burden of persuasion instead of a burden of production, and (2) the trial court erroneously refused to admit into evidence at the remedial stage of the proceeding DEA's alternative regression analyses.

On top of these legal errors, DEA claims, the trial court improperly devalued DEA's rebuttal evidence. DEA contends that in light of these errors and the vulnerability of plaintiffs' initial case, the trial court erred in finding discrimination. a. The trial court's allocation of burdens.

In a Title VII case alleging disparate treatment the "ultimate burden of persuading the trier of fact that the defendant intentionally discriminated against the plaintiff remains at all times with the plaintiff." *Burdine*, supra, 450 U.S. at 253, 101 S.Ct. at 1093. See Part II-A supra. DEA argues that the trial court violated this precept in analyzing the disparate treatment claim in this case.

The controversy turns on the interpretation given the following paragraph in the trial court's opinion: The burden of proof in Title VII litigation always remains on the Plaintiff. After the establishment of a prima facie case, however, the burden of persuasion shifts to the employer. This burden requires the Defendant to "articulate some legitimate, nondiscriminatory reason." * * * If the Defendant meets the rebuttal burden, the Plaintiff has an opportunity to show that the apparently legitimate reason is, in fact, a pretext. * * * 508 F.Supp. at 711 (citations omitted).

Read literally, one sentence in this passage would seem to indicate that the trial judge erred; he states that a burden of persuasion shifts to the defendant. But read as a whole, the passage indicates that the judge allocated burdens correctly. He states explicitly that the burden of proof

always remains with the plaintiff, and the burden that he labels “persuasion” he defines as one of “articulation.”³⁰ A clarification that the trial court issued should remove any doubt on this score.

The Supreme Court decided *Burdine* one month after the trial court issued its opinion in this case. Shortly after the Court issued *Burdine* plaintiffs in this case requested a clarification of the trial court’s conclusions of law with regard to the applicable burdens of proof.

The court responded that it had allocated burdens in conformity with *Burdine*. See Order of April 30, 1981, JA 99. This clarification is sufficient reason to distinguish the present case from *Freeman v. Lewis*, 675 F.2d 398 (D.C.Cir.1982).

In *Freeman* a panel of this circuit held that language almost identical to that of the trial court here was an improper allocation of burdens under *Burdine*. We question whether that panel gave the trial court’s language a wholly fair reading, but we decide that the later clarification in the present controversy suffices to demonstrate that the trial court’s language here, though perhaps initially ambiguous, did comport with *Burdine*’s allocation of burdens. b. The decision not to admit DEA’s alternative regression analysis.

In deciding the liability issues the trial court admonished DEA for failing to substantiate its attack on plaintiffs’ statistics by reworking their analysis. 508 F.Supp. at 712. In response DEA sought to introduce at the remedial phase of the trial an alternative regression analysis purporting to demonstrate that race did not explain *1285salary differentials at DEA.

Refusing to reopen the question of liability, the trial court rejected this proffer of evidence. See Part I-C-2 & n. 11 *supra*. DEA argues on appeal as though this rejected evidence were part of the record, see, e.g., brief for appellants at 69-71, but it is not. Nonetheless we must consider whether the trial court properly excluded the evidence.³¹ In a bifurcated trial the judgment on liability remains interlocutory, and thus subject to the trial court’s modification, until the remedial order issues.

Marconi Wireless Telegraph Co. v. United States, 320 U.S. 1, 47-48, 63 S.Ct. 1393, 1414-1415, 87 L.Ed. 1731 (1943). This principle applies to bifurcated Title VII actions. *Laffey v. Northwest Airlines, Inc.*, 642 F.2d 578, 584-585 (D.C.Cir.1980).

The decision whether to reopen a liability determination is, however, discretionary. On appeal “the critical question is whether there was good cause to do so. Absent a convincing showing that the District Court’s answer to this question constituted an abuse of discretion, we will not second-guess its decision.” *Trout v. Lehman*, *supra*, 702 F.2d at 1106. *Trout v. Lehman* dealt with the precise issue before us in this case.

We found that a trial court had not abused its discretion in refusing a defendant’s proffer of rebuttal statistics at the remedial phase of the Title VII trial. Two factors underlay the decision:

“the evidence * * * could have been discovered and presented at trial by a duly diligent defendant,” and the defendants “offered no good reason whatsoever to explain why their statistical analyses were not produced at trial.” *Id.* Though the Supreme Court vacated the Trout decision, it did so for reasons wholly unrelated to the question of admissibility of liability evidence at the remedial stage.

In fact the Court’s remand implicitly approved this circuit’s holding that the trial court had not abused its discretion in refusing to admit the evidence; while requiring the District Court to make new factual findings with respect to discrimination, the Supreme Court did not require the District Court to consider the evidence defendant proffered at the remedial stage, or any other new evidence.

Lehman v. Trout, *supra*, — U.S. at –, 104 S.Ct. at 1404. In light of the intrinsic strength of the Trout reasoning on this point, and the Court’s implicit approval of that reasoning, we follow Trout here. Plaintiffs filed the complaint in this action in January 1977 and the case came to trial in April 1979. DEA made use of statistical experts, and did offer extensive statistical evidence at the liability phase.

Without a doubt, DEA had the time and the resources to develop and present its alternative regressions then. And DEA’s arguments at the remedial hearing and on appeal contain not a word of justification for its failure to do so.

In light of this unjustified omission, the trial court certainly did not abuse its discretion in refusing to admit DEA’s alternative regressions. c. The trial court’s evaluation of DEA’s cohort analysis. Though its regressions were rejected at the remedial stage, DEA did properly introduce during the liability phase a cohort analysis to rebut plaintiffs’ showing of disparity.

Cohort analysis is another method to test for race discrimination. Under this approach all employees who start together at the same level are surveyed over the course of an observation period and their comparative progress in salary and promotions is evaluated. DEA’s expert divided the special agents into 15 cohort groups, each group comprising agents who started in the same year and at the same initial grade level.

The analysis revealed discrimination in four of the 15 groups. For purposes of further evaluation, these four groups were broken into subgroups. Discrimination was still present in two of the subgroups. After examining the files of agents in these two subgroups, DEA discovered that three *1286agents had been “misclassified.” Only when these three agents were excluded did traces of discrimination disappear from the results of the analysis.

See Tr. at 1910-1914; Findings 11 8, 508 F.Supp. at 697-698. We would overturn the District Court’s evaluation of this evidence only if we were to find that evaluation clearly erroneous. Though the District Court may have overstated a bit when it labeled cohort analysis “an untried

method of statistical study, unsupported in any published statistical work or judicial decision,” 508 F.Supp. at 698, the court was surely correct to reject this particular cohort analysis.

Courts have viewed cohort analysis in this area with a wary eye, see *Valentino*, supra, 674 F.2d at 72-73 n. 30; *O’Brien v. Sky Chiefs, Inc.*, 670 F.2d 864 (9th Cir.1982); *Trout v. Hidalgo*, supra, 517 F.Supp. at 884-885.

The flaws that these courts have perceived were perceived in the present case by the District Court. See Findings If 8, 508 F.Supp. at 697-698. The court noted that by comparing those who started at the same grade level, the analysis fails to account for possible discrimination in initial grade assignments, an important allegation in this case. More importantly, the court found that DEA’s use of cohort analysis in this case was methodologically flawed.

The division of the workforce into extremely small segments made it unlikely that this cohort study would detect disparities. Instead of repeatedly disaggregating until groups were too small to generate any statistically significant evidence of discrimination, DEA’s expert should have aggregated the significance of the result in each subgroup to derive a test for significance with respect to the class as a whole.

See *D. Baldus & J. Cole*, supra, at 212 & n. 2. In light of this methodological misstep — and the fact that DEA’s analysis tended as much to confirm as to refute the presence of discrimination³² — the District Court properly discounted the probative value of DEA’s rebuttal statistics. 3. Weighing the evidence.

The analytic application of Title VII’s formulaic rules for shifting burdens can come to resemble a furious tennis match. When the volleying is over, however, a Title VII case is like all others: the trier of fact must weigh the plaintiff’s proof and the defendant’s rebuttal and decide whether plaintiffs have met the ultimate burden of persuasion that the law imposes on them.

See *U.S. Postal Service Bd. of Gov. v. Aikens*, 460 U.S. 711, 716, 103 S.Ct. 1478, 1482, 75 L.Ed.2d 403 (1983). We have already evaluated DEA’s challenges to the particulars that went into the District Court’s balance in this case. Since we have found no errors of law or clearly erroneous findings, all that remains is to examine the court’s overall assessment of the evidence.

We review with deference. Only if we find the trial court’s ultimate decision to be clearly erroneous will we overturn it. *Albemarle Paper Co.*, supra, 422 U.S. at 424, 95 S.Ct. at 2374. Plaintiffs brought in a battery of statistics to prove discrimination at DEA. Their analyses tended to show significant salary disparities between comparably qualified white and black special agents, and discrimination in DEA’s initial grade assignments, work assignments, supervisory evaluations, promotions, and imposition of discipline.

In response DEA sought primarily to cast sufficient doubt on the existence of race-related disparities to prevent plaintiffs from carrying their burden of persuasion. To do so DEA argued that plaintiffs were required to show “gross disparities” because they had failed to produce any credited individual anecdotal accounts of discrimination.

We have held that, as a matter of law, plaintiffs were not required to meet this enhanced threshold of “gross disparities.” See Part II-B-1-b-i *supra*. DEA also argued that plaintiffs’ salary regressions had failed to show actionable disparities at levels of statistical significance sufficient to permit an inference of discrimination.

We have held that the District Court properly found that the studies did show actionable disparities at sufficient levels of statistical significance. See Part II-B-1-b-ii *supra*. In any event, this objection went only to plaintiffs’ salary regressions and thus failed to rebut the showings of discrimination in initial grade assignments, work assignments, supervisory evaluations, promotions, and imposition of discipline.

The keystone of DEA’s defense was the argument that plaintiffs had failed to account for the explanatory variable of prior law enforcement experience. In essence DEA has argued that this variable, not race, explains virtually all of the observed disparities between white and black special agents. DEA styled this argument primarily as an attack on the sufficiency of plaintiffs’ *prima facie* case.

In other words, DEA has argued that because plaintiffs failed to account for this factor their initial offer of proof was insufficient to support an inference of discrimination. We have held that plaintiffs’ failure to account explicitly for this variable was not fatal to its *prima facie* case; the trial court properly found that the evidence plaintiffs did present was sufficient, notwithstanding this omission, to support an inference of discrimination under the functional test of *Teamsters*, *Furnco*, and *Burdine*.

See Part II-B-1-a *supra*. Even if this argument is insufficient to invalidate plaintiffs’ *prima facie* case, it might nonetheless serve as a legitimate nondiscriminatory explanation for the observed disparities between white and black agents.

In other words, even if plaintiffs’ omission did not preclude them as a matter of law from making their initial case, DEA’s explanation might serve to preclude the ultimate inference of discrimination against black agents under the disparate treatment theory. Claiming that this factor, not race, explains the disparities, DEA has in effect made such an argument.

To rebut plaintiffs’ disparate treatment claim DEA need not carry the burden of persuasion as to this legitimate nondiscriminatory explanation. See *Burdine*, *supra*, 450 U.S. at 253-254, 101 S.Ct. at 1093-1094. The evidence must, however, cast sufficient doubt on plaintiffs’ case to cause the trier of fact not to draw the ultimate inference of discrimination. See Part IIA-1 *supra*.

The District Court did not find this rebuttal sufficiently strong to preclude the ultimate inference of discrimination. On review we cannot say that the court erred in this assessment. DEA has introduced no admissible evidence that this alleged differential in prior law enforcement experience exists.

As we have noted, there is no reason to assume that black agents in a group with one year of prior criminal investigative experience are more likely than white agents in that group to lack a second year of such experience. See Part II-B-I-a *supra*. Nor has DEA presented any admissible evidence that the purported differential in law enforcement experience explains the observed disparities.

Absent such evidence, we are left, as the trial court noted, with mere speculation and conjecture. See 508 F.Supp. at 712. Of course, “the most effective way to rebut a *prima facie* case is to present more accurate statistics.” *Trout v. Lehman*, *supra*, 702 F.2d at 1102. A defendant is not absolutely required to rework a plaintiffs’ statistics when, as in this case, the omitted variable was allegedly too subjective to admit of quantification.³³ A defendant must, however, make some credible showing that the omission skewed plaintiffs’ statistics.

At a minimum the employer must raise a genuine issue of fact as to the veracity of plaintiffs’ proof, and “[t]o accomplish this, the defendant must clearly set forth, through the introduction of admissible evidence, the reasons for” the observed disparity. *Burdine*, *supra*, 450 U.S. at 254-1288255, 101 S.Ct. at 1094. “Thus the defendant cannot meet its burden merely through * * * argument of counsel.” *Id.* at 255 n. 9, 101 S.Ct. at 1094 n. 9.

Because DEA has introduced no evidence to support its purported nondiscriminatory explanation, this rebuttal fails as a matter of law. On balance, we find no reversible error in the District Court’s overall assessment of the evidence.

The court properly attributed probative weight to plaintiffs’ statistical analyses, and properly rejected the three aspects of DEA’s case on rebuttal — the need for gross disparities, the insufficiency of the statistical studies, and the purported failure to account for prior law enforcement experience.

In light of these findings, the court appropriately held that DEA had engaged in a pattern or practice of discrimination against black special agents, 508 F.Supp. at 712, and properly held that DEA’s initial grade assignments, work assignments, supervisory evaluations, imposition of discipline, and promotion process had disparate impacts on black agents. *Id.* at 712-715.³⁴ We therefore affirm the District Court’s liability determination in its entirety.

4. Disparate impact analysis of DEA’s rebuttal evidence. We note finally that even had DEA succeeded in rebutting plaintiffs’ disparate treatment case by making a credible showing that the differential in prior law enforcement experience explained the observed disparity, DEA would have done no more than create a situation ripe for resolution under the disparate impact theory.

See Part II-A-1-b *supra*. According to DEA's argument, black special agents appear to do less well throughout the range of DEA's employment system because they tend to start lower in that system as a result of their relative lack of more than one year of prior law enforcement experience. This boils down to a claim that DEA's requirement of a second year of law enforcement experience for entry at GS-9 instead of GS-7 has an adverse impact on blacks because they tend to lack that qualification.

Between plaintiffs' and defendants' proof, the trier of fact would have had before it all the elements of a traditional disparate impact claim: plaintiffs had shown a disparity and defendant had pinpointed the facially neutral employment practice causing the disparity.

In this situation the trial court would properly have applied the disparate impact analysis of *Griggs, supra*, and its progeny. Had DEA made a credible showing that the requirement of an additional year of law enforcement experience caused the disparity, DEA would have been required to show the job-relatedness of such a requirement. *Griggs, supra*, 424 U.S. at 432, 91 S.Ct. at 854; *Albemarle Paper Co., supra*, 422 U.S. at 425, 95 S.Ct. at 2375.

DEA has not even attempted any such showing. Thus, even had DEA succeeded in its attempt to articulate a legitimate nondiscriminatory explanation, DEA would still have been found in violation of Title VII under the disparate impact theory. II.

The Remedies Determination Section 706(g) of Title VII empowers a court that has found illegal discrimination to "order such affirmative action as may be appropriate, which may include, but is not limited to, reinstatement or hiring of employees, with or without back pay * * * or any other equitable relief as the court *1289deems appropriate." 42 U.S.C. § 2000e-5(g) (1976).

The Conference Report accompanying amendment of Title VII in 1972 noted: The provisions of this subsection are intended to give the courts wide discretion exercising their equitable powers to fashion the most complete relief possible.

In dealing with the present section 706(g) the courts have stressed that the scope of relief under that section of the Act is intended to make the victims of unlawful discrimination whole, and that the attainment of this objective rests not only upon the elimination of the particular unlawful employment practice complained of, but also requires that the consequences and effects of the unlawful employment practice be, so far as possible, restored to a position where they would have been were it not for the unlawful discrimination.

This broad reading of the need for effective remedies * * * is intended to be preserved in this bill * * *. Section-by-Section Analysis of H.R. 1746, accompanying the Equal Employment Opportunity Act of 1972 — Conference Report, 118 Cong.Rec. 7166, 7168 (1972).

The Supreme Court has also stressed the breadth of this remedial power. See *Albemarle Paper Co.*, supra, 422 U.S. at 421, 95 S.Ct. at 2373; *Franks v. Bowman Transportation Co.*, 424 U.S. 747, 763-764, 96 S.Ct. 1251, 1263-1264, 47 L.Ed.2d 444 (1976).

Having found pervasive discrimination at DEA, the District Court fashioned a tripartite remedial scheme: class-wide backpay for those at GS-11 and above,³⁵ promotion goals and timetables at DEA's upper levels, and class-wide frontpay for those at GS-11 and above. See Mem.Op. and Remedial Order, JA 114; Part I-C-2 supra. DEA raises three challenges to these remedies.

First, the class-wide backpay award impermissibly circumvents the individualized remedial hearings required by *Teamsters*, supra, 431 U.S. at 361-364, 97 S.Ct. at 1867-1869. Second, the backpay award compensates for nonactionable pre-1972 discrimination.

Third, the promotion goals and timetables exceed the court's remedial authority under Section 706(g) and violate the equal protection component of the Fifth Amendment to the Constitution. A. Individualized Hearings DEA objects to the District Court's decision to forego in this case the individualized relief hearings prescribed in *Teamsters*, supra, 431 U.S. at 361, 97 S.Ct. at 1867.

The gravamen of DEA's objection is that class-wide relief may benefit some black agents who were not victims of illegal discrimination. The Court in *Teamsters* stated that when plaintiffs seek relief as "victims of the discriminatory practice, a district court must usually conduct additional proceedings after the liability phase of the trial to determine the scope of individual relief." *Id.* In the wake of *Teamsters* individualized hearings have been common features of Title VII class actions.

See, e.g., *McKenzie v. Sawyer*, 684 F.2d 62, 75 (D.C.Cir.1982). Though *Teamsters* certainly raises a presumption in favor of individualized hearings, the case should not be read as an unyielding limit on a court's equitable power to fashion effective relief for proven discrimination.³⁶ The language of *Teamsters* is not so inflexible; after stating that individual hearings are "usually" required, *Teamsters*, supra, 431 U.S. at 361, 97 S.Ct. at 1867, the Court went on to note that "[i]n determining the specific remedies to be afforded, a district court is 'to fashion such relief as the particular circumstances of a case may require to effect restitution.'" *Id.* at 364, 97 S.Ct. at 1869, quoting *Franks*, supra, 424 U.S. at 764, 96 S.Ct. at 1264.

Later courts have often faced situations in which the *Teamsters* hearing preference had to bend to accommodate Title VII's remedial purposes. Primarily, courts have not required hearings when discrimination has so percolated through an employment system that any attempt to reconstruct individual employment histories would drag the court into "a quagmire of hypothetical judgments." *Thompson v. Boyle*, 499 F.Supp. 1147, 1170 (D.D.C.1979) (quoting *Pettway v. American Cast Iron Pipe Co.*, 494 F.2d 211, 260 (5th Cir.1974), cert. denied, 439 U.S. 1115, 99 S.Ct.

1020, 59 L.Ed.2d 74 (1979)), *aff'd*, 678 F.2d 257 (D.C.Cir.1982); *Hamheed v. Int'l Ass'n of Ironworkers*, 637 F.2d 506, 520 (8th Cir.1980). See also *Stewart v. General Motors Corp.*, 542 F.2d 445, 452-453 (7th Cir.1976) (pre-Teamsters), *cert. denied*, 433 U.S. 919, 97 S.Ct. 2995, 53 L.Ed.2d 1105 (1977); *Bowe v. Colgate Palmolive Co.*, 416 F.2d 711, 721 (7th Cir.1969) (same).

Applying these principles to the present controversy, we note at the outset that the District Court did not rush willynilly to impose class-wide relief. The court specifically ordered individual relief hearings where feasible. All claims of backpay for discrimination at levels below GS-11 will be resolved in individualized hearings. See *Mem.Op.* at 3, JA 116.

At these levels individualized hearings are appropriate because a small number of discernible decisions as to initial grade assignment and promotions will be in issue for each agent. These determinations are akin to those in *Teamsters*, where the required hearings were to involve a single determination as to whether individual plaintiffs had applied and were qualified for particular line driver positions in the trucking industry.

431 U.S. at 371-372, 97 S.Ct. at 1872-1873. After careful consideration, the District Court here ordered class-wide relief only for discrimination above GS-11. The court had found that discrimination impeded black agents at every turn; blacks faced extra hurdles in DEA's initial grade assignments, work assignments, supervisory evaluations, imposition of discipline, and promotions.

At the higher levels the cumulative effect of these pervasive discriminatory practices became severe, and the increased subjectivity in evaluations gave discrimination more room to work its effects. In such a situation "exact reconstruction of each individual claimant's work history, as if discrimination had not occurred, is not only imprecise but impractical." *Pettway*, *supra*, 494 F.2d at 262.

The District Court here specifically found that "[e]ach major criterion in the promotion process at DEA was tainted by discrimination, making discrimination in the promotion process cumulative. Any attempt to recreate the employment histories of individual employees absent discrimination would result in mere guesswork." *Mem.Op.* at 2 n. 1, JA 115. Our role in reviewing this determination is limited. "The framing of a remedial decree is left largely in the hands of the district judge, whose assessment of the needs of the situation is a factual judgment reviewable only for clear error * * *." *McKenzie v. Sawyer*, *supra*, 684 F.2d at 75.

We perceive no error in the District Court's finding that it would be impossible to reconstruct the employment histories of DEA's senior black agents. Examination of discrete promotion decisions, as difficult as even that might be, will not suffice.

The decisive criteria for promotions decisions — supervisory evaluations, breadth of experience, and disciplinary history, see Part I-A *supra* — were themselves found to be tainted with illegal

discrimination. The court found that discrimination had skewed evaluations of black agents, but the court could have had no way of knowing how much more favorable a particular agent's *1291evaluation should have been, or how a fair evaluation might have affected the agent's chances for obtaining a particular promotion.

Similarly, the court found that discrimination in work assignments — leaving black agents with a disproportionately large share of undercover assignments— had impeded black agents in promotions, but the court could have had no way to divine what other broadening experiences a particular agent might have had, and no way to gauge how this hypothetical additional experience would have affected particular promotion decisions.

And though the court found that black agents have been disciplined more frequently and more severely than white agents committing similar infractions, the court could have had no way of knowing exactly what effect the disproportionate disciplinary sanctions had on a particular agent's chances for particular promotions.

Finally, because promotions at DEA are cumulative, the effects of discrimination in promotions are also cumulative. Denial of promotion to one grade affects the agent's eligibility for later promotions to higher grades.

To require individualized hearings in these circumstances would be to deny relief to the bulk of DEA's black agents despite a finding of pervasive discrimination against them. In effect, DEA would have us preclude relief unless the remedial order is perfectly tailored to award relief only to those injured and only in the exact amount of their injury. Though Section 706(g) generally does not allow for backpay to those whom discrimination has not injured, this section should not be read as requiring effective denial of backpay to the large numbers of agents whom DEA's discrimination has injured in order to account for the risk that a small number of undeserving individuals might receive backpay.

Such a result cannot be squared with what the Supreme Court has told us about the nature of a court's remedial authority under Title VII. "[T]he scope of a district court's remedial powers under Title VII is determined by the purposes of the Act." *Teamsters*, supra, 431 U.S. at 364, 97 S.Ct. at 1869. A core purpose of Title VII is "to make persons whole for injuries suffered on account of unlawful employment discrimination." *Albemarle Paper Co.*, supra, 422 U.S. at 418, 95 S.Ct. at 2372. "[F]ederal courts are empowered to fashion such relief as the particular circumstances require to effect restitution, making whole insofar as possible the victims of racial discrimination *
* *Franks*, supra, 424 U.S. at 764, 96 S.Ct. at 1264; accord *Albemarle Paper Co.*, supra, 422 U.S. at 418, 95 S.Ct. at 2372 (the District Courts have "not merely the power but the duty to render a decree which will so far as possible eliminate the discriminatory effects of the past as well as bar like discrimination in the future"); *Teamsters*, supra, 431 U.S. at 364-365, 97 S.Ct. at 1869-1870.

The trial court found that the particular circumstances of this case required class-wide relief for black agents at GS-11 and above to ensure that they were made whole for the pervasive discrimination they have suffered. If effective relief for the victims of discrimination necessarily entails the risk that a few nonvictims might also benefit from the relief, then the employer, as a proven discriminator, must bear that risk.

See *Stewart v. General Motors Corp.*, supra, 542 F.2d at 452-453. B. The Allegation of Class-wide Overcompensation In calculating the backpay pool the District Court used the race coefficient of the first of plaintiffs' two salary regressions as the measure of average discrimination per agent.

The first regression measured discrimination against all black agents, including those hired before 1972. This study may therefore have reflected the continuing effects of some discrimination occurring prior to 1972. See Parts I-B-1, II-B-1-b supra. Since the actionable period in this case commenced on July 15, 1972, use of the first regression might, according to DEA's argument, amount to compensation for some nonactionable discrimination.³⁷ Though the remedial order specifically states that backpay begins to accrue only as of July 15, 1972, see Remedial Order at 3, JA 121, DEA argues that a portion of the disparities between black and white agents as of that time (and thereafter) was caused by discrimination before 1972, and that DEA is therefore not liable for that portion.

The District Court found in the Liability Determination that "while pre-1972 discrimination may have affected the statistics * * *, post 1972 discrimination largely contributed to those statistics." Findings 117i, 508 F.Supp. at 697.

The court also noted in the Remedial Order that plaintiffs' regressions "provide an accurate measure of the extent to which blacks at DEA were paid less than comparably qualified whites [and] * * * provide an appropriate basis for classwide relief." Mem.Op. at 3, JA 116 (citation omitted).

We are reluctant to disturb the trial court's finding on this factual issue. See *McKenzie v. Sawyer*, supra, 684 F.2d at 75. Nonetheless on the record as it now stands, we cannot affirm the District Court's decision to use the first regression as a basis for calculating the backpay pool.

Although the court properly found that the plaintiffs' evidence sufficed to support an inference of actionable discrimination, see Part II-B-1-b supra, the court's reliance on the first regression to determine back-pay is problematic.

The court never found that all of that regression's race coefficient reflected actionable post-1972 discrimination.³⁸ To do so the court would have had to find either that all discrimination reflected in the salary disparities occurred after 1972 or that the small portion of "continuing effects" of pre-1972 discrimination reflected in the disparities was the result of a "continuing violation." See *id.* The court made neither finding, and having found in the Liability

Determination that pre-1972 discrimination had been “neither admitted nor proven,” 508 F.Supp. at 696, the court cannot plausibly rely on a continuing violation theory in the Remedial Order as grounds for using the first salary regression as a benchmark for the backpay pool.

It may be that plaintiffs’ first regression does reflect only post-1972 discrimination. DEA’s complete failure to present evidence showing pre-1972 discrimination in the regression certainly supports this view. It may also be that the portion of the disparity that reflects continuing effects of pre-1972 discrimination might be actionable on a continuing violation theory.

Or it may be that the small amount of continuing effects cannot plausibly be factored out of the study; if so, and if no more precise methods of ascertaining the amount of actionable discrimination are reasonably available to the court, the court would be faced with using either a mildly overcompensatory formula based on the first regression or a significantly undercompensatory formula based on the second regression.

Use of the first regression under these circumstances might be permissible. We cannot, however, resolve these matters on the present appeal. As the Supreme Court stressed in *Lehman v. Trout*, supra, — U.S. at —, 104 S.Ct. at 1404, *1293 this court must scrupulously respect the factfinding prerogative of the District Court.

In this case the District Court has not yet determined whether the first regression reflects only post-1972 discrimination, whether a continuing violation occurred that might permit compensation for whatever continuing effects the regression reflects, or whether the small portion of nonactionable continuing effects that might be reflected in the regression, cannot be factored out.

On remand, if the District Court is unable to find that any of these three factual circumstances exists, the court must devise a new backpay formula. C. Promotion Goals and Timetables The District Court ordered that one black be promoted for every two whites to positions above GS-12 at DEA until blacks made up 10 percent of all agents at each grade above GS-12 or until five years after the order was entered.

DEA objects to this aspect of the remedy for the same reason that it objects to class-wide backpay: some individual agents might receive promotions they do not deserve. DEA argues that promotion goals and timetables exceed a court’s remedial power under Title VII unless every person who potentially benefits from the relief has been individually shown to have been discriminatorily denied a specific promotion.

According to DEA, Section 706(g) mandates this result. See 42 U.S.C. § 2000-5(g) (1976) (“No order of the court shall require the * * * promotion of an individual as an employee, * * * if such individual was refused * * * advancement * * * for any reason other than discrimination * * *.”).

DEA also argues that such goals and timetables violate the equal protection component of the Fifth Amendment to the Constitution.

Though DEA's claims are not without some superficial appeal, Section 706(g) must not be read as requiring an exact fit between those whom an employer's discrimination has victimized and those eligible under promotion goals and timetables.

The language on which DEA relies was aimed at ensuring that Title VII was not read as giving courts authority to remedy racial imbalance as an evil in itself, i.e., absent any finding that illegal discrimination caused the imbalance. See *EEOC v. AT&T*, 556 F.2d 167, 175 (3d Cir.1977), cert. denied, 438 U.S. 915, 98 S.Ct. 3145, 57 L.Ed.2d 1161 (1978).

The language should not be stretched to support a requirement of absolute precision in fashioning promotion goals and timetables when such a requirement would frustrate effective relief for those who were victimized by discrimination.³⁹ Every federal Court of Appeals in this nation has approved remedial use of goals and timetables without requiring that each and every potentially eligible person be shown to have been a victim of discrimination.⁴⁰ Nor can the imposition of quotas *1294to remedy proven discrimination be said to violate the Constitution's guarantees of equal protection.

Whatever the current status of affirmative action absent a finding of discrimination, the Supreme Court has made clear that such relief is not unconstitutional when used to remedy proven discrimination. See *Swann v. Charlotte-Mecklenburg School District*, 402 U.S. 1, 91 S.Ct. 1267, 28 L.Ed.2d 554 (1971); *Bakke v. Board of Regents of the University of California*, 438 U.S. 265, 302, 98 S.Ct.

2733, 2754, 57 L.Ed.2d 750 (1978) (Powell, J., concurring); *id.* at 363-386, 98 S.Ct. at 2785-2797 (Brennan, White, Marshall and Blackmun, JJ, concurring). Nonetheless promotion goals and timetables — even if as admirably crafted as those at issue here — must be used cautiously. Such relief intrudes into the structure of employment relations and may at times upset the legitimate promotion expectations of individuals in the majority group.

We must take a careful look at the District Court's decision to use goals and timetables in this case. We are persuaded that the District Court's order that one black be promoted for every two whites to positions above GS-12 was not appropriate. Strict goals and timetables should not be imposed when "alternative, equally effective methods could * * * supplant resort to a quota." *Thompson v. Sawyer*, *supra*, 678 F.2d at 294.

See *Sledge v. J.P. Stevens & Co.*, 585 F.2d 625, 646 (4th Cir.1978), cert. denied, 440 U.S. 981, 99 S.Ct. 1789, 60 L.Ed.2d 241 (1979); *United States v. City of Chicago*, 549 F.2d 415, 437 (7th Cir.1977), cert. denied, 434 U.S. 875, 98 S.Ct. 225, 54 L.Ed.2d 155 (1977); *NAACP v. Allen*, 493 F.2d 614, 621 (5th Cir.1974).

The District Court did not consider whether less severe remedies might prove equally efficacious in this case. We therefore vacate the District Court's imposition of goals and timetables, and remand for additional consideration of the propriety of such remedies in this case.

In determining whether less severe remedies might prove equally effective the court must evaluate the likelihood that the employer will implement the remedy in good faith. See *Firefighters Institute for Racial Equality v. City of St. Louis*, 616 F.2d 350, 364 (8th Cir.1980), cert. denied, 452 U.S. 938, 101 S.Ct. 3079, 69 L.Ed.2d 951 (1981); *NAACP v. Allen*, supra, 493 F.2d at 621.

One important indicium is the employer's past behavior in implementing equal opportunity programs, either voluntarily or in response to court order. See *Ass'n Against Discrimination In Employment, Inc. v. City of Bridgeport*, 647 F.2d 256, 284 (2d Cir.), cert. denied, 455 U.S. 988, 102 S.Ct. 1611, 71 L.Ed.2d 847 (1981); *Firefighters Institute for Racial Equality*, supra, 616 F.2d at 364.

This court has some doubt that DEA's past record on equal employment opportunity warrants application of strict goals and timetables. DEA has not been before this court in the past on identical or related claims of discrimination, and thus has not shown any recalcitrance in remedying discrimination pursuant to court order. Nor does DEA's overall approach to equal employment matters lead us to conclude that DEA will be unlikely to remedy the proven discrimination in promotions once this court orders it to do so.

The record contains significant uncontradicted evidence of DEA's institutional good faith in implementing equal employment opportunity programs (summarized in brief for appellants at 66-67). Of course, the determination of appropriate relief is for the District Court in the first instance.

We also vacate the District Court's order of class-wide frontpay because the frontpay order was premised on the existence of promotion goals and timetables. The District Court is free to impose a new frontpay order on remand if it deems one appropriate. *1295 On remand we encourage the District Court to consider other remedial options to ensure that black agents attain their rightful places at the upper levels of DEA.

We note in particular that a promotion bottleneck appears to exist at the GS-12 level. While black agents manage to arrive at this level eventually, few progress beyond this point. In remedying promotion discrimination at this point and at all levels, the court is of course free to establish promotion guidelines and to monitor DEA's progress in meeting those guidelines, or to fashion any other appropriate relief.

IV. Other Issues A. The Jackson Injunction During the course of this proceeding the District Court issued a preliminary injunction against the demotion and transfer of plaintiff Carl Jackson. Order of May 5, 1981, JA 113. Special Agent Jackson, the second highest ranking black agent at DEA,

had claimed that the demotion and transfer, and other harassment from a few particular white DEA officials, were in retaliation for Jackson's testimony in this case.

It is undisputed that prior to Jackson's testimony his employment history at DEA was exemplary and that after his testimony he was the focus of significant official criticism from these individuals, culminating in his demotion and transfer.

The District Court found that Jackson had made a sufficient showing of likelihood of success on the merits of his claim of retaliation in violation of Section 704(a) of Title VII, 42 U.S.C. § 2000e-3(a) ("It shall be an unlawful employment practice for an employer to discriminate against any of his employees * * * because he has opposed any practice made an unlawful employment practice by this subchapter * * *").

The court also found a high likelihood of irreparable harm if the injunctive relief were denied because other black agents, fearful of similar reprisal, would not come forth at the impending relief phase of the proceeding to demand individual relief. DEA makes no claim that the trial court applied an improper legal standard in granting the Jackson injunction.

Rather, DEA makes two factual challenges to the order: (1) the trial court erred in finding that Jackson's testimony caused the subsequent adverse employment action, and (2) the trial court erred in finding that inhibition of other agents at the relief stage constituted irreparable harm.

We review the trial court's factual findings with deference. Only if we are left with the definite and firm conviction that a mistake has been made will we overturn the trial court's determination. Neither of DEA's arguments convinces us that a mistake has been made. DEA's first argument turns primarily on the trial court's evaluation of the credibility of DEA's witnesses.

See brief for appellants at 73-75. We are extremely reluctant to overturn a District Court on a matter of credibility, and we decline to do so here. The District Court, moreover, marshalled extensive evidence to support its finding of causation. See Memorandum Opinion of May 5, 1981 at 3-10, JA 103-111. DEA's second argument is frivolous. DEA argues that irreparable harm could not have been found because the trial court ordered class-wide relief, thus obviating the need for individual black agents to come forward at the relief stage.

This argument grossly misstates the facts; as DEA is well aware, the trial court also ordered individualized hearings for all claims of discrimination below GS-11. Thus the District Court was wholly correct in anticipating harm if black agents were deterred from coming forward at the relief stage. While we affirm the District Court's decision to grant preliminary relief to Special Agent Jackson, we note that his claim of illegal retaliation has not been definitively resolved.

On remand, we expect the District Court to take appropriate action on this matter. B. Prejudgment Interest. Plaintiffs cross-appeal the trial court's denial of prejudgment interest. *1296This circuit

dealt with the issue of prejudgment interest in Title VII actions against the federal government in *Blake v. Califano*, 626 F.2d 891 (D.C.Cir.1980).

In that case we followed the principle that, for reasons of sovereign immunity, a court will not award interest against the United States unless a statute specifically authorizes such an award or evinces Congress' intention to do so. See *Smyth v. United States*, 302 U.S. 329, 353, 58 S.Ct. 248, 252, 82 L.Ed. 294 (1937). Plaintiffs ask us to reconsider the decision in *Blake v. Califano* on the ground that Congress modelled Title VII's remedial scheme on the National Labor Relations Act, which permits interest awards.

This argument is without merit. Though Congress did model Title VII's remedial provisions on the NLRA, see *Albemarle Paper Co.*, supra, 422 U.S. at 422, 95 S.Ct. at 2373, when Congress did so in 1964 neither the NLRA nor Title VII applied to the federal government.

Thus congressional reliance on the NLRA as a model implies nothing about congressional intent to permit interest awards in Title VII suits against the United States. When Congress amended Title VII in 1972 to bring the federal government under its provisions, Congress evinced no intention to waive sovereign immunity as to interest awards.

Thus we affirm the District Court's denial of prejudgment interest. V. Conclusion This case, like many Title VII class actions, has presented a host of complex legal issues. After careful review, we affirm the District Court's liability determination in its entirety.

We also affirm the District Court's remedial use of a class-wide back-pay scheme, but vacate the particular calculation of the backpay formula. We vacate the court's imposition of strict promotion goals and timetables, and the class-wide frontpay approach tied to the goals and timetables.

On remand the District Court is to conduct further remedial proceedings consistent with this opinion. The particular evidentiary and procedural requirements that have evolved in Title VII cases can greatly aid resolution of complex questions. Care must be taken, however, to ensure that such requirements are not applied in inflexible ways that thwart the purposes for which they were adopted.

Such requirements as the "minimum objective qualifications" test, the purported need for anecdotal evidence, and the preference for individual remedial hearings must be applied so as to advance Title VII's goals of ferreting out and remedying employment discrimination.

In affirming the District Court's liability determination we stress that tests for the sufficiency of plaintiffs' proof should not be applied in a "rigid, mechanistic, or ritualistic" way. *Furnco*, supra, 438 U.S. at 577, 98 S.Ct. at 2949.

In affirming the District Court's use of class-wide backpay, we stress that the primary duty of a court exercising equitable remedial power under Title VII is to fashion a decree that affords

complete relief to those victimized by illegal discrimination. Affirmed in part and vacated and remanded in part. ADDENDUM On June 12, 1984, while the opinion in the instant case was in the printing stage, the Supreme Court issued its decision in *Firefighters Local Union No. 1784 v. Stotts*, - U.S -, 104 S.Ct.

2576, 81 L.Ed.2d 483 (1984). In considering the issues of appropriate remedies on remand, the District Court should, of course, consider the Supreme Court's opinion in *Stotts*, to the extent applicable. See *Tavoulareas v. The Washington Post Co.*, 737 F.2d 1170, 1172 (D.C.Cir.1984) (In light of recent Supreme Court precedent, "[t]he most efficient course, and the course most respectful of the valid discretion of our district judge, is to remand for reconsideration").

42 U.S.C. § 2000e et seq. (1976 & Supp. V 1981).. Section 703(a) of the Civil Rights Act provides: It shall be an unlawful employment practice for an employer— (1) to fail or refuse to hire or to discharge any individual, or otherwise to discriminate against any individual with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, sex, or national origin; or (2) to limit, segregate, or classify his employees or applicants for employment in any way which would deprive or tend to deprive any individual of employment opportunities or otherwise adversely affect his status as an employee, because of such individual's race, color, religion, sex, or national origin.

42 U.S.C. § 2000e-2(a). That section applies fully to the federal government, id. § 2000e-16.. We vacate the frontpay remedy only because the trial court specifically linked it to the promotion timetables, and without prejudice to reinstatement of a new frontpay remedy if the trial court finds such a course appropriate on remand..

The parties have stipulated as to the Civil Service definitions of general experience and *1260specialized experience. See Joint Exhibit I (the relevant portions of which are presented at Joint Appendix (JA) 39-43). These definitions are discussed in detail *infra*. See Part II-B-l-a *infra*.. See Joint Exhibit I, JA 40.. When the numerical system was first implemented in 1976, point values were as follows: length of experience (20); breadth of experience (40); education and training (10).

In 1978 DEA modified the rating system as follows: breadth of experience (45); performance evaluations (45); training (10). Within the breadth of experience and performance evaluation categories are several subcategories.

Under breadth of experience are: supervisory experience (8); complex investigation experience (6); internal security experience (7); diverse domestic (6) and foreign (7) experience; and special skills (4). Under performance evaluation are: most recent annual rating (25); supervisor's comments (15); and awards (5). Findings ¶ 4, 508 F.Supp. at 695..

The T-Ratio figure for a particular measure of race-related disparity corresponds to the number of standard deviations for that figure. D. Baldus & J. Cole, *Statistical Proof of Discrimination* 297 n. 14 (1980).. Professors Bergmann and Straszheim both hold Ph.D.'s and teach labor economics at the University of Maryland. Findings ¶ 6, 508 F.Supp. at 695.. Plaintiffs are subject to the statutory limit on the period of actionable discrimination; under Title VII liability may not accrue for a period of more than two years before the date of filing of an administrative complaint with the Equal Employment Opportunity Commission.

42 U.S.C. § 2000e-5(g). In this case the actionable period began on July 15, 1972. See Memorandum Opinion, February 17, 1982, at 3 n. 2, JA 114, 116 n. 2. Although not formally created until 1973, DEA was at its creation a consolidation of other federal agencies engaged in drug enforcement efforts, and agents serving these agencies became DEA agents..

The court did, however, refuse to credit most of plaintiffs' anecdotal accounts of specific instances of discrimination. Findings ¶514, 508 F.Supp. at 710.. DEA sought at the remedial hearing to introduce its own regression analyses. These regressions purportedly showed an absence of race-related disparity at DEA.

The District Court rejected this proffered evidence of DEA's nonliability as untimely. See Memorandum Opinion, *supra* note 9, at 3, JA 116.. Typically, Title VII litigation proceeds through a more or less well-defined sequence of shifting intermediate burdens of proof. See *Texas Dep't of Community Affairs v. Burdine*, 450 U.S. 248, 253-254, 101 S.Ct. 1089, 1093-1094, 67 L.Ed.2d 207 (1981) (defining sequence for non-class action disparate treatment claim); *Albemarle Paper Co. v. Moody*, 422 U.S. 405, 425, 95 S.Ct.

2362, 2375, 45 L.Ed.2d 280 (1975) (defining sequence for disparate impact claim). Though these proof sequences are designed to sharpen the inquiry into alleged illegal discrimination, they can confuse more than clarify when they are applied inflexibly. See *Int'l Brhd of Teamsters v. United States*, 431 U.S. 324, 358, 97 S.Ct. 1843, 1866, 52 L.Ed.2d 369 (1977).

Nowhere is this more true than in pattern or practice cases such as the one now before this court. These cases do not fit comfortably into the standard proof sequences. See note 14 *infra*.. To make out a *prima facie* case under *McDonnell Douglas Corp. v. Green*, 411 U.S. 792, 801-802, 93 S.Ct. 1817, 1823-1824, 36 L.Ed.2d 668 (1973), an individual plaintiff need only show that he or she: (1) is a member of a protected group; (2) applied for the position and was qualified; (3) was rejected; and (4) the job remained open.

411 U.S. at 802, 93 S.Ct. at 1824. Presentation of a clear and reasonably specific explanation of the apparent disparity in treatment, if supported by admissible evidence, generally suffices to rebut the plaintiffs minimal initial showing.

In such cases the burden appropriately shifts back to plaintiff to show that the employer's nondiscriminatory explanation is pretextual. *Burdine*, supra note 12, 450 U.S. at 253-254, 101 S.Ct. at 1093-1094.. This proof will seek to show a disparity between the plaintiff class and the majority group, demonstrate that race explains the disparity by eliminating other possible explanations, and make these showings at high levels of statistical significance..

Such class actions often can be viewed as collapsing the prima facie and pretext stages of a suit involving an individual plaintiff. See *McKenzie v. Sawyer*, 684 F.2d 62, 71 (D.C.Cir. 1982); *Vuyanich v. Republic Nat'l Bank of Dallas*, 521 F.Supp. 656, 662 (N.D.Tex.1981), vacated on other grounds, 723 F.2d 1195 (5th Cir.1984).

We do not mean to suggest, however, that plaintiff must rely on its initial proof. The plaintiff is of course free to — and if the defendant's rebuttal is sufficiently strong may have to — introduce evidence to discredit the rebuttal. 6. Not every nondiscriminatory explanation will implicate disparate impact analysis.

For example, an employer might seek to show that an observed disparity resulted from discrimination prior to the date Title VII applied to the employer. But when the employer's explanation amounts to an articulation of a specific employment practice, disparate impact analysis should apply.. *Burdine* in no way altered this traditional allocation of burdens.

The Court stated that it "recognized that the factual issues, and therefore the character of the evidence presented, differ when the plaintiff claims that a facially neutral employment policy has a discriminatory impact on protected classes." 450 U.S. at 252 n. 5, 101 S.Ct. at 1093 n. 5..

The Supreme Court has recognized that retroactive relief for victims of Title VII violations serves the important purpose of removing barriers to equal opportunity because such relief "provides the spur or catalyst which causes employers and unions to self-examine and to self-evaluate their employment practices and to endeavor to eliminate the last vestiges" of discriminatory barriers.

Albermarle Paper Co. v. Moody, 422 U.S. 405, 417-418, 95 S.Ct. 2362, 2371-2372, 45 L.Ed.2d 280 (1975); accord *Teamsters*, supra note 12, 431 U.S. at 364, 97 S.Ct. at 1869. Similarly, plaintiffs' prima facie disparate treatment case spurs an employer's self-evaluation to determine which of its employment practices cause the observed disparity. Once these employment practices with differential impact have been brought into the open, no sound policy reason exists for refusing to apply traditional disparate impact analysis to them.

Indeed, application of disparate impact in this situation speeds the day when we will have rid ourselves of discrimination in its subtle as well as its crass aspect.. We note further that application of disparate impact analysis when appropriate in a pattern or practice case will not result in disparate treatment analysis swallowing up the whole of disparate impact analysis.

Disparate impact will apply in the pattern or practice case only after plaintiffs have made a sufficient initial showing of disparity between groups that appear to be comparably qualified, and after it has been decided that the employer's explanation rebuts the disparate treatment claim..

The Supreme Court has recently stated: "Where the defendant has done everything that would be required of him if the plaintiff had properly made out a prima facie case, whether the plaintiff really did so is no longer relevant.

The district court has before it all the evidence it needs [to make the ultimate determination] * * *." U.S. Postal Service Bd. of Gov. v. Aikens, 460 U.S. 711, 715, 103 S.Ct. 1478, 1482, 75 L.Ed.2d 403 (1983). We follow the prescribed analysis in this case.. Pre-1972 discrimination may also have affected the results obtained in some of appellees' grade-at-entry statistics.

However, the trial court found that "[f]or new hires (post 1972) Blacks were 12% less likely than whites to be hired at GS-9, as opposed to GS-7, and this is statistically significant at the .01 level." Findings ¶ 9a, 508 F.Supp. at 698..

The court's 1979 Liability Determination contains no suggestion that the court thought continuing effects were actionable. In fact, the court's repeated statements that DEA could have rebutted plaintiffs' statistics by making a showing that the statistics reflected the continuing effects of pre-1972 discrimination dictates the opposite conclusion.

In one isolated sentence in the 1981 Remedial Order the court did state its view that continuing effects of pre-1972 discrimination are actionable under a continuing violation theory. Although this is a correct statement of the law of this circuit, see *Thompson v. Sawyer*, 678 F.2d 257, 291 (D.C.Cir.1982); *Bethel v. Jefferson*, 589 F.2d 631, 636-637 (D.C.Cir.1978), as we indicate infra we do not think the record supports a finding that there was a continuing violation here..

Findings ¶7& 508 F.Supp. at 696 ("It has been neither admitted nor proven that Defendants discriminated against Black special agents prior to 1972."); see 508 F.Supp. at 712. In this respect the case is quite unlike *Trout*, where the District Court expressly found that pre-1972 discrimination had occurred and that it was likely that such discrimination had "continuing discriminatory effects after 1972." *Trout v. Hidalgo*, 517 F.Supp. 873, 880 (D.D.C.1981), aff'd, 702 F.2d 1094 (D.C.Cir.1983), vacated, — U.S. —, 104 S.Ct.

1404, 79 L.Ed.2d 732 (1984).. The court indicated that; Depending on DEA's response to perceived pre-1972 discrimination, said discrimination might have three possible effects on the [relevant] statistics, namely (1) the showing of post-1972 discrimination could be artificially [sz'c] accentuated because it would include pre-1972 discrimination, (2) the showing could be attenuated by any affirmative action taken by DEA to rectify pre-1972 discrimination, and (3) the showing might actually downplay post-1972 discrimination because any affirmative action by DEA was overresponsive to the pre-1972 discrimination.

No evidence was presented by Defendants indicating that one of the three possibilities was more probable than any of the others. 508 F.Supp. at 697 n. 3.. 508 F.Supp. at 712 (discussing DEA's allegation that plaintiffs' "statistics were insignificant because relevant factors (e.g. pre-1972 discrimination, inflation, and specific types of prior work experience) were omitted from the regression analyses")..

In the words of the District Court: Plaintiffs have shown gross disparities between the salaries of comparably qualified Black and White agents at DEA. These disparities are evident in the regression analyses involving all agents for the period 1975-1978, and new hires for the period 1976-1978.

Because of the significant level of the disparities shown, Plaintiffs have proven a prima facie case of discrimination in salary. * * * 508 F.Supp. at 712 (emphasis added).. DEA also argues that plaintiffs' regressions lack probative worth because the R² figures are too low. R² provides an overall indication of how well the disparity in the dependent variable (salary, in this case) can be explained by all the independent variables.

Plaintiffs' first salary regression had R² values ranging from .42 to .52. Plaintiffs' second salary regression had R² values ranging from .21 to .37. Findings ¶ 7n, 508 F.Supp. at 697. The court found that these values were "not so low as to adversely affect the veracity of Plaintiffs' studies." Id. We find no error in this decision, given the high levels of statistical significance that plaintiffs' studies achieved; R² is not a measure of statistical significance and is not a highly precise indicator of the probative value of a statistical study.

See D. Baldus & J. Cole, *supra* note 7, at 273-274; *Vuyanich v. Republic Nat'l Bank of Dallas*, 505 F.Supp. 224, 273 (N.D.Tex.1980), vacated on other grounds, 723 F.2d 1195 (5th Cir.1984).. DEA has urged that we adopt the "greater than two or three standard deviations" test of statistical significance that the Supreme Court purportedly established in *Casteneda v. Partida*, 430 U.S. 482, 496-497 n. 17, 97 S.Ct.

1272, 1281 n. 17, 51 L.Ed.2d 498 (1977). A level of two standard deviations corresponds to statistical significance at the .05 level, and a level of three standard deviations corresponds to statistical significance at approximately the .001 level.

The huge difference between two and three standard deviations, and the casualness of the Court's language in the footnote DEA points to, together suggest that the Court in *Casteneda* did not intend to fix any specific test for statistical significance. Nor would the court have needed to do so. Since the standard deviations of the statistics used in *Casteneda* ranged from 6 to 12, the Court would have had no reason to fix a precise lower bound for statistical significance.

Thus we decline to interpret *Casteneda* as DEA suggests we should. In any event, almost all of plaintiffs' statistics in this case did achieve statistical significance at the .05 (or 2 standard

deviations) level.. Some courts have suggested that an inference of discrimination might be permissible even if levels of statistical significance fall short of the .05 mark.

See *Vuyanich v. Republic Nat'l Bank of Dallas*, supra note 27, 505 F.Supp. at 272.. The burden of articulation applies to DEA's rebuttal of plaintiffs' disparate treatment claims. To the extent that plaintiffs' evidence, and DEA's rebuttal, implicate disparate impact, DEA of course bears the burden of proving the business necessity of the challenged practices..

The evidence has not been subjected to the rigors of the adversarial process, and its veracity is therefore far from certain.. When plaintiffs' experts used an undisputed statistical technique to aggregate across DEA's cohort groups, a salary disparity adverse to black agents, and significant at the .001 level, was found. See Tr. at 1937 (testimony of Dr. Spradlin); id. at 2001-2003 (testimony of Professor Straszheim); Plaintiffs' Exhibit 53..

Of course, when a defendant claims that a specific factor was sufficiently objective to permit quantification, the defendant's failure to present alternative statistics incorporating the factor will severely undermine its rebuttal..

Having found disparate impact in these employment practices, the District Court ordered validity studies "in order to implement effective, nondiscriminatory supervisory evaluation, discipline, and promotion systems[.]" 508 F.Supp. at 715. DEA has not challenged the trial court's application of disparate impact analysis to these specific employment practices.

Though these practices arguably encompass some subjective judgments as to agents' performance, we find that disparate impact appropriately applies to them. See Bartholet, *Application of Title VII to Jobs in High Places*, 95 Harv.L.Rev. 947, 1005-1008 (1982).

In ordering validity studies the trial court has neither precluded elements of subjective decisionmaking in DEA's practices nor invalidated the propriety of the traits that DEA's current practices seek to measure. Rather, validity studies seek to find ways to provide more specific guidance to discretionary decisionmakers, and to eliminate those elements of discretionary decisionmaking that are shown to affect black agents adversely without any compensatory showing of business necessity..

Finding most discrimination took place at GS-11 and above, the court did not order class-wide relief for discrimination against black agents at GS-7 or GS-9 during any given back-pay year. See Mem.Op., supra note 9, at 3, JA 116.

The court did, however, permit these agents to bring individual claims for relief. Any individual awards at these levels are to be deducted from the class-wide backpay pool distributed to agents at GS-11 and above. See Remedial Order at 6, JA 124.. *McKenzie v. Sawyer*, 684 F.2d 62 (D.C.Cir.1982), does not mandate individual hearings in every case.

The panel in *Sawyer* affirmed a District Court's decision to require individual relief hearings. When, in an exercise of its remedial discretion, a trial court orders hearings, an appellate court is properly reluctant to interfere with that judgment. But the appellate panel in *Sawyer* was not faced with a trial court's decision that individual hearings would effectively preclude relief for most members of the plaintiff class.

Thus, *Sawyer*'s reiteration of the Teamsters hearing preference should not be taken as implying that class-wide relief in the present context would be improper.. DEA also makes an argument that use of the first salary regression overcompensates plaintiffs based on the R^2 values for this study. DEA argues that, because the R^2 value was roughly .50, only about half of the race coefficient for the years in question actually represents race-related disparity.

This argument reveals a basic misunderstanding of the meaning of R^2 figures. An R^2 of .50 does not mean that only half of the race coefficient is attributable to race. Rather, it means that half of the total salary disparity between black and white agents is attributable to the totality of the factors examined in the regression. See generally Fisher, *Multiple Regression in Legal Proceedings*, 80 Colum.L.Rev.

702, 720 (1980). In any event, R^2 is far from a wholly reliable measure of a study's accuracy. See note 27 *supra*. For these reasons, we hold that DEA's objection based on R^2 values is without force.. Of course, the court need not have found that all of the discrimination reflected in the regression occurred after 1972 in order to find the regression sufficient to make out a *prima facie* case of actionable discrimination.

See Part IIB-1-b; *Valentino v. U.S. Postal Service*, 674 F.2d 56, 71 n. 26 (D.C.Cir.1982).. DEA has amassed an array of quotes from Title VII's legislative history in support of its contention that promotion goals and timetables are invalid if they benefit any individuals who are not proven victims of discrimination. See reply brief for appellants at 20-22. Many in Congress spoke in 1964, and again in 1972 when Title VII was amended, to assure wavering supporters that Title VII could not be applied to grant preferences for those who were not victims of discrimination.

These statements are, however, inapposite to the question before us in this case. Those in Congress who made such statements were not considering the issue whether in affording relief for proven discrimination against a broad class some individual nonvictims might benefit in order to ensure that all actual victims benefitted. Rather, these statements were made with reference to the question whether Title VII could be used as a mandate to correct overall racial imbalance in an employer's workforce when such an imbalance had not been shown to be the result of discrimination..

See *Thompson v. Sawyer*, 678 F.2d 257, 294 (D.C.Cir.1982); *Chisolm v. U.S. Postal Service*, 665 F.2d 482 (4th Cir.1981); *United States v. City of Chicago*, 663 F.2d 1354 (7th Cir.1981); *Ass'n*

Against Discrimination in Employment, Inc. v. City of Bridgeport, 647 F.2d 256 (2d Cir.), cert. denied, 455 U.S. 988, 102 S.Ct. 1611, 71 L.Ed.2d 847 (1981); United States v. Lee Way Motor Freight, Inc., 625 F.2d 918 (10th Cir.1979); James v. Stockham Valves & Fittings Co., 559 F.2d 310 (5th Cir.1977), cert. denied, 434 U.S. 1034, 98 S.Ct.

767, 54 L.Ed.2d 781 (1978); United States v. Int'l Union of Elevator Constructors, Local 5, 538 F.2d 1012 (3d Cir.1976); Boston Chapter, NAACP, Inc. v. Beecher, 504 F.2d 1017 (1st Cir.1974), cert. denied, 421 U.S. 910, 95 S.Ct. *12941561, 43 L.Ed.2d 775 (1975); United States v. N.L. Industries, Inc., 479 F.2d 354 (8th Cir.1973); United States v. Ironworkers Local 86, 443 F.2d 544 (9th Cir.), cert. denied, 404 U.S. 984, 92 S.Ct.

447, 30 L.Ed.2d 367 (1971); United States v. Int'l Brotherhood of Electrical Workers, Local 38, 428 F.2d 144 (6th Cir.), cert. denied, 400 U.S. 943, 91 S.Ct. 245, 27 L.Ed.2d 248 (1970).