

Speech before the Western Association of Graduate Schools: The graduate and research enterprise

Senator Spark M. Matsunaga Papers

Senate, Public relations, Speeches, Organizations, Box PR74, Folder 47

<https://hdl.handle.net/10524/82548>

Items in eVols are protected by copyright, with all rights reserved, unless otherwise indicated.

UHM Library Digital Collections Disclaimer and Copyright Information

*Sum corrections made:
ji 3/9/79*

"THE GRADUATE AND RESEARCH ENTERPRISE
AS VIEWED BY A U.S. SENATOR"
A SPEECH BY THE HONORABLE SPARK M. MATSUNAGA
AT THE TWENTY-FIRST ANNUAL MEETING OF
THE WESTERN ASSOCIATION OF GRADUATE SCHOOLS
THE BROADMOOR, COLORADO SPRINGS
MARCH 4, 1979, 8:00 P.M.

PRESIDENT MCKAUGHAN (HOWARD), PRESIDENT-ELECT COMSTOCK
DEAN SMUCKLER
(DALE), PAST-PRESIDENT ALBRECHT (PAUL), GRADUATE DEANS,
ACADEMICIANS, LADIES AND GENTLEMEN:

PERMIT ME AT THE OUTSET TO SAY THAT I AM DEEPLY
HONORED BY YOUR INVITATION TO PRESENT THE KEYNOTE ADDRESS AT
THIS 21ST ANNUAL MEETING OF THE WESTERN ASSOCIATION OF
GRADUATE SCHOOLS -- ESPECIALLY IN THE LIGHT OF BEING THE
FIRST MEMBER OF THE U.S. CONGRESS TO SPEAK AT YOUR ANNUAL
MEETING. I DO HOPE THAT THE EXCHANGE OF VIEWS WILL BE USEFUL
AND INFORMATIVE AND THAT, AS A RESULT OF MY PARTICIPATION,
THE LEADERSHIP OF THE WESTERN ASSOCIATION OF GRADUATE SCHOOLS
WILL BE ENCOURAGED TO EXPAND THEIR DIRECT CONTACTS WITH

LEGISLATIVE REPRESENTATIVES AT ALL LEVELS OF GOVERNMENT.

WHEN I WAS ELECTED TO THE UNITED STATES SENATE ON NOVEMBER 6, 1976, AFTER HAVING SERVED FOR SEVEN TERMS IN THE HOUSE OF REPRESENTATIVES, I PUBLICLY EXCLAIMED THAT "MY AMERICAN DREAM HAD COME TRUE." EVEN NOW, AS I REFLECT UPON MY PAST, IT SEEMS INCREDIBLE, EXCEPT IN THE UNITED STATES, HOW ANYONE, BORN OF IMMIGRANT JAPANESE PARENTS INTO A POVERTY STRICKEN FAMILY OF NINE MEMBERS, LIVING ON A SUGAR PLANTATION ON THE TINY, LITTLE-KNOWN ISLAND OF KAUAI, IN THE MIDDLE OF THE VAST PACIFIC OCEAN, COULD THIS DAY BE ADDRESSING THIS SCHOLARLY ASSEMBLY AS A UNITED STATES SENATOR. NO ONE NEED EVER TRY TO CONVINC ME THAT THIS NATION, THAT WHICH WE CALL AMERICAN DEMOCRACY, IS THE GREATEST SYSTEM OF SOCIETY EVER DEvised BY THE MIND OF MAN.

WHEN I WAS A CHILD I WAS TAUGHT TO BELIEVE THAT AMERICA IS A LAND OF EQUAL AND UNLIMITED OPPORTUNITIES. AS A GROWN MAN I AM FULLY CONVINCED OF IT, AND IT IS DUE, IN NO SMALL MEASURE, TO THE AMERICAN EDUCATIONAL ENTERPRISE OF WHICH YOU

AND I ARE AN INTEGRAL PART.

SOME OF YOU MAY HAVE HEARD MIT'S (MASSACHUSETTS INSTITUTE OF TECHNOLOGY) PRESIDENT, DR. JEROME WIESNER WHEN HE SPOKE LAST FALL AT A MEETING OF THE NATIONAL COUNCIL OF UNIVERSITY RESEARCH ADMINISTRATORS. IN HIS SPEECH HE EXPRESSED GRAVE CONCERN ABOUT THE STRAINS IN THE LONGSTANDING PARTNERSHIP BETWEEN UNIVERSITIES AND THE FEDERAL GOVERNMENT.

ALTHOUGH I SHARE MANY OF HIS CONCERNS ABOUT THE PROBLEMS FACING UNIVERSITIES TODAY, I TAKE STRONG EXCEPTION TO HIS EMPHATIC ASSERTION THAT THE FEDERAL GOVERNMENT HAS DESERTED ITS FRIENDS IN THE UNIVERSITY. IT SIMPLY CAN'T AFFORD TO DO THAT, AND I BELIEVE THIS VIEW IS WIDELY SHARED BY MY COLLEAGUES IN BOTH HOUSES OF CONGRESS, ON BOTH SIDES OF THE AISLE, BY DEMOCRATS AND REPUBLICANS ALIKE.

LET ME ASSURE YOU, FURTHER, THAT GRADUATE INSTITUTIONS ARE VIEWED THROUGHOUT THE WASHINGTON ESTABLISHMENT AS AN IMPORTANT NATIONAL RESOURCE, NOT ONLY FOR THE ROLE THAT THEY PLAY IN THE EDUCATION OF OVER A MILLION ADVANCED DEGREE STUDENTS

EACH YEAR, BUT ALSO FOR THEIR UNRIVALED CAPACITY FOR PERFORMING SCHOLARLY RESEARCH.

THIS CONCLUSION FLOWS DIRECTLY FROM A FUNDAMENTAL PREMISE, THAT THE PRIMARY FUNCTION OF THE UNIVERSITY IS TO FOSTER AND DEVELOP CRITICAL AND ANALYTICAL SKILLS, TO NURTURE THE CREATIVE MIND, AND TO ESTABLISH AN ENVIRONMENT WHICH, AT ONE AND THE SAME TIME, IS BOTH OPEN AND SECURE; WHEREIN NEW IDEAS CAN BE EXAMINED, AND ULTIMATELY BE PUT TO THE MOST RIGOROUS TEST TO DETERMINE THEIR VALIDITY.

A LITTLE KNOWN FACT IS THAT MORE THAN HALF OF THE BASIC RESEARCH PERFORMED IN THE UNITED STATES LAST YEAR WAS DONE IN UNIVERSITIES. I THINK IT'S FAIR TO SAY THAT THE UNITED STATES IS UNIQUE IN THE WORLD IN THE DEGREE OF ITS INSTITUTIONAL INTEGRATION BETWEEN THE SCIENTIFIC, ENGINEERING, EDUCATION AND RESEARCH COMMUNITIES. MOREOVER, THE COUPLING OF THESE IMPORTANT AREAS ENABLES STUDENTS TO BENEFIT FROM TRAINING BY TOP AUTHORITIES IN THEIR FIELDS WHILE ALLOWING RESEARCH TO PROCEED IN AN ATMOSPHERE WHICH ENCOURAGES FREEDOM OF THOUGHT AND THE DEVELOPMENT OF NEW IDEAS.

BEFORE I EXPAND ON THE RESEARCH ROLE OF GRADUATE INSTITUTIONS LET ME DIGRESS JUST BRIEFLY TO DISCUSS A MAJOR CARTER ADMINISTRATION INITIATIVE WHICH WILL, I BELIEVE, HAVE A POSITIVE EFFECT ON HIGHER EDUCATION-FEDERAL GOVERNMENT RELATIONS. THAT IS THE PROPOSED FORMATION OF A ^{CABINET LEVEL} DEPARTMENT OF EDUCATION.

THOSE OF YOU WHO HAVE BEEN FOLLOWING THIS PROPOSAL--- I SHOULD HASTEN TO ADD THAT IF YOU'RE NOT YOU SHOULD BE--- KNOW THAT PRESENTLY, OVER 40 FEDERAL AGENCIES AND ORGANIZATIONS ADMINISTER AT LEAST 200 PROGRAMS OF FEDERAL AID TO EDUCATION UNDER A HODGE-PODGE OF RULES AND REGULATIONS WHICH HAVE EITHER CONFLICTED WITH EACH OTHER OR DUPLICATED EFFORTS IN THEIR SUPPORT OF EDUCATION. # LAST FALL, THE SENATE PASSED A BILL, S. 991, WHICH WOULD HAVE CONSOLIDATED MANY OF THESE PROGRAMS AT THE CABINET LEVEL UNDER A SECRETARY OF EDUCATION. MY GOOD FRIEND HOWARD MCKAUGAN KNOWS, I WAS NOT ONLY A CO-SPONSOR AND ADVOCATE OF THIS LEGISLATION, I WAS ALSO PRIVILEGED TO PRESIDE OVER THE SENATE WHEN THIS LEGISLATION WAS PASSED BY

THE SENATE BY AN OVERWHELMING VOTE OF 72-11.

ALTHOUGH A CORRESPONDING BILL, H.R. 13778, WAS INTRODUCED IN THE HOUSE AND SUBSEQUENTLY REPORTED BY THE HOUSE COMMITTEE ON GOVERNMENT OPERATIONS, NO FLOOR ACTION WAS TAKEN ON THE MEASURE BEFORE THE 95TH CONGRESS ADJOURNED, AND THE BILL DIED.

SIMILAR LEGISLATION, OF WHICH I AM AGAIN ONE OF THE PRINCIPAL CO-SPONSORS, HAVE ALREADY BEEN INTRODUCED IN THE 96TH CONGRESS. THE SENATE GOVERNMENT AFFAIRS COMMITTEE HELD HEARINGS IN EARLY FEBRUARY, AND IT SEEMS LIKELY THAT LEGISLATION CREATING A DEPARTMENT OF EDUCATION WILL BE ENACTED INTO LAW DURING THIS CONGRESS.

I BELIEVE THE CREATION OF A DEPARTMENT OF EDUCATION WOULD BE HIGHLY BENEFICIAL TO THE ENTIRE EDUCATION COMMUNITY. IT WOULD INSURE OVERALL COORDINATION AND DIRECTION IN THE ALLOCATION OF THE BILLIONS OF DOLLARS BEING VESTED IN EDUCATION AND PROVIDE AN ORDERLY AND FOCUSED MEANS OF AVOIDING DUPLICATIVE EFFORT AND WASTAGE OF FUNDS. MOREOVER, A

FULL-TIME SECRETARY OF EDUCATION WOULD BE AN ADVOCATE FOR ALL OF THE DEPARTMENT'S EDUCATIONAL EFFORTS AND COULD SPEAK WITH CABINET-LEVEL AUTHORITY TO THE PRESIDENT, THE OFFICE OF MANAGEMENT AND BUDGET, THE CONGRESS, AND THE AMERICAN PUBLIC.

IN LENDING MY SUPPORT TO THE EFFORT NOW UNDERWAY TO PASS THIS LEGISLATION, I RECOGNIZE THAT THERE HAS BEEN SOME FEAR EXPRESSED BY MEMBERS OF THE HIGHER EDUCATION COMMUNITY THAT THE PROPOSED DEPARTMENT WOULD BE DOMINATED BY THE INTERESTS OF ELEMENTARY AND SECONDARY EDUCATION. I DO NOT BELIEVE THAT THIS WILL BE THE CASE. THE BILL THAT PASSED THE SENATE IN 1978, AND THE PRESENT SENATE BILL, WOULD ESTABLISH AN OFFICE FOR POST-SECONDARY EDUCATION WHICH WOULD HAVE A SPENDING AUTHORITY OF ABOUT \$3.6 BILLION AND A STAFF OF APPROXIMATELY 1,200. BOTH FUNDING AND STAFF ARE LARGER THAN THOSE EXPECTED FOR THE CORRESPONDING OFFICE OF ELEMENTARY AND SECONDARY EDUCATION.

THE ASSISTANT SECRETARY FOR POST-SECONDARY EDUCATION WOULD BE YOUR PRIMARY CONTACT WITH THE DEPARTMENT. FURTHERMORE,

THE REPORT OF THE SENATE COMMITTEE ON GOVERNMENTAL AFFAIRS ACCOMPANYING THE LEGISLATION LAST YEAR STATED THAT, AND I QUOTE, "THE ASSISTANT SECRETARY WILL ESTABLISH CONTINUING RELATIONSHIPS WITH STUDENTS, FACULTY, ADMINISTRATORS, TRUSTEES, AND OTHER LEADERS TO IDENTIFY ISSUES AND PROBLEMS AND TO MAKE RECOMMENDATIONS FOR IMPROVEMENTS IN FEDERAL EDUCATION PROGRAMS AFFECTING POST-SECONDARY EDUCATION. STREAMLINING REGULATORY REQUIREMENTS AND PAPERWORK BURDENS, WHICH CURRENTLY HAMSTRING MANY POST-SECONDARY INSTITUTIONS, SHOULD BE ONE OF THE FIRST ORDERS OF BUSINESS."

AS YOU CAN READILY SEE, THE PERSON WHO IS SELECTED TO FILL THE POSITION OF ASSISTANT SECRETARY WILL BE CRUCIAL TO HOW GRADUATE EDUCATION WILL FARE WITHIN THE DEPARTMENT. IT BEHOOVES YOU, THEREFORE, TO BECOME ACTIVELY INVOLVED IN THE SELECTION OF THE ASSISTANT SECRETARY FOR POST SECONDARY EDUCATION, IN ANTICIPATION OF THE CREATION OF A NEW DEPARTMENT OF EDUCATION.

THERE WAS ALSO SOME CONCERN VOICED WHEN THE BILL CREATING

THE DEPARTMENT OF EDUCATION INITIALLY CALLED FOR TRANSFERRING THE ENTIRE SCIENCE EDUCATION DIRECTORATE OF THE NATIONAL SCIENCE FOUNDATION TO THE NEW DEPARTMENT. HOWEVER, IN BOTH THE MODIFIED VERSION OF THE BILL WHICH PASSED THE SENATE LAST YEAR AND THIS YEAR'S BILL, ONLY THOSE NATIONAL SCIENCE FOUNDATION PROGRAMS AIMED PRIMARILY AT STUDENTS AND TEACHERS IN ELEMENTARY, SECONDARY AND UNDERGRADUATE INSTITUTIONS WILL BE TRANSFERRED. THE PROGRAMS AIMED AT THE RECRUITING AND TRAINING OF SCIENTISTS, WHICH LOGICALLY SHOULD BE CLOSELY TIED TO RESEARCH PROGRAMS, WILL REMAIN AT THE NATIONAL SCIENCE FOUNDATION AS WILL THOSE REQUIRING DIRECT PARTICIPATION OF SCIENTISTS AND THOSE WHICH PROVIDE SCIENCE INFORMATION AND ASSISTANCE TO CITIZENS GROUPS.

THIS LAST POINT PUTS ME BACK ON THE TRACK TO EXAMINE IN GREATER DETAIL THE FEDERAL GOVERNMENT'S ROLE IN PROVIDING FUNDING SUPPORT FOR THE UNIVERSITY RESEARCH ENTERPRISE. FIRST, I THINK IT IS IMPORTANT TO NOTE THAT THE LONG SLIDE DOWNWARD IN FEDERAL FUNDS FOR RESEARCH AND DEVELOPMENT, WHICH

CHARACTERIZED THE LATE 1960'S AND EARLY SEVENTIES, HAS---UNDER THE CURRENT DEMOCRATIC ADMINISTRATION---BEEN HALTED,

FROM 1967 TO 1975, THE TOTAL FEDERAL OUTLAY FOR RESEARCH AND DEVELOPMENT, IN CONSTANT DOLLARS, DECLINED 3.8% PER YEAR. HOWEVER, IN 1975, FEDERAL R AND D OUTLAYS INCREASED 3% AND

HAVE CONTINUED TO INCREASE SINCE THEN. BASIC RESEARCH, WHICH WAS HIT HARDEST DURING THE LEAN YEARS, HAS SEEN THE LARGEST INCREASES IN THE PAST FEW YEARS. AFTER ALLOWING FOR INFLATION, FEDERAL FUNDS FOR BASIC RESEARCH INCREASED 10 PERCENT IN 1977, AND SIX PERCENT IN 1978 AND THEY ARE EXPECTED TO CONTINUE TO RISE IN 1979 AND 1980. THIS IS CERTAINLY GOOD NEWS FOR UNIVERSITIES, WHICH, I AM TOLD, ACCOUNT FOR ONLY 16% OF THE TOTAL RESEARCH AND DEVELOPMENT ACTIVITY IN THE NATION, WHILE PERFORMING ABOUT 55 PERCENT OF THE BASIC RESEARCH. SINCE 1975, FEDERAL SUPPORT FOR RESEARCH AND DEVELOPMENT IN UNIVERSITIES HAS BEEN INCREASING ABOUT TWO TO THREE PERCENT EACH YEAR AFTER INFLATION. ALTHOUGH THIS IS A FAR CRY FROM THE 10-15 PERCENT INCREASES OF THE BOOM YEARS PRECEDING 1975, I BELIEVE IT IS A MORE REALISTIC LONG-TERM GROWTH RATE WHEN OTHER

COMPETING NATIONAL PRIORITIES ARE TAKEN INTO CONSIDERATION.

THE PAST FEW YEARS HAVE ALSO SEEN A SHIFT AMONG THE PRIMARY SUPPORTERS OF FEDERAL RESEARCH AND DEVELOPMENT AT UNIVERSITIES AS WELL. THE TREND HAS BEEN AWAY FROM DEFENSE AND SPACE SPENDING IN FAVOR OF ENERGY, HEALTH AND THE ENVIRONMENT. I AM SURE IT COMES AS NO SURPRISE TO YOU THAT THE DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, WHICH OPERATES THE NATIONAL INSTITUTES OF HEALTH, AND THE NATIONAL SCIENCE FOUNDATION NOW ACCOUNT FOR OVER TWO-THIRDS OF THE RESEARCH AND DEVELOPMENT FUNDS SUPPLIED TO UNIVERSITIES BY THE FEDERAL GOVERNMENT.

HOW DO THINGS LOOK FOR THE IMMEDIATE FUTURE? THE FISCAL YEAR 1979 APPROPRIATIONS PASSED BY CONGRESS LAST YEAR INCREASED RESEARCH AND DEVELOPMENT SPENDING BY EIGHT PERCENT. THIS EXCEEDED THE PRESIDENT'S BUDGET REQUEST LARGELY BECAUSE OF AN INCREASE ABOVE THE REQUEST OF MORE THAN 13 PERCENT IN THE APPROPRIATION FOR THE NATIONAL INSTITUTES OF HEALTH. MOREOVER, CONGRESS SUPPORTED PRESIDENT CARTER'S EMPHASIS ON

BASIC RESEARCH, BY PROVIDING FOR AN OVERALL INCREASE IN THIS AREA OF 15 PERCENT. FUNDS SPECIFICALLY TARGETED TO SUPPORT RESEARCH IN UNIVERSITIES WERE ALSO INCREASED BY NINE AND ONE HALF PERCENT FOR FISCAL YEAR 1979. WE ANTICIPATE, FURTHERMORE, CONTINUED MODERATE GROWTH OF FEDERAL FUNDING SUPPORT FOR UNIVERSITY RESEARCH PROGRAMS OVER AND ABOVE THE RATE OF INFLATION.

THE ADMINISTRATION'S BUDGET FOR 1980 SHOWS CONTINUED EMPHASIS ON BASIC RESEARCH. IT'S UP 12 PERCENT. FURTHERMORE, THERE IS AN INCREASE OF 10 PERCENT IN FEDERAL OUTLAYS FOR RESEARCH IN UNIVERSITIES AS COMPARED TO AN OVERALL 7.6% EXPECTED INCREASE FOR TOTAL R AND D IN THE TIGHT FISCAL YEAR 1980 BUDGET. THE LARGEST INCREASES FOR UNIVERSITIES ARE FOR RESEARCH SUPPORTED BY THE NATIONAL SCIENCE FOUNDATION AND THE DEPARTMENT OF DEFENSE. THE PRESIDENT'S BUDGET DID NOT ASK FOR ANY INCREASE IN NEW OBLIGATIONS FOR BASIC RESEARCH BY THE NATIONAL INSTITUTES OF HEALTH. HOWEVER, CONGRESS DOES NOT INTEND TO JEOPARDIZE HEALTH RESEARCH AND IT IS LIKELY THAT THERE WILL BE MORE MONEY FOR NIH THAN REQUESTED, AS HAS OCCURRED

IN THE PAST FEW YEARS. THIS COULD MEAN MORE THAN A 10 PERCENT INCREASE IN FUNDS TO UNIVERSITIES, AS THE NATIONAL INSTITUTES OF HEALTH ACCOUNTS FOR A LARGE PART OF THESE FUNDS.

FUNDS FOR NEW EQUIPMENT FOR SCIENTIFIC RESEARCH HAVE BEEN GIVEN SPECIAL EMPHASIS IN THE 1980 BUDGET. BELT TIGHTENING IN PAST YEARS HAS LED TO A GENERAL AGING OF THE EQUIPMENT IN LABORATORIES ACROSS THE COUNTRY. THE NATIONAL SCIENCE FOUNDATION HAS REQUESTED \$81.6 MILLION, AN INCREASE OF 50 PERCENT OVER 1979, TO SUPPORT PURCHASES OF NEW EQUIPMENT. MOST OF THIS, I AM TOLD, WILL BE TARGETED TO UNIVERSITY RESEARCH LABORATORIES.

IN SUMMARY, WHAT ALL THESE NUMBERS ADD UP TO IS A PICTURE OF CONTINUED MODERATE INCREASES IN FEDERAL FUNDS FOR RESEARCH IN UNIVERSITIES. FROM A FUNDING PERSPECTIVE, YOUR FUTURE LOOKS CONSIDERABLY BRIGHTER THAN THAT DEPICTED BY DR. WEISNER IN HIS ADDRESS LAST FALL.

FUNDING QUESTIONS ASIDE, THERE ARE, I BELIEVE TWO RELATED DEMOGRAPHIC TRENDS DEVELOPING WHICH MAY THREATEN THE ABILITY

OF GRADUATE INSTITUTIONS TO MAINTAIN THE PRESENT HIGH QUALITY OF SCIENTIFIC RESEARCH. THE FIRST IS A DECLINE IN THE POPULATION IN THE 18 TO 21 YEAR OLD AGE GROUP. UNLESS A LARGER THAN EXPECTED NUMBER OF QUALIFIED HIGH SCHOOL STUDENTS DECIDE TO CONTINUE THEIR EDUCATION, IT IS INEVITABLE THAT BOTH UNDERGRADUATE AND GRADUATE ENROLLMENTS WILL BEGIN TO DECLINE IN THE EARLY 1980'S. THIS IN TURN WILL CAUSE A DECREASE IN TUITION SUPPORT, INTENSIFYING THE FINANCIAL PRESSURES ON UNIVERSITY ADMINISTRATORS TO REDUCE GRADUATE FACULTIES AND PARE OTHER HIGH COST ACADEMIC PROGRAMS.

QUITE FRANKLY, I VIEW THIS CIRCUMSTANCE WITH SOME DEGREE OF ALARM. I RECOGNIZE, MOREOVER, THAT THE NATION SIMPLY CANNOT AFFORD THE DECLINE IN RESEARCH WHICH WOULD ACCOMPANY ANY DECREASE IN THE SIZE OF UNIVERSITY FACULTIES. THE BASIC RESEARCH THAT IS PERFORMED IN GRADUATE INSTITUTIONS IS JUST TOO IMPORTANT TO THE WELFARE OF THE UNITED STATES TO BE TIED TO THE SIZE OF THE COLLEGE AGE POPULATION IN THIS MANNER.

THE SECOND DISTURBING DEMOGRAPHIC TREND I PERCEIVE

INVOLVES THE AGE DISTRIBUTION OF COLLEGE AND UNIVERSITY FACULTY MEMBERS. PROPORTIONALLY FEWER FACULTY ARE REACHING RETIREMENT AGE, THE STATISTICS TELL US. THIS OCCURRENCE COMBINED WITH A SLOWLY GROWING, OR EVEN SHRINKING FACULTY SIZE HAS CREATED AN UNFORTUNATE SITUATION IN WHICH ONLY A VERY LIMITED NUMBER OF UNIVERSITY POSITION OPENINGS ARE NOW AVAILABLE FOR YOUNG RESEARCHERS.

THE PERCENTAGE OF FACULTY MEMBERS WHO HAVE HELD THEIR DOCTORATES FOR SEVEN YEARS OR LESS HAS FALLEN STEADILY FROM OVER 43 PERCENT IN 1968 TO 26 PERCENT IN 1976. THE SITUATION IS PARTICULARLY SERIOUS IN FIELDS SUCH AS PHYSICS AND CHEMISTRY WHERE RECENT DOCTORATES COMPRISE ONLY 18% OF THE TOTAL FACULTIES, AND THEIR NUMBERS ARE EXPECTED TO CONTINUE TO FALL. MANY BRIGHT YOUNG PH.D'S ARE NOW LEAVING THEIR FIELD OF TRAINING BECAUSE OF AN INABILITY TO FIND FACULTY POSITIONS. OTHERS PROCEED FROM ONE TEMPORARY POST-DOCTORAL POSITION TO ANOTHER, UNABLE TO UNDERTAKE LONG-RANGE RESEARCH PROJECTS THAT DO NOT PROMISE IMMEDIATE PAYOFFS. IT IS DIFFICULT TO ESTIMATE THE

NEGATIVE IMPACT WHICH THIS MAY ALREADY BE CAUSING ON THE QUALITY OF RESEARCH IN GRADUATE INSTITUTIONS.

WHAT CAN BE DONE ABOUT THESE PROBLEMS? AS THE POPULATION OF 18 TO 21-YEAR\$ OLD\$ DECLINE\$, UNIVERSITIES MUST LOOK TO OTHER SECTORS OF THE POPULATION IN ORDER TO MAINTAIN THEIR ENROLLMENTS. THERE IS A TREMENDOUS POTENTIAL FOR ADULT EDUCATION AND CONTINUING PROFESSIONAL EDUCATION WHICH IS GOING LARGELY UNTAPPED. INSTITUTIONS MUST BE MORE FLEXIBLE IN THEIR EDUCATIONAL PROGRAMS IN ORDER TO ATTRACT THESE STUDENTS. ANOTHER STEP THAT SHOULD BE TAKEN BY GRADUATE INSTITUTIONS IS TO DIVERSIFY THE TRAINING OF THEIR DOCTORAL STUDENTS. IF ONLY A LIMITED NUMBER WILL BE ABLE TO LAND FACULTY POSITIONS, THE OTHERS MUST RECEIVE TRAINING THAT WILL ENABLE THEM TO ADAPT THEIR CAREERS TO FIT THE NEEDS OF INDUSTRY AND GOVERNMENT. CHANGING NATIONAL PRIORITIES HAVE CONSISTENTLY PRODUCED TECHNICAL MANPOWER SHORTAGES IN SPECIFIC FIELDS EVEN IN TIMES OF A GENERAL OVERSUPPLY OF RESEARCHERS.

BROADLY TRAINED RESEARCHERS IS ONE WAY THIS MAY BE DONE.

THEY WOULD BE ABLE TO LAND JOBS THAT ARE NOT DIRECTLY RELATED TO THEIR SPECIALTIES AND CONTINUE TO CONTRIBUTE TO THE SCIENTIFIC AND TECHNICAL BASE OF OUR SOCIETY. I AM CERTAIN THAT THIS IS NOT THE ONLY SOLUTION TO THIS PROBLEM. INSTITUTIONS SUCH AS THE ONES REPRESENTED HERE TONIGHT MUST, I BELIEVE, EXAMINE THE ALTERNATIVES WITH A RENEWED SENSE OF URGENCY.

WHILE IT APPEARS THAT AN INCREASING PROPORTION OF YOUR GRADUATES WILL HAVE TO FIND EMPLOYMENT IN INDUSTRY OR GOVERNMENT, THERE MUST BE MORE POSITIONS MADE AVAILABLE FOR YOUNG RESEARCHERS WHO WILL MAINTAIN THE VITALITY OF UNIVERSITY RESEARCH AND BE AVAILABLE FOR TEACHING WHEN THE NUMBERS OF STUDENTS BEGIN TO RISE AGAIN IN THE 1990'S. ONE INDICATION THAT THIS IS ALREADY OCCURRING IS THE INCREASE IN THE NUMBER OF DOCTORAL RESEARCH STAFF IN UNIVERSITIES WHO ARE NEITHER PART OF THE REGULAR TENURE TRACK NOR POST DOCTORAL APPOINTMENTS. THESE APPOINTMENTS, WHICH RARELY INVOLVE TEACHING DUTIES, ARE GENERALLY FOR PERIODS OF FIVE YEARS, BUT MAY BE EXTENDED INDEFINITELY. IN CHEMISTRY DEPARTMENTS, TO CITE JUST ONE EXAMPLE, THERE HAS BEEN NEARLY

A DOUBLING OF THIS KIND OF POSITION BETWEEN 1975 AND 1977. OVER 85 PERCENT OF THE DOCTORAL RESEARCH STAFF RECEIVE SOME SUPPORT FROM THE FEDERAL GOVERNMENT COMPARED WITH JUST OVER 50 PERCENT OF REGULAR CHEMISTRY FACULTY. HENCE, IT SEEMS THAT THE FEDERAL GOVERNMENT IS ALREADY PLAYING A LARGER ROLE IN THE SUPPORT OF THESE YOUNGER RESEARCHERS.

MORE FORMAL PROGRAMS OF FEDERAL SUPPORT FOR YOUNG FACULTY HAVE ALSO BEEN SUGGESTED. THESE INCLUDE A NATIONAL RESEARCH SCIENTIST PROGRAM THROUGH WHICH YOUNG RESEARCHERS WOULD BE GIVEN AN OPPORTUNITY TO COMPETE FOR LONG TERM FEDERAL RESEARCH SUPPORT TO BE USED AT AN INSTITUTION OF THEIR CHOICE. ANOTHER PROGRAM THAT HAS BEEN SUGGESTED IS THE ESTABLISHMENT OF SPECIAL FEDERALLY DESIGNATED UNIVERSITY RESEARCH CENTERS IN SELECTED FIELDS, DRAWING MOST OF THEIR SUPPORT FROM THE FEDERAL GOVERNMENT. EXPERTS ADVISE US THAT IMPLEMENTING THESE SORTS OF MEASURES WILL HAVE TO BE MADE IN THE NEXT YEAR OR TWO IF THEY ARE TO HAVE AN IMPACT ON MEETING THE CRITICAL LONG-TERM NEEDS OF THE SCIENTIFIC ESTABLISHMENT.

ANOTHER WAY FOR GRADUATE INSTITUTIONS TO INCREASE THE RESOURCES AVAILABLE TO THEM FOR RESEARCH IN THE LIGHT OF DECLINING ENROLLMENTS IS THROUGH INCREASED COOPERATION WITH PRIVATE INDUSTRY. IN MY JUDGMENT THE TIME IS RIPE FOR THIS, AS THERE IS INCREASING CONCERN IN MANY SECTORS ABOUT THE DECLINING PERCENTAGE OF INDUSTRIAL RESEARCH AND DEVELOPMENT FUNDS ALLOCATED TO BASIC RESEARCH. THERE IS A GENERAL BELIEF AMONG MANPOWER EXPERTS THAT THE DECLINE IN BASIC RESEARCH FUNDED BY INDUSTRY HAS CAUSED A DECLINE IN NEW TECHNOLOGICAL INNOVATIONS.

INCREASED COMMUNICATION BETWEEN THE BASIC RESEARCH COMMUNITY WHICH IS SO STRONG IN UNIVERSITIES AND THE APPLIED RESEARCH AND DEVELOPMENT COMMUNITY WHICH IS TRADITIONALLY THE STRENGTH OF PRIVATE INDUSTRY, MAY REVERSE THIS TREND. INDUSTRY HAS RECENTLY BEEN INCREASING ITS SUPPORT OF RESEARCH IN UNIVERSITIES, BUT ITS CONTRIBUTIONS STILL AMOUNT TO ONLY THREE PERCENT OF ALL RESEARCH FUNDS GOING TO UNIVERSITIES,

THE NATIONAL SCIENCE FOUNDATION HAS TWO PROGRAMS AIMED

AT INCREASING COOPERATION BETWEEN UNIVERSITIES AND PRIVATE INDUSTRY. THERE IS AN OLDER PROGRAM IN THEIR APPLIED RESEARCH DIRECTORATE WHICH PROVIDES SEED MONEY TO UNIVERSITIES FOR APPLIED RESEARCH WITH THE UNDERSTANDING THAT THE FUNDING WILL BE TAKEN OVER BY INDUSTRY AFTER SOME INITIAL RESULTS. MORE DIRECTLY AIMED AT THE BASIC RESEARCH PROBLEM, HOWEVER, IS THE NEW INDUSTRY/UNIVERSITY COOPERATIVE ACTIVITY. UNDER THIS PROGRAM, RESEARCH PROPOSALS MUST BE PREPARED JOINTLY BY ACADEMIC AND INDUSTRIAL RESEARCHERS AND SUBMITTED JOINTLY BY THEIR RESPECTIVE INSTITUTIONS TO ONE OF THE NSF BASIC RESEARCH DIRECTORATES. THE EVALUATION OF PROPOSALS INCLUDES CONSIDERATION OF THE POTENTIAL FOR SHARING OF LABORATORY SPACE, EQUIPMENT, AND PERSONNEL.

WHILE GOVERNMENT STIMULATION OF BASIC RESEARCH IN PRIVATE INDUSTRY IS AN IMPORTANT GOAL, THIS MUST BE DONE WITHOUT ERODING SOURCES OF FUNDING WHICH HAVE TRADITIONALLY GONE TO UNIVERSITIES. THE INDUSTRY/UNIVERSITY COOPERATIVE PROGRAM MAY ACTUALLY INCREASE THE FUNDS AVAILABLE TO UNIVERSITIES IF SUCCESSFUL CONTACTS WITH PRIVATE INDUSTRY CAN BE EXPLOITED.

ENCOURAGING INNOVATION AND JOINT UNIVERSITY-INDUSTRY COOPERATION WILL BE A CONTINUING CONCERN OF CONGRESS IN THE MONTHS AHEAD. HAWAII, FOR EXAMPLE, HAS ALREADY BECOME A NATIONAL LABORATORY FOR THE DEVELOPMENT OF ALTERNATIVE FORMS OF ENERGY. SOLAR-HEATED HOT WATER IS NOW A REALITY FOR MANY ISLAND RESIDENTS, AND WE HAVE INITIATED WITH FEDERAL ASSISTANCE SEVERAL JOINT UNIVERSITY-INDUSTRY RESEARCH PROJECTS AIMED AT THE COMMERCIAL DEVELOPMENT OF WIND ENERGY, OCEAN-THERMAL ENERGY, GEOTHERMAL ENERGY, SILVICULTURE, AND THE CONVERSION OF WASTE MATERIALS INTO ENERGY.

AS THE NATIONAL LABORATORY FOR ENERGY SELF-SUFFICIENCY, HAWAII HOPES TO BE NEARLY SELF-SUFFICIENT IN ENERGY BY 1990.

IN ADDITION TO MEASURES AIMED AT INCREASING INDUSTRY-UNIVERSITY COOPERATION, CONGRESS WILL BE CONSIDERING LEGISLATION TO EXTEND INVESTMENT TAX CREDITS TO INCLUDE INDUSTRIAL RESEARCH AND DEVELOPMENT, AND OTHER TAX MEASURES TO STIMULATE INNOVATION. AS IN THE PAST, CONGRESS WILL ALSO CONTINUE TO EXERCISE ITS DISCRETION IN TARGETING SPECIFIC HIGH PRIORITY RESEARCH AREAS

FOR THE INFUSION OF SPECIAL FUNDING. JUST LAST FALL, FOR EXAMPLE, CONGRESS PASSED AND THE PRESIDENT SIGNED INTO LAW THE SOLAR PHOTOVOLTAIC ENERGY RESEARCH, DEVELOPMENT AND DEMONSTRATION ACT OF 1978. THIS BILL, WHICH I INTRODUCED IN THE 95TH CONGRESS, COMMITS THE NATION TO A 10-YEAR, \$1.5 BILLION RESEARCH PROGRAM IN SOLAR PHOTOVOLTAIC TECHNOLOGIES. IT PROVIDES FOR THE DOUBLING OF TOTAL U.S. PRODUCTION OF PHOTOVOLTAIC SYSTEMS EACH YEAR FOR 10 YEARS, ADVANCING THE STATE OF THE TECHNOLOGY AND ACHIEVING COST REDUCTIONS THROUGH LARGE SCALE PRODUCTION.

IN CLOSING, LET ME AGAIN EXPRESS THE HOPE THAT THE INFORMATION, THOUGHTS, PERCEPTIONS, AND INSIGHTS, IF ANY, WHICH I'VE CONVEYED TONIGHT, WILL ENABLE YOU BETTER TO UNDERSTAND HOW THE GRADUATE AND RESEARCH ENTERPRISE IS VIEWED BY AT LEAST ONE VETERAN MEMBER OF CONGRESS.

IN PROVIDING THESE VIEWS, I DELIBERATELY SET OUT TO TOUCH ON A LIMITED NUMBER OF TOPICS I FELT MIGHT BE OF IMMEDIATE AND SPECIFIC INTEREST TO YOU. BUT THIS IS ONLY THE BEGINNING.

OF YOUR OWN ACCORD, I ENCOURAGE YOU TO TAKE THE INITIATIVE AND EXPAND THE HIGHER EDUCATION DIALOGUE WITH LEGISLATIVE REPRESENTATIVES AT ALL LEVELS OF GOVERNMENT.

I CAUTION YOU, HOWEVER. WHEN YOU INITIATE THESE CONTACTS DON'T BE MISLED BY BLAND ASSURANCES THAT YOUR CONCERNS ARE BEING CONSIDERED. FOLLOW-UP. DOCUMENT YOUR CASE. GET OTHERS CONCERNED AND INVOLVED.

ABOVE ALL, KEEP IN MIND THAT THE RESPONSIBILITY FOR MAKING YOUR CASE TO CONGRESS, WHATEVER IT MAY BE, FALLS SQUARELY ON YOUR SHOULDERS. IF YOU DON'T SELL CONGRESS ON THE NEED FOR BASIC RESEARCH, WHO WILL? CERTAINLY NOT INDUSTRY -- OR THE DEFENSE DEPARTMENT -- WHOSE PRIMARY INTEREST LIE IN THE AREA OF APPLIED RESEARCH.

ALTHOUGH THE HIGHER EDUCATION LOBBYISTS IN WASHINGTON ARE DOING A REMARKABLE JOB REPRESENTING YOUR INTERESTS, YOU SHOULDN'T LOSE SIGHT OF A FUNDAMENTAL POLITICAL PRINCIPLE THAT A LOBBYIST'S SUCCESS IS ALWAYS ROOTED IN EXPRESSIONS OF INTEREST FROM THE VOTING CONSTITUENTS. LOBBYISTS DEPEND ON

YOUR HELP TO DEMONSTRATE THAT THE PROGRAMS THEY ARE ADVOCATING
REALLY HAVE GRASS ROOTS SUPPORT BACK HOME.

IN THIS REGARD, THERE IS LITTLE DOUBT THAT THE HIGHER
EDUCATION LOBBY HAS THE POTENTIAL TO BECOME ONE OF THE MOST
POWERFUL FORCES IN WASHINGTON. WHAT'S NEEDED TO REALIZE
THIS GOAL IS CONCERTED POLITICAL ACTION, AT THE GRASS ROOTS
LEVEL DIRECTED AT YOUR OWN SENATORS AND REPRESENTATIVES IN
CONGRESS.

THANK YOU VERY MUCH.

INTRODUCTION OF U. S. SENATOR SPARK MATSUNAGA
KEYNOTE SPEAKER
WESTERN ASSOCIATION OF GRADUATE SCHOOLS
THE BROADMOOR HOTEL, COLORADO SPRINGS
SUNDAY, MARCH 4, 1979

LADIES AND GENTLEMEN, OUR KEYNOTE SPEAKER THIS EVENING IS A MAN WITH AN OUTSTANDING RECORD OF PUBLIC SERVICE AND ACHIEVEMENTS IN CONGRESS. SENATOR SPARK MATSUNAGA IS AN HONOR GRADUATE OF THE UNIVERSITY OF HAWAII AND EARNED HIS JURIS DOCTOR FROM HARVARD LAW SCHOOL. IN ADDITION, HE HAS RECEIVED HONORARY DOCTOR OF LAWS DEGREES FROM SAINT JOHN'S UNIVERSITY, SOOCHOW UNIVERSITY, AND EASTERN ILLINOIS UNIVERSITY. HE IS A TWICE-WOUNDED, COMBAT VETERAN OF WORLD WAR II AND WAS A CHARTER MEMBER OF THE FAMED 100TH INFANTRY BATALLION, WHICH LATER BECAME THE FIRST BATALLION OF THE ALL JAPANESE-AMERICAN 442ND COMBAT TEAM, THE MOST-HIGHLY DECORATED MILITARY UNIT IN THE HISTORY OF THE UNITED STATES.

SENATOR MATSUNAGA'S CAREER IN PUBLIC SERVICE BEGAN IN 1941 AS A TEACHER IN HAWAII'S PUBLIC SCHOOL SYSTEM. HIS PROMISING FUTURE AS AN EDUCATOR WAS TRUNCATED BY PEARL HARBOR AND IT WASN'T UNTIL TEN YEARS LATER THAT SPARK MATSUNAGA--- SOLDIER/VETERAN/GI BILL HARVARD LAW GRADUATE---RETURNED TO HAWAII TO MAKE A NEW BEGINNING AS A PRACTICING ATTORNEY.

IN 1952, LESS THAN A YEAR AFTER HIS RETURN, SPARK MATSUNAGA AGAIN RESPONDED TO A PUBLIC SERVICE CALL WHEN HE ACCEPTED AN APPOINTMENT TO THE POST OF ASSISTANT PUBLIC PROSECUTOR OF THE CITY AND COUNTY OF HONOLULU. IN 1954 HE WAS ELECTED TO THE HAWAII TERRITORIAL HOUSE OF REPRESENTATIVES AND SERVED AS ITS MAJORITY LEADER.

IN 1962, HE WAS ELECTED TO THE U.S. CONGRESS WHERE HE SERVED FOR 14 CONSECUTIVE YEARS AND WHERE HE DISTINGUISHED HIMSELF AS DEPUTY MAJORITY WHIP AND AS A KEY MEMBER OF THE

POWERFUL HOUSE RULES COMMITTEE. FORMER HOUSE SPEAKER JOHN W. McCORMACK WAS PROMPTED TO OBSERVE ON OCCASION THAT "SPARKY'S RISE TO NATIONAL PROMINENCE HAS BEEN PHENOMENAL."

AS BUSY AS HE WAS, THEN CONGRESSMAN MATSUNAGA MANAGED TO WRITE A BOOK ABOUT THE ACTIVITIES AND INTERNAL WORKINGS OF THE RULES COMMITTEE. THE INSIGHTS AS WELL AS THE COMPREHENSIVE ANALYSIS PROVIDED IN HIS BOOK, "RULEMAKERS OF THE HOUSE," HAVE BEEN WIDELY HERALDED BY THE POLITICAL SCIENCE COMMUNITY. STANFORD UNIVERSITY'S HIGHLY REGARDED CONGRESSIONAL SCHOLAR JOHN MANLEY, FOR EXAMPLE, WROTE IN HIS CRITIQUE OF "RULEMAKERS" THAT SEN. MATSUNAGA "...SUCCEEDED IN COMBINING THE RARE INSIGHTS OF A PARTICIPANT OBSERVER WITH THE HIGHEST STANDARDS OF SCHOLARSHIP TO PRODUCE A MUCH NEEDED ADDITION TO THE CONGRESSIONAL LITERATURE." SINCE ITS PUBLICATION IN 1976, RULEMAKERS HAS BECOME REQUIRED READING IN POLITICAL SCIENCE COURSES TAUGHT AT, AT LEAST 16 UNIVERSITIES AND IS ON THE RECOMMENDED READING LIST OF SEVERAL MORE. THE FAVORABLE

RECEPTION THE BOOK RECEIVED IN THE ACADEMIC COMMUNITY HAS PROMPTED THE PUBLISHER, THE UNIVERSITY OF ILLINOIS PRESS, TO RELEASE A PAPERBACK EDITION IN ANTICIPATION OF INCREASED DEMAND FOR THE BOOK IN THE COLLEGE MARKET.

THE LEGISLATIVE ACCOMPLISHMENTS OF SENATOR MATSUNAGA HAVE BEEN TRULY REMARKABLE. HIS PRIMARY EFFORTS HAVE BEEN DIRECTED AGAINST SOCIAL INJUSTICE, POVERTY AND IGNORANCE. A STAUNCH DEFENDER OF CIVIL RIGHTS, HE LED THE FIGHT TO REPEAL TITLE II OF THE INTERNAL SECURITY ACT---THE "EMERGENCY DETENTION ACT"---THUS ELIMINATING THE SPECTRE OF "AMERICAN CONCENTRATION CAMPS" IN THIS COUNTRY. HE WAS A COSPONSOR OF THE CIVIL RIGHTS ACT OF 1954, THE VOTING RIGHTS ACT OF 1965, AND THE EQUAL RIGHTS AMENDMENT OF 1973. HE WAS A PRIME MOVER IN THE REPEAL OF THE "COOLY TRADE LAWS" WHICH WERE TARGETED AGAINST THE CHINESE IN AMERICA. HE WORKED ASSIDUOUSLY FOR THE EQUAL PAY ACT. HE HAS CHAMPIONED THE CAUSE OF AMERICA'S SENIOR CITIZENS. HE HAS BEEN A STRONG AND CONSTANT ADVOCATE

OF FEDERAL ASSISTANCE TO EDUCATION, BOTH IN THE PUBLIC AND PRIVATE SECTORS.

TO COMBAT HUNGER IN DEVELOPING NATIONS, HE AUTHORED AND SUCCEEDED IN OBTAINING PASSAGE OF LEGISLATION TO PROMOTE RESEARCH AND DEVELOPMENT IN TROPICAL AND SUBTROPICAL AGRICULTURE AND AQUACULTURE.

SINCE HIS ELECTION TO THE SENATE IN 1976, SENATOR MATSUNAGA HAS BEEN DEEPLY INVOLVED IN THE CHIEF ISSUES FACING CONGRESS AND OUR NATION. AS A FRESHMAN MEMBER, HE ESTABLISHED AN UNPRECEDENTED RECORD BY BEING APPOINTED CHIEF DEPUTY MAJORITY WHIP. HE WAS ALSO AWARDED THE COVETED "GOLDEN GAVEL" FOR PRESIDING OVER THE SENATE IN EXCESS OF 100 HOURS IN THE FIRST SESSION OF THE 95TH CONGRESS. IN HIS POSITION AS CHIEF DEPUTY MAJORITY WHIP OF THE SENATE, HE PLAYED A MAJOR ROLE IN COORDINATING THE HISTORICAL DEBATES ON THE RATIFICATION OF THE PANAMA CANAL TREATIES.

AS A MEMBER OF THE SENATE COMMITTEES ON FINANCE AND

ENERGY AND NATURAL RESOURCES, AND AS A SENATE CONFEREE ON THE ENERGY BILLS, SENATOR MATSUNAGA HAS BEEN AT THE FOREFRONT OF THE SUCCESSFUL CONGRESSIONAL EFFORT TO ADOPT A NATIONAL ENERGY PROGRAM.

AS A MEMBER OF THE FINANCE COMMITTEE, SENATOR MATSUNAGA WAS DEEPLY INVOLVED IN THE CONSIDERATION OF THE PRESIDENT'S TAX LEGISLATION LAST YEAR.

LOOKING AHEAD TO NEW LEGISLATION ALREADY BEING GIVEN SERIOUS CONSIDERATION IN THE OPENING DAYS OF THE 96TH CONGRESS, WE FIND SENATOR MATSUNAGA VERY MUCH IN THE MAINSTREAM OF CONGRESSIONAL ACTIVITY. ALTHOUGH THE SENATE HAS BEEN IN SESSION FOR LESS THAN TWO MONTHS, SENATOR MATSUNAGA HAS ALREADY INTRODUCED OR COSPONSORED 47 BILLS. INCLUDED AMONG THESE ARE S. 210 TO CREATE A CABINATE LEVEL DEPARTMENT OF EDUCATION; S. 20 TO ESTABLISH THE OFFICE OF POET LAUREATE OF THE UNITED STATES; SENATE JOINT RESOLUTION 24 TO REQUIRE IMPROVEMENT AND EXPANSION OF THE COLLECTION, ANALYSIS AND PUBLICATION OF

STATISTICAL DATA RELATING TO WORKING WOMEN; SENATE JOINT
RESOLUTION 1, TO PROVIDE FOR THE DIRECT POPULAR ELECTION OF
THE PRESIDENT AND VICE PRESIDENT OF THE UNITED STATES, S. 240
TO MAKE IT A FEDERAL CRIME TO FRAUDULENTLY USE A COMPUTER IN
THE CONDUCT OF BUSINESS RELATING TO INTERSTATE COMMERCE;
S. 190 TO PROVIDE FEDERAL ASSISTANCE TO STATE CRIME VICTIM
COMPENSATION PROGRAMS; S. 300 TO RESTORE FAIR AND EFFECTIVE
ENFORCEMENT OF ANTITRUST LAWS; AND S. 414 TO PROVIDE FOR A
CONSISTENT FEDERAL POLICY CONCERNING THE PATENTABILITY OF
INVENTIONS MADE WITH FEDERAL ASSISTANCE.

LADIES AND GENTLEMEN, IT IS MY GREAT PLEASURE TO
INTRODUCE AT THIS TIME, A GOOD FRIEND OF HIGHER EDUCATION---
AN EXPERIENCED AND KNOWLEDGEABLE AUTHORITY ON THE WORKINGS
OF CONGRESS---AN AUTHOR AND SCHOLAR---THE HONORABLE SPARK M.
MATSUNAGA, U. S. SENATOR FROM HAWAII.