

1978

# Reverse discrimination in higher education: a comparison of the employment of black and white recent doctoral recipients by sex

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**SAMUELS, CHARLES LEE**  
**REVERSE DISCRIMINATION IN HIGHER EDUCATION:**  
**A COMPARISON OF THE EMPLOYMENT OF BLACK AND**  
**WHITE RECENT DOCTORAL RECIPIENTS BY SEX.**

**IOWA STATE UNIVERSITY, PH.D., 1978**

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Reverse discrimination in higher education:  
A comparison of the employment of  
Black and white recent doctoral recipients by sex

by

Charles Lee Samuels

A Dissertation Submitted to the  
Graduate Faculty in Partial Fulfillment of  
The Requirements for the Degree of  
DOCTOR OF PHILOSOPHY

Department: Professional Studies  
Major: Education (Higher Education)

Approved:

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1978

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## DEFINITION OF TERMS

Affirmative Action: This term is a concept emanating from Executive Order 11246 which has as its premise that unless positive action is undertaken by employers to overcome the effects of systemic institutional forms of exclusion and discrimination, a benign neutrality in employment practices will tend to perpetuate the status quo.

As used in this order, it requires employers to make additional efforts to recruit, employ and promote members of groups formerly excluded from their work force, even if the exclusion cannot be traced to a particular discriminatory action on their part. In essence, it is the taking of positive steps to further employment opportunities for women and minorities.

Affirmative Action Plan: This is a program which is developed by government contractors pursuant to Order Number Four for furthering the employment of minorities and women. Such programs must be approved by the Office of Federal Contract Compliance, updated annually, and retained on file for submission to the compliance agency upon request.

Carnegie Code Classifications: This is a system developed by the Carnegie Corporation on Higher Education in 1970 which grouped U.S. institutions of higher education into five major categories and a number of subcategories, totaling 18 in all. Approximately 2,827 institutions have been classified under this system on the basis of educational mission, enrollment size, budget, number of degrees awarded and others. For purposes of this study, the following ten classifications have been extracted:

Doctoral Granting Institutions

Research Universities I: The 50 leading universities in terms of financial support of academic science in at least two of the three academic years, 1968-69, 1969-70, 1970-71, provided they awarded at least 50 Ph.D.'s in 1969-70.

Research Universities II: Includes universities on the list of the 100 leading institutions in terms of federal financial support in at least two of the above three years and awarded at least 50 Ph.D.'s in 1969-70, or were among the leading 50 institutions in terms of the total number of Ph.D.'s awarded during the years from 1960-61 to 1969-70.

Doctoral-Granting Universities I: Includes institutions awarding 40 or more Ph.D.'s in 1969-70 or receiving at least 63 million in total federal financial support in either 1969-70 or 1970-71.

Doctoral-Granting Universities II: Includes institutions awarding at least 10 Ph.D.'s in 1969-70, with the exception of a few doctoral granting institutions that may be expected to increase the number of Ph.D.'s awarded within a few years.

#### Comprehensive Universities and Colleges

Comprehensive Universities and Colleges I: Includes institutions offering a liberal arts program as well as several other programs, such as engineering and business administration. Many of these institutions offer master's degrees, but all lack a doctoral program or had extremely limited doctoral programs. All institutions have at least two professional or occupational programs and enrolled at least 2,000 students in 1970.

Comprehensive Universities and Colleges II: Includes state colleges and some private colleges which offer a liberal arts program and at least one professional or occupational program such as teacher training or nursing. This classification excludes private institutions with fewer than 1,500 students and public institutions with fewer than 1,000 students in 1970.

#### Liberal Arts Colleges

Liberal Arts Colleges I: Includes colleges which scored 5 or above on Astin's "Selectivity Index" (classification according to first choice selection by students taking the NM SQT in 1974), or those included among the 200 leading baccalaureate-granting institutions in terms of numbers of their graduates receiving Ph.D.'s at 40 leading doctoral-granting institutions from 1920 to 1966.

Liberal Arts Colleges II: Includes all the liberal arts colleges not meeting the criteria for inclusion in the first group of liberal arts colleges.

#### Two-Year Colleges and Institutions

Professional Schools and Other Specialized Institutions: Includes theological seminaries, medical schools, schools of engineering and technology, schools of business and management, schools of art, music, design, law and teachers colleges.

Compliance Agency: A compliance agency is any federal agency which issues contracts and has been designated by the Office of Federal Contract Compliance for the purpose of enforcing the executive order provisions in those contracts which they have awarded and/or over those institutions and agencies which have been placed under their jurisdiction.

Compliance Review: A compliance review is an on-site visit by a representative of the compliance agency to determine to what extent the government contractor is adhering to the approved affirmative action plan. This review may encompass any aspect of the government contractor's employment practices.

Contract: A contract is a voluntary agreement between agencies of the U.S. Government and institutions of higher education to do or abstain from doing some act. In the context of the executive order, this entails providing a specific good or service without discriminating on the basis of race, sex, color, national origin, or religion and taking further affirmative action.

Goals: Goals as used in Executive Order 11246 are numerical objectives fixed realistically by the government contractor in terms of the amount of underutilizations, the number of vacancies expected and the number of qualified applicants in the relevant job market. In fulfilling established goals, there is no requirement that a government contractor employ an unqualified applicant over one who is qualified or that employment be given to a lesser qualified applicant over a more qualified applicant. In making this determination, however, the government contractor must realistically measure the persons ability to do the job or the job to which he or she is likely to progress.

Failure to attain established goals does not automatically require a determination of noncompliance and sanctions. If the government contractor can demonstrate that he/she has acted in "good faith" in meeting this obligation, no sanctions may be imposed.

Government Contractor: A government contractor is any person, agency or institution of higher education who enters into a legal agreement with any agency of the U.S. Government to provide goods and/or services.

Minorities: Minorities include Asians, Blacks, American Indians and Hispanics who are American citizens for the purpose of affirmative action.

Pre-award Review: A pre-award review is an assessment by the contracting agency of the government contractor's progress with respect to the fulfillment of the affirmative action plan where a contract in excess of \$1 million is to be awarded or renewed.

Preferential Treatment: Preferential treatment in the context of this study has the connotation of selecting unqualified or less qualified applicants over qualified applicants on the basis of race and/or sex.



Primary Work Activity: The primary work activity for purpose of this study includes teaching, research and development, and professional services to others as the employee's major responsibility.

Quotas: Quotas are specified numbers or percentages of persons who must be employed or promoted which must be obtained and cannot be reduced. Under a quota system, a fixed number would be established to reflect the population or some other basis regardless of the number of applicants who meet the necessary qualifications. Where this fixed number is not attained, the government contractor is deemed to be in noncompliance and sanctions are imposed. "Good faith" efforts are of no consequence.

Reverse Discrimination: This term denotes that Caucasian males are being discriminated against in favor of racial minorities and women.

Timetables: Timetables signify the period in which goals might reasonably be achieved considering anticipated changes in the contractor's work force. The recommended period for establishing such timetables is from 3 to 5 years.

Underutilization: Underutilization is defined as having fewer women and/or minorities in the contractor's work force in a particular job than would reasonably be expected by their availability.

## CHAPTER I - INTRODUCTION

## The Problem

During recent years relations between the federal government and some entities of higher education have become strained over governmental enforcement of "mandated social welfare programs." Within the past decade federal guidelines have been issued imposing standards upon higher education institutions with respect to the confidentiality of student records, protection of human subjects in the conduct of research, occupational health and safety, and minority and female employment, among others. This new federal emphasis led one educator to comment that colleges and universities "have lost their immunity to the burdens that all other businesses bear in an increasingly regulated society" (Rosenzweig, 1978), and another one to lament that the United States Government has gone further than the governments of other countries in "imposing upon universities" obviously nonacademic, nonintellectual criteria for academic employment (Shils quoted by Farnham, 1977). However, there is disagreement among some higher education personnel with respect to the justification for governmental intervention and its reversibility.

In speaking before the 77th National Assembly of the Center for Higher Education Management Systems in Denver, Colorado, Charles Saunders, Jr. (1978) predicted that governmental involvement in higher education will continue into the 1980's. In his opinion, governmental agencies have relied upon the higher education community to enforce its own standards in those areas where it has established generally recognized standards and

has moved in to established arbitrary governmental standards in those areas where no standards have been established and higher education has been unwilling or incapable of acting on its own to protect the public interest. Saunders admonished the conferees that rather than searching for a magic formula for deregulation or adamantly insisting that the federal government should not intervene on campus, higher education should establish its own effective self-regulation systems to render governmental intervention unnecessary.

Higher education has shown a reluctance to embrace any external regulations in the past. Today this reluctance has become more acute as pressures are being brought to bear upon institutions to institute programs to increase the number of minorities and women in their work forces through affirmative action without engaging in discrimination on certain proscribed bases.

Discrimination on certain bases has been prohibited in the United States by federal legislation for the past 112 years. In 1866 the first Civil Rights Act (CRA) was passed by the United States Congress granting to ex-slaves "the same rights and privileges as those enjoyed by white citizens" (CRA, 1866). Since this precedent-setting action by Congress, laws have subsequently been passed to prohibit discrimination on the basis of religion, age, national origin, handicap, sex, and veteran status, in addition to race and color (CRA, 1964, et al.).

For the past 37 years (beginning in 1941), executive orders (E.O.) have been issued to augment these Congressional legislative acts. These

orders have been divided into three basic categories: 1) those in which the president acts pursuant to express or implied authorization by Congress wherein his authority is at a maximum; 2) those in which he acts in the absence of Congressional grant of authority and must rely on his own independent powers; and 3) those in which executive action conflicts with the express or implied will of Congress at which time he is most subject to challenge (Youngstown, 1952).

In 1941, then President Franklin D. Roosevelt banned discrimination in employment by the United States Government and by defense contractors on the basis of race, color, religion, and national origin. This action was designed to facilitate the mobilization of all human resources for participation in the war effort and marked the first use of presidential powers in the field of Civil Rights (E.O. 8802). Since 1941, each succeeding president has issued similar orders, requiring a greater commitment from contractors in meeting compliance requirements. The enforcement of these orders resided in various committees with limited jurisdiction for effecting compliance (E.O. 9346, 1943, et al.).

For most of history, both the laws and the presidential orders have advocated voluntary compliance programs and the establishment of "neutral policies." In 1965, however, all voluntary compliance programs established under previous orders were abolished. During this year, then President Lyndon B. Johnson issued Executive Order 11246 making compliance by government contractors mandatory as a condition for doing business with all federal contracting agencies. The powers and responsibilities which

formerly resided with committees were delegated to the Secretary of Labor. The secretary in turn delegated in part the responsibility for promulgating implementing regulations and the designation of compliance agencies for their enforcement to the newly created Office of Federal Contract Compliance Programs. All federal contracting agencies were required to issue rules and regulations for implementing Executive Order 11246 as amended consistent with the rules promulgated by the Office of Federal Contract Compliance Programs (OFCCP) embodied in what is commonly referred to as Order Number Four. Approximately fifteen agencies were initially designated as "compliance agencies," each having enforcement responsibilities over certain institutions and agencies with which they contracted. The overall responsibility for assuring compliance with this order by higher education institutions was delegated to the Office for Civil Rights (OCR) in the Department of Health, Education and Welfare. This order was amended by former President Richard M. Nixon in 1967 (E.O. 11375) to include "sex" and "religion" as proscribed bases for discrimination in employment by colleges and universities.

Participation as a contractor remains voluntary with each party having certain prerogatives and responsibilities. Colleges and universities may enter into such a contractual relationship, and once having done so, may terminate the relationship at such time as it is deemed to be inconsistent with their educational mission and ideals of equality based upon qualifications. However, should they elect to enter into a contract with the federal government in the amount of \$50,000 or more and if they have

a work force of 50 or more employees, as most do, they must execute a written contract with the contracting agency committing themselves to refrain from discrimination on the basis of race, color, religion, sex, or national origin in employment and conditions of employment. Further, colleges and universities must agree to develop and maintain an affirmative action program acceptable to the Department of Labor through the contracting agencies.

To meet the standards of acceptability, these plans must include, but are not limited to, 1) a work force utilization analysis; 2) an availability analysis for each job category; 3) goals for effecting parity when underutilization is determined to exist; and 4) timetables by which parity might reasonably be obtained.

The rules and regulations which have been promulgated for the development of affirmative action programs are general in nature and thereby permit each institution to develop its program, within reason, according to its own structure. In conducting the work force analysis, colleges and universities are permitted the option of listing faculty personnel by departments (each individual discipline) or by broad fields of study (e.g. life sciences). Where faculty members hold joint appointments in one or more departments, institutions may select their own systems for listing such individuals. Regardless of the procedures used, however, each individual must be listed by rank, race/ethnicity and sex. Minority groups may be listed together or separately depending upon the level of employment for each minority group.

In determining availability pools for the purpose of ascertaining whether underutilization exists for any group numerically, the university has the option of selecting from any of a variety of reputable statistical sources. Data may be obtained from professional associations, national centers which provide statistics on faculty, clusters or feeder schools (least desirable) or government documents. The primary determinant of the data base is the number of doctorate recipients in a field. However, where an institution utilizes faculty members who possess degrees other than the doctorate, the lesser degree serves as the base.

The flexibility permitted in the above two processes is not permitted in established goals and timetables. Goals are determined by comparing the racial/ethnic and sex proportionate representation in the available pool with the proportionate representation of these groups in the institution's work force. If the institution's work force reflects a smaller proportion than the pool, then it is required to establish a goal in the amount of the underutilization.

Timetables are established by determining the number of vacancies which an institution can anticipate within a given time frame, usually not to exceed five years. In making this determination, consideration is to be given to program expansion and contraction, retirements, promotions, and terminations. When the goals and timetables have been established for an existent underutilization, colleges and universities are expected to utilize recruitment resources in which job vacancy announcements can be perused by members of a cross section of society and to establish a system to monitor the recruitment and hiring process.

Federal agencies, on the other hand, are responsible for selecting the appropriate contractor which can best produce the desired product; to provide technical assistance where warranted to clarify the conditions of the contract; and to determine compliance in order to protect the public interest. In the event that compliance cannot be obtained pursuant to the conditions of the contract through persuasion and conciliation within a reasonable time, the contracting agencies may impose such sanctions as contract suspension, contract termination, debarment from future contracts and/or referral to other governmental agencies for court action as provided for under the order.

When the ground rules have been established in which each party is cognizant of its prerogatives and responsibilities, one would expect a minimum of controversy. This, however, has not been the case with respect to the government's affirmative action program. Both the program and the agencies, particularly the Office for Civil Rights, have come under such critical attack that the utility of the order itself is severely questioned. Some of the issues being raised in debate are those on which people of goodwill might reasonably disagree. Others, however, might rightfully fall within the rubric of a "smoke screen" to impede the effective implementation of the program as has often been alleged by those who believe themselves to be the intended recipients.

It is interesting to note that in this controversy, which has been gaining in momentum since 1971, there is allegedly no anti-affirmative action opponent. The differences in expressed sentiment reportedly lie



not in the concept of affirmative action but in the manner it is to develop to fruition. Nevertheless, for the differentiation purposes, the terms affirmative action proponents--those who support the implementation of the current guidelines--and the affirmative action opponents--those who desire changes in the guidelines--will be used in the remainder of this study.

Among the most notable organizations comprising the affirmative action opponents are the University Center for Rational Alternatives, the Committee on Academic Nondiscrimination and Integrity, the Committee for Affirmative Action-Universities, the Antidefamation League, and the American Jewish Congress. These organizations and committees have mounted an intensive campaign in denouncing the manner in which the affirmative action program is being applied to higher education. Their strategies have included the placement of paid announcements in major newspapers highlighting the 'evils' of affirmative action programs, letter campaigns to academics advocating contacts with local members of the U.S. Congress, giving testimony at various hearings, meetings with governmental officials, the publication of articles in various educational journals (Progress Report, 1975), and providing legal support in cases filed by Caucasian males alleging discrimination (Baumann, 1977).

The organizations which have served in the affirmative action proponent's camp have included the National Association for the Advancement of Colored People, the American Civil Liberties Union, the Women's Equity Action League, the National Organization for Women, other minority

organizations and higher education faculty. These organizations have virtually utilized the same strategies as those employed by the affirmative action opponents.

The arguments and counter arguments proffered by these opposing groups have generated widespread debate within the broader higher education community. However, the multitude of articles published in educational journals on affirmative action have advanced few new issues for cogitation. The central foci of these debates, when all rhetoric subsides, involves the potential impact of goals and timetables, their utility, and federal enforcement.

Goals and timetables have been equated by their opponents with hiring quotas. Their imposition upon higher education has been characterized as unwarranted, unauthorized and contrary to rules and regulations set forth in other civil rights legislation. Through alleged high-handed enforcement tactics being employed by federal bureaucrats, colleges and universities are said to be engaging in reverse discrimination by giving preferential treatment to women and minorities and lowering academic standards to avoid the loss of federal financial support. Such action has led many higher education administrators to decry what they perceive to be the high costs of implementing social welfare programs, the unavailability of qualified minorities and women to render such goals and timetables attainable and the denigration of competent minorities through the implication that they can only compete in the job market through special treatment (Hooks, 1974; Todorovich, 1975; Baumann, 1977; Sowell, 1975).

Proponents of goals and timetables are quick to point out that the academic community has been in the forefront in engineering change in American attitude toward minorities, especially Blacks. But in so doing, as some members of this group believe, colleges have fallen short in beholding the "beam in the own eye(s)." "They have been prepared to manipulate the rest of society," as Harris opines (1975, p. 21), "but not to take the consequences for themselves." In order to protect them from themselves and to protect them as a national resource for the rest of society, it is believed imperative that they be "deprived of their wish to be a sanctuary" (Harris, p. 22) through exemptions from affirmative action requirements. They maintain that the government's right to determine with whom it will deal and to fix the terms and conditions upon which it will make "needed purchases" has been validated in such court decisions as "Crown Zellerbach" (46 LW 2271) and others; that preference must be given if minorities and women are to be brought up to the "starting line" to render competition realistic; that goals and timetables are quotas only by those who wish to operate in bad faith; that no qualifications are adequate for a faculty that does not wish to share the benefits of academic life (Harris, p. 39); and that there can only be change in the kind of people who are asked to join the junior faculty when there has been a change in the kind of people who comprise the senior faculty (Willie, 1975, p. 13). "While there has been much talk of reverse discrimination," Fleming (1975, p. 25) said, "very little evidence has been produced to support such allegations."

Both sides have resorted to the courts for the purpose of obtaining what each believes to signify justice. However, the judicial system thus far has provided no clear direction for universities to follow in meeting their moral or legal obligations with regard to nondiscrimination and affirmative action, and is not likely to be successful in doing so in the near future. Each case will continue to be decided on its own merits.

Based upon the publicity which affirmative action programs have received to date, much of which is incorrect and misleading, applicants of all races and sexes have developed a widespread distrust of all employment decisions. Unsuccessful applicants in increasing numbers are requesting written reasons for their rejection, sometimes upon encouragement by higher education personnel for self-serving purposes. The stigma of being "less qualified" is being attached to minorities and women who have been selected pursuant to traditional higher education screening procedures; interviews, which formerly included questions pertinent to marital status, number of children and employment of spouse to place the applicant at ease, now serve as the basis for the filing of complaints of discrimination; and efforts formerly devoted to developing criteria for employment and promotion are becoming secondary to efforts aimed at documenting all decisions which hopefully will serve to exonerate the members of screening and selection committees from personal liability suits.

Higher education institutions are faced with limited options in their relations with the federal government with respect to nondiscrimination and affirmative action. Despite laments that "affirmative action has come

at a bad time when positions are scarce" (Valentine, 1975), and assertions that on most campuses the prerogative to arbitrarily select its members resides with the "white male club" (Terry, 1974), it is becoming more difficult for these institutions to justify satisfactorily to compliance agencies the retention of the status quo. To forego the receipt of federal financial assistance, as some people have proposed as a panacea for "federal intervention," is not practical in that such assistance comprises approximately 30 percent of many institutions' budgets (Shils quoted by Farnham, 1977). While such a course of action might provide the aura of autonomy for the nurturing of the concept of "academic freedom," there is little question that in so doing there will be fewer academics in the future exercising this freedom. And further, since the development of an affirmative action program can be required as a condition for conciliation subsequent to a finding of discrimination even in the absence of any federal funding, the net effect of such a decision would be to reduce resources and yet acquire the same obligation through a circuitous route.

At this juncture, higher education does not need additional debate on the evils of goals and timetables and their conceivable spin-off--"reverse discrimination." The alleged existence of "over 100 documented cases of discrimination against white males" (Sherman, 1975) is no more proof of discrimination, in fact, than "1,600 cases filed against over 500 institutions of higher education in 1973 on the basis of sex" (Sandler, 1975). In both situations, determinations must be made by competent jurisdictions on the basis of the specifics in each case. If higher education is to

progress more effectively in making its policy of nondiscrimination a reality, it must be guided by more research rather than by rhetoric.

#### Purpose

It is the purpose of this study to conduct a comparative analysis of Black and Caucasian males and females employed by higher education institutions who received their doctoral degree or its equivalent in the years 1973 through 1977.

#### Objective

The primary objective of this study is to determine if the proportions of Black and white doctoral recipients obtaining employment in higher education institutions upon receipt of the degree have changed significantly over the past five years and whether such changes, if any, tend to lend support to allegations of "widespread reverse discrimination" adversely affecting the employment of white males.

#### Scope

This study is limited to Black and white United States citizens who received the Ph.D. degree or its equivalent from all United States colleges and universities between 1973 and 1977 inclusively.

#### Statement of Hypotheses

The general hypotheses tested in the conduct of this study were the following:

### Hypothesis 1

The proportion (percent) of doctoral recipients having definite employment plans upon receipt of the degree has remained the same over the fiscal years 1973 to 1977 despite annual increases/decreases in the total availability pool.

### Hypothesis 2

The definite employment plans of doctoral recipients upon receipt of the degree do not differ significantly by race and/or sex when the years 1973 through 1977 are combined.

### Hypothesis 3

The proportion (percent) of doctoral recipients having definite higher education employment plans upon receipt of the degree has remained the same between 1973 and 1977 despite employment by the nonacademic sector.

### Hypothesis 4

The proportion (percent) of Black and white doctoral recipients having definite higher education plans upon receipt of the degree is unrelated to the race and sex of the recipient when the years 1973 and 1977 are combined.

### Hypothesis 5

The proportion (percent) of Black doctoral recipients reporting definite plans for employment by predominantly Black institutions remained the same between 1973 and 1977 by sex.

Hypothesis 6

The proportion (percent) of Black doctoral recipients employed by predominantly white institutions of higher education is approximately the same as the proportion (percent) of Black doctoral recipients employed by predominantly Black institutions.

Hypothesis 7

The proportion (percent) of representation of doctoral recipients is the same for each racial and sex group in each institutional classification based upon availability when the years 1973 and 1977 are combined.

Hypothesis 8

The percent of doctoral recipients reporting definite employment plans between 1973 and 1977 remains the same in each major responsibility category for each racial and sex grouping.

Hypothesis 9

When all employment years are combined, the proportion of doctoral recipients by primary work activity in higher education institutions remains the same when race and sex are taken as factors.



## CHAPTER II - THE ISSUES IN CONTEXT

## A Review of the Literature

"Reverse discrimination is a misnomer as racial discrimination knows neither a course nor direction. The keystone of a democratic government is the concept of equality...."

— Raess, D.J.

The controversy surrounding the implementation of affirmative action in higher education has escalated during the past seven years to what might be characterized as "the fever pitch level." A substantial commitment of time and effort has been devoted primarily to matters of form rather than substance as real and legitimate progress toward the attainment of employment equality languishes in suspended animation. Precipitating this dilemma has been the issue of "preferential treatment" with the "Bakke case" rising to the fore as the epitome of the injustice perpetrated against scores of Caucasian males by colleges and universities pursuant to federally mandated rules and regulations.

The case of "Bakke v. The Regents of the University of California" (45 LW 2180) was editorialized as a "reverse discrimination" issue. It involved the rejection of Alan Bakke, a Caucasian male, for admission to the freshman medical school class at Davis while minorities, alleged to be less qualified, were admitted through a special admission program voluntarily instituted by the university. Whether Mr. Bakke was in fact "better qualified" than the minorities admitted and was in fact the victim of "reverse discrimination" was never determined with any degree

of accuracy. More alleged "facts" were presented in published articles and letters to the editor on the "real Bakke" case than those contained in the court transcript of prior proceedings. If, as some people concede, we have no accurate way of predicting who will be successful in medicine, law or teaching (Elam, 1977), that at least three quarters of those rejected for medical schools are fully qualified, and if some of the slots in the regular freshman medical class are regularly filled on the basis of friendship and political connections, the issue is perhaps not racism or reverse discrimination, but capriciousness (Margolis, 1977; Farago, 1977).

In commenting on the case of "Bakke" (Change, 1977), George Bonham stated that Americans like to believe that large social issues can be resolved on purely rational grounds by civilized men and women. If rationality were the determining factor, he opines, this nation would never have been led to racism nor its continued maintenance of first and second class citizens, and if human rights and dignity are to be resolved on various procedural grounds rather than on grounds of public morality and public practice, this is tantamount to not resolving the issues at all. If "Bakke" is to be decided on traditionally ascribed standards of merit, "It is a bizarre society," as HEW Secretary Califano observes, "that judges a person's potential for success by the conditions and experiences it has denied to that person by past discrimination" (quoted by Bonham, 1977). This humanistic view was further expressed by Chief Justice Burger in the landmark case of "Griggs v. Duke Power Co."

"Tests," he stated, "are useful servants, but Congress has mandated the common sense proposition that they not become masters of reality" (Griggs v. Duke Power Co., 1970).

The import of "Bakke" is reflected in the attention it has drawn not only to the issue of reverse discrimination but to the more underlying problem of systemic discrimination. Barriers have been erected in the system, sometimes unintentionally, which have led to the exclusion of women and minorities, thereby creating a substantial preference for white males regardless of their relative qualifications in comparison with women and minorities. While some opponents of affirmative action maintain that "colleges were doing a fine job of adding minorities until the federal government butted in" (Gross, 1976), advocates maintain that colleges did the best job of exclusion dating from pre-civil war days, and that "today's minorities are on campus because of equal opportunity policies which they forged for themselves" (Weinberg, 1975). In 1974, approximately one half of all B.A. degrees awarded to Blacks were earned at Black institutions (Lockett and Simpkins, 1977). While the Black enrollment in predominantly white institutions is said to be increasing, the graduation rate remains stagnant. This phenomenon has led one advocate to question whether there is in fact an "academic melting pot" (Wuthnow, 1977).

Inasmuch as white males have controlled access and have derived the benefits therefrom, affirmative action programs such as the Davis special admissions program are perceived to be designed not to establish preferential treatment for women and minorities but rather to eliminate the

institutional barriers that women and minorities now encounter in seeking access, and to redress the historic imbalance favoring the white males in the market (U.S. Commission on Civil Rights, 1973).

The long-awaited Supreme Court opinion which was rendered in this case was not the landmark decision to serve as the "be-all" and "end-all" with regard to the issue of "preferential treatment" as had been anticipated. Instead, the ruling provided something for both opponents and proponents of affirmative action programs to cheer as a victory. In two 5 to 4 majority opinions, with Justice Powell providing the majority vote on each instance, the majority held that Bakke was illegally denied admission to the Davis Medical School and was ordered admitted, but also that race could be considered in determining an institution's admission policy (Labor Law Reports, 1978). How much weight can be given to race when considered along with other factors in determining which among the applicants are to be admitted to professional schools has been left unanswered. This decision provides insufficient guidance to assure immunity from subsequent charges of this nature.

Each situation will by necessity be judged on its own merits. Institutions which wish to take affirmative action because of their commitment to its concept will continue to make progress in this regard; those which are adverse to it will continue to maintain the status quo until forced to do so under threat of economic sanctions. In any event, there is little evidence at this time that the federal civil rights enforcement mechanism will be dismantled in the near future. Instead, efforts are being made to eliminate duplication among the various federal

civil rights agencies through consolidations to render their enforcement more efficient (The President's Reorganization Plan No. 1 of 1978).

Prior to the "Bakke case," the major criticism of affirmative action programs focused upon goals and timetables with respect to academic employment. This is still considered to be the primary emphasis of affirmative action critics who believe that their attainment must by necessity entail preferential treatment in favor of minorities and females. This view was expressed by Richard Lester in his book entitled Anti Bias Regulation of Universities (1974) wherein he made the observation that "in today's market, it is good to be Black, valuable to be a woman and bad luck to be a white male." To support this contention, Lester cited a study conducted by David Rafky in 1969 disclosing that Blacks averaged 3.1 job offers while whites received only 1.5 offers, and that in those cases where Blacks had received their degrees from prestigious institutions and had publication records, the ratio was 4 to 1.

The offering of a position to Blacks does not necessarily denote "good faith" even though at face value this would appear to be the case. Many institutions have been advised by HEW regional offices to obtain letters from minorities and women who reject offers in support of their "good faith efforts" where they have failed to achieve their established goals. This approach, however, will not necessarily mitigate against offering a woman or a Black a position at a lower salary than he or she is already earning and upon rejection of the offer, to raise the salary when it is offered to a white male, if the institutions wishes to operate in "bad faith."

Even assuming that this disclosure did evince good faith, Lester nevertheless failed to elaborate further on the findings of this study. Rafky (1971) also disclosed that 20 years prior to his study in 1968-69, 19 percent of the Blacks were invited to accept their first position as opposed to 11 percent of the whites. But in 1968-69, this situation had reversed wherein 30 percent of the whites were invited to accept their first positions while such offers to similarly qualified Blacks had decreased to 6 percent. The study further concluded that although whites were "better qualified" than Blacks, the Blacks were more likely to be at elite colleges, were relegated to the lower ranks, untenured, and more often having partial duties related to disadvantaged individuals and programs (Rafky, 1971).

The fact that the Blacks studies by Rafky received a higher number of job offers than a similarly qualified number of whites may not be particularly meaningful in that there were fewer qualified Blacks to approach than whites. A sample of 699 Blacks represents a much higher percentage of the universe than a similar number of whites. Opponents of goals and timetables have consistently lamented the limited number of Blacks in the "qualified" pool which they attribute to their inability to attain established goals. Under such circumstances it is understandable that the number of job offers to qualified Blacks would exceed those offered to whites proportionately.

Complaints which are sometimes lodged by predominantly white institutions failing to achieve hiring goals is that they are unable to attract more women and minorities because they do not know how to reach them,

To support these contentions, some have established recruitment and monitoring systems by which to measure progress. Whether these systems or mechanisms are effective in determining if and what extent discrimination is actually taking place in recruitment and selection is a matter of conjecture at this time and will require further screening.

In an overt effort to seek out and employ members of minority groups and women, colleges and universities have expanded their recruitment network to include personal and written communications to women and minority institutions, caucuses, organizations, and newspapers in addition to the listing of job vacancy announcements in professional journals, academic departments and at professional association conferences. An example of this increased advertisement can be discerned from the growth of the Chronicle of Higher Education which has increased from a four-page newspaper in 1968 to approximately 30-40 pages today. In addition to these announcements, institutions use various methods to elicit such information from applicants as race, sex, age, source in which announcement was cited and others to determine to what extent members of these groups are being reached. Some have developed forms to be sent to applicants for completion prior to a determination of the successful applicant with instructions that they be returned to the affirmative action/equal opportunity office, as is done by Iowa State University.

On the forms used by this institution which are submitted to applicants for completion, a notation is placed thereon which describes the purpose for which the data is being requested and indicating that their

completion and return is optional. It is not a rare occasion for an institution to receive no returns to a particular announcement or to receive as low as 10 percent on others. Under such circumstances it is almost impossible to determine if women or minority groups are in fact perusing the announcements and simply electing not to return the forms. At a major higher education institution, there could be as many as 20 different screening committees functioning at the same time which would preclude the actual monitoring of the process in each instance. Thus great reliance must be placed upon "good faith" with in-depth reviews conducted pursuant to complaints.

In an effort to test the "good faith" of higher education institutions with regard to affirmative action, Silvestri and Kane (1975) conducted an unobtrusive study of higher education recruitment practices to determine if and to what extent institutions placing job vacancies would respond to individuals placing ads for positions. In this study, two sets of fictitious ads were placed in the Chronicle of Higher Education indicating "positions wanted" in administration. One set, including white and Black females separately, was placed with each having seven years of administrative experience. A second ad was placed indicating one year of experience.

Of the 230 vacancies announced in the applicable issue of the "Chronicle," 140 were for administrative positions. Records of inquiries received disclosed that for the ads indicating seven years of experience, the Black female received three inquiries; the Black male, two; the white



female, two; and the white male, none. In response to the ad indicating one year's experience, the inquiries were as follows: Black female, two; Black male, two; white female, one; white male, none. From these results the authors concluded that although the institutions designated themselves as "equal opportunity/affirmative action employers," few were willing to expend the extra effort to make the necessary contacts.

While this study raises some questions relative to the "good faith" recruitment practices of higher education institutions in seeking out qualified women and minorities, it must, nevertheless, be viewed as limited. As examples, it does not answer the question relative to the actual number of women, minorities and white males who actually made applications for the positions; the number from each group employed; or whether the persons, if not fictitious, might have subsequently applied in addition to announcing availability and have been employed.

A further study of higher education recruitment and hiring practices was conducted, again using the Chronicle of Higher Education as the source. In this study, 72 positions of 125 deans, associate deans, vice presidents and provosts advertised in seven issues of The Chronicle between January 31 and March 7, 1977, were selected for analyses. Nine months after the positions were announced, letters and brief questionnaires were mailed to the incumbents in the positions.

Based upon a 97 percent return, the data revealed that all of the institutions persistently drew only from the traditional pool of candidates; all except one hired individuals from within academia.

No new patterns of occupational mobility, no marked geographical movement and no significant mobility among types and categories of higher education institutions were observed.

The findings of this study further disclosed that the newly mandated hiring programs have not completely offset the traditional hiring practices of colleges and universities. Seventy-six percent of the institutions in the sample advertised nationally and at the same time invoked the "old boy" practice, and only 24 percent of the time were senior level positions filled by individuals who applied directly for the position without any prior connections with the institution or the individuals doing the hiring. Over half of all jobs and over half of the jobs filled by those who did not directly respond to job notices went to individuals already at the employing institutions, following a national search (Socolow, 1978). This study tends to obviate Lester's inferences of preferential treatment to Blacks over whites and instead points more to the maintenance of the status quo.

The prediction that goals and timetables will lead to the preferential hiring of women and minorities is of dubious validity at this time. If and to the extent that they lead to quotas, contrary to federal interpretations of existing guidelines (Holmes, 1974; EEOCC, 1976), they are believed to be operating in favor of white males (Scruggs, 1977). At one large university, hiring goals were reportedly established by using minority availability data based upon their representation in prestigious schools, rather than upon the broader availability pool,

to reduce the level of underutilization for departmental hiring. Once these contracted goals were reached, and no minorities already employed had been lost, the subsequent pursuit of minorities was allegedly abandoned even to the point of reducing advertising (Steele and Green, 1976). Reports of this nature tend to indicate that this university and perhaps others have engaged in the practice of quota hiring contrary to their professed abhorrence of such practices.

Some progress has been assessed in the hiring of minorities and women on specific campuses (Marcus, 1977; Maca, 1976), but this progress is exhibited for the most part in higher education employment at the lower levels. A 1976 study of 600 four-year institutions, conducted by the American Association of University Women (AAUW) revealed that there had been no gains made by women since 1973 in holding top level administrative positions or tenured faculty positions in either private or public higher education institutions (Fields, 1978).

In the administrative hierarchy, 6 percent of the presidents and 5 percent of the chief business officers were women, the same proportion as in 1973, in the institutions studied. The study further disclosed that of the chief academic officers, 12 percent were women, up 3 percent, and 8 percent of the development officers were women, up 2 percent.

The advancement of women in the faculty showed a similar movement. Women were found to hold 16 percent of all tenured positions, up one half of one percent since 1973. Clustering of women still occurred at the lower professional ranks. Women in 1976 held only 8 percent of the

full professorships, 16 percent of the associate professorships, but 49 percent of the instructors' positions and 37 percent of the lecturers' slots. These findings were summarized by Marjorie Bell, president of AAUW, as "change without progress" (Fields, 1978).

In a more comprehensive survey conducted for the College and University Personnel Association (CUPA), the representation of Blacks and women was assessed in 18,035 full-time administrative positions at 1,037 higher education institutions. For purposes of this survey, institutions were separated into four categories: predominantly white co-educational institutions; white women's colleges; white men's colleges; and minority institutions. These institutions were further divided by sector (public and private) and by educational mission using five Carnegie classifications.

Based upon the findings of this survey, of the 18,035 full-time administrators, 79 percent were white men; 14 percent were white women; minority men, 5 percent; and minority women, 2 percent. At predominantly white coeducational institutions, white men held 96 percent of the chief administrative positions and 83 percent of all positions covered in the study. At white men's colleges, 88 percent were held by white men; approximately 67 percent at women's colleges; and 10 percent at minority colleges.

Approximately one-half of the minority administrators in the survey were employed in the 36 minority participating institutions; the other one-half were employed in 1001 white institutions. Under 10 percent of

the women were employed in 40 women's colleges and almost 90 percent were employed in 976 white and minority coeducational institutions. Only 10 percent were employed in 21 men's colleges.

Both women and Blacks tended to be concentrated in a smaller group of jobs. The study revealed that one-half of the women were concentrated in 7 of 52 positions whereas one-half of the minorities were concentrated in five positions. Only one of the administrative positions out of the 52 had a sizeable representation of all four races and sex groups. This position--affirmative action/equal opportunity officer--was comprised of 20 percent white males; 33 percent minority males; 31 percent white females; and 16 percent minority females (VanAlstyne, Mensel, Withers, and Malott, 1977; VanAlstyne, Withers, and Mensel, 1977).

In the various salary analyses which have been recently conducted, women and minorities have received lower salaries than their white male counterparts in all similar positions. The CUPA study disclosed that women and minorities were paid about 80 percent of the going rate for white men in administrative positions, whereas the findings in the AAUW study indicated that women were paid lower than men in faculty positions at all ranks. These findings have been supported, with minor deviations, by various other studies assessing the import of race and sex upon higher education employment (Ferber and Westmiller, 1975; Cassara, 1978; Centra, 1975; Magarrell, 1978).

Whether one supports or opposes affirmative action requirements in higher education as a national policy, the evidence appears to be

clear that colleges and universities have made only minor efforts to actually implement federal requirements (Fishel, 1976). While new structured systems have emerged for accountability, no major changes have been observed in factors particularly discriminatory to the hiring of women and minorities (Hermes, 1976). There has been little or no association between goal setting and achievement in hiring parity (West, 1976). The limited progress exhibited thus far has elicited concurrence from advocates and adversaries alike that the affirmative action program is in need of improvement (Friesen, 1976) to overcome deficiencies related to staff, research data, institutional support, stability of rules, budget and government enforcement (Martin, 1976). Some advocates have ventured further to hypothesize that the only way for meaningful progress to occur is via the so-called "reverse discrimination" process (Hamblin, 1976; Solomon and Heeter, 1977).

Charges that the federal agencies, particularly the Office for Civil Rights, have been less than enthusiastic in their enforcement tend to be supported by the facts which would tend to obviate any counter allegations of widespread use of high-handed tactics by "unelected federal bureaucrats" (Todorovich, 1975).

Based upon the U.S. Civil Rights Commission's report on "The Civil Rights Enforcement Effort-1977" (1977), as late as 1974 compliance agencies did not have an effective method of identifying federal contractors, no effective reporting system by which the Office of Federal Contract Compliance, the oversight agency, could determine whether

conciliation agreements were being adhered to or even what they entailed.

In this 1977 report, the Department of Health, Education and Welfare's Office of Civil Rights (DHEW-OCR) was cited as one of three federal compliance agencies having a poor compliance record. Reportedly the record of this office nationally disclosed extensive periods of negotiation with higher education institutions in an effort to effect compliance with the basic affirmative action guidelines as they related to the submission of an acceptable affirmative action plan. Such negotiations allegedly consumed four years at the University of California at Berkeley, four years at the Universities of Washington and Michigan, and three years at Harvard. As of August 1977, DHEW-OCR had found 13 higher education institutions in compliance, or 1.6 percent of the total covered by the executive order; 7 had received interim acceptance; of 214 submitted plans, 14 were rejected, 200 were awaiting action; and 700 campuses had not yet submitted such plans. In none of these instances was federal funding terminated.

Between 1975 and 1977, only five contractors had been debarred from receiving federal contracts, two of which were debarred in 1977. During this year, two contractors were awaiting an administrative law judge's decision and a final administrative determination by OFCCP--one by HEW in 1976 and one in 1977--none of which were colleges. As of July 1977, six contractors were awaiting an administrative hearing, the report stated.

Based upon this enforcement record and the progress made by higher education institutions in complying with affirmative action good faith effort requirements, the program has been described as "an illusion" (Gittell, 1975) and as "the finest piece of distraction that a white middle class mentality has conceived since the doctrine 'separate but equal'" (Gonzales, 1975). Perhaps the most scathing attack against higher education and the enforcement agencies to date has been launched by John Reilly in his article written for the Forum, entitled "The Function of Equal Opportunity and Affirmative Action in Higher Education" (1978).

Reilly perceives higher education's approach to equal opportunity and affirmative action as mercenary and restrictive in that it allegedly strives to do the least and gain the most. He maintains that the need to disguise discriminatory practices enhances the methods used by higher education which become more elaborate. He extracts lines from Shakespeare's MacBeth to describe federal enforcement agencies as "a poor player that struts and frets its hours upon the stage and then is heard no more...full of sound and fury signifying nothing." And of affirmative action officers, he had the following to say:

"...(their) greatest hazard...is self-deception...to avoid these pitfalls...they need only to apprehend their true positions within the vast corporate and political scheme of which academe is an extricable part. They are employed to be window dressers--not



to right the wrongs but to make the wrongs look right. They are the sentinels of the status quo, the spooks who sit by the door to convey the impression that all is well within. Their jobs are not to defer acts of discrimination, but to deter complaints of discrimination..."

The criticisms which have been advanced with respect to the implementation and enforcement of the affirmative action program in higher education have not been totally without merit. Current rules and regulations are open to different interpretations and as such, have led to bickering among the various enforcement agencies with pendant jurisdiction; higher education institutions have had to submit multiple affirmative action plans for approval due to changes in rules and/or their interpretation; implementing affirmative action programs are costly; and there are in fact fewer minorities and females in the qualified pool of doctorate holders. In spite of these truisms, the continuous filing of complaints tends to indicate that there is a problem in higher education with respect to the employment of minorities and women and in their treatment after employment. While there has been much discussion of the issues of widespread reverse discrimination, the evidence in support of this allegation has not yet been presented.

Most of the research conducted to date has focused on such aspects of affirmative action as faculty and administrator's attitudes towards affirmative action, the impact of collective bargaining and programs

of affirmative action on the role of higher education personnel officers (Persson, 1976), the impact of change due to affirmative action in clusters of institutions (Haycock, 1976), Afro-American manpower (Gatewood, 1975), and others previously mentioned. No studies have been discerned during the review of the literature on this subject which deals with the proportionate employment of new doctorate recipients nationwide by race and sex. It is this area toward which this research is directed.

## CHAPTER III - RESEARCH PROCEDURES

## Population

The population used for the purpose of the study includes all Black and white native-born United States citizens who were awarded the doctorate degree in the United States between years 1973 and 1977 inclusively. Data for purposes of this study were secured from the National Research Council (Washington, D.C.). From these data the following tables were derived:

Table 1

Postdoctoral Employment and Study Plans of Doctoral Recipients (Blacks and whites who are native-born U.S. citizens only) in fiscal years 1973-1977 by sex (percent of total responses).

Table 2

Field of Doctoral Degree of Recipients (Black and white who are native-born U.S. citizens only and who have definite employment plans) in fiscal years 1973-1977 by type of employment and by sex (percent of total responses).

Table 4

Higher Education Institutions Employing Doctoral Recipients (Black and white who are native-born U.S. citizens only and who have definite employment plans) in fiscal years 1973-1977 by sex, Carnegie Classifications and primary work activity (percent of total responses).

Table 5

Number of Predominantly Black Institutions Employing Doctoral Recipients by Race and Sex, 1973-1977.

Table 6

Number of Predominantly White Institutions Employing Black Doctoral Recipients, 1973-1977.

#### Source of Data

These data were obtained from the Doctorate Records file of the Commission on Human Resources of the National Research Council. The Doctorate Records file contains responses to questionnaires completed by virtually all individuals who have earned doctorates in all fields in the United States from 1958 to the present.

The survey of earned doctorates from which this file is compiled provides information on the educational history, background data and plans of degree recipients at the time the degree was awarded. It includes research doctorates in all fields and applied research doctorates such as Doctor of Education, Doctor of Arts, Doctor of Musical Arts and Doctor of Engineering, but excludes such professional degrees as Doctor of Medicine, Doctor of Dental Science and Doctor of Veterinary Medicine.

#### Data Collection and Limitations

The survey questionnaire of earned doctorates is administered to all graduates completing the requirements for the doctorate degree by the awarding graduate schools. Due to the use of obsolete forms by some

institutions, some questions are reported as "unknown" which fail to produce total responses in all cases. To compensate for this weakness, only reported responses have been included in this study with no attempts being made to assume random distribution for allocation among the categories used.

### Research Methods

No attempt has been made to utilize all of the data which was obtained for the purpose of this study due to time constraints and other considerations. Instead, only four areas have been selected for comparative purposes. These areas include:

- 1) General Employment Plans of Doctoral Recipients: 1973-1977
- 2) General Higher Education Employment Plans of Doctoral Recipients: 1973-1977
- 3) Higher Education Employment Plans of Doctoral Recipients by Types of Institutions
- 4) Higher Education Employment Plans of Doctoral Recipients by Major Responsibilities

Throughout this study, attempts have been made to determine in each of these areas whether significant proportionate changes have occurred between 1973 and 1977 for each study group (white males, Black males, white females, and Black females), and whether such changes are related to race and/or sex. Hypotheses 1 through 9 have been tested in each of these study groups.

The chi square ( $\chi^2$ ) parametric statistic was used throughout this study for analyzing the research findings. The data utilized for comparative purposes are in the form of frequency counts and set forth in tables by observed and expected frequency counts with the expected counts being included in parentheses. Where percentages are calculated they have been also enclosed by parentheses. The asterisk (\*) following the chi square values in the tables denotes significant differences.

## CHAPTER IV - RESEARCH FINDINGS AND ANALYSES

## Employment Plans of Doctoral Recipients by Race and Sex

The findings of this research have been presented in this Chapter under the following four major headings: General Employment Plans; General Higher Education Employment Plans; Higher Education Employment Plans by Types of Instruction; and Higher Education Employment Plans by Major Responsibilities.

## General Employment Plans

Between 1973 and 1977 United States institutions of higher education awarded 129,182 doctoral degrees in all fields of study to United States native-born citizens. Seventy-seven (77) percent of the total degrees awarded were received by male and 23 percent by females. The number and percentage of degrees awarded when assessed by race/ethnicity and sex can be discerned from Table 1.

Table 1. Number and Percentage of Doctoral Degrees Awarded to Native-Born United States Citizens in all Fields of Study Between 1973 and 1977, by United States Higher Education Institutions and by Race and Sex.

Race	Sex		Total
	Male	Female	
Whites	86,067 (86.3)	25,271 (75.7)	111,338
Blacks	2,929 (2.9)	1,601 (5.4)	4,530
Other Minorities	10,706 (10.7)	2,608 (8.8)	13,314
Total	99,702	29,480	129,182

Of the total number of Blacks and whites receiving doctoral degrees during this five-year period, 95,239 (74 percent) were reportedly seeking employment or had definite employment plans upon receipt of the degree. Those reporting definite postdoctoral study plans, seeking postdoctoral study, and no postdoctoral plans totalled 33,943 (26 percent).

The available employment pool of doctoral recipients having definite employment plans and those seeking employment increased slightly over this period for each group. White males increased from 13,255 in 1973 to an average of 14,274 or 1.1 percent over the next four years (Table 2). The peak year for this group was 1974 with gradual declines over the next three years reaching a new low in 1977. Black males increased in 1974 and 1975, remained at the 1975 level in 1976 and increased again in 1977 reaching a new high (Table 3). The increase for this group was approximately 1.5 percent from 376 in 1973 to an average increase of 560. The number of white female doctoral recipients increased in 1974 and 1975, reached its highest level in 1976 and gradually declined in 1977 (Table 4). The average increase over the 1973 level from 3,123, to approximately 4,432 was 1.4 percent. Black female doctoral recipients increased annually between 1973 and 1976 and decreased over the 1976 level in 1977 (Table 5). The increase for this group was 2.4 percent, up from 133 in 1973 to an average of 323 over the next four years.

In order to determine if the above annual fluctuations impacted significantly upon the proportions of those having definite employment



plans and those seeking employment upon receipt of the degree, Hypotheses 1 was tested with each study group (Black males, Black females, white males, white females).

Hypothesis 1: There was no significant change in the porportion (percent) of doctoral recipients having definite employment plans upon receipt of the degree during the years 1973-1977 despite the annual increases/decreases in the total availability pool.

For white male doctoral recipients, this hypothesis must be rejected as the proportion did change significantly during the years 1973-1977 as reported in Table 2.

Table 2. Postdoctoral Employment Plans of White Male Doctoral Recipients: 1973 to 1977

Employment Plans	Year of Degrees					Total
	1973	1974	1975	1976	1977	
Definite	10,547 (10,234)	11,723 (11,608)	11,482 (11,451)	10,823 (11,003)	9,744 (10,022)	54,319
Seeking	2,708 (3,021)	3,311 (3,426)	3,349 (3,380)	3,428 (3,248)	3,236 (2,958)	16,032
Total	13,255	15,034	14,831	14,251	12,980	70,351
	$X^2 = 94.127^*$		alpha 05,4 d.f. = 9.488			

The number of white male doctoral recipients having definite employment plans upon receipt of the degree reached its peak in 1974 and was followed by decreases annually over the next three years. The years representing the most significant changes with regard to the number of white males in this survey group seeking employment and those reporting

definite employment plans were 1973 and 1977. Approximately 80 percent of the new doctoral recipients reported definite employment plans upon receipt of the degree in 1973 while only 75 percent reported such plans in 1977. The changes during the interim years were not significant.

Black male doctoral recipients having definite employment plans increased by an overall average of 49 percent. However, no changes in proportions were observed. In 1973, the ratio of those having definite employment to those seeking employment was approximately 72.1 percent. By 1977 this percentage increased approximately 1 percent. The increases in fluctuation during any year of this time period was on the average not found to be significant. The observed and expected frequencies used in the test of significance for this group are presented in Table 3.

Table 3. Postdoctoral Employment Plans for Black Male Doctoral Recipients: 1973 to 1977

Employment Plans	Year of Degree					Total
	1973	1974	1975	1976	1977	
Definite	271 (272)	382 (366)	405 (414)	405 (414)	426 (423)	1,889
Seeking	105 (104)	125 (141)	168 (159)	168 (159)	160 (163)	726
Total	376	507	573	573	586	2,615
	$\chi^2 = 4.015$		alpha 05,4 d.f. = 9.488			

White female doctoral recipients having definite employment increased numerically during the period by approximately 42 percent. This increase,

as with the Black male recipients, did not affect the proportionate relationship. Approximately 68 percent of the available female labor pool had definite employment plans in 1973; approximately 68 percent also had such plans in 1977 with no significant proportionate changes being evinced during the intervening years (see Table 4).

Table 4. Postdoctoral Employment Plans for White Female Recipients: 1973 to 1977

Employment Plans	Year of Degree					Total
	1973	1974	1975	1976	1977	
Definite	2,107 (2,107)	2,561 (2,568)	3,046 (3,025)	3,174 (3,201)	3,176 (3,163)	14,064
Seeking	1,016 (1,016)	1,246 (1,239)	1,438 (1,459)	1,572 (1,545)	1,513 (1,526)	6,785
Total	3,123	3,807	4,484	4,746	4,689	20,849
	$\chi^2 = 1.371$		$\alpha 05, 1 \text{ d.f.} = 9.488$			

When an analysis was made of the employment plans of Black female doctoral recipients, this group was found to have increased numerically by 137 percent over the five-year period. However, in spite of this large increase, this group still experienced a proportionate decrease over 1973 by approximately 4 percent; down from 70 percent in 1973 to 66 percent in 1977. This decrease, however, was not found to be significant as reported in Table 5.

Table 5. Postdoctoral Employment Plans for Black Female Doctoral Recipients: 1973 to 1977

Employment Plans	Year of Degree					Total
	1973	1974	1975	1976	1977	
Definite	93 (91)	152 (157)	220 (213)	267 (262)	243 (252)	975
Seeking	40 (42)	78 (73)	91 (98)	115 (120)	125 (116)	449
Total	133	230	311	382	368	1,424
	$X^2 = 2.692$		alpha 05,4 d.f. = 9.488			

In observing the trends of employment plans for all four groups of doctoral recipients, a further test was conducted to determine if race and/or sex were significant factors in employment when all years were combined. In other words, was a higher proportion of one study group reporting definite employment plans in relation to its representation in the total pool than another indicating a preference or tendency based upon race or sex.

To test for significant differences in definite employment plans, Hypothesis 2 was first applied for the four groups together by race and sex, and subsequently by race and sex groupings separately.

Hypothesis 2: The definite employment plans of doctoral recipients do not differ significantly by race and/or sex when the years 1973 through 1977 are combined.

When all groups combined were tested against this hypothesis by race and sex as shown in Table 6, a significant difference was found to exist indicating that the definite employment plans of doctoral recipients do tend to differ significantly by race and sex.

Table 6. Postdoctoral Employment Plans of Doctoral Recipients  
by Race and Sex: 1973 to 1977 Combined

Employment Plans	Doctoral Recipients by Race and Sex				Total
	White		Black		
	Male	Female	Male	Female	
Definite	54,319 (52,629)	14,064 (15,597)	1,889 (1,956)	975 (1,065)	71,247
Seeking	16,032 (17,722)	6,785 (5,252)	726 (659)	449 (359)	23,992
Total	70,351	20,849	2,615	1,424	95,239
	$\chi^2 = 850.848^*$		alpha 05,3 d.f. = 7.815		

Seventy-seven (77) percent of the white male doctorate recipients available for employment had definite employment plans upon receipt of the degree when all years are combined. This contrasted with 67 percent for white females, 72 percent for Black males and 68 percent for Black females.

When similar tests were conducted among groups having definite employment plans on the basis of race, white doctoral recipients exhibited a significant difference in the proportion having definite employment plans, 75 percent, as compared to Black doctoral recipients with 71 percent. The summary of the data tested for significance for these racial groups is presented in Table 7.

Table 7. Postdoctoral Employment Plans for Doctoral Recipients by Race: 1973 to 1977 Combined

Employment Plans	Doctoral Recipients by Race		
	White	Black	Total
Definite	68,383 (68,225)	2,864 (3,022)	71,047
Seeking	22,817 (22,975)	1,175 (1,017)	23,992
Total	91,200	4,039	95,239
	$\chi^2 = 34.261^*$ alpha 05,1 d.f. = 3.841		

A significant difference in definite employment plans was also observed when males were tested against females as shown in Table 8. In this test 77 percent of the males had definite employment plans compared to 68 percent for females.

Table 8. Postdoctoral Employment Plans for Doctoral Recipients by Sex: 1973 to 1977 Combined

Employment Plans	Doctoral Recipients by Sex		
	Male	Female	Total
Definite	56,208 (54,585)	15,039 (16,662)	71,247
Seeking	16,758 (18,381)	7,234 (5,611)	23,992
Total	72,966	22,273	95,239
	$\chi^2 = 819.942^*$ alpha 05,1 d.f. = 3.841		

When definite employment plans of white males were tested against Black males as shown in Table 9--77 percent of the white males had definite employment plans in contrast to 72 percent for Black males.

Table 9. Postdoctoral Employment Plans of Male Doctoral Recipients by Race: 1973 to 1977 Combined

Employment Plans	Male Doctoral Recipients by Race		
	Black	White	Total
Definite	1,889 (2,014)	54,319 (54,194)	56,208
Seeking	726 (601)	16,032 (16,157)	16,758
Total	2,615	70,351	72,966

$\chi^2 = 35.011*$       alpha 05,1 d.f. = 3.841

Among Black doctoral recipients, Black females reported a lower percentage (68 percent) having definite employment plans upon receipt of the degree than Black males (72 percent). This percentage difference was found to be significant as reflected by Table 10.

Table 10. Postdoctoral Employment Plans of Black Doctoral Recipients by Sex: 1973 to 1977 Combined

Employment Plans	Black Doctoral Recipients by Sex		
	Males	Females	Total
Definite	1,889 (1,854)	975 (1,010)	2,864
Seeking	726 (761)	449 (414)	1,175
Total	2,615	1,424	4,039

$\chi^2 = 6.443*$       alpha 05,1 d.f. = 3.841

No significant differences were found to exist when analyses were conducted with females on the basis of race as shown in Table 11. The proportions for these groups were 67 percent for white females and 68 percent for Black females.

Table 11. Postdoctoral Employment Plans of Female Doctoral Recipients by Race: 1973 to 1977 Combined.

Employment Plans	Female Doctoral Recipients by Race		
	Black	White	Total
Definite	975 (962)	14,064 (14,077)	15,039
Seeking	449 (462)	6,785 (6,772)	7,234
Total	1,424	20,849	22,273

$\chi^2 = .579$       alpha 05,1 d.f. = 3.841

In Table 12, a significant difference in definite employment plans was observed to the advantage of the white male doctoral degree recipient (77 percent) when compared with white females (67 percent).

Table 12. Postdoctoral Employment of White Doctoral Recipients by Race: 1973 to 1977 Combined

Employment Plans	White Doctoral Recipients by Sex		
	Males	Females	Total
Definite	54,319 (52,750)	14,064 (15,633)	68,383
Seeking	16,032 (17,601)	6,785 (5,216)	22,817
Total	70,351	20,849	91,200

$\chi^2 = 815.968^*$       alpha 05,1 d.f. = 3.841



The data derived from the preceding analyses tend to indicate that while white male doctoral recipients having definite employment plans upon receipt of the degree have experienced the most significant decreases during this period, this group, nevertheless, continues to enjoy a significant advantage when compared with the availability of all other groups in the study. In comprising approximately 74 percent of the total available pool, 76 percent of its members reported definite employment plans for filling the available positions for which commitments have been made.

Female doctoral recipients comprise approximately 22 percent of the pool and have definite employment plans for 20 percent of the available positions.

The proportions for Black male and female doctoral recipients in the pool and those having definite employment plans are approximately the same. Black males represent approximately 3 percent of the pool and 3 percent reported definite employment plans. The ratio for Black females was 1.5 percent and 1.4 percent respectively.

#### Higher Education Employment Plans

During the period of this study, 71,153 doctoral recipients reported definite employment plans by various types of employers. Among these employers were four year colleges and universities, junior colleges, elementary and secondary schools, foreign governments, the United States federal Government, state and local governments, nonprofit

organizations, business and industry, self employment and others. Of this total, however, over one-half (61 percent), or 43,429 of the recipients, reported definite employment plans with regard to higher education. Those reporting such plans in higher education by race and sex were as follows: white males, 31,512 (73 percent); white females, 9,959 (23 percent); Black males, 1,261 (3 percent); and Black females, 697 (2 percent).

In an effort to determine the impact of employment of doctoral recipients by nonhigher education entities upon higher education institutional employment, two hypotheses were tested with each study group for this purpose. The first of these was formulated as Hypothesis 3.

Hypothesis 3: There was no significant change in the proportion (percent) of doctoral recipients reporting definite higher education employment plans during 1973 - 1977 despite employment by the non-academic sector.

Higher education institutions, as used in this context, included all four-year colleges and universities and two-year colleges combined to obtain a single total for comparisons.

In testing this hypothesis using white males only as shown in Table 13, the overall changes in higher education employment for the five year period were found to be significant. The proportion of white males reporting definite higher education employment plans in 1973 was 61 percent. This percentage decreased to 55 percent in 1977. With the exception of 1974 in which members of this group reported significant increases in non-higher education employment and during 1973 and 1977, changes for the two other years were not significant.

Table 13. White Male Doctoral Recipients Reporting Definite Employment Plans by Year and Type of Employer: 1973 to 1977

Type of Employer	Year of Employment Plans					Total
	1973	1974	1975	1976	1977	
Higher Education	6,452 (6,121)	6,959 (6,803)	6,530 (6,654)	6,195 (6,276)	5,376 (5,658)	31,512
Non-Higher Education	4,060 (4,391)	4,723 (4,879)	4,897 (4,773)	4,582 (4,501)	4,341 (4,059)	22,603
Total	10,512	11,682	11,427	10,777	9,717	54,115
	$\chi^2 = 93.097^*$		alpha 05,4 d.f. = 9.488			

The changes which occurred when this hypothesis was tested with white females only were also found to be significant. Members of this group reported a proportionate increase of approximately 2 percent in 1974 (75 percent) over 1973 (73 percent) and a decrease by approximately 8 percent in 1976 to 65 percent. The overall decrease for members of this group during this period was approximately 3 percent from 1973 when the four years were totalled and averaged for the four succeeding years (70 percent). The test of significance for these overall changes can be discerned from Table 14.

Table 14. White Female Doctoral Recipients Reporting Definite Employment Plans by Year and Type of Employer: 1973 to 1977

Type of Employer	Year of Employment Plans					Total
	1973	1974	1975	1976	1977	
Higher Education	1,539 (1,470)	1,901 (1,788)	2,153 (2,120)	2,200 (2,360)	2,166 (2,221)	9,959
Non-Higher Education	557 (626)	647 (760)	869 (902)	1,164 (1,004)	999 (944)	4,236
Total	2,096	2,548	3,022	3,364	3,165	14,195
	$\chi^2 = 77.418^*$		alpha 05,4 d.f. = 9.488			

Black male doctoral recipients having definite higher education employment plans exceeded the 1973 level numerically in all succeeding years, but at the same time registered a percentage decrease of approximately 4 percent, from 71 percent in 1973 to an average of 67 percent for the remaining years. The overall decrease, however, was not found to be significant, nor were there any significant changes observed in any given year with regard to proportionality over 1973 (see Table 15).

Table 15. Black Male Doctoral Recipients Reporting Definite Employment Plans by Year and Type of Employer: 1973 to 1977

Type of Employer	Year of Definite Plans					Total
	1973	1974	1975	1976	1977	
Higher Education	191 (181)	266 (255)	270 (271)	258 (269)	276 (285)	1,261
Non-Higher Education	78 (88)	112 (123)	132 (131)	142 (131)	147 (138)	611
Total	269	378	402	400	423	1,872
	$\chi^2 = 4.509$		alpha 05,4 d.f. = 9.488			

When the test was applied to Black female doctoral recipients, as can be gleaned from Table 16, the changes which occurred, as with the Black male, were determined to be insignificant despite an overall average proportionate decrease of approximately 5 percent, down from 77 percent in 1973 to an average of 72 percent.

Table 16. Black Female Doctoral Recipients Reporting Definite Employment Plans by Year and Type of Employer: 1973 to 1977

Type of Employment	Year of Employment Plans					Total
	1973	1974	1975	1976	1977	
Higher Education	72 (67)	114 (109)	153 (156)	188 (190)	170 (173)	697
Non-Higher Education	21 (26)	38 (43)	64 (61)	80 (75)	71 (68)	274
Total	93	152	217	265	241	968
	$\chi^2 = 3.000$		alpha 05,4 d.f. = 9.488			

As can be gleaned from the above data, all groups studied exhibited a percentage decline in definite higher education employment plans, however, those for both Black males and females were determined to be insignificant. Of all the groups, however, only the white male group as indicated during 1977 decreased numerically in such plans below the 1973 level.

In observing the above percentage decreases for each of the study groups having definite higher education employment plans upon receipt of the doctoral degree, a second hypothesis was formulated to determine if such employment was independent of such factors as race and sex when all years were combined.

The hypothesis tested by race and sex was as follows:

Hypothesis 4: The proportion (percent) of Black and white doctoral recipients having definite higher education employment plans upon receipt of the degree is not significantly related to the race and/or sex of the recipient when the years 1973 to 1977 are combined.

In testing this hypothesis with all groups as in Table 17, this hypothesis was rejected. White males were more heavily represented with non-higher education definite employment plans. While having definite employment plans for approximately 73 percent (31,512/43,429) of all higher education positions, this sum nevertheless represented only 58 percent (31,512/54,115) of all white males having definite employment plans. By contrast, 70 percent (9,959/14,195) of all white females had definite higher education employment plans which constituted 23 percent (9,959/43,429) of the positions reported; 67 percent (1,261/1,872) with Black males for 3 percent (1,261/43,429) of the positions reported; and 72 percent (697/971) of the Black females for 2 percent (697/43,429) of the reported positions. In terms of the total available pool, 44 percent (31,512/71,153) of the white males had definite higher education employment plans; white females, 14 percent (9,959/71,153); Black males, 2 percent (1,261/71,153); and, Black females, 2 percent (697/71,173).

Table 17. Doctoral Recipients Reporting Definite Employment Plans by Race and Sex and by Type of Employment: 1973 to 1977 Combined

Type of Employer	Doctoral Recipients by Race and Sex				Total
	White		Black		
	Male	Female	Male	Female	
Higher Education	31,512 (33,030)	9,959 (8,665)	1,261 (1,143)	697 (593)	43,429
Non-Higher Education	22,603 (21,085)	4,236 (5,531)	611 (729)	274 (378)	27,724
Total	54,115	14,195	1,872	971	71,153
	$\chi^2 = 753.633*$		alpha 05,3 d.f. = 7.815		

Race was determined to be a significant factor when the two racial groups were compared as shown in Table 18 in favor of Black doctoral recipients as 69 percent of this group had definite higher education employment plans while comprising 5 percent of the reported positions. Commitments on the other hand for 96 percent of the reported positions resided with 61 percent of the white population.

Table 18. Doctoral Recipients Reporting Definite Employment Plans by Race and Type of Employer: 1973 to 1977 Combined

Type of Employer	Doctoral Recipients by Race		
	White	Black	Total
Higher Education	41,471 (41,694)	1,958 (1,735)	43,429
Non-Higher Education	26,839 (26,616)	885 (1,108)	27,724
Total	68,310	2,843	71,153
	$\chi^2 = 76.605^*$ alpha 05,1 d.f. = 3.841		

A significant difference was also determined to exist when doctoral recipients were compared by sex, 59 percent males to 70 percent females, as shown in Table 19.

Table 19. Doctoral Recipients Reporting Definite Employment Plans by Sex and Type of Employer: 1973 to 1977 Combined

Type of Employer	Doctoral Recipients by Sex		
	Male	Female	Total
Higher Education	32,773 (34,172)	10,656 (9,257)	43,429
Non-Higher Education	23,214 (21,815)	4,510 (5,909)	27,724
Total	55,987	15,166	71,153
	$\chi^2 = 689.646*$	alpha 05,1 d.f. = 3.841	

When males were compared by race as in Table 20, the ratio of white males to Black males having definite higher education employment plans and 52 percent and 67 percent respectively.

Table 20. Male Doctoral Recipients Reporting Definite Employment Plans by Race and Type of Employment: 1973 to 1977 Combined

Type of Employment	Male Doctoral Recipients by Race		
	White	Black	Total
Higher Education	31,512 (31,677)	1,261 (1,096)	32,773
Non-Higher Education	22,603 (22,438)	611 (776)	23,214
Total	54,115	1,872	55,987
	$\chi^2 = 61.996*$	alpha 05,1 d.f. = 3.841	

No significant differences were found when females were compared on the basis of race which were 70 percent white, 72 percent Black as reported in Table 21.



Table 21. Female Doctoral Recipients Reporting Definite Employment Plans by Race and Type of Employer: 1973 to 1977 Combined

Type of Employer	Female Doctoral Recipients by Race		
	White	Black	Total
Higher Education	9,959 (9,974)	697 (682)	10,656
Non-Higher Education	4,236 (4,221)	274 (289)	4,510
Total	14,195	971	15,166
	$\chi^2 = 1.185$	alpha 05, 1 d.f. = 3.811	

Further tests were conducted of higher education employment to determine if the changes which occurred during this period significantly altered the employment patterns of Blacks being employed by predominantly Black and white higher education institutions and whites being employed by predominantly Black institutions. No tests were conducted to compare the employment of Blacks and whites having definite employment plans at predominantly white institutions as data which would have made this possible were not originally requested.

Between 1973 and 1977, 774 Blacks (467 males and 307 females) reported definite employment plans by predominantly Black institutions. Hypothesis 5 was used to ascertain whether changes in the employment patterns were significant over the five year period for Blacks in predominantly Black and white higher education institutions and whites in predominantly Black higher education institutions by sex.

Hypothesis 5: There was no significant change in the proportion (percent) of Black doctoral recipients reporting definite employment plans by predominantly white and Black institutions of higher education and by whites in predominantly Black institutions of higher education between 1973 - 1977 by sex.

When this hypothesis was applied to Black doctoral recipients, the changes as shown in Table 22 were found to be significant in spite of the small numerical increases for both sexes. Black females evinced significant increases in 1974 and 1976.

Table 22. Black Doctoral Recipients Having Definite Employment Plans in Predominantly Black Higher Education Institutions: 1973 to 1977

Sex	Year of Employment Plans					Total
	1973	1974	1975	1976	1977	
Males	78 (68)	114 (98)	99 (99)	82 (101)	94 (101)	467
Females	34 (44)	49 (65)	66 (66)	85 (66)	73 (66)	307
Total	112	163	165	167	167	774
	$\chi^2 = 20.565^*$		alpha 05, 4 d.f. = 9.488			

Based on the number of reported Black institutions tendering offers of employment, each institution employed on the average 1.7 females and 2.1 males per year (see Table 23).

Table 23. Average Employment of Black Doctoral Recipients by Predominantly Black Higher Education Institutions by Year and Sex: 1973 to 1977

Year of Employment	Sex of Doctorate Employed	Number of Doctorates Employed	Number of Employing Institutions	Average Number per Employing Institution
1973	Male	78	37	2.1
	Female	34	28	1.2
1974	Male	114	48	2.4
	Female	49	31	1.5
1975	Male	99	46	2.2
	Female	66	34	1.9
1976	Male	82	40	2.1
	Female	85	43	2.0
1977	Male	94	47	2.0
	Female	73	40	1.8
Total	Male	467	218	2.1
	Female	307	176	1.7

A significant difference was also observed when this hypothesis was applied to Blacks having definite plans for employment by predominantly white institutions (see Table 24).

Table 24. Black Doctoral Recipients Having Definite Employment Plans in Predominantly White Higher Education Institutions by Sex: 1973 to 1977

Sex	Year of Employment Plans					Total
	1973	1974	1975	1976	1977	
Male	107 (94)	144 (138)	158 (161)	166 (179)	166 (169)	741
Female	33 (46)	61 (67)	80 (77)	99 (86)	84 (81)	357
Total	140	205	238	265	250	1,098
	$\chi^2 = 9.516 *$		alpha 05,4 d.f. = 9.488			

As can be seen in Table 25, white institutions employed an average of 1.3 Black males and 1.2 Black females per year yet the employment of Black females was found to be significant.

Table 25. Average Employment of Black Doctoral Recipients by Predominantly White Higher Education Institutions by Year and Sex: 1973 to 1977

Year of Employment	Sex of Doctorate Employed	Number of Doctorates Employed	Number of Employing Institutions	Average Number per Employing Institution
1973	Male	107	87	1.2
	Female	33	32	1.0
1974	Male	144	112	1.3
	Female	61	53	1.2
1975	Male	158	117	1.4
	Female	80	72	1.1
1976	Male	166	130	1.3
	Female	99	84	1.2
1977	Male	166	134	1.2
	Female	84	67	1.3
Total	Male	741	580	1.3
	Female	357	308	1.2

No significant changes were observed when white males and females were tested against this hypothesis over the five year period as can be observed in Table 26.

Table 26. White Doctoral Recipients Having Definite Employment Plans in Predominantly Black Higher Education Institutions by Year and Sex: 1973 to 1977

Sex	Year of Employment Plans					Total
	1973	1974	1975	1976	1977	
Male	77 (69)	67 (69)	70 (74)	74 (75)	52 (53)	340
Female	18 (26)	27 (25)	31 (27)	28 (27)	21 (20)	125
Total	95	94	101	102	73	465
	$\chi^2 = 4.536$		alpha 05.4 d.f. = 9.488			

The average number of whites employed by predominantly Black institutions, 1.6 males and 1.3 females per institution, compares favorably with the average number of Blacks employed by predominantly white institutions on a per institution basis (see Table 27).

Table 27. Average Employment of White Doctoral Recipients by Predominantly Black Higher Education Institutions by Year and Sex: 1973 to 1977

Year of Employment	Sex of Doctorate Employed	Number Doctorates Employed	Number of Employing Institutions	Average Number per Employing Institution
1973	Male	77	47	1.6
	Female	18	14	1.3
1974	Male	67	43	1.6
	Female	27	20	1.4
1975	Male	70	41	1.7
	Female	31	24	1.3
1976	Male	74	45	1.6
	Female	28	24	1.2
1977	Male	52	33	1.6
	Female	21	17	1.2
Total	Male	340	209	1.6
	Female	125	99	1.3

A final test was conducted with regard to the employment of Black doctoral recipients by predominantly white institutions of higher education and of white doctoral recipients by predominantly Black institutions of higher education employing the following hypothesis:

Hypothesis 6: There is no significant difference in the employment of Black doctoral recipients by predominantly white institutions and of white doctoral recipients by predominantly Black institutions based on race and sex.

This hypothesis was rejected by the data as reported in Table 28.

Table 28. A Comparison of Black Doctoral Recipients Having Definite Employment Plans in Predominantly White Higher Education Institutions with White Doctoral Recipients Having Definite Employment Plans in Predominantly Black Higher Education Institutions by Sex: 1973 to 1977

	Sex of Recipients		Total
	Male	Female	
Black Doctoral Recipients Having Definite Employment Plans in Predominantly White Institutions	741 (759)	357 (339)	1,098
White Doctoral Recipients Having Definite Employment Plans in Predominantly Black Institutions	340 (322)	125 (143)	465
Total	1,081	482	1,563
	$\chi^2 = 4.655$	alpha 05, 1 d.f. = 3.841	

Based upon the data presented in this table, a significantly greater proportion of Black males and females have definite commitments for employment by predominantly white institutions than white doctoral recipients having definite employment in predominantly Black institutions. The proportions for Black with commitments in predominantly

white institutions are 66 percent for males and 74 percent for females, while the proportions for white in predominantly Black institutions are 32 percent for males and 26 percent for females.

When the employment of Black doctoral recipients in predominantly Black institutions is compared with their employment in predominantly white institutions, significantly more Blacks are employed by predominantly white institutions as shown in Table 29.

Table 29. A Comparison of Black Doctoral Recipients Having Definite Employment Plans in Predominantly Black and Predominantly White Institutions by Sex and by Combined Years 1973 to 1977

	Sex of Doctoral Recipients		
	Male	Female	Total
Black Doctoral Recipients Having Definite Employment Plans in Predominantly Black Institutions	467 (499)	307 (275)	774
Black Doctoral Recipients Having Definite Employment Plans in Predominantly White Institutions	741 (709)	357 (389)	1,098
Total	1,208	664	1,872
	$\chi^2 = 9.852^*$	alpha 05,1 d.f. = 3.841	

These proportions are 39 percent Black males and 47 percent Black females in predominantly Black institutions and 47 percent Black males and 61 percent Black females in predominantly white institutions.

Higher Education Employment Plans by Race,  
Sex and Classification of Institution

The study attempted further to determine which types of institutions (Carnegie Classifications) employed the greater number of new doctoral recipients and whether the employment pattern changed significantly over the five year period for each study group, when all classifications of institutions were compared.

The major employers for recent white male doctoral recipients as shown in Table 30 are comprehensive universities and colleges and research universities. These two classifications of institutions combined employed approximately 56 percent of the white males receiving the doctoral degree during the past five years.

Table 30. Number and Percent of White male Doctoral Recipients Reporting Definite Higher Education Plans by Classification of the Institution: 1973 to 1977

Type of Institution	Year of Employment Plans					Total
	1973	1974	1975	1976	1977	
Research	1,658 (25.7)	1,760 (25.3)	1,900 (27.6)	1,636 (26.4)	1,490 (27.7)	8,344
Doctoral Granting	812 (12.6)	930 (13.3)	849 (13.0)	748 (12.1)	733 (13.6)	4,072
Comprehensive	2,138 (33.1)	2,197 (31.6)	1,891 (28.9)	1,750 (28.2)	1,426 (26.5)	9,402
Liberal Arts	803 (12.5)	903 (13.0)	777 (11.9)	826 (13.3)	612 (11.4)	3,921
Two Year Colleges	465 (7.2)	502 (7.2)	562 (8.6)	592 (9.6)	532 (9.9)	2,653
Other	576 (8.93)	667 (9.6)	651 (10.0)	643 (10.4)	583 (10.9)	3,120
Total	6,452	6,959	6,530	6,195	5,376	31,512



In assessing the changes which occurred over the period of time, the increases/decreases in employment patterns were found to be significant in all types of higher education institutions. The tabulated value for chi square (143.722) was found to be greater than alpha 05, with 30 degrees of freedom (31.410). The greatest percentage changes in the employment of members of this group occurred in comprehensive universities and colleges (15 percent) and in two-year colleges (18 percent).

Comprehensive universities and colleges and research institutions also served as the major employer of white female doctoral recipients obtaining higher education employment. Combined, these classifications employed in comparable numbers approximately 55 percent of the total having definite employment plans (see Table 31).

Table 31. Number and Percent of White Female Doctoral Recipients Reporting Definite Higher Education Employment Plans by Classification of Institutions: 1973 to 1977

Major Focus of Institution	Year of Employment Plans					Total
	1973	1974	1975	1976	1977	
Research	404 (26.3)	544 (28.6)	590 (27.4)	589 (26.8)	566 (26.1)	2,693 (27.0)
Doctoral Granting	171 (11.1)	228 (12.0)	281 (13.1)	264 (12.0)	269 (12.4)	1,213 (12.2)
Comprehensive	469 (30.5)	543 (28.6)	613 (28.5)	566 (25.7)	548 (25.3)	2,739 (27.5)
Liberal Arts	250 (16.2)	291 (15.3)	315 (14.6)	349 (15.9)	341 (15.8)	1,546 (15.5)
Two-Year Colleges	119 (7.7)	150 (7.9)	164 (7.6)	213 (9.7)	190 (8.8)	836 (8.4)
Other	126 (8.2)	145 (7.6)	190 (8.8)	219 (9.9)	252 (11.6)	932 (9.4)
Total	1,539	1,901	2,153	2,200	2,166	9,959

The major percentage changes for this group occurred in the category of "others" (60 percent), in doctoral degree granting institutions (52 percent), and in two-year colleges (59 percent). The overall increases/decreases in employment in these classifications as well as with others over time were found to be significant ( $\chi^2 = 39.223 \blacktriangleright$  alpha 05 = 31.410).

The employment of Black doctoral recipients was concentrated primarily in comprehensive universities and colleges (41 percent) although the major changes occurred in the liberal arts colleges (132 percent) and those classified as "others" (104 percent) (see Table 32).

Table 32. Number and Percent of Black Male Doctoral Recipients Reporting Definite Higher Education Employment Plans by Classification of Institution: 1973 to 1977

Focus of Institution	Year of Employment Plans					Total
	1973	1974	1975	1976	1977	
Research	43 (22.5)	57 (21.4)	67 (24.8)	55 (21.3)	60 (21.7)	282
Doctoral Granting	20 (10.5)	23 (8.6)	22 (8.1)	21 (8.2)	24 (8.7)	110
Comprehensive	89 (46.6)	119 (44.7)	105 (38.9)	111 (43.0)	97 (35.1)	521
Liberal Arts	14 (7.3)	39 (14.7)	34 (12.6)	22 (8.5)	35 (12.7)	114
Two-Year Colleges	14 (7.3)	12 (4.5)	17 (6.3)	25 (9.7)	35 (12.7)	103
Other	11 (5.8)	16 (6.0)	25 (9.3)	24 (9.3)	25 (9.1)	101
Total	191	266	270	258	276	1,261

The changes exhibited among the various classifications for this study group was only slightly significant ( $X^2 = 31.942 > \alpha 05 = 31.410$ ).

As with the Black male, Black female doctoral recipients received the greater number of employment opportunities in comprehensive institutions (43 percent) as shown in Table 33.

Table 33. Number and Percent of Black Female Doctoral Recipients Reporting Definite Higher Education Employment Plans by Classification of Institutions: 1973 to 1977

Major Focus of Institutions	Year of Employment Plans					Total
	1973	1974	1975	1976	1977	
Research	8 (11.1)	26 (22.8)	31 (20.3)	39 (20.8)	30 (17.6)	134 (19.2)
Doctoral Granting	10 (13.9)	12 (10.5)	13 (8.5)	17 (9.0)	20 (11.8)	72 (10.3)
Comprehensive	31 (43.1)	48 (42.1)	72 (47.0)	84 (44.7)	66 (38.8)	301 (43.2)
Liberal Arts	15 (20.8)	16 (14.0)	19 (12.4)	26 (13.8)	21 (12.4)	97 (13.9)
Two-Year Colleges	2 (2.8)	6 (5.3)	9 (5.9)	13 (6.9)	17 (10.0)	47 (6.8)
Other	6 (8.3)	6 (5.3)	9 (5.9)	9 (4.8)	16 (9.4)	46 (6.6)
Total	72	114	153	188	170	697

However, the largest percentage change among all institutions occurred in research institutions (293.8 percent). This change, in spite of its size as well as those which occurred within other institutions, was not found to be significant ( $X^2 = 20.949 < \alpha 05, 31.410$ ).

As can be discerned from the foregoing tables, all study groups have experienced significant changes in employment within the various classifications of the employing institutions, except Black females. The employment of white male doctoral recipients decreased during this five-year period in two classifications but still registered as an overall increase. No such decrease was in evidence with regard to the other study groups.

To determine if the proportion of doctoral recipients employed by different classifications of institutions is the same based upon the availability without regard for race and sex when all fiscal years are combined, the following hypothesis was tested with all groups against selected institutional classifications:

Hypothesis 7: The proportion (percent) representation of doctoral recipients is the same for each racial and sex group in each institutional classification based upon availability when the years 1973 to 1977 are combined.

This hypothesis did not hold true when applied to research institutions and was rejected as shown in Table 34. Twenty-nine point seven (29.7) percent of the white males and 27.0 percent of the white females had definite research institutional employment plans while only 22.4 percent of the Black males and 19.2 percent of the Black females reported such plans. A significant difference was observed in favor of white doctoral recipients, both males and females.

Table 34. Doctoral Recipients Having Definite Research Institution Employment Plans by Race, Sex and Combined Years

Type of Institution	Doctoral Recipients Having Definite Employment Plans by Race and Sex				Total
	White		Black		
	Male	Female	Male	Female	
Research	8,344 (8,310)	2,693 (2,626)	282 (333)	134 (184)	11,453
Other	23,168 (23,202)	7,266 (7,333)	979 (928)	563 (515)	31,976
Total	31,512	9,959	1,261	697	43,429

$\chi^2 = 31.185^*$       alpha 05,3 d.f. = 7.815

In comprehensive universities and colleges, a significant difference was observed in favor of Blacks, both males and females, (see Table 35). Only 29.8 percent of the white males and 27.5 percent of the white females had definite employment plans in this institutional classification in contrast to 41.3 percent for Black males and 43.2 percent for Black females. Percentage-wise, the employment of Blacks was almost twice the percentage of whites.

Table 35. Doctoral Recipients Reporting Definite Comprehensive Institution Employment Plans by Race, Sex and Combined: 1973 to 1977

Type of Institution	Employment of Doctoral Recipients by Race and Sex				Total
	White		Black		
	Male	Female	Male	Female	
Comprehensive	9,402 (9,406)	2,739 (2,973)	521 (376)	301 (208)	12,963
Other	22,110 (22,106)	7,220 (6,986)	740 (885)	396 (489)	30,466
Total	31,512	9,959	1,261	697	43,429

$\chi^2 = 165.203^*$       alpha 05,3 d.f. = 7.815

In doctoral granting institutions, a significant difference was observed in the employment of white and Blacks as shown in Table 36. Employed by this classification were 12.9 percent of the white males; 12.2 percent of the white females; 8.7 percent of the Black males; and 10.3 percent of the Black females.

Table 36. Doctoral Recipients Reporting Definite Doctoral Granting Institution Employment Plans by Race, Sex and Combined Years

Focus of Institution	Doctoral Recipients Having Definite Employment by Race and Sex				Total
	White		Black		
	Male	Female	Male	Female	
Doctoral Granting	4,072 (3,967)	1,213 (1,254)	110 (159)	72 (88)	5,467
Other	27,440 (27,545)	8,746 (8,705)	1,151 (1,102)	625 (609)	37,962
Total	31,512	9,959	1,261	697	43,429

$\chi^2 = 25.322^*$                       alpha 05,3 d.f. = 7.815

With regard to employment by liberal arts institutions, white and Black females registered the higher percentage of appointments--15.5 percent for white females and 13.9 percent for Black females in contrast to 12.4 percent for white males and 11.4 percent for Black males. These differences were significant on the basis of sex (see Table 37).

Table 37. Doctoral Recipients Reporting Definite Liberal Arts College Employment Plans by Race, Sex and Combined Years

Type of Institution	Employment of Doctoral Recipients by Race and Sex				Total
	White		Black		
	Male	Female	Male	Female	
Liberal Arts	3,921 (4,142)	1,546 (1,309)	144 (166)	97 (92)	5,708
Other	27,591 (27,370)	8,413 (8,650)	1,117 (1,095)	600 (605)	37,721
Total	31,512	9,959	1,261	697	43,429
	$\chi^2 = 66.651^*$		alpha 05,3 d.f. = 7.815		

No significant differences were observed with regard to two-year colleges. The percentage of white male doctoral recipients reporting definite employment plans in two-year colleges was equal to the percent reported by white females, 8.4 percent. The percentage of Black males (8.0) and females (6.7) was slightly lower (Table 38).

Table 38. Doctoral Recipients Reporting Definite Two-Year College Employment Plans by Race, Sex and Combined Years

Focus of Institution	Employment of Doctoral Recipients by Race and Sex				Total
	White		Black		
	Male	Female	Male	Female	
Two-Year Colleges	2,653 (2,639)	836 (834)	101 (106)	47 (58)	3,637
Other	28,859 (28,873)	9,123 (9,125)	1,160 (1,155)	659 (639)	39,792
Total	31,512	9,959	1,261	697	43,429
	$\chi^2 = 2.619$		alpha 05,3 d.f. = 7.815		

In summary, these data tend to indicate that white and Black female doctoral recipients are employed in higher proportions than males in liberal arts colleges, while Black males and females have the edge in comprehensive institutions. Only slight proportional differences exist between these two racial groups by sex in doctoral granting institutions, with no significant difference evinced in two-year colleges.

#### Higher Education Employment Plans by Major Responsibilities

The final area of focus in this study was to determine if the major responsibilities of doctoral recipients having definite employment plans in higher education institutions were significantly different by race and sex and if changes in the form of decreases and/or increases in employment affected employment patterns with respect to these responsibilities. Major responsibilities for purposes of this section relate basically to such areas of academic employment as research and development, teaching, administration, professional service and joint appointments involving one or more of the above.

In seeking to determine the extent of change from year to year during the period covered by this study, an assessment was made with each study group separately by major responsibilities and combined years of definite employment plans. Hypothesis 9 was used to test for annual changes in major responsibilities by race and sex:

Hypothesis 8: The percent of doctoral recipients reporting definite employment plans between 1973 and 1977 remained the same in each major responsibility category for each racial and sex grouping.



When white male doctoral recipients were analyzed, it was discovered that approximately 77 percent of this group reported definite employment plans with primary responsibilities in teaching. The area evincing the greatest change for this study group was the area of joint appointments which declined approximately 59.1 percent from the 1973 level. The overall decline for this group in all responsibility areas was a minus 7.2 (see Table 39).

Table 39. Number and Percent of White Male Doctoral Recipients Having Definite Employment Plans by Year and Major Responsibility: 1973 to 1977

Major Responsibility	Year of Appointment					Total
	1973	1974	1975	1976	1977	
Research and Development	479 (7.5)	590 (8.9)	586 (9.4)	566 (9.7)	546 (10.8)	2,767
Teaching	4,953 (77.3)	5,251 (78.6)	4,772 (77.1)	4,462 (76.6)	3,828 (75.5)	23,266
Administration	437 (6.8)	492 (7.4)	495 (8.0)	479 (8.2)	437 (8.6)	2,341
Professional Service	185 (2.9)	208 (3.1)	190 (3.1)	158 (2.7)	130 (2.6)	871
Joint Appointments and Others	350 (5.5)	136 (2.0)	147 (2.4)	161 (2.8)	129 (2.5)	923
Total	6,404	6,678	6,190	5,826	5,070	30,168

White female doctoral recipients showed the greatest change during this period in professional services appointments (72.0 percent) and an overall average increase over 1973 of 35 percent. The numbers and percentages for this study are presented in Table 40.

Table 40. Number and Percent of White Female Doctoral Recipients Reporting Definite Employment Plans by Major Responsibilities: 1973 to 1977

Major Responsibilities	Year of Employment Plans					Total
	1973	1974	1975	1976	1977	
Research and Development	110 (7.4)	126 (6.9)	143 (6.9)	173 (8.3)	152 (7.3)	704
Teaching	1,237 (83.4)	1,506 (82.7)	1,663 (80.8)	1,639 (78.6)	1,618 (77.9)	7,663
Administration	53 (3.6)	88 (4.8)	127 (6.2)	136 (6.5)	167 (8.0)	571
Professional Services	50 (3.4)	67 (3.7)	82 (4.0)	86 (4.1)	109 (5.3)	394
Joint Appointments and Others	33 (2.2)	35 (1.9)	44 (2.1)	52 (2.5)	32 (1.5)	196
Total	1,483	1,822	2,059	2,086	2,078	9,528

The overall percentage increase for Black male doctoral recipients over 1973 was 35.1 percent. Among the major responsibilities for which Black males had definite employment plans, research showed the greatest percentage increase (71.8 percent). Table 41 contains the numbers and percentages of change which occurred during this period for this group.

Table 41. Number and Percentage of Black Male Doctoral Recipients Reporting Definite Employment Plans by Major Responsibilities: 1973 to 1977

Major Responsibilities	Year of Employment Plans					Total
	1973	1974	1975	1976	1977	
Research and Development	8 (4.6)	12 (4.9)	15 (6.5)	15 (7.0)	13 (5.4)	69
Teaching	123 (71.1)	163 (66.5)	152 (65.5)	137 (63.4)	161 (66.5)	736
Administration	35 (20.7)	47 (19.2)	44 (19.0)	46 (21.3)	47 (19.4)	219
Professional Services	3 (1.8)	14 (5.7)	8 (3.4)	5 (2.3)	12 (5.0)	42
Joint Appointments and Others	4 (2.3)	9 (3.7)	13 (5.6)	13 (6.0)	9 (3.7)	48
Total	173	245	232	216	242	1,108

The annual increase over 1973 for Black female doctoral recipients averaged approximately 139 percent, with major responsibilities relating to teaching (see Table 42).

Table 42. Number and Percent of Black Female Doctoral Recipients Reporting Definite Employment Plans by Major Responsibilities: 1973 to 1977

Major Responsibilities	Year of Employment Plans					Total
	1973	1974	1975	1976	1977	
Research and Development	1 (1.7)	3 (2.7)	8 (5.7)	8 (4.8)	6 (3.8)	26
Teaching	51 (85.0)	85 (76.6)	100 (70.9)	132 (79.0)	121 (77.6)	489
Administration	5 (8.3)	13 (11.9)	19 (13.5)	17 (10.2)	18 (11.6)	72
Professional Services	1 (1.7)	9 (8.1)	6 (4.2)	3 (1.8)	6 (3.8)	25
Joint Appointments and Others	2 (3.3)	1 (0.9)	8 (5.7)	7 (4.2)	5 (3.2)	23
Total	60	111	141	167	156	635

For the four study groups, the changes over this period were found to be significant for white males and white females, but insignificant for Black males and Black females.

In testing for significant differences by race and sex according to the types of major responsibilities reported by doctoral recipients, the following hypothesis was applied to each responsibility separately by combined years.

Hypothesis 9: When all employment years are combined, the proportion (percent) of doctoral recipients does not differ significantly according to major responsibility by race and/or sex.

This hypothesis was rejected when applied to research and development as shown in Table 43. Approximately 9.2 percent of the research and development positions were reported by white males, followed by white females, 7.4 percent; Black males, 6.2 percent; and by Black females, 4.1 percent (Table 43).

Table 43. Doctoral Recipients Reporting Definite Employment Plans in Research and Development by Race, Sex and Combined Years

Major Responsibilities	Doctoral Recipients by Race and Sex				Total
	White		Black		
	Male	Female	Male	Female	
Research and Development	2,767 (2,596)	704 (820)	69 (95)	26 (55)	3,566
Other	27,401 (27,572)	8,824 (8,708)	1,039 (1,013)	609 (580)	37,873
Total	30,168	9,528	1,108	635	41,439
	$\chi^2 = 54.804^*$		alpha 05,3 d.f. = 7.815		

In teaching, white females reported the higher proportion followed by males (white, 77.1 percent; Black, 71.0 percent) and by Black females, 66.4 percent. These proportions were found to be significant leading to the rejection of this hypothesis (see Table 44).

Table 44. Doctoral Recipients Reporting Definite Employment Plans in Teaching by Race, Sex and Combined Years

Major Responsibilities	Doctoral Recipients by Race and Sex				Total
	White		Black		
	Male	Female	Male	Female	
Teaching	23,266 (23,408)	7,663 (7,393)	736 (860)	489 (493)	32,154
Others	6,902 (6,760)	1,865 (2,135)	372 (248)	146 (142)	9,285
Total	32,168	9,528	1,108	635	41,439

$\chi^2 = 127.874^*$                       alpha 05,3 d.f. = 7.815

Unlike teaching and research in which white males and females were dominant, Black males and females reported the higher proportions of definite employment in administration. The proportions (percent) reported by each study group in this responsibility category were: Black males, 19.8 percent; Black females 11.3 percent; white males, 7.8 percent; and white females, 6.0 percent. These proportions/percents were found to be significant as shown in Table 45.

Table 45. Doctoral Recipients Reporting Definite Employment Plans in Administration by Race, Sex and Combined Years

Major Responsibilities	Doctoral Recipients by Race and Sex				Total
	White		Black		
	Male	Female	Male	Female	
Administration	2,341 (2,332)	571 (736)	219 (86)	72 (49)	3,203
Other	27,827 (27,836)	8,957 (8,792)	889 (1,022)	563 (586)	38,236
Total	30,168	9,528	1,108	635	41,439

$\chi^2 = 274.818^*$                       alpha 05,3 d.f. = 7.815

A significant difference was also observed when this hypothesis was tested with the category of service. A higher proportion in this category was reported by white females, 4.1 percent, closely followed by Black males and females with 3.9 percent and 3.8 percent, respectively. Only 2.9 percent of the white males reported definite employment plans in this area (see Table 46).

Table 46. Doctoral Recipients Reporting Definite Employment Plans in Service by Race, Sex and Combined Years

Major Responsibilities	Doctoral Recipients by Race and Sex				Total
	White		Black		
	Male	Female	Male	Female	
Service	871 (970)	394 (306)	42 (36)	28 (20)	1,332
Others	29,297 (29,198)	9,134 (9,222)	1,066 (1,072)	610 (615)	40,107
Total	30,168	9,528	1,108	635	41,439
	$\chi^2 = 38.912^*$		alpha 05,3 d.f. = 7.815		

As can be discerned from the foregoing series of tables, significant differences exist between white and Black doctoral recipients having definite higher education employment plans by major responsibilities. When the two racial groups are compared by sex, white males predominate proportionately in research and development, white females in teaching and service, and Black males in administration. In no category of major responsibility is the Black female doctoral degree holder more dominant than all other groups studied.

## CHAPTER V - SUMMARY AND RECOMMENDATIONS

Allegations of reverse discrimination have been widespread during the past five years. Many of these allegations have been made by opponents of affirmative action programs. The general thrust of the opposition's arguments is that through governmental pressures, contractors doing business with the federal government have expanded their recruitment and employment efforts to attract more females and minorities to their work force to the extent that such activities have had a disparate impact upon the employment opportunities of white males.

To determine if and to what extent such action was in fact having a disparate impact upon white males in employment, several comparisons were made in the foregoing study using recent doctoral degree recipients between 1973 and 1977 as the population. This population was selected pursuant to recommendations proffered by Richard Lester in his book entitled Antibias Regulations on Universities, Faculty Problems and Their Solution (1974). In his book, Lester hypothesized that affirmative action programs should be directed toward the employment of junior faculty rather than toward senior faculty in that most faculty positions in higher education today would be filled at that level. Lester further suggested that by focusing on junior faculty employment, greater progress could be expected in that such considerations as national reputation, publication record, and other experiences usually considered in the employment of senior faculty members would be obviated. The findings,

derived from comparing the employment plans of doctoral degree recipients to this population over a five-year period, tend to indicate that the allegations of "wide-spread reverse discrimination" have emanated more from the vivid imaginations of the opponents of affirmative action programs than from reality.

Between 1973 and 1977, approximately 74 percent (95,239) of all Black and white doctoral degree recipients (129,182) were either seeking employment or had definite employment plans upon receipt of the degree, and therefore, could be considered to constitute the available employment pool. Of this total availability pool, 74 percent (70,351) were white males, 22 percent (20,849) were white females, 3 percent (2,615) were Black males, and 1 percent (1,424) were Black females. When all study groups were compared with regard to employment plans by all years combined and by all types of employers, the proportion of white males reporting definite employment plans was significantly greater than all other study groups. Seventy-six (76) percent (54,319) of the white males reported definite employment plans in contrast to 20 percent (14,064) for white females, 3 percent (1,899) for Black males, and approximately 1 percent (975) for Black females. When further comparisons were made by race and sex, a significantly greater proportion of white doctoral recipients (77 percent) reported definite employment plans than Black doctoral recipients (68 percent); males (77 percent) greater than females (72 percent); and Black males (72 percent) greater than Black females (68 percent). No significant difference was found



to exist when females were compared by race. The proportion of Black females reporting definite employment plans upon receipt of the degree was 68 percent compared to 67 percent for white females. In employment by all types of employers, white males, while decreasing numerically, continued to be employed above their availability in the pool; the proportionate employment of Black females was less than their availability despite annual numerical increases. The employment of Black recipients, both male and female, remained relatively stable even though each group experienced gradual numerical increases during this period.

With regard to higher education employment, 61 percent (43,429) of the availability pool of doctoral degree recipients listed higher education institutions as the employer. This number represented only 34 percent of all Blacks and white receiving the doctorate degree. As in general employment, white males continued to receive the greater number of positions in higher education institutions than the other study groups.

Of the number of definite employment commitments reported, 73 percent were given to white males, although proportionately this represented only 58 percent of the white males reporting definite employment plans. By contrast, 70 percent of the white females reported definite higher education employment plans to fill 23 percent of the total positions committed. Seventy-two (72) percent of the Black males and 67 percent of the Black females reported definite higher education employment plans, which represented 3 and 2 percent respectively of all the

commitments made. While these percentages might be construed to indicate that white males are faring less favorably in higher education employment than the other study groups, such a conclusion was not supportable when the changes over the five-year period were assessed for each group.

During the past five years, all study groups exhibited proportionate decreases in higher education employment. The percentage of white males reporting definite higher education employment plans decreased approximately 4 percent, down from 61 percent in 1973 to an average of 57 percent for the succeeding four years. White females decreased by approximately 3 percent, from 73 percent in 1973 to an average of 70 percent. The decreases for these two study groups were found to be significant. Black males and females exhibited decreases of 4 and 5 percent respectively, with Black males decreasing from 71 percent in 1973 to an average of 67 percent for the next four years, and Black females, from 77 percent in 1973 to an average of 72 percent. These decreases, however, were not found to be significant. Thus Black doctoral recipients experienced a relative stand-still in proportionate employment by higher education institutions between 1973 and 1977. As a higher proportion of white males reported definite employment plans upon receipt of the doctoral degree than all other study groups by all types of employers, and since the pattern of their employment in higher education has been consistently less proportionately than the other study groups, the difference in this proportionality tends to be more related to the greater availability of job opportunities in the nonacademic sector

for white males than to the numerical gains experienced by white females and Black recipients during the period of this study.

When the issue of reverse discrimination has been debated, such debates have primarily focused upon the employment of Blacks by predominantly white institutions of higher education. Predominantly Black institutions have received little attention with regard to the changes which have occurred involving their efforts to recruit or employ white males. Approximately 38 percent (465) of all positions (1,239) committed to doctoral recipients by predominantly Black institutions between 1973 and 1977 were granted to white doctoral recipients. Of all males reporting definite employment plans in predominantly Black institutions, 42 percent (340) were white doctoral recipients in comparison with 58 percent (807) for Black doctoral recipients. Seventy-one (71) percent (307) of such commitments of employment were given to Black females and 20 percent (125) to white females. While predominantly white institutions employ significantly more Black doctoral recipients than predominantly Black institutions for either Black or white recipients, the average number of doctoral recipients employed by each institution by racial composition is relatively small and has changed only minimally over the period of this study.

In 1973 the per-institution employment of Black doctoral recipients by predominantly white higher education institutions was 1.2 Black males and 1.0 Black females. In 1977, this number increased slightly to 1.3 Black males and 1.2 Black females. Of the white doctoral

recipients employed by predominantly Black higher education institutions, the number of white males and females remained the same in 1973 and 1977 at 1.6 males and 1.3 females. The average number of Black doctoral recipients employed by predominantly Black institutions remained the same in 1973 and 1977 for Black males at 2.1 persons but increased slightly for Black females from 1.2 to 1.7. As can be discerned from these data, a slightly higher number of whites are being employed on a per-institution basis by predominantly Black institutions than Blacks by predominantly white institutions. When one considers that there are approximately 3,000 higher education institutions which serve as employers, and if only approximately 1,098 Blacks have been employed on the average of 1.2 Blacks per institution (888) for the entire five-year period, the issue of reverse discrimination would seem not to have supportive evidence.

When the employment patterns of doctoral recipients were analyzed by selected types of institutions, significant changes were found to have occurred for all of the study groups with the exception of Black females. The types of institutions in which the employment of white males exhibited the greater percentage change were in comprehensive colleges and universities and two-year colleges. While decreasing by approximately 15 percent in comprehensive colleges and universities during this period, the employment of white males increased by approximately 18 percent in two-year colleges. White females on the other hand exhibited substantial employment increases in institutions classified as "other" (60 percent), in two year colleges (59 percent) and in doctoral degree granting

institutions (52 percent). Changes for Black males occurred primarily in liberal arts college and in colleges classified as "other". These changes were in the form of a decrease in comprehensive colleges and universities (41 percent) accompanied by an increase in liberal arts colleges (132 percent). No attempt was made in this study to determine the reasons for these changes or to assess the annual impact of these changes within each of these types of institutions in comparison with each group. Instead, efforts were directed to determining whether a significant difference existed in the employment plans of the doctorate recipients when all years were combined.

The data derived from testing for significant differences in the employment plans of doctorate recipients when all years were combined can be summarized as follow: Proportionately more white male and female doctorate recipients reported definite employment plans in research universities; Black males and females received employment commitments in comprehensive colleges and universities; females reported significantly higher proportions of commitments in liberal arts colleges than males; only a slight significant difference existed between Black and white doctoral recipients by sex in doctoral granting institutions; and no significant difference existed in the employment plans of these two racial groups with regard to two-year institutions. The changes observed during this period provided no evidence that the employment pattern of white males has been significantly altered because of the increases experienced by females and Black recipients within the selected types of institutions.

In terms of major responsibilities within higher education institutions, white males were found to predominate in research and development, white females in teaching and service, and Black males in administration. In no category or job responsibilities were Black females observed to be more dominant than all other study groups.

As can be discerned from the comparisons and analyses conducted in this study of doctoral degree recipients over the past five years by race and sex, the number of white males receiving the doctoral degree has decreased, while the numbers for all other study groups have increased. However, neither the numerical decreases for white males nor the numerical increases for the other study groups has been particularly significant in altering the proportionate employment patterns to the advantage or disadvantage of any group. The patterns for the major part have remained the same. While the data presented tend not to support the allegations of "wide-spread reverse discrimination," further studies need to be conducted as more specific data become available with regard to the progress of affirmative action employment programs.

One of the principal tests conducted by compliance agencies to determine progress is the test for disparate impact wherein comparisons are made by race and sex with regard to the number of persons employed and those making applications for employment vacancies. This test could not be conducted in this study because of the unavailability of data relative to the number of doctoral recipients making application to the various types of employers. From the data obtained, it could not be

determined whether doctoral recipients reporting definite employment plans by the different types of employers reflected their choice of employer or the absence of an alternative. Such data and analyses are essential to a more definitive determination of disparate impact in employment.

In addition to the preceding recommendation, other areas of research which will provide needed information not only for making further assessments of the "reverse discrimination issue" in higher education employment, but also for establishing affirmative action goals and timetables with some reasonable expectations for success are as follow:

- 1) The relationship of the doctoral field and the type of employer reported by the recipient by race and sex.

- 2) The relationship of the doctoral field and the major responsibilities of the recipients by race and sex.

- 3) The relationship of geographical location and the employment plans of doctoral recipients by race and sex.

- 4) The rejection ratio of doctoral recipients making application for employment by types of higher education institutions and by race and sex.

- 5) A comparison of reverse discrimination complaints filed by females and Black doctoral recipients against predominantly female and Black institutions of higher education with those filed by white male doctoral recipients against predominantly white and male institutions of higher education.

The purpose of this study was neither to affirm nor to deny the existence of isolated cases of discrimination, but rather to determine if the majority in higher education had embarked upon a nationwide campaign under alleged federal pressure to discriminate against its own kind in providing employment opportunities to women and minorities. The data presented in this study do not support this phenomenon.



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## ACKNOWLEDGEMENTS

Few endeavors of this nature can be carried through to fruition in the absence of contributions by others. As this product has emanated from such assistance, I believe that an expression of appreciation to its contributors is not only warranted but mandated.

In this regard, I am herein expressing my sincere gratitude to:

- 1) My major advisor, Dr. Stanley Ahmann, and to other members of my graduate committee which included Dr. Larry Ebbers, Dr. William Hunter, Dr. Virginia Thomas and Dr. Wilbur Layton for their patience, support and assurance throughout this study.
- 2) Dr. Richard Warren for his invaluable assistance in statistics.
- 3) Mrs. Peggy Johnston, Mrs. Sandra Shranklen, Mrs. Bettye Danofsky and Miss Linda Adkins for their hours of labours in typing and proof-reading the many drafts of this document.
- 4) Dr. Daniel Zaffarano and Dr. William Hunter for the needed financial support which they provided through their respective offices.
- 5) And to my wife Joyce and family for their encouragement and understanding during the long period of negligence.

This study is dedicated to my family and hopefully will serve others interested in the field of Civil Rights.

APPENDIX A - SAMPLES OF DATA REQUESTED FROM THE  
NATIONAL RESEARCH COUNCIL

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TABLE 1

Postdoctoral Employment and Study Plans of Doctorate Recipients  
(Blacks and Whites Who are Native-Born U.S. Citizens Only)  
in Fiscal Years 1973-1977 by Sex (Percent of Total Responses)

<u>Postdoctoral Plans</u>		Men			Women		
		<u>White</u>	<u>Black</u>	<u>Total PhDs</u>	<u>White</u>	<u>Black</u>	<u>Total PhDs</u>
Definite Employment	N	9744	426	10746	3176	243	3594
	H	90.7	4.0		88.4	6.8	
	V	61.4	67.2	61.4	57.9	62.0	58.0
Definite Study	N	2238	30	2426	590	16	632
	H	92.3	1.2		93.4	2.5	
	V	14.1	4.7	13.9	10.7	4.1	10.2
Seeking Employment	N	3236	160	3618	1513	125	1727
	H	89.4	4.4		87.6	7.2	
	V	20.4	25.2	20.7	27.6	31.9	27.9
Seeking Study	N	649	18	713	210	8	241
	H	91.0	2.5		87.1	3.3	
	V	4.1	2.8	4.1	3.8	2.0	3.9
Total Reported	N	15867	634	17503	5489	392	6194
	H	90.7	3.6		88.6	6.3	
Not Reported	N	473	31	814	280	25	413
	H	58.1	3.8		67.8	6.1	
Total All	N	16340	665	18317	5769	417	6607
	H	89.2	3.6		87.3	6.3	

TABLE 2

Field of Doctorate Degree of Recipients (Blacks and Whites  
Who are Native-Born U.S. Citizens Only and Who Have  
Definite Employment Plans) in Fiscal Years 1973-1977  
by Type of Employer and by Sex (Percent of Total Responses)

<u>Type of Employer</u>		Men			Women		
		<u>White</u>	<u>Black</u>	<u>Total PhDs</u>	<u>White</u>	<u>Black</u>	<u>Total PhDs</u>
4-yr. College/Univ	N	959	99	1133	636	75	749
	H	84.6	8.7		84.9	10.0	
	V	35.8	43.6	37.0	50.2	50.7	50.2
Medical School	N	10		12	11		11
	H	83.3			100.0		
	V	.4		.4	.9		.7
Junior College	N	336	33	391	121	21	149
	H	85.9	8.4		81.2	14.1	
	V	12.5	14.5	12.8	9.6	14.2	10.0
Elem/Sec School	N	766	59	853	273	32	322
	H	89.8	6.9		84.8	9.9	
	V	28.6	26.0	27.9	21.5	21.6	21.6
Foreign Government	N	2		2			
	H	100.0					
	V	.1		.1			
U.S. Fed Govt	N	73	8	83	19	3	24
	H	88.0	9.6		79.2	12.5	
	V	2.7	3.5	2.7	1.5	2.0	1.6
State/Local Govt	N	92	4	99	34	5	40
	H	92.9	4.0		85.0	12.5	
	V	3.4	1.8	3.2	2.7	3.4	2.7
U.S. State Govt	N	72	3	82	34		36
	H	87.8	3.7		94.4		
	V	2.7	1.3	2.7	2.7		2.4
U.S. Local Govt	N	118	11	133	37	2	44
	H	88.7	8.3		84.1	4.5	
	V	4.4	4.8	4.3	2.9	1.4	2.9
Non-Profit Organ	N	161	6	171	65	6	73
	H	94.2	3.5		89.0	8.2	
	V	6.0	2.6	5.6	5.1	4.1	4.9
Industry/Business	N	46	1	50	19	1	20
	H	92.0	2.0		95.0	5.0	
	V	1.7	14	1.6	1.5	.7	1.3

TABLE 4

Higher Education Institutions Employing Doctorate Recipients (Blacks and Whites Who are Native-Born U.S. Citizens Only and Who Have Definite Employment Plans) in Fiscal Years 1973-1977 by Sex, Carnegie Classifications and Primary Work Activity (Percent of Total Responses)

Primary Work Activity		Men			Women		
		White	Black	Total PhDs	White	Black	Total PhDs
Research & Develop	N	546	13	596	152	6	166
	H	91.6	2.2		91.6	3.6	
	V	10.8	5.4	10.6	7.3	3.8	7.1
Teaching	N	3828	161	4211	1618	121	1826
	H	90.9	3.8		88.6	6.6	
	V	75.5	66.5	74.8	77.9	77.6	77.8
Administration	N	437	47	520	167	18	191
	H	84.0	9.0		87.4	9.4	
	V	8.6	19.4	9.2	8.0	11.5	8.1
Prof Servs to Indivs	N	130	120	148	109	6	118
	H	87.8	8.1		92.4	5.1	
	V	2.6	5.0	2.6	5.2	3.8	5.0
Other	N	41	1	43	13	1	16
	H	95.3	2.3		81.3	6.3	
	V	.8	.4	.8	.6	.6	.7
R&D and Teaching	N	59	4	75	10	2	18
	H	78.7	5.3		55.6	11.1	
	V	1.2	1.7	1.3	.5	1.3	.8
R&D and Admin	N	6		7			
	H	85.7					
	V	.1		.1			
Teaching and Admin	N	23	4	31	9	2	13
	H	74.2	12.9		69.2	15.4	
	V	.5	1.7	.6	.4	1.3	.6
Total Reported	N	5070	242	5631	2078	156	2348
	H	90.0	4.3		88.5	6.6	
Not Reported	N	306	34	360	88	14	106
	H	85.0	9.4		83.0	13.2	
Total All	N	5376	276	5991	2166	170	2454
	H	89.7	4.6		88.3	6.9	

TABLE 5

Number of Predominantly Black Institutions Employing  
Doctorate Recipients by Race and Sex, 1973-1977

	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
<u>Black Males</u>					
No. of Institutions	37	48	46	40	47
No. of Ph.D.'s	78	114	99	82	94
<u>Black Females</u>					
No. of Institutions	28	31	34	43	40
No. of Ph.D.'s	34	49	66	85	73
<u>White Males</u>					
No. of Institutions	47	43	41	45	33
No. of Ph.D.'s	77	67	70	74	52
<u>White Females</u>					
No. of Institutions	14	20	24	24	17
No. of Ph.D.'s	18	27	31	28	21

TABLE 6

Number of Predominantly White Institutions  
Employing Black Ph.D. Recipients, 1973-1977

	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
<u>Black Males</u>					
No. of Institutions	87	112	117	130	134
No. of Ph.D.'s	107	144	158	166	166
<u>Black Females</u>					
No. of Institutions	32	53	72	84	67
No. of Ph.D.'s	33	61	80	99	84

**APPENDIX B - SURVEY OF EARNED DOCTORATES**

PLEASE NOTE:

Some pages have small and  
indistinct print Filmed in  
the best possible way.

UNIVERSITY MICROFILMS.

**SURVEY OF EARNED DOCTORATES**

This form is to be returned to the GRADUATE DEAN, for forwarding to Board on Human-Resource Data and Analyses

Commission on Human Resources  
National Research Council  
2101 Constitution Avenue, Washington, D. C. 20418

Please print or type.

A. Name in full: (Last Name) (First Name) (Middle Name) (9-30)

Cross Reference: Maiden name or former name legally changed (31)

B. Permanent address through which you could always be reached: (Care of, if applicable)

(Number) (Street) (City)

(State) (Zip Code) (Or Country if not U.S.)

C. U.S. Social Security Number: (32-40)

D. Date of birth: (41-45) (Month) (Day) (Year) Place of birth: (46-47) (State) (Or Country if not U.S.)

E. Sex: 1 Male 2 Female (48)

F. Marital status: 1 Married 2 Not married (including widowed, divorced) (49)

G. Citizenship: 0 U.S. native 2 Non U.S., Immigrant (Permanent Resident)  
1 U.S. naturalized 3 Non-U.S., Non-Immigrant (Temporary Resident) (50)

If Non-U.S., indicate country of present citizenship (51-52)

H. Racial or ethnic group: (Check all that apply.) A person having origins in---  
0 American Indian or Alaskan Native any of the original peoples of North America, and who maintain cultural identification through tribal affiliation or community recognition.  
1 Asian or Pacific Islander any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands. This area includes, for example, China, Japan, Korea, the Philippine Islands, and Samoa.  
2 Black, not of Hispanic Origin any of the black racial groups of Africa.  
3 White, not of Hispanic Origin any of the original peoples of Europe, North Africa, or the Middle East.  
4 Hispanic Mexican, Puerto Rican, Central or South American, or other Spanish culture or origins, regardless of race. (53-59)

I. Number of dependents: Do not include yourself. (Dependent - someone receiving at least one half of his or her support from you) (56)

J. U.S. veteran status: 0 Veteran 1 On active duty 2 Non-veteran or not applicable (57)

**EDUCATION**

K. High school last attended: (School Name) (City) (State) (58-59)

Year of graduation from high school: (60-61)

L. List in the table below all collegiate and graduate institutions you have attended including 2-year colleges. List chronologically, and include your doctoral institution as the last entry.

Institution Name	Location	Years Attended		Major Field		Minor Field	Degree (if any)			
		From	To	Use Specialties List Name	Number		Number	Title of Degree	Granted Mo.	Yr.

M. Enter below the title of your doctoral dissertation and the most appropriate classification number and field. If a project report or a musical or literary composition (not a dissertation) is a degree requirement, please check box (44)

Title ..... Classify using Specialties List  
..... Number Name of field

N. Name the department (or interdisciplinary committee, center, institute, etc.) and school or college of the university which supervised your doctoral program: (Department/Institute/Committee/Program) (School)

O. Name of your dissertation adviser: (Last Name) (First Name) (Middle Initial)



103  
**SURVEY OF EARNED DOCTORATES, Cont.**

P. Please enter a "1" beside your primary source of support during graduate study. Enter a "2" beside your secondary source of support during graduate study. Check all other sources from which support was received.

- |                                |  |  |                                  |
|--------------------------------|--|--|----------------------------------|
| 58 --- NSF Fellowship          | 66 --- GI Bill   | 72 --- Research Assistantship                                | 76 --- Spouse's earnings         |
| 59 --- NSF Traineeship         | 67 --- Other Federal support<br>(specify) .....          | 73 --- Educational fund of<br>industrial or<br>business firm | 77 --- Family contribu-<br>tions |
| 60 --- NIH Fellowship          | 68 --- Woodrow Wilson Fellowship                         | 74 --- Other institutional<br>funds (specify) .....          | 78 --- Loans (S/D/S/L<br>direct) |
| 61 --- NIH Traineeship         | 69 --- Other U.S. national fellowship<br>(specify) ..... | 75 --- Own earnings  | 79 --- Other loans               |
| 62 --- NDEA Fellowship         | 70 --- University Fellowship                             |  | 80 --- Other (specify) .....     |
| 63 --- Other HEW<br>Fellowship |  |  |                                  |
| 64 --- AEC/ERDA<br>Fellowship  |  |  |                                  |
| 65 --- NASA Traineeship        | 71 --- Teaching Assistantship                            |  |                                  |

Q. Please check the space which most fully describes your status during the year immediately preceding the doctorate.

- |   |  |   |  |     |
|---|--|---|--|-----|
| 0 <input type="checkbox"/> Held fellowship<br>1 <input type="checkbox"/> Held assistantship<br>2 <input type="checkbox"/> Held own research grant<br>3 <input type="checkbox"/> Not employed<br>4 <input type="checkbox"/> Part-time employed | Full-time<br>Employed in:<br>(Other than<br>0, 1, 2) | { | 5 <input type="checkbox"/> College or university, teaching<br>6 <input type="checkbox"/> College or university, non teaching<br>7 <input type="checkbox"/> Elem. or sec. school, teaching<br>8 <input type="checkbox"/> Elem. or sec. school, non teaching<br>9 <input type="checkbox"/> Industry or business<br>(11) <input type="checkbox"/> Other (specify) ..... | (9) |
|   |  |   | (12) <input type="checkbox"/> Any other (specify) .....  |     |

R. How many years (full-time equivalent basis) of professional work experience did you have prior to the doctorate? (include assistantships as professional experience) ..... (10-11)

**POSTGRADUATION PLANS**

- S. How well defined are your postgraduation plans?
- 0  Have signed contract or made definite commitment  
 1  Am negotiating with a specific organization, or more than one  
 2  Am seeking appointment but have no specific prospects  
 3  Other (specify) ..... (12)

- T. What are your immediate postgraduation plans?
- |   |   |                                 |
|---|---|---------------------------------|
| 0 <input type="checkbox"/> Postdoctoral fellowship?<br>1 <input type="checkbox"/> Postdoctoral research associateship?<br>2 <input type="checkbox"/> Traineeship?<br>3 <input type="checkbox"/> Other study (specify) ..... | { | Go to<br>Item "U"<br>.....      |
| 4 <input type="checkbox"/> Employment (other than 0, 1, 2, 3)<br>5 <input type="checkbox"/> Military service?<br>6 <input type="checkbox"/> Other (specify) .....   | { | Go to<br>Item "V"<br>..... (13) |

U. If you plan to be on a postdoctoral fellowship, associateship, traineeship or other study

What will be the field of your postdoctoral study?  
 Classify using Specialties List.

Number	Field	
.....	.....	(14-16)

What will be the primary source of support?

0  U.S. Government  
 1  College or university  
 2  Private foundation  
 3  Nonprofit, other than private foundation  
 4  Other (specify) .....

6  Unknown  
 Go to Item "W"

V. If you plan to be employed, enter military service, or other -- What will be the type of employer?

- 0  4-year college or university other than medical school  
 1  Medical school  
 2  Jr. or community college  
 3  Elem. or sec. school  
 4  Foreign government  
 5  U.S. Federal government  
 6  U.S. state government  
 7  U.S. local government  
 8  Nonprofit organization  
 9  Industry or business  
 (11)  Self employed  
 (12)  Other (specify) ..... (18)

Indicate *primary* work activity with "1" in appropriate box; *secondary* work activity (if any) with "2" in appropriate box.

- 0  Research and development  
 1  Teaching  
 2  Administration  
 3  Professional services to individuals  
 5  Other (specify) ..... (19-20)

In what field will you be working?  
 Please enter number from Specialties List ..... (21-23)

Go to Item "W"

W. What is the name and address of the organization with which you will be associated?

.....  
 (Name of Organization)

.....  
 (Street) (City, State) (Or Country if not U.S.) (34-36)

**BACKGROUND INFORMATION**

X. Please indicate, by circling the highest grade attained, the education of

<i>your father:</i>	none	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	MA, MD PhD	Graduate	Postdoctoral	(30)
		Elementary school								High school				College							
<i>your mother</i>	none	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	MA, MD PhD	Graduate	Postdoctoral	(31)
	0	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	8	9	(11)	

Signature ..... Date completed ..... (32-34)