SPEECH BY SENATOR BIRCH BAYH
WORLD FAIR FOR TECHNOLOGICAL EXCHANGE
ATLANTA, GEORGIA
FEBRUARY 28, 1979

Barbara: Can you type this up so that we can send out copies, please send one copy to

THANK YOU VERY MUCH FOR INVITING ME TO ATLANTA TO TALK WITH YOU. THERE ARE SO MANY GEORGIANS IN WASHINGTON THESE DAYS THAT THE ONLY PEOPLE THAT I KNEW FOR SURE STILL LIVED DOWN HERE WERE BERT LANCE AND BILLY CARTER.

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Copy of his reading version, printed copy next

Thanks
Joe

MY OFFICE RECEIVED A CALL THE OTHER DAY FROM A REPORTER WHO WAS WRITING A STORY ABOUT THE DIFFICULTIES THAT AN INVENTOR FACES TODAY AS COMPARED TO THE SITUATION THAT EXISTED AT THE TIME WHEN THOMAS EDISON, ALEXANDER GRAHAM BELL AND HENRY FORD WERE MAKING THEIR WORLD CHANGING DISCOVERIES.

I HAVE BEEN THINKING ABOUT WHAT A RADICALLY DIFFERENT WORLD THAT WE LIVE IN NOW AS COMPARED TO FIFTY YEARS AGO, WHICH IS LITTLE MORE THAN A BLINK IN HISTORICAL TIME. WHILE THE INGREDIENTS NECESSARY FOR INVENTIVENESS ARE STILL BASICALLY THE SAME, TODAY'S INVENTOR FACES A MUCH MORE COMPLEX WORLD THAN THAT WHICH FACED HIS PREDECESSORS.

INVENTORS TODAY ARE MUCH MORE LIKELY TO BE FOUND IN EXPENSIVE LABORATORIES THAN IN THEIR ATTICS OR BASEMENTS BECAUSE OF THE GREAT COSTS AND TECHNICAL REQUIREMENTS NEEDED FOR CONDUCTING MOST RESEARCH. THE COSTS OF RESEARCH AND DEVELOPMENT HAVE INCREASED ASTRONOMICALLY. NEW INVENTIONS FREQUENTLY FACE APPROVAL BY GOVERNMENT AGENCIES WHICH EITHER DID NOT EXIST AT ALL 50 YEARS AGO OR WERE IN THEIR INFANCY.

STILL, OUR SOCIETY NEEDS THE INVENTOR JUST AS MUCH NOW AS IN THE PAST. AND, GOVERNMENT MUST DO ITS PART TO MAKE SURE THE INVENTIVE SPIRIT STAYS ALIVE AND WELL IN THIS COUNTRY.

WE ARE STILL REFINING AND DEVELOPING THE DISCOVERIES MADE DURING THE GREAT AGE OF INVENTION. A HANDFUL OF COURAGEOUS,PERSISTENT AND IMAGINATIVE MEN AND WOMEN DRAMATICALLY IMPROVED THE QUALITY OF LIFE FOR THE MILLIONS LIVING TODAY AND FOR THE UNTOLD NUMBERS WHO WILL FOLLOW US. CERTAINLY NO ONE COULD HAVE FORESEEN THE EFFECTS THAT ELECTRICITY, AUTOMOBILES AND THE TELEPHONE WOULD HAVE. BECAUSE THE GREAT INVENTORS LIVED IN FREE SOCIETIES, THEY WERE ABLE TO DEVELOP AND MARKET THEIR IDEAS. WE ARE STILL PROFITING FROM THEIR EFFORTS.

TODAY WE ALSO HAVE MEDICAL DISCOVERIES THAT HAVE NOT ONLY PROLONGED LIFE, BUT HAVE GREATLY IMPROVED ITS QUALITY. IT SEEMS INCREDIBLE, BUT AS RECENTLY AS 1918-1919 A WORLDWIDE FLU EPIDEMIC KILLED MORE PEOPLE THAN WERE KILLED IN FOUR YEARS OF BLOODY COMBAT IN WORLD WAR I. IT IS ESTIMATED THAT AS MANY AS A THIRD OF THE WORLD'S POPULATION WERE AFFECTED BY THIS EPIDEMIC.

THE LIST OF INVENTIONS THAT WOULD HAVE SEEMED MIRACULOUS 100 YEARS AGO--BUT WHICH WE TAKE FOR GRANTED TODAY--SEEMS ENDLESS. THERE HAS BEEN MORE CHANGE IN THE LAST 60 YEARS THAN IN ALL THE PRECEDING CENTURIES.

WE SHOULD ALL PAUSE OCCASIONALLY TO READ WHAT LIFE WAS LIKE BEFORE THE GREAT AGE OF INVENTION WHEN CONDITIONS EXISTED IN THE MOST DEVELOPED COUNTRIES THAT TODAY WE WOULD ASSOCIATE ONLY WITH THE MOST BACKWARD REGIONS. THE GREAT INVENTORS LIFTED A LARGE PERCENTAGE OF THE WORLD'S POPULATION TO A LEVEL OF WELL BEING THAT WAS PREVIOUSLY IN THE REACH OF ONLY THE FABULOUSLY WEALTHY, AND IN MANY CASES NOT EVEN TO THEM.

WE SHOULD REMEMBER THE ADVANCES WE HAVE MADE WHEN WE BECOME DISCOURAGED ABOUT FACING THE CHALLENGES NOW BEFORE US. I BELIEVE THE INVENTIVE SPIRIT WHICH HAS ADVANCED US SO QUICKLY IN THIS CENTURY CAN ALSO COPE WITH THE PROBLEMS OF THE UNDERNOURISHED AND NEEDY OF THE WORLD.

IT IS NO ACCIDENT THAT ALMOST ALL OF THE GREAT INVENTIONS OF OUR TIME HAVE COME FROM FREE SOCIETIES. THE INVENTIVE MIND NEEDS FREEDOM TO EXPLORE NEW REGIONS OF THOUGHT AND IMAGINATION. THIS QUALITY IS EXACTLY WHAT THE TOTALITARIAN MIND FINDS MOST THREATENING. BECAUSE GENIUS IS SUCH A FRAGILE, INDIVIDUAL QUALITY, IT IS SUFFOCATED BY DEADENING CONFORMITY AND GOVERNMENTAL CONTROL WHICH ARE THE HALLMARKS OF THE TOTALITARIAN STATE. THE ABILITY OF THE INDIVIDUAL TO PURSUE HIS DREAMS AND TO POSSIBLY BRING THEM TO REALITY IS ONE OF THE FREE WORLD'S GREATEST ACCOMPLISHMENTS.

IN THE UNITED STATES THERE HAS BEEN A GREAT DEAL OF CONCERN THAT OUR PACE OF INVENTIVE SPIRIT IS SOMEHOW RUNNING OUT. OUR RATE OF PRODUCTIVITY AND INNOVATION DO SEEM TO BE DECLINING. THERE ARE MANY POSSIBLE ANSWERS TO THIS PROBLEM, BUT I THINK THAT THE MAIN OBSTACLE TO INNOVATION AND INVENTIVENESS IS A LACK OF INCENTIVE TO TAKE CHANCES CAUSED BOTH BY SOME GOVERNMENT POLICIES, OVERCAUTION ON THE PART OF MANY BUSINESSMEN AND ARTIFICIAL TRADE BARRIERS WHICH SOME FOREIGN GOVERNMENTS HAVE IMPOSED. IT IS THIS WHICH PREVENT U.S. COMPANIES FROM COMPETING FAIRLY IN MANY OVERSEAS MARKETS, AND WHICH HAS LED TO A FEELING OF FRUSTRATION BY MANY IN THE BUSINESS COMMUNITY.

WE SHOULD ALSO REMEMBER THAT EXISTING REGULATIONS ARE THE RESULT OF A DESIRE TO PROTECT OUR SOCIETY FROM THREATS TO OUR HEALTH AND WELFARE--A LEGITIMATE DUTY OF GOVERNMENT. THE PROBLEM IS THAT THE LINE BETWEEN PROTECTING THE PUBLIC AND STIMULATING CREATIVITY IS HARD TO DRAW AND MANY TIMES THAT NECESSARY BALANCE IS REACHED ONLY AFTER TRIAL AND ERROR.

I AM LOOKING FORWARD TO SEEING THE RESULTS OF THE PRESIDENT'S STUDY OF INNOVATION WHICH IS BEING CONDUCTED BY ASSISTANT SECRETARY OF COMMERCE JORDAN J. BARUCH. THIS STUDY HAS CONSIDERED A WIDE RANGE OF FACTORS THAT IMPACT ON PRODUCTIVITY AND INNOVATION. THE REPORT, WHICH IS DUE TO BE SUBMITTED TO THE PRESIDENT IN MARCH OF THIS YEAR, SHOULD SHED SOME LIGHT ON THE BEST WAYS FOR STIMULATING AMERICAN CREATIVITY.

THERE IS ALSO A CONCERN AMONG SOME OF MY SENATE COLLEAGUES THAT SOMETHING HAS GONE WRONG WITH OUR LEGENDARY AMERICAN INGENUITY. I HAVE INTRODUCED, ALONG WITH SENATOR ROBERT DOLE OF KANSAS, THE UNIVERSITY AND SMALL BUSINESS PATENT PROCEDURES ACT WHICH DEALS WITH ONE PART OF THIS PROBLEM. THE BIPARTISAN SUPPORT THAT OUR BILL HAS RECEIVED IN THE SENATE IS A GOOD INDICATION OF HOW SERIOUSLY THE PROBLEM OF TECHNOLOGICAL INNOVATION IS VIEWED ON CAPITOL HILL.

THIS BILL IS DESIGNED TO CUT THE BUREAUCRATIC RED TAPE THAT IS PRESENTLY STRANGLING INNOVATION RESULTING FROM FEDERALLY-SUPPORTED RESEARCH AND DEVELOPMENT. WHEN THE FEDERAL AGENCY WHICH FUNDED THE RESEARCH INSISTS ON RETAINING PATENT RIGHTS ON RESULTING INVENTIONS, THERE IS NO INCENTIVE FOR PRIVATE INDUSTRY TO SPEND THE MILLIONS OF DOLLARS COMMONLY NEEDED TO DEVELOP AND MARKET THE PATENT. THIS PROCESS, AS YOU KNOW, IS HAZARDOUS AT BEST, BUT WHEN THERE IS NO PATENT PROTECTION AVAILABLE TO PROTECT THIS INVESTMENT, THE ODDS AGAINST RECEIVING A SUFFICIENT RETURN ON THE COMPANIES' INVESTMENT ARE SHARPLY INCREASED.

THE FEDERAL GOVERNMENT NOW HAS MORE THAN 28,000 PATENTS IN ITS PORTFOLIO, YET IS SUCCESSFUL IN LICENSING ONLY 4% OF THESE PATENTS. THE REST ARE SIMPLY GATHERING DUST ON THE AGENCIES' SHELVES. THIS IS TO ME THE TYPE OF WASTE WHICH HAS SO UNDERSTANDABLY UPSET THE AMERICAN PEOPLE.

I WOULD LIKE TO MENTION TO YOU ONE EXAMPLE OF THE TYPE OF INVENTION WE ARE TALKING ABOUT. TWO RESEARCHERS AT THE UNIVERSITY OF ARIZONA DEVELOPED A PROCESS WHEREBY THEY CAN EXTRACT A BLOOD SAMPLE FROM A CANCER PATIENT AND DETERMINE WHAT TYPE OF CHEMOTHERAPY THE PATIENT CAN TOLERATE. AT PRESENT, THE PATIENT ACTUALLY HAS TO RECEIVE THESE DRUGS--AND IN MANY CASES UNDERGO PAINFUL REACTIONS TO THEM--BEFORE PROPER TREATMENT IS DISCOVERED. THIS PROMISING PROCESS HAS BEEN PENDING FOR WELL OVER A YEAR NOW, AWAITING A DECISION ON WHETHER THE DEPARTMENT WILL GRANT A WAIVER OF ITS PATENT RIGHTS TO THE UNIVERSITY OF ARIZONA SO THAT DEVELOPMENT AND POSSIBLY MARKETING CAN BEGIN. THIS TYPE OF UNNECESSARY DELAY IS INTOLERABLE.

UNDER THE UNIVERSITY AND SMALL BUSINESS PATENT PROCEDURES ACT UNIVERSITIES, SMALL BUSINESSES AND NONPROFIT ORGANIZATIONS WOULD BE ABLE TO RETAIN PATENT RIGHTS ON INVENTIONS THAT THEY MAKE UNDER FEDERALLY SUPPORTED RESEARCH AND DEVELOPMENT IF THEY ARE WILLING TO SPEND THE NECESSARY FUNDS TO DEVELOP AND MARKET THEM. THE BILL WOULD ALSO PROTECT THE RIGHTS OF THE GOVERNMENT TO ENJOY AND USE FOR ITSELF INVENTIONS THAT IT HAD HELPED TO SUPPORT.

EXPERIENCE HAS SHOWN THAT UNLESS INVENTORS, UNIVERSITIES, SMALL BUSINESSES AND THE PRIVATE SECTOR GENERALLY ARE GIVEN INCENTIVES TO WORK TOGETHER AND BRING INVENTIONS TO THE PUBLIC, NEW TECHNOLOGY IS LIKELY TO LANGUISH.

ANOTHER PROBLEM ADDRESSED BY MY BILL IS THE DISTRESSINGLY LOW PERCENTAGE OF FEDERAL RESEARCH MONEY GOING TO SMALL BUSINESSES. THE OFFICE OF MANAGEMENT AND BUDGET RELEASED A STUDY WHICH SAID THAT FIRMS WITH 1000 EMPLOYEES OR LESS ARE CREDITED WITH ALMOST HALF OF THE INDUSTRIAL INNOVATIONS MADE BETWEEN 1953 AND 1973. THIS SAME STUDY ESTIMATED THAT 16 SMALL HIGH-TECHNOLOGY FIRMS CREATED 25,558 JOBS FOR AMERICAN WORKERS DURING THIS 20-YEAR PERIOD. IN LIGHT OF THESE FACTS, IT IS VERY DISTURBING TO ME THAT SMALL BUSINESS RECEIVES LESS THAN FOUR PERCENT OF ALL FEDERAL RESEARCH AND DEVELOPMENT EXPENDITURES. ONE MAJOR REASON MANY OF THESE INNOVATIVE SMALL COMPANIES HAVE AVOIDED FEDERAL GRANTS IS THE UNCERTAINTY OVER WHETHER THEY WILL BE ALLOWED TO RETAIN PATENT RIGHTS ON RESULTING INVENTIONS. THE UNIVERSITY AND SMALL BUSINESS PATENT PROCEDURES ACT WILL END THIS UNCERTAINTY.

THE CRUX OF THIS PROBLEM IS TO MAKE SURE THAT THE BENEFITS OF FEDERAL RESEARCH AND DEVELOPMENT REACH THE MARKETPLACE WHERE THE PUBLIC HAS ACCESS TO THEM. CONSIDERING THE POTENTIAL DISCOVERIES POSSIBLE IN THE WIDE RANGE OF AREAS INCLUDED IN GOVERNMENT RESEARCH, THESE INVENTIONS COULD HAVE WORLDWIDE IMPORTANCE.

YET THIS BILL ADDRESSES ONLY A SMALL PART OF THE OVERALL PROBLEM OF CONTINUED INNOVATION AND GREATER PRODUCTIVITY. WITHOUT A DOUBT, AMERICANS NEED TO STUDY THE SUCCESS IN PRODUCTIVITY ACHIEVED BY JAPAN AND WEST GERMANY SINCE WORLD WAR II, AND SEE WHAT TYPES OF INCENTIVES AND GOVERNMENT PROGRAMS HAVE WORKED BEST FOR THESE NATIONS. THE HEALTHY EXCHANGE ENJOYED WITH OUR FREE WORLD COMPETITORS BENEFITS ALL OF US BY REQUIRING COMPANIES TO REMAIN IMAGINATIVE AND RESPONSIBLE TO THE PUBLIC NEEDS IF THEY ARE TO SUCCEED IN THE INTERNATIONAL MARKETPLACE.

THE GREAT TECHNOLOGICAL ADVANCES THE FREE WORLD HAS MADE ARE ALSO AN EXAMPLE AND AN ILLUSTRATION TO THE REST OF THE WORLD THAT THE HUMAN SPIRIT NEEDS FREEDOM AS A FUNDAMENTAL REQUIREMENT FOR ITS ADVANCEMENT. THE TECHNOLOGY FAIR IS EVIDENCE THAT INVENTIVENESS AND CREATIVITY ARE NOT LIMITED TO THE AGE OF EDISON, FORD AND BELL, BUT ARE ALIVE AND WELL HERE AND NOW. WE MERELY NEED THE PROPER CONDITIONS TO CONTINUE FLOURISHING.

I WOULD BE LESS THAN CANDID IF I DID NOT MENTION THE IMPORTANCE OF MAKING CERTAIN THAT MARKETS ARE AS OPEN TO THE CONTINUED FLOW OF U.S. HIGH TECHOLOGY PRODUCTS AND INNOVATIONS FROM OUR FREE WORLD TRADING PARTNERS AS THEY ARE TO PRODUCTS FROM JAPAN AND THE EUROPEAN COMMUNITY. AS YOU KNOW, U.S. COMPANIES LOOK WORLDWIDE IN THEIR SEARCH FOR THE BEST PRODUCT AVAILABLE AT COMPETITIVE PRICES, WHILE MANY FOREIGN GOVERNMENTS HAVE CLOSED THEIR MARKETS TO OUR HIGH-TECHNOLOGY FIRMS EVEN THOUGH THEY ARE COMPETITIVE WITH DOMESTIC COMPANIES.

OUR GOVERNMENT IS NOW IN THE PROCESS OF NEGOTIATING AN INTERNATIONAL PROCUREMENT CODE WHICH IS INTENDED TO OPEN UP TRADE TO THE MOST COMPETITIVE COMPANY WHETHER FOREIGN OR DOMESTIC THROUGH A SYSTEM OF OPEN BIDDING ON GOVERNMENT CONTRACTS. THE TELECOMMUNICATIONS AND ELECTRONICS INDUSTRIES HAVE SUFFERED IN INTERNATIONAL COMPETITION BECAUSE OF ARTIFICIAL BARRIERS TO FOREIGN MARKETS ADOPTED BY SOME COUNTRIES I THINK THE CONGRESS WILL BE VERY RELUCTANT TO APPROVE ANY AGREEMENT WHICH DOES NOT GUARANTEE U.S. COMPANIES AN ACCESS TO FOREIGN MARKETS COMPARABLE TO THE EASY ACCESS WHICH FOREIGN COMPANIES HAVE TO OUR MARKETS.

ONE EXAMPLE OF ARTIFICIAL BARRIERS TO U.S. COMPANIES AND ITS EFFECTS IS THE FACT THAT WE BUY 30% OF OUR TELECOMMUNICATIONS EQUIPMENT ABROAD, WHILE ENTITIES LIKE NIPPON TELEPHONE AND TELEGRAPH IMPORT LESS THAN 2% OF THEIRS. THE ONLY OTHER ALTERNATIVE TO MAKING FOREIGN MARKETS MORE OPEN WOULD BE TO REEVALUATE PRESENT POLICIES WHICH ALLOW FOREIGN COMPANIES TO COMPETE FREELY IN OUR MARKETS. SUCH A STEP WOULD WORK TO THE ULTIMATE DETRIMENT OF EVERYONE INVOLVED, THUS I HOPE FOREIGN GOVERNMENTS WILL AGREE TO ALLOW U.S. COMPANIES TO HAVE A FAIR ACCESS TO THEIR HIGH TECHNOLOGY MARKETS.

THERE IS ALSO A SECURITY ASPECT IN TECHNOLOGY WHICH DICTATES THAT WE MUST CAREFULLY EXAMINE THE EXPORT OF HIGH TECHNOLOGY TO POTENTIAL POLITICAL OR MILITARY ADVERSARIES. IN THE WORDS OF THE LATE SENATOR HUBERT H. HUMPHREY, WE SHOULD BE WILLING TO SELL THEM "ANYTHING THAT THEY CAN'T SHOOT BACK."

I ~~WAS FRANKLY VERY RELUCTANT TO SEE OUR GOVERNMENT APPROVE~~ opposed COMPUTER SALES TO THE SOVIET UNION WHICH COULD BE USED TO FURTHER HARRASS HUMAN RIGHTS ADVOCATES, AS WELL AS BE ADAPTED TO MILITARY PURPOSES, And supported the Presidents decision to disapprove this sale. ONCE, WHEN LENIN REMARKED THAT THE COMMUNISTS WOULD HANG THE WEST, HE WAS ASKED WHERE THEY WOULD GET THE ROPE. HE REPLIED "THE WEST WILL SELL IT TO US." WE MUST MAKE SURE THAT LENIN'S PREDICTION NEVER COMES TRUE.

IN CONCLUSION, I THINK THAT THE TWO GREATEST AREAS FOR IMPROVING OUR TECHNOLOGICAL INNOVATION AND PRODUCTIVITY IS TO ENCOURAGE MORE RESEARCH AND DEVELOPMENT BY MAKING SURE THAT RESULTING INVENTIONS AND DISCOVERIES REACH THE MARKETPLACE. SECONDLY, WE MUST ASSURE OUR COMPANIES OF A FAIR CHANCE TO COMPETE IN FOREIGN MARKETS. ULTIMATELY ALLOWING INTERNATIONAL COMPETITION TO FLOURISH WILL WORK TO THE BENEFIT OF ALL OF US AS IT HAS IN THE PAST.

THANK YOU.

- 30 -