

LEGISLATIVE NOTICE

NOTICE #96

JUNE 23, 1980

U.S. SENATE REPUBLICAN POLICY COMMITTEE

John Tower, Chairman

Calendar 763

S. 568: NATIONAL SCIENCE FOUNDATION AND WOMEN IN SCIENCE AUTHORIZATIONS, FY's 81-82

REPORTED: May 15 (legis. day, Jan. 3), 1980, Labor and Human Resources (S. Rept. 96-713)

CAPSULE VERSION

PURPOSE: (1) Continue present authorities of National Science Foundation (NSF) for FY's 1981 and 1982, authorizing \$1,074,000,000 and \$1,235,500,000 respectively; and (2) establish program for FY's 1981 and 1982 to promote full use of human resources in science and technology through comprehensive program to increase potential contribution and advancement of women in scientific, professional, and technical careers, earmarking \$23 million in FY 1981 and \$27 million in FY 1982 from NSF funds.

ADDITIONAL VIEWS: Hatch. Supports women-in-science proposal because women deserve sounder base from which to compete, but program will rise or fall in first 2 years. Also, program should not be looked on as first step in Federal run on Government paternalism for women. Regret program was coupled with NSF authorization bill and that NSF money was reduced to accommodate it (while still keeping within requested funding level).

POSSIBLE AMENDMENT: AMDT. #1891 - Hatch. (Substitute for bill.)

(1) Include same Title I (dealing with NSF authorizations); but
(2) revise Title II (dealing with women-in-science), keeping same amounts but striking certain provisions so that bulk of money would go to women participants, NOT for bureaucratic expenses, etc.

(For details, see below.)

BACKGROUND: National Science Foundation's principal missions are to advance U.S. science and strengthen science education at all academic levels. NSF sponsors basic research in all fields of science, and supports applied research in areas where there is particular potential to improve technology and economic growth or to contribute to solution of national problems involving public interest. Nearly all NSF programs are carried out through grants and contracts, and it does not operate any research laboratories itself. The largest share of NSF support goes for individual research projects grants, awarded on basis of merit as judged by applicants peers in particular field of science. NSF provides dominant share of Federal basic research support going to academic institutions in a number of fields; more than 2,000 colleges, universities, industrial firms, and other institutions are participating in NSF-assisted research and education projects; and projects supported by NSF involve participation of about 18,000 scientific researchers and teachers and more than 13,000 graduate student research assistants and scientific technicians.

Women compose 51.3 percent of U.S. population, but less than 3 percent of engineers are women, only 4 percent of physicists, and only 11 percent of chemists. Over years, educational institutional, and cultural barriers have stood in way of equal participation of women in science and technology. Also, those women who are employed in scientific careers generally earn less than men in every field, at every degree level, every level of experience, and in every employment setting. Women are excluded from selection of scientific and technical professions at an early age, although, generally speaking, boys and girls have equal abilities in terms of achievement and interest in mathematics and science until 9th grade. After 9th grade, fewer girls take science courses -- possibly because of sexual stereotyping which has had its effect by this time, many experts believe. Parents have also been noted as possibly contributing to the dampening of their female child's enthusiasm for science. The numbers of women in science and technology probably will not reach even half of their proportion of the population until women are actively encouraged to consider such careers at an early stage in their education.

PURPOSE: (1) Authorize FY 1981 and FY 1982 funds for National Science Foundation (NSF) and (2) set up 2-year program to increase contribution and advancement of women in science as follows:

TITLE I -- NATIONAL SCIENCE FOUNDATION AUTHORIZATION

Sec. 101: Authorize for NSF (a) \$1,074,000,000 in FY 1981 and (b) \$1,235,500,000 in FY 1982, distributing amounts to 10 line-item program categories.

Sec. 102: Provide appropriations shall remain available for period specified in appropriations acts.

Sec. 103: (1) Provide for specific set-asides of (a) \$1 million for program of education in appropriate technology, (b) \$2.25 million for program Ethics and Values in Science and Technology, and (c) \$5 million for program Minorities and Handicapped in Science; and (2) provide that, of amounts authorized for equipment and instrumentation, NOT LESS than 10 percent shall be made available for grants to 2- and 4-year colleges for equipment and instrumentation costing \$35,000 or less.

Sec. 104: Authorize (a) up to \$5,000 for FY 1981 and (b) such sums as may be necessary for FY 1982 for official consultation, representation, and other extraordinary expenses at Director's discretion.

Sec. 105: Authorize (a) up to \$5.5 million for FY 1981 and (b) such sums as may be necessary for FY 1982 for expenses of NSF incurred outside U.S. and to be drawn from excess foreign currencies.

Sec. 106: (1) Provide that funds may be transferred among line items up to 10 percent net increase or decrease in each line item; and (2) provide for line-item transfers in excess of 10 percent IF proposal for such transfer is sent in writing to President of Senate, House Speaker, Senate Labor and Human Resources, and House Science and Technology, with transfer taking effect 30 days thereafter (or sooner, if chairmen of both House and Senate committees have written Director there is no objection).

Sec. 107: Provide, under NSF Act of 1950, President, in making nominations to Foundation, shall give due consideration to equitable representation of scientists who are women and who represent minorities.

TITLE II -- WOMEN IN SCIENCE

Sec. 201: Cite title as "Women in Science and Technology Equal Opportunity Act."

PART A -- STATEMENT OF FINDINGS, PURPOSE, AND POLICY

Sec. 211: State congressional findings.

Sec. 212: Declare purpose of Act is to encourage full participation of women in scientific, engineering, professional, and technical fields.

Sec. 213: Declare policy of Nation is to encourage women to acquire skills in science and mathematics so that equal opportunities in education, training, and employment in scientific and technical fields will be assured.

Sec. 214: Provide applicable definitions.

PART B -- EDUCATION

Sec. 221: Authorize NSF to support elementary and secondary school programs in science and mathematics which will emphasize acquiring of knowledge, skills, and information by female students.

Sec. 222: Authorize NSF to support activities in higher education that will (a) increase numbers of women taking courses that lead to scientific and technical degrees, (b) encourage women to consider and prepare for careers in science and technology, (c) provide opportunities for fellowships and traineeships for women in science and technology, or (d) provide continuing education and retraining opportunities in scientific and technical careers for women whose careers have been interrupted.

Sec. 223: Authorize NSF to support continuing education activities that provide opportunities for women scientists who are in the workforce (or who are outside the workforce because of career interruptions) to obtain new scientific and technical knowledge, techniques, and skills.

Sec. 224: Authorize NSF to provide necessary technical assistance.

PART C -- PUBLIC UNDERSTANDING

Sec. 231: (1) Create Center for Women in Science which NSF shall initiate or support after consulting with groups active in promoting opportunities for women in science and other appropriate public agencies and private entities; and (2) direct Center (a) to undertake and support activities that are designed to educate and inform public concerning importance of participation of women in science and technology, (b) to examine barriers confronted by women in science and provide information about alleviating discrimination and bias against women in scientific and technical fields, and (c) to encourage education, employment and advancement of women in science, (d) to conduct or support collection, analysis, and dissemination to the public information about public and private sector efforts that encourage full participation of women in science and technology.

Sec. 232: Authorize NSF to initiate or support research program that will increase understanding of potential contribution of women in science and technology and means of furthering their participation and achievement in same.

Sec. 233: Authorize NSF to create a visiting women scientists program under which visiting women scientists, named by NSF Director, will visit secondary schools and colleges in all regions of country to encourage girls and women to get scientific and mathematical skills, to consider such careers, and to prepare for such careers through lectures, seminars, workshops, and informal discussions regarding different aspects of careers.

Sec. 234: Authorize NSF to support activities to improve scope, relevance, and quality of information available to public concerning importance of women's participation in scientific and technical careers through radio, TV, journals, newspapers, magazines, and other media.

Sec. 235: Authorize NSF to support identification or development of books and instructional materials, portraying women in scientific and technical occupations, encouraging girls and women to consider science and technology careers, stressing need for mathematical and technical skills in numerous activities and professions, presenting scientific and technical material unbiased with regard to gender, stressing equality of ability and status of men and women, and emphasizing importance of equal opportunity.

Sec. 236: Authorize NSF to support community outreach projects stressing importance of equal opportunity for women in scientific and technical fields, stimulating girls' and women's interest in science and math, and encouraging them to complete courses in same.

Sec. 237: Authorize NSF to support activities of museums and science centers demonstrating potential to interest and involve women in developing mathematical and scientific skills.

Sec. 238: Authorize dissemination to public of any collected data, material, etc., gained thru such museums and science centers pertaining to importance of women's participation in scientific and technical careers.

PART D -- OPPORTUNITY IMPROVEMENT AND REPORTING PROGRAMS

Subpart 1 -- Opportunity Programs

Sec. 241: Authorize NSF Director to make National Research Opportunity Grants to women scientists who received their Ph.D.'s 5 years previous to grant OR who received doctorate but are reentering workforce within 5 years after career was interrupted, with (a) grants to be based on merit, used to conduct scientific research in scientist's chosen field, and to include funds for acquiring and keeping up equipment and renovating facilities, (b) each grant set for 3-year period (renewable for another 3-year period) and at minimum of \$10,000 per year and maximum of \$75,000 per year (with Director determining actual amount), and (c) grant paid directly to recipient, although Director can provide up to \$5,000 per year to institution where research is done to help defray institutional costs of same.

Sec. 242: Authorize NSF to award grants to individuals or academic institutions for full- or part-time visiting professorships (of 1 or 2 years) for women scientists from industrial, public, or academic sectors.

Sec. 243: Authorize NSF to support demonstration projects to encourage employment and advancement of women in science and engineering by (a) establishing and implementing cooperative research and education arrangements among business, academic, and other entities, (b) developing programs to help scientists and engineers acquire new skills in order to change fields, advance, or adopt to changing scientific and technological needs, (c) developing programs to allow scientists to exchange or rotate between positions within public and private entities, (d) creating new research opportunities for students, scientists, and engineers, and (e) improving employment policies and conditions.

Sec. 244: Advise Office of Personnel Management to include in its training program for officials of appropriate Federal agencies information and instructions concerning recruitment, retention, and promotion of qualified women scientists, engineers, and technicians, etc.

Subpart 2 -- Agency Responsibility

Sec. 246: Define certain terms.

Sec. 247: Instruct Chairman of Equal Employment Opportunity Commission (EEOC) to prepare and send to NSF by Sept. 30 each year report concerning employment status of women in scientific and technical fields for (a) all employers with 15 or more employees who use individuals in scientific and technical fields and (b) each Federal agency, national laboratory, etc., to prevent discrimination against women in science and technology.

Sec. 248: Instruct NSF Director to prepare every 2 years report concerning participation and status of women in science and technology in Federal, State, and local government, private sector, and academic institutions which will be sent both to Congress and other Government offices.

PART E -- GENERAL PROVISIONS

Sec. 251: (1) Establish within NSF Committee on Women in Science (made up of 13 members) to advise NSF concerning implementation of Act and other NSF policies and activities encouraging full participation of women in science, etc., and (2) establish

Special Assistant for Women in Science within NSF who will be principal adviser to Director regarding matters on advancement of women in science and technology.

Sec. 252: State NSF shall have same powers and authority under this Act as stipulated under NSF Act of 1950 to perform its duties (with Director also having same powers).

Sec. 253: State that no grant may be awarded nor contract entered into UNLESS application is submitted to Director containing required information.

Sec. 254: State that, if provision of Act is deemed invalid, validity of other parts will not be affected.

Sec. 255: State that, of sums authorized for NSF by bill, \$23 million in FY 1981 and \$27 million in FY 1982 shall be available for implementing provisions dealing with women in science and technology, with limits of (a) 15 percent placed on graduate and post graduate fellowships, career development grants, and research participation, traineeships or internship programs (sec. 222) and fellowships (Sec. 223), (b) 15 percent for National Research Opportunity Grants, and (c) 5 percent for visiting professorships.

COST: (1) FY 1981 -- \$999 million; FY 1982 -- \$1.096 billion; FY 1983 -- \$529.1 million; FY 1984 -- \$193.4 million; and FY 1985 -- \$121.2 million for NSF programs, (2) FY's 1981-1983 -- \$1 million for EEOC data collection on employment status of women in scientific and technological fields.

REGULATORY IMPACT: Title I: No additional regulatory impact. Title II: No additional regulatory impact regarding women in science because present regulations can be used.

Printed amendment thereto:

AMENDMENT #1891: Hatch. (In nature of substitute for bill.) (1) To provide, in Title I, same authorizations for NSF as in bill (\$1.074 billion in FY 1981 and \$1.235 billion in FY 1982) BUT amounts authorized for women in science program has been spread out among research directorates with one-third of total for women in science being allocated to Science Education directorate (RATHER THAN taking proportional cuts in NSF research directorates to accommodate separate women in science program); and (2) to provide, in Title II, (a) same amounts for women in science program (\$23 million in FY 1981 and \$27 million in FY 1982) BUT distributed so that women themselves will receive more of funds; (b) for programs in bill which would channel funds into research opportunities for women; visiting women scientists; internships; workshops and field trips for elementary and secondary school girls, undergraduate, graduate, and post-graduate fellowships; traineeships, research participation projects; visiting women professorships; and continuing education assistance (with only emphasis added being at the undergraduate level) BUT with bill provisions eliminated which require spending funds on symbolic trappings of Federal emphasis [i.e., substitute DOES NOT include bill's sections dealing with Center for Women in Science (sec. 231), information being available to public (sec. 234), developing books and instructional materials (sec. 235), community outreach programs (sec. 236), research activities of museums and science centers and dissemination of such information to public (secs. 237 and 238), mandating Federal Government to include recruitment of women scientists in its personnel training (sec. 244), and Committee on Women in Science (sec. 251)]; and (c) that one-third of FY 1982 authorization (\$27 million) be spent on all Science Education programs under Title II of bill and remaining amount on research for women, etc.

NATIONAL SCIENCE FOUNDATION
AND WOMEN IN SCIENCE AUTHORIZATION ACT
STATEMENT OF SENATOR BOB DOLE

MR. DOLE. MR. PRESIDENT, I AM PLEASED TO EXTEND MY SUPPORT TO THE CONTINUING AUTHORIZATION OF THE NATIONAL SCIENCE FOUNDATION, AS WELL AS THE WOMEN IN SCIENCE AUTHORIZATION ACT. OVER THE YEARS, THE NATIONAL SCIENCE FOUNDATION HAS MADE A TREMENDOUS CONTRIBUTION TO OUR SOCIETY THROUGH ITS ADVANCEMENT OF U. S. SCIENCE AND EDUCATION IN THE SCIENCES AT ALL ACADEMIC LEVELS. IT HAS SPONSORED BASIC RESEARCH IN ALL FIELDS OF SCIENCE AND SUPPORTED APPLIED RESEARCH IN AREAS WHERE OUR TECHNOLOGY MAY BE IMPROVED OR A PARTICULAR POTENTIAL TOWARD ECONOMIC GROWTH IS SEEN. IT HAS ALSO CONTRIBUTED MUCH TO THE SOLUTION OF NATIONAL PROBLEMS RELATING TO SCIENCE AND INVOLVING THE PUBLIC INTEREST.

ROLE WITHIN THE FEDERAL GOVERNMENT

WITHIN THE FEDERAL BUREAUCRACY, THE NATIONAL SCIENCE FOUNDATION HAS PROMOTED SCIENTIFIC INTERESTS AND GENERATED A PRODUCTIVE ENVIRONMENT FOR SCIENCES WITHIN THE UNITED STATES TO DEVELOP AND PROSPER. IT HAS DONE MUCH TO ASSURE THAT OUR COUNTRY WILL HAVE A SUFFICIENT POOL OF WELL-QUALIFIED SCIENTISTS AND ENGINEERS. AMONG ITS OTHER RESPONSIBILITIES, IT HAS CONSIDERABLE INPUT INTO A BROAD RANGE OF SCIENTIFIC POLICY AND SCIENCE AND ENGINEERING RESOURCE STUDIES. IT ANALYZES SCIENCE PERSONNEL AND FUNDING TRENDS. IN ITS EFFORTS TO FOSTER WORLD-WIDE COOPERATION, IT SPONSORS VARIOUS RESEARCH PROGRAMS IN COLLABORATION WITH OTHER COUNTRIES AND ENHANCES THE PEACE EFFORT BY PROVIDING A LINK BETWEEN THE UNITED STATES AND FOREIGN SCIENTISTS, WHICH CONTRIBUTES TO OUR INTERNATIONAL COMMUNICATION AND COOPERATION WITH OTHER NATIONS, AT THE SAME TIME STRENGTHENING OUR OWN SCIENTIFIC KNOWLEDGE.

GRANT SUPPORT

CURRENTLY, MORE THAN 2,000 COLLEGES, UNIVERSITIES, INDUSTRIAL FIRMS AND OTHER INSTITUTIONS BENEFIT FROM NSF GRANTS IN THEIR RESEARCH AND EDUCATION PROJECTS. IN THE FIELDS OF APPLIED SCIENCE AND TECHNOLOGY, INDUSTRIAL FIRMS ARE ALSO ENGAGING IN NSF-ASSISTED PROGRAMS. THE LARGEST SHARE OF NSF SUPPORT GOES FOR INDIVIDUAL RESEARCH PROJECT GRANTS, WHICH ARE AWARDED ON THE BASIS OF MERIT THROUGH A PEER REVIEW PROCESS. MORE THAN 30,000 SCIENTISTS AND ENGINEERS PARTICIPATE IN THIS APPLICATION SCREENING PROCESS AS REPRESENTATIVES FROM PARTICULAR FIELDS WITHIN THE SCIENTIFIC COMMUNITY. THE FOUNDATION ALSO PROVIDES A SIGNIFICANT AMOUNT OF FEDERAL BASIC RESEARCH SUPPORT TO ACADEMIC INSTITUTIONS IN A BROAD SPECTRUM OF SCIENTIFIC FIELDS. ABOUT 18,000 SCIENTIFIC RESEARCHERS AND TEACHERS AND MORE THAN 13,000 GRADUATE STUDENT RESEARCH ASSISTANTS AND SCIENTIFIC TECHNICIANS PARTICIPATE IN NSF SUPPORTED PROJECTS.

SOME LESSER KNOWN INVOLVEMENT ON THE PART OF NSF IS ITS SUPPORT FOR THE NATIONAL CENTER FOR ATMOSPHERIC RESEARCH AT BOULDER, COLORADO, AS WELL AS VARIOUS OBSERVATORIES AND FOUR NATIONAL RESEARCH CENTERS. IN ADDITION, THE FOUNDATION FUNDS AND MANAGES THE U. S. ANTARCTIC PROGRAM.

UNUTILIZED RESOURCES IN SCIENCE AND TECHNOLOGY

ONE OF THE MAJOR FOCAL POINTS OF THIS LEGISLATION IS TO PROMOTE THE INCREASED PARTICIPATION OF WOMEN IN THE FIELDS OF SCIENCE AND TECHNOLOGY. GIVEN THE SOCIOLOGICAL FACTORS INVOLVED, AS WELL AS SOME SUBSTANTIAL STATISTICAL DATA, THERE IS CONVINCING EVIDENCE THAT ONE OF OUR MOST VALUABLE RESOURCES IS EXTREMELY UNDERUTILIZED IN THESE AREAS. ALTHOUGH WOMEN COMPRISE 51.3 PERCENT OF OUR POPULATION, LESS THAN 3 PERCENT OF ENGINEERS ARE WOMEN, ONLY 4 PERCENT OF PHYSICISTS ARE WOMEN, AND ONLY 11 PERCENT OF CHEMISTS ARE WOMEN. THEIR EQUAL PARTICIPATION IN SCIENTIFIC AND ENGINEERING FIELDS HAS BEEN PREVENTED FOR A NUMBER OF COMPLEX EDUCATIONAL, INSTITUTIONAL, AND CULTURAL REASONS. THIS SITUATION HAS IMPROVED DURING THE '70'S BUT THERE IS STILL MUCH PROGRESS TO BE MADE TOWARD ELIMINATING THE BARRIERS THAT HAVE EXISTED IN PREVIOUS YEARS.

THOSE WOMEN WHO ARE EMPLOYED IN SCIENTIFIC CAREERS GENERALLY EARN LESS THAN MEN IN EVERY FIELD OF COMPARISON, AND AT EVERY LEVEL OF DEGREE, EXPERIENCE, AND EMPLOYMENT. FOR EXAMPLE, IN 1973, FEMALE DOCTORAL SCIENTISTS AND ENGINEERS EARNED 16.7 PERCENT LESS THAN THEIR MALE COUNTERPARTS. INSTEAD OF CLOSING THIS GAP, IT INCREASED TO 20.5 PERCENT BY 1977. WOMEN WHO SEEK SCIENTIFIC AND TECHNICAL CAREERS EXPERIENCE UNEMPLOYMENT RATES 2-5 TIMES HIGHER THAN THOSE OF MALES SEEKING THE SAME KIND OF POSITIONS.

SOCIOLOGICAL BACKGROUND

IT ALL SOUNDS LIKE A GRAVE INJUSTICE, BUT IT IS JUST PART OF WHAT E. R. A. HAS BEEN COMPLAINING ABOUT FOR YEARS, AND UNFORTUNATELY IT IS CAUSED BY CERTAIN ELEMENTS THAT HAVE FOR TOO LONG BEEN INGRAINED IN OUR SYSTEM. IT IS NOW WELL DOCUMENTED THAT, GENERALLY SPEAKING, BOYS AND GIRLS HAVE EQUAL ABILITIES IN TERMS OF ACHIEVEMENT AND INTEREST IN MATHEMATICS AND SCIENCE, BUT THE TURNING POINT SEEMS TO OCCUR SOMEWHERE AROUND THE NINTH GRADE. THEREAFTER, FEWER GIRLS TAKE SCIENCE COURSES. WHILE 25 PERCENT OF BOYS CONSIDER CAREERS IN SCIENCE AT THIS STAGE OF THE LEARNING PROCESS, ONLY ABOUT 3 PERCENT OF GIRLS DO.

IT IS APPARENT THAT STIMULATING INTERST IN SCIENTIFIC AND TECHNOLOGICAL CAREERS ON THE PART OF WOMEN IS CONSIDERABLY ERODED DURING THE FORMAL EDUCATION PROCESS, BUT A LOT OF THIS IS DUE TO THE STEREOTYPING INFLUENCE CAUSED BY SOCIOLOGICAL FACTORS. GIRLS ARE NOT EXPECTED TO THINK LOGICALLY OR UNDERSTAND COMPLEX SCIENTIFIC AND MATHEMATICAL PRINCIPLES. WITH MINIMUM EXTERNAL ENCOURAGEMENT FROM PARENTS AND TEACHERS, THEY GIVE UP ON SUCH POTENTIAL CAREER PATHS AT AN EARLY AGE BECAUSE THEY INWARDLY ACCEPT WHAT SEEMS TO BE EXPECTED OF THEM.

UNTIL WOMEN ARE ACTIVELY ENCOURAGED TO CONSIDER SUCH CAREERS AT AN EARLY STAGE IN THEIR EDUCATION, THERE IS LITTLE HOPE THAT THE NUMBERS OF WOMEN WHO HAVE CAREERS IN SCIENCE AND TECHNOLOGY WILL REACH EVEN HALF OF THEIR PROPORTION WITHIN THE POPULATION AT LARGE.

NATIONAL ACADEMY OF SCIENCES STUDY

IN A RECENTLY PUBLISHED STUDY ON THE EMPLOYMENT OF WOMEN SCIENTISTS IN INDUSTRY AND GOVERNMENT, THE NATIONAL ACADEMY OF SCIENCES DISCOVERED WIDE DIFFERENCES IN THE EMPLOYMENT, WORK ACTIVITIES, AND SALARIES OF MALE AND FEMALE PH.D.'S IN INDUSTRY. THE SEX DIFFERENCE IN HIRING RATE IS MOST SIGNIFICANT IN THE LIFE SCIENCES WHERE THE AVAILABLE POOL OF DOCTORAL WOMEN IS RELATIVELY LARGE. IN REFERENCE TO THIS STUDY, THE ACADEMY STATED "THE SEX DIFFERENCES IN HIRING RATES AND SALARIES WHICH PERSIST SUGGEST THAT AFFIRMATIVE ACTION MANDATES ARE NOT ENFORCED AT PROFESSIONAL LEVELS IN INDUSTRY, BUT A FIRM CONCLUSION OF THIS SORT MUST AWAIT A MORE DETAILED STUDY."

FOR SOME REASON, THE STATISTICS IN FAVOR OF WOMEN SCIENTISTS AND ENGINEERS WITHIN THE FEDERAL GOVERNMENT IS MUCH MORE FAVORABLE. THEY ARE EMPLOYED IN SOMEWHAT CLOSER APPROXIMATION TO THEIR PROPORTIONS WITHIN THE AVAILABLE POPULATION. HOWEVER, ACADEMIA REFLECTS UNFAVORABLE STATISTICS AGAIN. WHEN COMPARING EQUAL RANK, WOMEN FACULTY RECEIVE TENURE LESS OFTEN THAN THEIR MALE COLLEAGUES. WHILE 72 PERCENT OF MALE FACULTY HOLD TENURE APPOINTMENTS, ONLY 47 PERCENT OF WOMEN POSSESS THE SAME RANK. FEMALE PH.D.'S WHO EARNED THEIR DEGREES IN THE 1950'S AND 1960'S HOLD ACADEMIC RANKS SIGNIFICANTLY BELOW MEN IN THE SAME FIELDS AT A COMPARABLE CAREER LEVEL. AND, SURPRISINGLY ENOUGH, THE SITUATION DID NOT IMPROVE FOR THOSE PH.D. CANDIDATES FROM 1970-74,

AMONG WHOM HIGHER PROPORTIONS OF MEN THAN OF WOMEN REACHED THE RANKS OF ASSOCIATE PROFESSOR BY 1977. AS WE CAN SEE, THERE IS STILL A LONG WAY TO GO.

FUTURE OF WOMEN IN SCIENCE

IT IS MY HOPE THAT THIS LEGISLATION WILL SERVE TO FOSTER THE PARTICIPATION OF WOMEN IN SCIENCE AND TECHNOLOGY. HOWEVER, THERE IS ALWAYS A DANGER WITH SUCH INTENT THAT IT WILL SERVE AS A CRUTCH AND NOT MERELY HAVE A MOTIVATING INFLUENCE. AS WITH ALL GOOD INTENTIONS, THE PROMOTION OF WOMEN IN SCIENTIFIC FIELDS SHOULD NOT BE REGARDED AS ANOTHER FORM OF GOVERNMENT PATERNALISM FOR WOMEN. QUITE OFTEN THE CONDESCENDING ATTITUDES FROM MEN ARE ENOUGH TO COPE WITH -- WOMEN DO NOT NEED A GOVERNMENT THAT REGARDS THEM IN THE SAME PERSPECTIVE.

THE EVIDENCE IS OVERWHELMING THAT WOMEN ARE FACED WITH TREMENDOUS BARRIERS TO THEIR PROGRESS IN SCIENTIFIC FIELDS, BUT, WITH A GROWTH IN AWARENESS AT ALL LEVELS OF OUR SOCIETY, HOPEFULLY THESE ROADBLOCKS WILL BE OVERCOME WITH TIME. IT ALL BEGINS WITH OPPORTUNITIES AT THE ELEMENTARY AND SECONDARY LEVELS OF EDUCATION. WOMEN SHOULD BE ENCOURAGED TO PREPARE FOR CAREERS IN SCIENCE. IF THE PROGRAM OUTLINED IN THIS LEGISLATION IS SUCCESSFUL, IT WILL ENHANCE THE ABILITY OF WOMEN TO COMPETE ON A EQUAL BASIS FOR PROFESSIONAL POSITIONS IN ACADEMIA, INDUSTRY, AND GOVERNMENT. I SUPPORT THE CONTINUING AUTHORIZATION FOR THE NATIONAL SCIENCE FOUNDATION, AS WELL AS THE OBJECTIVE TO FOSTER WOMEN IN THE SCIENCES.

MEMORANDUM

June 19, 1980

TO: Senator Dole

FROM: Chris Bolton *Chris*

RE: National Science Foundation and Women in Science Authorization Act

The NSF authorization could come up for floor action anytime, possibly late today or tomorrow. It is not controversial, and is primarily a continuing authorization for the National Science Foundation for fiscal years 1981 and 1982.

There is a new provision in that it establishes a program for fiscal years 1981 and 1982 to promote the full use of human resources in science and technology through a comprehensive program to increase the potential contribution and advancement of women in scientific, professional, and technical careers.

FUNDING: Authorization for funding of \$1,074 and \$1,235.5 billion for FY 1981 and 1982, respectively, with \$23 million for FY 1981 and \$27 million in FY 1982 to be allocated for the promotion of women in the fields of science and technology. Attached is a breakdown of the various sections of this authorization, for your information.

Would you like to have a statement on this?

_____ Yes _____ No