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THE WHITE HOUSE
WASHINGTON

September 18, 1992

MEMORANDUM FOR DENNIS ROSS

FROM: ALLAN BROMLEY *Alan*

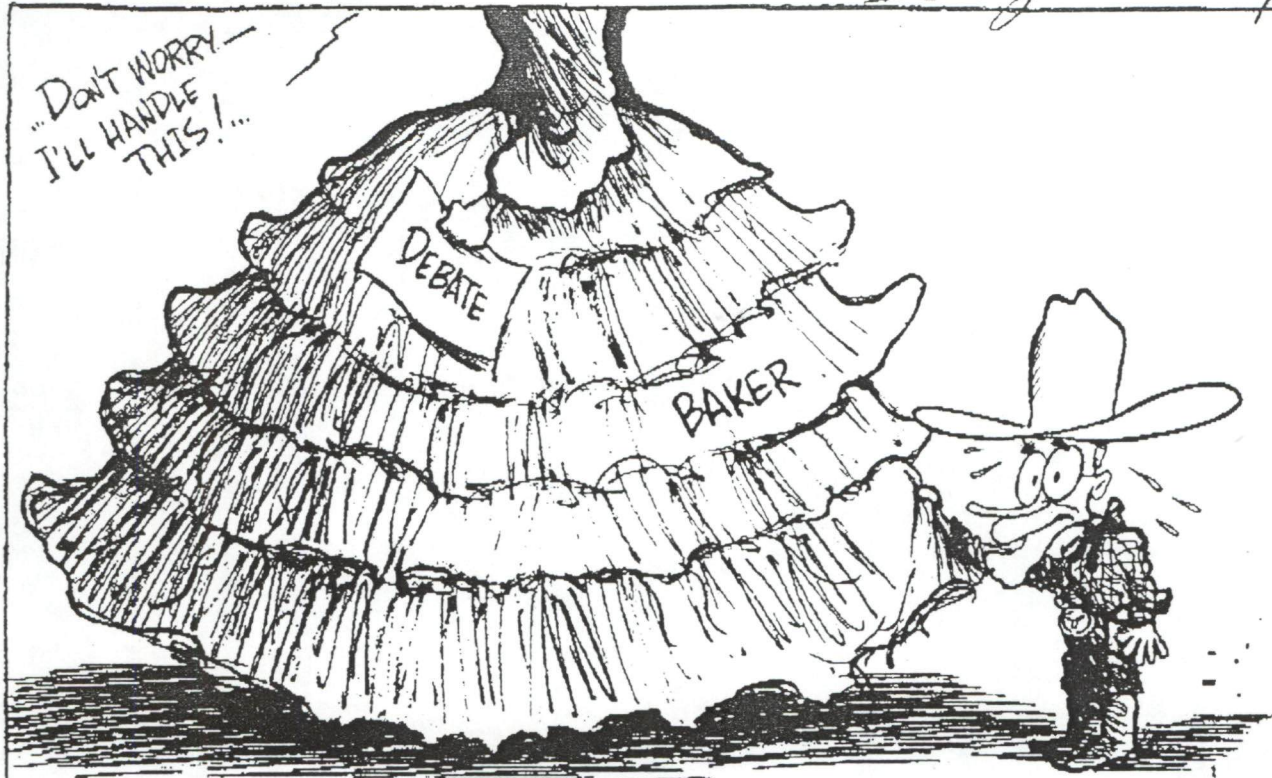
SUBJECT: PROMISED INPUT

I am sending you herewith some of the material we discussed recently. Among the items are

- a) A formal suggestion for a POTUS speech in Michigan that seems attractive from both technological and political vantage points.
- b) Input grist for a POTUS speech on technology. Rather than attempt to put these in any final form I have provided them as input for the WH speech writers.
- c) Input grist for a POTUS speech on mathematics and science education. Again, the WH speech writers will want to put their own signature on this. Both here and in b) above, of course, OSTP is prepared to expand, specify or otherwise modify these inputs in whatever way may appear useful.
- d) A series of answers to questions posed by the journal **Physics Today**. The answers were drafted in OSTP (by non-Hatched personnel) and then modified on the basis of input derived from WH staffing.
- e) A series of answers to questions posed by the journal **Science**. These answers were again drafted in OSTP and are currently in staffing.
- f) Material relating to the formation of the Intergovernmental Council

Attachments

Don Jose Mercury News 9/17/90



*Devin's:
This was forced to
me by David Packard*

HIGH NOON

WILLIS OFF JOE
REPUBLICAN NEWS

SCOTT WILLIS — MERCURY NEWS

LETTERS TO THE EDITOR

Executives for Clinton have blundered

I am very disappointed that John Young, John Sculley and many of my other good friends in the Silicon Valley industry have been caught in the updraft of Bill Clinton's hot air balloon.

I share their concern about the platform of the Republican Party and the influence of right-wing deviates centered in Orange County.

My friends have overlooked the fact that the Democratic Party has been the party of socialism since President Roosevelt's term in the Great Depression of the 1930s. I was there, and I recall vividly the NRA (National Recovery Administration), which was referred to as "nuts, raspberries and apple-sauce."

The great contribution of free enterprise, including scientists and engineers under the leadership of

Vannevar Bush during World War II made America the strongest nation in the world.

Roosevelt's disastrous agreement with Stalin at Yalta was a clear signal that he fundamentally supported socialism rather than freedom.

Gov. Clinton's military experience is limited to calling up the National Guard in one of our smaller, less important states.

If Pat Schroeder, Barbara Boxer and many other leading Democrats had had their way during the past 20 years, the United States, under President Bush's leadership, could not have undertaken Desert Storm, which was the greatest military victory in the history of the world.

The Democratic Party is indentured to union labor and has ex-

pressed opposition to the North American Free Trade Agreement, which will generate millions of jobs in Canada, the United States and Mexico in the years ahead.

The Democratic Party is also indentured to the teachers' union. As long as the teachers' union places survival ahead of the need to have knowledge about the subject being taught, there is no hope of improving American's educational system.

These and other similar evaluations of well-established Democratic Party positions convince me that my friends, who have defected to support Clinton, are making a serious strategic mistake.

— David Packard
Chairman of the Board
Hewlett-Packard Co.

THE WHITE HOUSE
WASHINGTON

September 17, 1992

MEMORANDUM FOR DENNIS ROSS

FROM: D. ALLAN BROMLEY 

SUBJECT: PROPOSED POTUS VISIT TO CHRYSLER TECH
CENTER

REQUEST: For President Bush to tour the Chrysler Tech Center (CTC) in Auburn Hills, Michigan, and make a major science and technology policy address.

PURPOSE: For the President to highlight his Advanced Manufacturing Initiative and advanced manufacturing technologies as they are currently being implemented by Chrysler. The U.S. is the world's leader in basic research, development and technology application, and the President is furthering American competitiveness through the Advanced Manufacturing Initiative and a variety of Administration S&T policies.

BACKGROUND: Chrysler has invested \$900 million in the design and construction of the CTC. It is nothing less than Chrysler's bid to achieve world leadership in auto manufacturing and to compete in the marketplace of the 21st century. By placing elements of all company divisions under one roof, Chrysler seeks to design, prototype and manufacture small runs of its new products in an environment that allows interaction among all divisions of the company. In the CTC, Chrysler is striving for "simultaneous engineering," which allows design changes to be quickly implemented in the manufacturing process. The CTC was prominently featured in the PBS documentary series "Made in America?" Currently, the CTC is operating at about 30-35% of capacity, by late this year it will be up and running at full speed, employing 5500-6000 people.

Chrysler is relying on a variety of advanced manufacturing techniques, including extensive use of computer design (CAD/CAM), robotic assembly, just-in-time logistics and short-run, highly flexible manufacturing. Chrysler's goal is "lean manufacturing," which seeks to reduce the production of a new automobile to the smallest number of individuals and operations and integrates individuals and robotics as extensively as possible.

Chrysler has also instituted a new labor-management approach called "platform teams" in which a horizontal slice of the entire company is responsible for the conception, design, tooling and production of each new product.

Although the new "cab forward" LH passenger car was begun three years ago, the design and production process is being finalized at the CTC. The LH will begin production in Canada later this year, and is being nationally advertised this fall. Chrysler is going to begin the development of its next (third-generation) minivan design at the CTC, followed by the completely new PL subcompact.

SENSITIVITIES:

Earlier this year, General Motors announced four plant closings which eliminated some 9800 manufacturing jobs in Michigan. Union leaders and Democratic elected officials, led by Senator Don Riegle, blamed the President, claiming that a deal had been cut to throw the GM work to Texas. On a subsequent visit to Michigan, the President denied this charge.

The national press inaccurately portrayed Lee Iacocca as being critical of the President's trade mission to Japan. Iacocca was far more conciliatory--and complimentary--in a subsequent speech given before the Detroit Economic Club. Iacocca is now retired from Chrysler and so would not likely be involved in any POTUS visit.

This remains an excellent opportunity for POTUS to talk about technology policy and job creation in an electorally significant state. Governor John Engler is the President's Chairman in Michigan, had proposed such an event earlier in the year and a successful, professionally managed event can be expected.

LOCATION: Chrysler Tech Center
Auburn Hills, Michigan

PARTICIPANTS: President Bush
Secretary Franklin
Dr. Allan Bromley
Governor John Engler
Other Participants TBD

DATE AND TIME: Such a visit could be scheduled at will, however, the political environment would argue for making such a visit and policy speech sooner rather than later.

OUTLINE OF EVENTS: TBD

REMARKS REQUIRED: Major Science and Technology Policy Address

MEDIA COVERAGE: Open press. The Chrysler Tech Center is in the Detroit Metro ADI encompassing some 1.7 million households, although much greater national, midwest, business/industry and Michigan coverage should be expected.

RECOMMENDED BY: D. Allan Bromley

CONTACT: Pat White, x2734

INPUT FOR PRESIDENTIAL SPEECH

from the
Office of Science and Technology Policy

September 18, 1992

A handwritten signature in dark ink, slanted upwards from left to right. The signature appears to read "James H. Hansen".

o Technology has always been at the heart of America's economic success. Advances in U.S. agriculture have made it possible for a small fraction of the American population to feed a large fraction of the world. The airplane and mass-produced automobiles have reshaped our cities and have provided our citizens with unprecedented personal mobility and freedom. The telephone, the computer, and modern communications have linked the world into a vast interconnected web of information. The remarkable surge in invention during the last 150 years, much of it the product of American inventors, has done much to create the modern world.

o To the ingenuity of individual inventors has been added the insights produced by basic scientific research. The molecules in a material can now be studied and manipulated at the atomic level, so that structures can be built from individual atoms. New materials are being developed that are lighter, stronger, and more durable than anything known today. The discovery of the structure of DNA and of the workings of cells has opened up whole new areas of opportunity in medicine, agriculture, and environmental protection; some of the secrets of life itself are now within reach. Advanced computers and new modes of communication, such as those based on satellites and optical fibers, are resulting in new ways to learn, work, and play. Together,

these technologies have dramatically changed and improved the quality of our lives.

- o In today's economy, innovation is critical. Success in the marketplace frequently depends simply on who has the newest and the best technology. To remain an economic leader, America must remain a technology leader. But innovation alone is not enough. Products must be commercialized quickly and produced at low cost and high quality if we are to reap the benefits of innovation.

- o America has led the world in science and technology for much of this century, resulting in a standard of living to which the rest of the world has aspired. Now, by focusing their activities, other countries have begun to challenge us and in a few cases to surpass us. But no other country comes close to matching the United States overall in science and technology, and this Administration is committed to maintaining that leadership.

Bush Administration Actions

- o This Administration's investments in science and technology have been unprecedented. We have increased R&D spending dramatically and have focused that spending on areas of particular importance, such as high performance computing, materials science, biotechnology, and global change research. We have maintained a world-class technological infrastructure, from the training of students to the development of specialized facilities that will keep America at the frontiers of human understanding.

- o This Administration has also fostered new partnerships among companies,

universities, and federal laboratories. Consortia and cooperative R&D agreements make it possible to pool resources, thus minimizing risk and saving time, so that companies and agencies do not each have to reinvent the technological wheel in an increasingly competitive and high-technology marketplace.

- o We have slashed the regulatory barriers that keep technologies from flowing freely to companies that can develop them further and introduce new products and services in the marketplace. Outmoded bureaucracies and regulations have a chilling effect on our entrepreneurial spirit; we are committed to weeding them out wherever they are found.

- o This Administration recognizes the importance of investment in human capital as an intrinsic element of U.S. industrial competitiveness, and has established a high priority for improvement of mathematics and science education. A Presidential Initiative to this end is funded at a level of \$2.1 billion in the FY 1993 budget request to the Congress. In the area of K-12 education, the highest priority for increased funding and reform, there has been a 123 percent increase above the FY 1990 level, to a total of \$768 million. Within the K-12 funding envelope, we are placing our greatest effort on the education of our mathematics and science teachers, both those on the job and those in the pipeline.

- o Given the tremendous changes that have occurred both nationally and internationally during this Administration, it is now appropriate for us to undertake a completely fresh look at our entire research and development enterprise. As a beginning, we are examining the missions and organization of our federal laboratories

to make sure that the country is receiving the best possible return on its substantial (\$22 billion) investments in them. We are committed to a total reexamination of the roles of academia, industry, and government -- both state and federal -- in our nation's research and development.

- o This Administration has also made a clear commitment to support the development of generic, precompetitive technologies that are important in both the public and private sectors. In this way, the federal government can leverage the resources of the private sector, helping companies convert new technologies to new products and expanded market share.

- o In particular, we have begun a major new effort in manufacturing research. Since early this year an interagency group working under the aegis of the Federal Coordinating Council for Science, Engineering, and Technology has been developing a government-wide initiative in manufacturing that will help to restore leadership in this vital area to the United States.

- o Federal leadership in technology development must be exercised in close partnership with industry. Any federal investment should serve as a catalyst to spur private investment, not to displace it. In the end, industrial investment must be driven by the marketplace. The federal role is limited to catalyzing, filling gaps, and providing a strong infrastructure and a healthy economic environment to ensure that the needed level of private investment is made.

Health Care

o Few things are more terrifying than experiencing a serious head injury or being told that you may have some type of brain disease. Until recently, brain surgery was the only good way doctors could get a good look inside the head to see what is wrong and whether they can do anything to correct it. As a result, some patients had operations they did not need, while others did not receive treatment that might have saved their lives. But today special computer-controlled medical cameras called scanners have changed things for the better. Patients can undergo a completely safe, painless brain scan, which gives doctors detailed pictures from deep inside the brain and enables them to select the best available treatment, while avoiding the risks, costs, and pain of unnecessary surgery. Thanks to such modern technology, more patients gain an improved quality of life, and fewer undergo health-care procedures that they do not need.

o Modern technology, biotechnology, and greatly improved understanding of the life sciences have brought American citizens to a watershed in health care. Instead of focussing on defense against disease we can now shift our attention to improving the quality of life enjoyed by all our citizens.

o Scientists now foresee a new age for protective vaccines. Revolutionary new techniques are speeding the development of new and safer vaccines. Now on the drawing boards is a "Children's Vaccine" -- a vaccine that can be administered at or soon after birth and which will protect the child for life against 20 or more serious diseases.

U.S. Strengths

o We must keep in mind the great strengths on which we can build. This country has the strongest research university system in the world. Our universities continue to attract the best and brightest young people from around the world. And they continue to produce much of the basic new knowledge from which new technologies grow.

o The United States also continues to have a business climate that encourages the formation of new companies and allows successful companies to grow quickly into major businesses. Small and medium-sized firms generate many of the most important new ideas in our economy, and they continue to generate most of this country's new jobs. Adequate investment capital must remain available for new start-ups, so that these companies will continue to keep America at the forefront of high technology.

o Finally, the United States remains an open society that prizes and rewards innovation. Our world is today changing at accelerating speed -- in part because of science and technology -- and those companies that remain flexible and innovative are going to be the ones best able to take advantage of those changes.

o This Administration is committed to maintaining America's technological supremacy. In transportation, energy, information technologies, and a host of other areas, we are creating tomorrow's world by building on today's technologies.

o To maintain world industrial leadership, we must continue to uncover new knowledge, foster the timely translation of this knowledge into new products and

services, and revive the great American tradition of manufacturing so that we not only start, but sustain and retain, great industries.

o We are entering a new era in which the ability to compete successfully in the global marketplace is becoming as important as having the military means to ensure national security. We have met the military challenge through leadership, organization, and superior technology. Through our technological supremacy, and because of quality of individual fighting men and women, we have won the Cold War. Now we must use our great strengths in technology to meet today's economic challenge.

SCIENCE EDUCATION AND THE NEW KNOW-HOW

PURPOSE

This speech is about mathematics and science education and the changes needed to enhance U.S. competitiveness in the world economy and quality of life. It identifies problems and then discusses administration actions and accomplishments in science and technology and in mathematics and science education.

THEME: AMERICAN KNOW-HOW

General Lew Allen, former Army Chief of Staff, observed (circa 1984) at one of the meetings of a government commission on science education that what won WWII for America was all those soldiers who not only could drive trucks, but fix them. This insightful observation is a classic example of that great national characteristic we call "know-how." In the 1930s and 1940s, we were unique in the world in the scope and grasp of the automobile and automotive vehicles. A key to our success in global competitiveness and our quality of life lies in our know-how, but today we need a new know-how.

The new know-how depends significantly on science and technology. We must incorporate mathematics and science into our world view, our habits of mind. The role of science in education and society has long been "off to the side," only for some people who will become esoteric specialists. But science must become part of everyone's education and perspective.

THE CHALLENGE

- o Many areas of individual and societal life are being transformed by globalization, especially the globalization of the economy. The challenge is to maintain and enhance the U. S. position in the increasingly competitive world economy.
- o This transformation is not a new experience for the world, but it is certainly different. The industrial revolution led to a transformation; while at one time in the 19th century as many as 97 percent of our people were engaged in farming, today fewer than 3 percent are. While the result of the transformation brought about by the industrial revolution is seen as positive and led to an enhanced quality of life for many, it also was wrenching and difficult for many others. The transformation in which we are now engaged is no less encompassing than the industrial revolution; it will be painful and wrenching, but it will ultimately lead to a better life, if we are successful in navigating the transformation.
- o There are several things we need to do as a society: spurring more savings and investment, controlling mandatory government spending while reducing overall spending and taxes, creating more jobs, etc. Our corporations need to change the way work is organized.

- o But the most important thing we have to do is reactivate American know-how, and the new know-how is strongly dependent on science and technology. From society's point of view, we must support and encourage research and development in technical fields. Today and from now on, social and economic value added will come from innovation resulting from increased knowledge and its utilization.
- o This means that we must change the way we educate and train people; we must substantially upgrade the quality of the workforce and bring larger numbers of our citizens to higher levels of achievement.
- o Emphasize that we are not talking about numbers of scientists and engineers or producing more of them; contrast current issue to sputnik era; then we wanted to increase the numbers of professional scientists and engineers, now we want to upgrade the entire workforce (the few vs. the many). In other words,

"...the basics of the 21st century are not only reading, writing, and arithmetic. They include communication and higher problem-solving skills, and scientific and technological literacy -- the thinking tools that allow us to understand the technological world around us. These new basics are needed by *all* students -- not only the few for whom excellence is a social and economic tradition. All students need a firm grounding in mathematics, science, and technology."

- o The ability of science and technology to contribute to the national welfare depends not only on the inventiveness and technical competence of its practitioners, but also on the degree to which its results are understood by citizens and can be assimilated into our social structures and institutions.

ADMINISTRATION ACCOMPLISHMENTS AND ACTIONS

- o Role of Science and Technology in the administration:
 - Generating the knowledge base for innovation.
 - Elevating position of science advisor to cabinet level rank; regular participation in all high level councils and cabinet sessions; energizing FCCSET.
 - The national S&T initiatives; first time in history we have had effective agency crosscuts; reorientation and reassignment of federal resources; the new manufacturing initiative.

THE MATHEMATICS AND SCIENCE EDUCATION INITIATIVE

- o One of the S&T initiatives is in education and human resources.**
- o Mathematics and Science Education Initiative addresses the National Education Goals and America 2000; goal four not intended as arrogance and we do not want to totally monopolize Nobel prizes; all nations must strive for excellence, competitiveness, and quality of life. Nevertheless, U.S. must have high aspirations.**
- o Development of the strategic plan; the strategy; leveraging and coordination; use of federal resources (people and facilities).**
- o Components of the plan; standards, curriculum frameworks, teachers and teacher enhancement;**
- o Plan also addresses lifelong learning and science literacy.**

CAVEAT

- o No quick and easy solutions; sustained effort required.**
- o While upgrading the workforce is a clear priority, this will not immediately translate to enhanced opportunity or income for every individual; a wrenching time is ahead for many, but the long-term results will be worthwhile.**

PRESIDENT BUSH'S RESPONSES TO PHYSICS TODAY QUESTIONS

1. It has been the conventional wisdom, ever since Vannevar Bush wrote a report in 1945 called "Science--the Endless Frontier," which inspired the creation of the National Science Foundation, that scientific research is the pacemaker for new technologies and economic progress. Yet, for the past five or six years, support by the Federal government and private industry for research, particularly in the physical sciences, has not kept pace with the levels in Japan or some countries in Europe. What would your administration do to ensure adequate government funding for scientific research and to stimulate companies to sponsor more research?

I view support for science and technology as a vital investment in our national future. My Administration has acted on its conviction that research and development (R&D) yields new knowledge, products and processes that over the long term result in economic growth and an improved quality of life for all Americans. The overall level of support for R&D in the U.S. still exceeds that of Japan, Germany, France and the U.K. combined. Recognizing that investments in R&D form the foundation for the exploration of the new frontiers I proposed to Congress for FY93 a budget of \$76 billion for R&D. If my proposals are enacted by Congress, Federal support for the conduct of basic research will have grown by 35%, from \$10.6 billion to \$14.3 billion since 1989. Total civilian R&D funded by the government will have increased by 43 percent over that same period. Technology priorities include advanced materials and manufacturing processes, biotechnology, aeronautics and surface transportation, energy and the environment, and information and telecommunications.

Federal funding increases are only one measure of this commitment. I have also organized special Presidential Initiatives in areas of particular promise and importance through my National Technology Initiative (NTI), which has opened up new and exciting opportunities for R&D collaboration with the private sector. In addition, the Administration's Cooperative Research and Development Agreement (CRADA) program gives federal scientists and engineers incentives to explore commercial applications for their work. Since December of 1991, CRADAs have increased 57 percent from 872 in 1991 to 1,375 in August of 1992. We will continue to advocate, propose and strive for passage of increased Federal R&D budgets.

Potentially far more important as an impetus to American scientific research, however, is private sector investment in R&D. I will continue to press for passage of legislation that would encourage private investment in R&D by making the research and experimentation tax credit permanent. I will also press for reductions in taxes on capital which discourage investment and research. The Administration is encouraging additional private-sector investment in R&D through increased emphasis on cooperative cost-shared research conducted under CRADA and through consortia such as the U.S. Advanced Battery Consortium.

2. With the end of the cold war, weapons research and development are being scaled back. The 1990 Budget Enforcement Act, however, prevents the transfer of funds from defense to domestic programs. One of the so-called peace dividends might

very well be the expansion of research in the nuclear weapons laboratories into non-defense programs that would advance the country's technologies, possibly in collaboration with manufacturing companies. Would this be a priority for you?

We have started doing what you suggest and are increasing our efforts in that regard. The end of the Cold War has given us an opportunity to change not only our foreign policy but also the structure and purposes of our national defense infrastructure. Our challenge now is to make those national assets, laboratories and human potential available for peaceful, civilian and commercial ends. The expertise and facilities in the nuclear weapons laboratories represent a major national resource and the effective use of this resource for both defense and non-defense use is certainly a high priority objective of this Administration. To this end, Secretary Watkins and other senior Administration officials have worked to expand the use of Cooperative Research and Development Agreement (CRDA) agreements that bring industry into partnerships with the Department of Energy laboratories to jointly develop technologies to strengthen the Nation's industrial base.

As overall defense spending decreases, it is vitally important that we maintain a healthy level of defense research and development (R&D) funding, particularly science and technology funding in order to ensure technological superiority. We have proposed that a larger share of the smaller future defense budgets should be allocated to R&D.

The continued strengthening of relationships between the Department of Defense and the academic community is also particularly important in this regard.

3. Would your Administration help convert defense manufacturing to civilian production--that is, without subsidizing inefficient companies and without destroying the whole military-industrial partnership that has worked so well? How would you do this?

The reality is this: we cannot maintain a production capability for everything that we might desire in the event of a war. We will continue to work to guarantee an adequate defense industrial base, especially to support those critical manufacturing processes that would be difficult to reconstitute if allowed to end. The Administration's approach is based in part on the fact that a significant portion of our manufacturing base already supports both defense needs and civilian production. This integration is particularly evident, for example, in the microelectronics sector, where it results in many efficiencies. The Department of Defense is fostering additional integration of the defense and civilian manufacturing bases, through its acquisition policy.

In addition, through efforts such the National Technologies Initiative, Cooperative Research and Development Agreements, the Advanced Technology Program at the Department of Commerce, and the new Advanced Manufacturing Initiative, which was announced in March 1992, we have sought to produce

an environment in which private, commercial industry and government labs and resources are encouraged to cooperate and transfer technologies.

4. Over the past several years, there have been several recommendations for creation of a civilian DARPA. Its purpose would be to select critical commercial technologies for increased government support, with the goal of improving America's global economic competitiveness. Has the time come to initiate something like MITI in Japan or the Framework program in the European Community?

This Administration does not support the creation of a Federal agency that would select commercial technologies for increased government support. We consider such an approach to be counterproductive. Private sector companies and entrepreneurs are far better situated than government agencies to identify and select promising new technologies for civilian commercial markets.

In discussing the creation of a "civilian DARPA," I think it's useful to remember that DARPA has been such a success in advancing defense technology because it has always had a sole customer and project manager: the Department of Defense. In the absence of such a specific customer, the mission of a "civilian DARPA" would be unfocused and would certainly be subjected to intense political pressures toward technological faddishness with its accompanying inefficiencies.

The success of MITI in picking winning technologies may have been exaggerated; MITI does many things, some of which it has done very well, but its record in choosing technologies

has been uneven at best. We are committed to an effective technology policy for the U.S., not simply mimicry of someone else's.

A unique American characteristic of our technology prowess is the participation of small, entrepreneurial firms in these frontiers of technology; they have been responsible for a disproportionate part of the job creation and innovation in these fields.

Our approach has been to build on the diversity of talent and expertise which our various federal agencies possess, capitalizing on our technological strengths to produce the next generation of generic, precompetitive technologies, and then to encourage the private sector to do what it does best - transform these technologies into new products and create new markets for them. Initiatives in Advanced Materials and Processing, Advanced Manufacturing, Biotechnology Research, and High Performance Computing and Communications are examples of our approach. These initiatives represent true national programs in which 15 to 20 Federal agencies work together in a coherent fashion in cooperation with the private sector to expand our technology base.

5. Very large and costly science projects, such as particle accelerators and space stations, serve as visible symbols of the nation's commitment to research and its leadership in particular fields. But in this era of tight budgets, should projects of such enormity be undertaken by several countries from the outset, using space station Freedom or the ITER magnetic fusion program as cases in point?

This Administration believes strongly that there should be early and sustained consultation with the international science community and corresponding governments on proposals for very large, long-term scientific projects. Specific efforts of our Administration have resulted in international agreements for magnetic fusion (ITER) research and for Space Station Freedom. The Administration has played a key role in establishing the Organization for Economic Cooperation and Development megaproject forum, which will be an important vehicle for exchanging information about potential future megaprojects.

I have acted on my conviction that major investments are required to construct the facilities needed for future advances in fields ranging from high energy physics to climate research. And I have balanced these investments with increased support for ongoing research conducted by individual research scientists.

6. Many scientific questions, such as those dealing with environmental degradation and climate change, cannot always be answered within national borders. What should the U.S. do to make sure that prudent measures are taken for the sake of the entire Earth?

The United States has played the leading, role in international climate change research and in formulating prudent responses based on scientifically and economically reliable data. The climate change treaty that I signed in Rio de Janeiro last June requires nations to develop detailed

action plans that specify what steps will be taken to respond to potential climate change and quantify the expected results. The treaty requires that all contributing factors be dealt with, not just CO2 emissions, and that these action plans be open to public scrutiny and updated on a regular basis in response to new scientific and economic information. So far, only the United States and the Netherlands have begun to implement such action plans. Ours will reduce net greenhouse gas emissions by 7-11 percent below projected levels for the year 2000 without imposing unwarranted costs on the U.S. economy.

Precisely because the scientific questions about environmental degradation and global change often cannot be answered within national borders, the Administration is providing leadership by mounting what is by far the largest, and most comprehensive and internationally-coordinated research program in the world. The U.S. Global Research Change Program combines a myriad of federal efforts, including space and ground-based earth observation, and coordinates them internationally. My Administration has invested nearly \$2.6 billion in climate research, far more than any other nation and more than all other countries combined over the last three years. An additional \$1.37 billion is proposed for Fiscal Year 1993, a six-fold increase over the FY 1989 level. Another example of U.S. leadership is the formation of the Inter-American Institute for Global Change Research, which was announced in May, 1992. The U.S. is now promoting the

establishment of similar institutes in the Pacific region and in Europe and Africa to meet the challenge of global stewardship.

The U.S. is also taking the lead to help the world community fashion intelligent, cost-effective policy measures to deal with global environmental concerns. Based on research conducted largely by Americans, the United States leads the world in phasing-out ozone-depleting CFC's -- from our ban on CFCs in aerosol propellants in 1978, to the accelerated 1995 phaseout I announced last February. We are now contributing \$50 million to the fund to assist developing countries in avoiding CFC use, and \$25 million to help developing countries inventory their greenhouse gas emissions and identify response options. Our policy responses to global environmental risks must reflect prudent judgement of relative priorities; that is why I have acted so decisively on CFC cuts; offered a new Forests for the Future Initiative to help countries halt the tragic loss of the earth's forests; and taken prompt action to ban ocean dumping. That is also why I insisted on a climate convention that emphasized concrete national actions encompassing net greenhouse gas emissions rather than rhetorical targets aimed only at one slice of the issue. And that is why I refused to sign the sadly flawed biodiversity convention, which would perversely discourage the greatest hope for biodiversity -- the coming wave of private sector investment in its conservation. Instead, the U.S. will

work for needed biodiversity research and will encourage real biodiversity conservation.

7. What is your position on developing alternatives to fossil fuel sources--that is, making greater use of solar energy, say, or wind and geothermal power, and, of course, more conservation? Would you advance these alternative energy programs with tax incentives or other schemes?

My Administration's record in both renewable energy and energy conservation is better than most people recognize. Alternatives to fossil fuel energy sources and increased conservation are both key ingredients of our National Energy Strategy (NES). Alternative energy technologies can serve both as sources of electricity and as substitutes for petroleum transportation fuels.

For electricity generation, I have strongly supported both nuclear power and solar and renewable energy in my budget requests and in the NES. During my term I have steadily increased the budget for solar and renewable energy: my FY 1993 request is 67 percent higher than the Congressional appropriation I inherited in FY 1989. I have also increased conservation R&D spending, with my request for FY 1993 being more than double the appropriation in FY 1989. In certain areas, the increases have been even more dramatic; for instance, my current budget request for electric vehicles represents a 450 percent increase over the FY 1989 appropriation, and my request for biofuels R&D and alternative fuel utilization as a substitute for gasoline and diesel fuel

is more than five times the appropriation when I entered office, so I have kept its funding essentially level over the past four years.

We have supported selective energy efficiency regulations, and we strongly support expanded energy labeling of both industrial and consumer products, so that buyers can make informed decisions. We prefer not to artificially steer markets with tax incentives. It is our experience that intentionally distorting the energy markets is generally counterproductive.

Altogether, my National Energy Strategy contains more than 100 initiatives, whose implementation is a shared responsibility with the American public, the private sector, academia, and all levels of government. I believe that our proposals represent a more cost-effective and sensible approach to protecting our environment and reducing our need for fossil fuels than the more extreme actions in competing proposals.

8. An abundance of fuel for nuclear power plants will soon be available from dismantled weapons. Indeed, this may be the only practical means of disposal. Moreover, nuclear power stations emit no greenhouse gases to pollute the atmosphere. Yet no nuclear plants have been started in the U.S. in more than a decade. What is your view on the future of nuclear power? And in connection with nuclear safety, should we be helping to make sure that nuclear power reactors in the former Soviet Union and Eastern Europe are safe to operate?

My Administration believes that nuclear power, as perhaps the most promising technology capable of supplying large amounts of electricity without direct emission of air pollutants or greenhouse gases, must play a significantly enhanced role in generating electricity in the future. I strongly support the development of the next generation of safer, less costly nuclear power plants. To this end, we have worked to bring forward legislation that would enable nuclear power to compete with other technologies on a level playing field, and DOE is supporting development of safer reactor and waste disposal technologies.

We should certainly help improve the safety of nuclear reactors in the former Soviet Union and Eastern Europe, and have been working on this daunting problem since 1988. Our current program features the \$25 million reactor safety initiative announced by Secretary Baker in Lisbon, which includes short-term operational safety measures as well as establishment of two training centers. This problem is so vast in scope that we agreed on a multilateral effort to address it at the G-7 Economic Summit last summer in Munich. In addition, proceeds from the sale of Russian highly-enriched uranium may be used in part to promote reactor safety.

9. Given the collapse of the USSR and the reemergence of extreme nationalism and ethnic conflict in parts of the world, what should be the U.S. position on nuclear arms control and nuclear non-proliferation? Is the conclusion of a

comprehensive nuclear test ban treaty an important objective now?

My Administration has made arms control and nonproliferation a top priority, and will continue to do so. Through hard work and historic opportunity, we have agreed to dramatic reductions in nuclear arsenals and a Chemical Weapons Convention text, increased Nuclear Non-Proliferation Treaty membership to over 150 countries, and strengthened export controls. Russia and the United States have also agreed to dilute Russian weapon-grade uranium to reactor-grade to ensure its peaceful use as a nuclear fuel. Since many dangers remain, however, I recently launched a comprehensive nonproliferation initiative calling for even greater nonproliferation efforts, in concert with our allies.

Technology that has been developed at federal laboratories will play a key role in inspection, verification, and other aspects of our nuclear arms control and nonproliferation activities. The principal remaining rationale for nuclear testing is to ensure the safety and reliability of weapons currently in the inventory. Here too, the work of our laboratories can help assure reliability and safety of weapons, and thus serve to limit the amount of testing that will be needed.

10. The number of American students willing to endure the rigors of education in science, math and engineering has declined in recent years. The problem is particularly acute for female

and minority students. Many American students who choose to pursue a career in science arrive at college poorly prepared by comparison with students from other countries. What can your Administration do to improve the situation?

I disagree with the premise that female and minority students are not "willing to endure the rigors of education in science, math and engineering." They can and will compete if given the challenge and the opportunity to succeed. In my Administration, we have sought to expand those opportunities for all of our students, requesting a 7% increase to \$2.1 billion for mathematics and science education in Fiscal Year 1993, and more than doubling spending at the elementary and secondary levels in these areas during my Administration. Improving achievement of American students in mathematics and science is a cornerstone in my efforts to strengthen and reform American schools. To this end, my Administration developed, for the first time: (a) a comprehensive baseline inventory of Federal programs that affect mathematics and science education at all levels, (b) a set of strategic priorities to guide future Federal actions in this area, and (c) objective standards against which performance can be measured. Reports on these respective accomplishments, setting forth the Presidential initiative on mathematics and science education, were included with the FY 1992 and FY 1993 budgets.

The Administration is now building on this work to develop a Strategic Plan to guide Federal activities in

mathematics and science education over the next five years and beyond. This effort is in support of wider efforts to attain the National Education Goals enunciated by the nations' Governors and the President. Through the AMERICA 2000 strategy, we expect to achieve these goals in an effective and efficient manner.

QUESTIONS FOR SCIENCE POLICY FORUM

QUESTION 1:

How important do you think basic science is for our country in general, or specifically, in areas such as improving health, preventing pollution of the environment, and the creation of jobs? Do you think appropriations for science should be increased, decreased, or kept level?

ANSWER:

I am convinced that support of basic science is one of the soundest investments that we as a nation can make in our future.

The strength and vitality of basic science in America will do much to determine the future of our country. Continuing preeminence in basic science translates directly into economic growth, the creation of jobs, a healthier population, and a cleaner environment. It is critical that these investments be sustained.

A strong basic science program has been a pillar of the Bush Administration policy. If the Congress responds to my FY 1993 requests, support of basic science will have increased by 35 percent during my Administration, and this has occurred during a period in which we have had to restrain domestic discretionary spending. Major Presidential Initiatives have been launched -- in biotechnology, materials science, advanced manufacturing, high performance computing and communications, and mathematics and science education.

My Administration has also taken a number of steps to facilitate the translation of basic science discoveries into practical applications. We have fostered cooperative research and development agreements (CRADA's) between government laboratories and industry. Special seminars dealing with critical technologies have brought together basic research scientists and those in industry in productive symposia in cities across the country. A Critical Technologies Institute has been launched that will examine opportunities and policy options to further strengthen the U.S. position in technology.

A broader and stronger basic science foundation has been and is being built. It is more closely linked than ever before with translation into practical applications. Impressive as the progress has been, the effects of these investments have yet to be fully appreciated. Rather, we look ahead to the latter part of this decade and into the next century to appreciate the magnitude of their importance

QUESTION 2:

What is your position on "big science" versus "little science"? Specifically, would you increase or decrease the appropriations for each of the following: the space station, the supercollider, the genome project, the National Institutes of Health, the National Science Foundation.

ANSWER:

I view Federal support for research as an investment in our country's future. As with all investments, the important question is not whether the investments are "big" or "small" but whether they are sound. That is the criterion my Administration applies to proposed expenditures on science, and that has convinced me to propose significant increases for research in my annual budget requests to Congress.

In preparing the budget for submission to the Congress in each fiscal year, we have given special attention to the need to balance supporting the current work of today's scientists and engineers with investments in the major facilities and programs that will take these same individuals to the frontiers of their fields -- and help define those frontiers -- five and ten years into the future.

I certainly would increase the appropriations for each of the activities you have mentioned, and I have done everything in my power to increase them. Unfortunately, the Congress has consistently short-funded these important projects and agencies and has appropriated significantly lower amounts than I have requested. For example, I recommended that the NSF budget be increased by 18 percent in FY 1994. While Congress still has not passed an appropriations bill at this late date (September 12), our best information is that Congress will appropriate little or no increase and thus will force the NSF to cut research programs drastically.

QUESTION 3:

There has been a shift in criteria for funding basic research at NSF and NIH towards emphasis on the possibility of creating U.S. jobs, i.e., national competitiveness. Would you favor that as a criterion for research funds? How would you implement criteria that would set that objective?

ANSWER:

I would not agree that the criteria for funding basic research at NSF and NIH have shifted "toward creating U.S. jobs." Our support of basic research in these and other agencies is an investment in our future, but by its very nature it is impossible to predict where, when, or to whom the benefits will flow.

Nevertheless, we can be sure that these benefits will be substantial. Professor Edwin Mansfield of the University of Pennsylvania has found that the social rate of return from such investments in academic research can very conservatively be estimated at 28 percent.

To take just two examples of how basic research can be translated into economic returns, NSF support of fundamental condensed matter research has had a major impact on both microelectronics and materials science, while NIH support of fundamental biology has provided much of the foundation for the biotechnology industry. Both of these areas have been and will be major producers of U.S. jobs.

The primary criteria for funding basic research has been, and should remain, the excellence of the proposal and the track record of the proposer. While no clear division is possible between basic and applied research, thematic or targeted research is funded with the intent of developing new materials, processes, and products that will contribute directly to economic competitiveness and national security and to improving the quality of American life.

The development of generic, precompetitive technologies falls into this latter category of research; we have emphasized our willingness to work with the private sector in consortia, in Cooperative Research and Developmental Agreements (CRADA's), and in three-way partnerships involving industry, academia, and federal and state governments. Involvement of the private sector from conception of the research through its completion is an essential element in effectively prioritizing and implementing this research.

QUESTION 4:

Would you favor giving EPA a research capability on environmental matters similar to NIH's research capabilities on medical matters?

ANSWER:

I am completely convinced that environmental policies and regulations must be based on sound science and on sound economics. I have strongly supported EPA Administrator Reilly's efforts to build a much stronger scientific community within EPA and at the same time have, through my Science Advisor, requested that the National Academy of Sciences provide me with its recommendations concerning the optimal structure and scope of the scientific research activity required to support rational environmental policies at all levels. This NAS study is still in progress, and I await its completion with great interest; pending its completion I would not wish to comment on the appropriateness of a National Institute for the Environment modeled on the National Institutes of Health.

In considering this issue, there are several principles I would affirm that need to guide our thinking. The first and most important principle is the preeminent need for quality research. Second class research is truly of no use at all. In fact, particularly with environmental matters, poor-quality research can cause great harm.

So my first principle would be that our focus should be as much or more on the quality of research being done as on the quantity. In particular, in my opinion, we should strive to apply peer review to as much environmental research as possible. Peer review has served the United States extremely well in maintaining a clear focus on excellence.

The second principle I would affirm is the need to maintain diversity in our research system for environmental R&D. A unique aspect of U.S. science and technology is that our science and technology program is built largely from the bottom up rather than the top down. In most countries, a science and technology budget is established by the appropriate governmental body that is then divided among different programs. In the United States, the situation is more pluralistic. The desires of individual scientists and engineers manifest themselves in proposals developed by individuals and groups of individuals with shared research goals. These proposals are then filtered by the agencies as they put together their individual R&D portfolios. By the time a proposal is submitted, there usually exists a group of some size that believes it to incorporate a good idea.

In such a system, however, coordination becomes a considerable challenge, which brings me to my third general principle. It is essential in interdisciplinary areas such as the

environment to coordinate and integrate agency programs to produce coherent national programs rather than collections of heterogeneous agency programs.

We have been quite successful in achieving such coordination through the newly revitalized Federal Coordinating Council for Science, Engineering, and Technology. FCCSET brings together representatives from the various federal agencies that are involved with science and technology to work out ways to integrate interagency efforts most effectively and to ensure that the maximum science and technology results are obtained at whatever investment level Congressional action makes possible.

The Committee on Earth and Environmental Sciences under FCCSET offers an instructive model in examining environmental research supported by the federal government. For the past four years, under its Working Group on Global Change, CEES has brought together representatives of some 19 federal agencies and offices to establish an integrated, comprehensive, long-term program of documenting, analyzing, and modeling the earth system. I have been tremendously impressed by the willingness of people in the agencies to come together and work toward a common goal.

QUESTION 5:

What are your feelings about the biodiversity treaty of the Rio Summit? What, in general, is your attitude toward international patent rights?

ANSWER:

I would like to reiterate a point that was made repeatedly at the Rio Conference (UNCED). The United States' decision not to sign the Convention on Biological Diversity in no way reflects a weakening of this Administration's commitment to the conservation of biological diversity, and we will continue to take measures domestically and internationally to conserve this diversity. To this end, the United States proposed, at UNCED, an international biological diversity survey, inventory, and data organization plan that will permit immediate action on this issue and need not await the entry into force of the Convention on Biological Diversity. We also are committed to domestic programs aimed at the conservation of biological diversity and will continue to pursue bilateral and multilateral efforts to encourage such activities abroad.

We participated in this effort because the United States is strongly committed to the conservation of biological diversity, both through protection of endangered and threatened species and through preventive measures to protect habitats and ecosystems in order to limit the number of species that become threatened or endangered.

Originally, the United States envisaged a convention limited to the conservation of biological diversity. Unfortunately, at preparatory meetings leading up to the negotiations, the developing countries insisted that the Convention address additional issues that the United States considered inappropriate to, or beyond the scope of, an agreement on the conservation of biological diversity. Such additional issues included the regulation of the development and use of biotechnology products, concessional terms for sharing benefits derived from biological resources, and the creation of a special financing mechanism under the Convention.

Despite all efforts, the final text contains a number of objectionable provision that caused the United States not to sign the Convention. For example, the Administration objects to the financial provisions of this Convention contained in Article 20 (Financial Resources), Article 21 (Financial Mechanism), and Article 39 (Financial Interim Arrangements), because these provisions are fundamentally inconsistent with the agreement reached within the Participants Assembly of the Global Environmental Facility (GEF) -- the environmental fund operated by the World Bank, UNEP, and the United States Development Programme -- just weeks before, on the appropriate division of responsibilities between the GEF and the parties to a Convention. Whereas the Climate Change Convention reflects that agreement, this Convention, by contrast, places

the financial mechanism almost entirely under the authority of the Parties to the Convention. As a result, donor countries would arguably have little control over either amount of their compulsory contributions to the permanent financial mechanisms or the ways in which those funds would be used. And while the GEF has been designated as the interim financial mechanism of the Convention, it is not even clear that the Convention, as drafted, would permit the GEF to serve as the permanent financial mechanism.

Furthermore, Articles 16 and 19 provide for unacceptable terms of technology transfer and inadequate protection of intellectual property rights. A more general concern is the Convention's treatment of biotechnology (e.g., Articles 8 and 19). The United States believes that the Convention places undue emphasis on possible safety risks to biological diversity associated with the products of biotechnology.

Despite these difficulties with the Convention, I would repeat that my Administration is strongly committed to conservation of biological diversity and we are aggressively moving forward to take measures, both domestically and internationally, to conserve such diversity. Again, as noted in the "U.S. Actions for a Better Environment" distributed at UNCED, the U.S. stated that it will establish its own national center for biodiversity information in the near future.

I believe that international patent and other intellectual property rights protections are essential to a fair international marketplace and to the protection of American competitiveness in that market. I have instructed Ambassador Hills and Dr. Bromley to insure that all our bilateral, multilateral agreements include strong intellectual property protection. In the long run such actions benefit our collaborators and trading partners as much as ourselves.

In areas of basic science and basic technology, however, it is important for us to recognize how much we, as a nation, have benefitted from our characteristic openness and the free exchange of information. I remain committed to that openness in all areas of basic science and technology and will work aggressively to insure reciprocal behavior on the part of all nations with whom we interact. Rather than attempt to restrict the international flow of science and technology, except in very rare occasions of specific national security importance, I have instructed members of my Administration to work toward acquisition of reciprocal benefits in all our negotiations so that scientific and technological exchange can continue to be, as it has in the past, a positive sum game in which all participants benefit.

QUESTION 6:

Do you expect to make changes in the White House science policy apparatus? In particular, will your Science Advisor remain at the level of Assistant to the President? Will your Science Advisor be involved in the selection of officials in top science posts in your Administration?

ANSWER:

I do not anticipate any significant changes in the White House science policy apparatus. My Science Advisor will continue to hold the rank of Assistant to the President for Science and Technology and will serve as Director of the Office of Science and Technology Policy in the Executive Office of the President. Participating in the selection of top scientists for government service will be one of the advisor's very important roles in the early days of my second term.

During my current term the Office of Science and Technology has been greatly strengthened and, through a revitalized Federal Coordinating Council for Science, Engineering, and Technology, has been responsible for unprecedented cooperation among the federal agencies and integration of their programs in a number of critically important areas. The President's Council of Advisors on Science and Technology has made available to me and to my senior White House staff the direct advice and counsel of an outstanding group of Americans with extensive experience and deep wisdom.

With the end of the Cold War, the development of the European Community and the Pacific Rim as major economic powers, and fundamental changes and challenges worldwide, I believe that the time is ripe for a broad reexamination of the rationale, structure, and effective utilization of the American research and development enterprise. I shall charge my Science Advisor with undertaking such a reexamination as a matter of high priority in my second term.

QUESTION 7:

What specific steps will you take to improve science education in grades K-12? For example, should science requirements be increased in high school?

ANSWER:

As many **Science** readers know, the FCCSET Committee on Education and Human Resources (CEHR) is in its third year of activity. Admiral James Watkins, Secretary of the Department of Energy, chairs the Committee.

Upon becoming President, I directed my Science Advisor, Dr. Allan Bromley, to strengthen FCCSET as the primary interagency group responsible for developing policy for science and technology in my Administration. Through this FCCSET process and in close cooperation with the Office of Management and Budget, CEHR has achieved a very substantial increase in the level of interagency coordination in mathematics and science education. This year, CEHR is completing a Strategic Plan directly relevant to K-12 science education improvement. The plan is not complete, but it is possible to indicate an outline of the strategy it encompasses.

Our strategy endorses a broad range of activities stratified into three tiers. For K-12, first priority is given to reform at the elementary and secondary education levels. I advocate activities such as:

- o Development of curriculum, teaching, and assessment standards for K-12 mathematics and science, incentives for their implementation, and methods for measurement of performance against these standards.
- o Development of model curriculum course, and instructional materials to extend the framework.
- o Support for teacher enhancement and preparation.

In addition to developing objective performance standards for what students should be expected to know as they complete grades 4, 8 and 12, it is essential that our teachers be given access to additional training and professionalism in their fields of expertise. This year 45,000 elementary school mathematics and science teachers are receiving such training. During the 1990's, all 1,500,000 such teachers will be offered such training.

As for increased science requirements in high school, there is no question that this Administration believes that our children need greater challenges in school than they now receive. That means more mathematics and science, but it also means **different**

mathematics and science in terms of curriculum and instruction. The key is to focus on what we expect students to know and be able to do. The standards and the frameworks will do this. Whether increased requirements will be necessary to achieve our goals or whether a restructured curriculum and new instructional approaches can do it in the same or less time remains to be seen.

The problems of America's schools are, of course, not limited to mathematics and science; nor will they be solved without a return to active participation by parents in the education of their children. In my **America 2000 Initiative** I have spelled out the kind of change that must take place in our schools, with particular emphasis on K-12, if we are to look forward not only to a work force adequate to the jobs of the 21st century but also to a citizenry prepared to participate in, and more fully enjoy, the benefits of our democratic society.

THE WHITE HOUSE
WASHINGTON

April 8, 1992

MEMORANDUM FOR HENSON MOORE

FROM: D. ALLAN BROMLEY 
SUBJECT: TECHNOLOGY FOR A PRODUCTIVE AMERICA

As you requested, I am enclosing herewith a much more detailed suggestion for the major technology event that we have discussed.

My colleagues and I had prepared a list of suggested cities for the event. If, however, the President is committed to the NTI meeting in Pasadena on May 28, then I would recommend that we consider making it the event described herein. If, for whatever reason, that turns out not to be possible then I would urge that we consider the event for a midwest location recognizing, however, the difficulty of getting the President involved in major technological public events on two closely spaced occasions.

I am convinced that Pasadena would be an excellent site and that we have a suggested event that would clearly establish the President's leadership in this very important area.

An important stimulus to America's industrial growth and innovation will be provided through new, cooperative government-industry programs and the redesignation of substantial funds in Federal laboratory budgets. Diminishing defense needs during this post-Cold War period permit increased resources to be made available for strengthening and expanding America's industrial and technology base and the creation of a single national industrial base transcending military and civilian needs.

We are, therefore, making what many will consider very radical suggestions herein for the President to consider as new initiatives to announce at the event. We will, of course, emphasize the already excellent track record of the Bush Administration but I believe that it is crucial for the President to do two very specific things at this event.

1. Galvanize the industrial sector--and the American public--with the recognition that technology is our competitive edge and that he is committed to maintaining his leadership in technology; leadership that will provide new, challenging

jobs, improve the quality of life of all our citizens, and assure our national security. If the President can mobilize public attention, as he did so effectively at the Education Summit, to the seriousness of the challenge we face in the international marketplace and to the importance of more effective utilization of technology in creating jobs, strengthening our economy and assuring continued US world leadership, all else will follow.

2. Announce a limited number of entirely new initiatives sufficiently bold to really attract press and public attention. I have suggested specific ones herein that my colleagues and I originally (up until yesterday!) thought were original and guaranteed to get such attention. Subsequently we find that very similar suggestions are flowing in from many sources (e.g. Harold Brown's NRC report, private letter to the President, Sam Skinner and Brent Scowcroft from Dr. Bill Wattenburg, etc.)

I still think that our suggestions are appropriate for your consideration and that of our senior colleagues in the West Wing and look forward to discussing them with you. They could have major beneficial impacts on our industrial strength and competitiveness. Clearly if we are to run this event by May 29 we have no time to waste! If you agree that we should go forward it will be essential for us to pull together an EOP as well as our suggested external advisory body at the earliest possible time and get everyone required aboard and working.

I remain convinced that we have the potential for a real winner here- both for the President and for the nation.

THE WHITE HOUSE
WASHINGTON

April 9, 1992

MEMORANDUM TO CLAYTON YEUTTER

FROM: D. ALLAN BROMLEY *Allan*
SUBJECT: THE BILL WATTENBURG PROPOSAL

By coincidence the Wattenburg program that you sent over--as well as the recent NAS/NRC report by a group chaired by Harold Brown (Carter's Secretary of Defense) have a number of ideas in common with a proposal that I made originally to John Sununu and, more recently to Henson Moore, for a major Presidential event focussing on Technology for a Productive America.

I enclose herewith copies of the recent memoranda of February 24 and April 8 to Henson. As you will observe, I am enthusiastic about showcasing the very real accomplishments of the Bush Administration in this area to take the initiative away from the Democrats. I also am convinced that using the bully pulpit, the President can mobilize our strengths in technology and industrial production and in so doing greatly improve our competitiveness in the international market place. Only the President can do this.

If you agree with the general ideas in my memos to Henson, who is the only person as yet outside of my office with whom I have discussed them, then I would suggest that we might wish to use the Science and Technology working group of your PCG to refine and develop the ideas for possible Presidential use. Since the President is now committed to speaking at Pasadena on May 28 this might be a target date.

I would hope that we could get the President to speak twice, on each of two consecutive days with other unrelated activities perhaps in between. In the first speech he would highlight the accomplishments of his Administration and challenge the group. In the second he would announce new initiatives such as those suggested in my memos to Henson as well as any that may emerge from the conference breakout sessions with the industrial and labor leaders.

I would welcome your comments and reactions.

Enclosure

THE WHITE HOUSE
WASHINGTON

DATE: 4-7-92

TO: DR. ALLAN BROMLEY

FROM: CLAYTON YEUTTER
Counsellor to the President for
Domestic Policy

Allan, your reactions??

*4/8/92 - Copies
sent to ABs!*

*Need 2
additional
copies*

FAX: THE WHITE HOUSE (202) 466-2397
ATTENTION: MARILYN, CHIEF OF STAFF'S OFFICE

MARCH 26, 1992

TO: PRESIDENT GEORGE BUSH
SAMUEL SKINNER, CHIEF OF STAFF
BRENT SCOWCROFT, NATIONAL SECURITY ADVISOR

SUBJECT: A MAJOR NO-NEW-COST, ALL-WIN DOMESTIC INITIATIVE
THAT WILL BE WELCOMED BY THE WORKING AMERICAN
PUBLIC WITH THE SUPPORT YOU GOT IN THE GULF WAR

FROM: DR. BILL WATTENBURG, THE UNIVERSITY FOUNDATION
CALIFORNIA STATE UNIV. CHICO.
CONSULTANT, LAWRENCE LIVERMORE NATIONAL LABORATORY
(916) 894-6844 FAX 893-1317

YOU CAN DECLARE WAR ON AMERICA'S REAL DOMESTIC PROBLEM WITH A BOLD STROKE THAT WILL CATCH YOUR POLITICAL CRITICS WITH THEIR BRAINS DISENGAGED--AND HARKEN BACK OUR VICTORIES IN THE COLD WAR AND GULF WAR TO THE WORKING AMERICAN PUBLIC: ANNOUNCE THAT YOU ARE DIRECTING THE AMERICAN DEFENSE INDUSTRIES AND OUR GREAT SCIENTIFIC LABORATORIES SUCH AS LIVERMORE AND LOS ALAMOS TO IMMEDIATELY DEVOTE, SAY, TWENTY PERCENT OF THEIR PRESENT BUDGETS TO JOINT VENTURES WITH AMERICAN DOMESTIC INDUSTRIES TO DESIGN AND MANUFACTURE ADVANCE PRODUCTS FOR THE WORLD MARKETS.

YOU WILL RECIEVE IMMEDIATE APPLAUSE FROM WORKING AMERICANS AND WALL STREET WHO KNOW THAT OUR ADVANCED DEFENSE TECHNOLOGY THAT WON THE COLD WAR IS OUR GREATEST REMAINING ASSET IN THE GLOBAL RACE FOR TECHNOLOGICAL LEADERSHIP. YOU WILL ALSO KILL THREE BIRDS WITH ONE STONE:

1. YOU WILL PROVIDE A NEW HIGH PURPOSE FOR OUR MOST VALUABLE DEFENSE INDUSTRIES AND THEIR CONTINUING SUPPORT BY DIRECTING THEM TO ATTACK OUR GREATEST ENEMY NOW--THE THREAT TO OUR ECONOMIC STABILITY--AND THEREBY KEEP THIS INVALUABLE RESOURCE INTACT WITHOUT HAVING TO FIGHT THE POLITICAL FORCES WHO WANT TO DISBAND OUR DEFENSE CAPABILITY FOR UNPRODUCTIVE DOMESTIC PORK-BARREL PROGRAMS THAT WILL ONLY MAKE US LESS COMPETITIVE.

2. YOU WILL INSTILL NEW FAITH IN AMERICAN COMPETITIVENESS AND HEALTHY FEAR IN OUR COMPETITORS WHO SAT ON THE SIDELINES WHILE WE PROTECTED THEM. OUR DEFENSE TECHNOLOGY IS THE ONE ASSET WE HAVE THAT THEY STILL RESPECT.

3. YOU WILL COMPLETELY DISARM YOUR POLITICAL CRITICS WHO ARE NOW CAMPAIGNING WITH PROMISES TO SLOW DOWN DEFENSE CUTBACKS TO "ALLOW EASIER TRANSITIONS FOR DEFENSE WORKERS"--WITHOUT PROPOSING A SINGLE PRODUCTIVE PLAN TO PAY FOR AND JUSTIFY THIS TO THE AMERICAN TAXPAYERS. BUT THEY WILL SOON GRAB THIS IDEA.

THIS IS THE REAL "PEACE DIVIDEND" AMERICAN WORKERS WANT. BUT NO ONE HAS TOLD THEM HOW WE START--TODAY--BEFORE IT'S TOO LATE.

Clayton:
Here's some
original
Thinking that
might be
useful.

Marilyn

Soon To Appear in Major Newspapers

Dr. Bill Wattenburg
711 Parkwood Dr.
Chico, Ca. 95928
(916) 894-6844 FAX 893-1317
March 24, 1992

DON'T DESTROY OUR DEFENSE INDUSTRY--REDEFINE THE ENEMY

MOST OF US, I BELIEVE, HAVE THE UNEASY FEELING THAT ANY SO-CALLED "PEACE DIVIDEND" BY QUICKLY CUTTING DEFENSE SPENDING WILL BE SQUANDERED BY OUR VOTE-BUYING POLITICIANS ON GIVE-AWAY PROGRAMS FOR THE LEAST PRODUCTIVE PEOPLE IN OUR STRUGGLING ECONOMY. THIS WILL BE ECONOMIC DISASTER. IT WILL ONLY ADD NEW TAX BURDENS ON THE WORKING PEOPLE--WITH NO NEW PRODUCTS FOR THEM TO BUILD AND SELL TO THE WORLD. WE WON'T BE ABLE TO SUPPORT EVEN OUR MOST DESERVING RETIRED PEOPLE WITH A SECOND-RATE ECONOMY.

OUR PRODUCTIVE CITIZENS PAID DEARLY, AND GLADLY IN MOST CASES, TO WIN THE COLD WAR FOR THE REST OF THE WORLD-- WHILE OUR STRONGEST ALLIES CONCENTRATED ON TAKING OVER OUR ECONOMY AND OUR JOBS HERE AT HOME.

THERE IS ONLY ONE FITTING ANSWER TO THIS NOW: CHALLENGE OUR FOREIGN COMPETITORS THE SAME WAY WE PROTECTED THEM FROM THE SOVIET THREAT FOR FOUR DECADES. QUICKLY TURN OUR DEFENSE INDUSTRIES AND SCIENTIFIC LABORATORIES TO THE TASK OF BUILDING ADVANCED PRODUCTS FOR AMERICAN INDUSTRY TO HELP US CATCH UP-- DON'T DISMANTLE OUR GREATEST REMAINING TECHNOLOGICAL STRENGTH THAT WE NEED TO COMPETE WITH ASIA AND EUROPE.

THE PRESIDENT AND CONGRESS MUST IMMEDIATELY ORDER OUR DEFENSE INDUSTRIES AND LABORATORIES TO REDIRECT THIRTY PERCENT OF THEIR EFFORTS IN THE NEXT TWO YEARS TO THE DESIGN AND IMPROVEMENT OF NEW AND BETTER COMMERCIAL PRODUCTS IN COOPERATION WITH AMERICAN INDUSTRY. IF OUR DEFENSE INDUSTRIES AND SCIENTIFIC LABORATORIES ARE GUARANTEED NO LARGE CUTS IN THEIR BUDGETS FOR A YEAR OR TWO, THERE WILL BE A STAMPEDE ON THEIR PART TO FORM JOINT VENTURES WITH AMERICAN INDUSTRY FOR THIS PURPOSE. WITHIN TWO YEARS, PRIVATE INDUSTRY WILL BEGIN PAYING FOR THOSE PROJECTS WHICH HAVE SHOWN ENOUGH IMPROVEMENT IN AMERICAN COMPETITIVENESS TO JUSTIFY CONTINUED FUNDING. BY THAT TIME, MANY IN THE DEFENSE INDUSTRY WILL HAVE MOVED INTO PRIVATE ENTERPRISE. THE TRANSITION FROM DEFENSE TO INDUSTRY WILL TAKE PLACE ON ITS OWN FROM THERE ON. NO NEW BUDGETS ARE REQUIRED. JUST KEEP IN PLACE WHAT WE HAVE FOR A WHILE--AND USE IT WISELY WHERE IT IS.

AFTER SEEING THE TECHNOLOGY THAT WAS DISPLAYED IN THE DESERT WAR, I THINK MOST WOULD BELIEVE THAT OUR DEFENSE INDUSTRIES, TURNED LOOSE WITH THE SAME MONEY, COULD HELP AMERICAN MANUFACTURERS BUILD SUPERIOR CARS, OR TURN OUR DEFENSE ELECTRONICS TECHNOLOGY INTO NEW AND EXOTIC CONSUMER PRODUCTS.

IF WE CAN REGAIN EVEN ONE THIRD OF THE AUTOMOBILE MARKET OR THE CONSUMER ELECTRONICS MARKET WE LOST WHILE WE WERE FIGHTING THE COLD WAR, THE JUMP IN OUR GNP AND TAX BASE WILL MAKE UP FOR CONTINUING OUR PRESENT DEFENSE BUDGET FOR THE NEXT TEN YEARS. WE WILL HAVE ANOTHER TEN MILLION JOBS IN PRIVATE INDUSTRY-- INSTEAD OF TWO MILLION MORE UNEMPLOYED IF WE DISMANTLE OUR DEFENSE INDUSTRIES AND THROW AWAY OUR REMAINING TECHNOLOGICAL LEADERSHIP.

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Bill Wattenburg

A Man of of Many Talents

Who is the man behind the microphone on Saturday and Sunday nights? A truck driver? A football player? The youngest-ever Ph.D. graduate in science & faculty member of UC Berkeley? Best-selling author? Will the real Bill Wattenburg please stand up.

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THE WHITE HOUSE
WASHINGTON

DATE: 4-7-92

TO: DR. ALLAN BROMLEY

FROM: CLAYTON YEUTTER
Counsellor to the President for
Domestic Policy

Allan, your reactions??

*4/8/92 - Copies
sent to AEs!*

*Ineed 2
additional
copies*

FAX: THE WHITE HOUSE (202) 466-2397
ATTENTION: MARILYN, CHIEF OF STAFF'S OFFICE

MARCH 26, 1992

TO: PRESIDENT GEORGE BUSH
SAMUEL SKINNER, CHIEF OF STAFF
BRENT SCOWCROFT, NATIONAL SECURITY ADVISOR

SUBJECT: A MAJOR NO-NEW-COST, ALL-WIN DOMESTIC INITIATIVE
THAT WILL BE WELCOMED BY THE WORKING AMERICAN
PUBLIC WITH THE SUPPORT YOU GOT IN THE GULF WAR

FROM: DR. BILL WATTENBURG, THE UNIVERSITY FOUNDATION
CALIFORNIA STATE UNIV. CHICO.
CONSULTANT, LAWRENCE LIVERMORE NATIONAL LABORATORY
(916) 894-6844 FAX 893-1317

YOU CAN DECLARE WAR ON AMERICA'S REAL DOMESTIC PROBLEM WITH
A BOLD STROKE THAT WILL CATCH YOUR POLITICAL CRITICS WITH THEIR
THEIR BRAINS DISENGAGED--AND HARKEN BACK OUR VICTORIES IN THE
COLD WAR AND GULF WAR TO THE WORKING AMERICAN PUBLIC:

ANNOUNCE THAT YOU ARE DIRECTING THE AMERICAN DEFENSE INDUSTRIES
AND OUR GREAT SCIENTIFIC LABORATORIES SUCH AS LIVERMORE AND LOS
ALAMOS TO IMMEDIATELY DEVOTE, SAY, TWENTY PERCENT OF THEIR
PRESENT BUDGETS TO JOINT VENTURES WITH AMERICAN DOMESTIC
INDUSTRIES TO DESIGN AND MANUFACTURE ADVANCE PRODUCTS FOR THE
WORLD MARKETS.

YOU WILL RECIEVE IMMEDIATE APPLAUSE FROM WORKING AMERICANS
AND WALL STREET WHO KNOW THAT OUR ADVANCED DEFENSE TECHNOLOGY
THAT WON THE COLD WAR IS OUR GREATEST REMAINING ASSET IN THE
GLOBAL RACE FOR TECHNOLOGICAL LEADERSHIP. YOU WILL ALSO KILL
THREE BIRDS WITH ONE STONE:

1. YOU WILL PROVIDE A NEW HIGH PURPOSE FOR OUR MOST VALUABLE
DEFENSE INDUSTRIES AND THEIR CONTINUING SUPPORT BY DIRECTING THEM
TO ATTACK OUR GREATEST ENEMY NOW--THE THREAT TO OUR ECONOMIC
STABILITY--AND THEREBY KEEP THIS INVALUABLE RESOURCE INTACT
WITHOUT HAVING TO FIGHT THE POLITICAL FORCES WHO WANT TO DISBAND
OUR DEFENSE CAPABILITY FOR UNPRODUCTIVE DOMESTIC PORK-BARREL
PROGRAMS THAT WILL ONLY MAKE US LESS COMPETITIVE.

2. YOU WILL INSTILL NEW FAITH IN AMERICAN COMPETITIVENESS AND
HEALTHY FEAR IN OUR COMPETITIORS WHO SAT ON THE SIDELINES WHILE
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3. YOU WILL COMPLETELY DISARM YOUR POLITICAL CRITICS WHO ARE
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"ALLOW EASIER TRANSITIONS FOR DEFENSE WORKERS"--WITHOUT
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THE AMERICAN TAXPAYERS. BUT THEY WILL SOON GRAB THIS IDEA.

THIS IS THE REAL "PEACE DIVIDEND" AMERICAN WORKERS WANT. BUT NO
ONE HAS TOLD THEM HOW WE START--TODAY--BEFORE IT'S TOO LATE.

Clayton:
Here's some
original
Thinking that
might be
useful.

Marilyn

Soon To Appear in Major Newspapers

Dr. Bill Wattenburg
711 Parkwood Dr.
Chico, Ca. 95928
(916) 894-6844 FAX 893-1317
March 24, 1992

DON'T DESTROY OUR DEFENSE INDUSTRY--REDEFINE THE ENEMY

MOST OF US, I BELIEVE, HAVE THE UNEASY FEELING THAT ANY SO-CALLED "PEACE DIVIDEND" BY QUICKLY CUTTING DEFENSE SPENDING WILL BE SQUANDERED BY OUR VOTE-BUYING POLITICIANS ON GIVE-AWAY PROGRAMS FOR THE LEAST PRODUCTIVE PEOPLE IN OUR STRUGGLING ECONOMY. THIS WILL BE ECONOMIC DISASTER. IT WILL ONLY ADD NEW TAX BURDENS ON THE WORKING PEOPLE--WITH NO NEW PRODUCTS FOR THEM TO BUILD AND SELL TO THE WORLD. WE WON'T BE ABLE TO SUPPORT EVEN OUR MOST DESERVING RETIRED PEOPLE WITH A SECOND-RATE ECONOMY.

OUR PRODUCTIVE CITIZENS PAID DEARLY, AND GLADLY IN MOST CASES, TO WIN THE COLD WAR FOR THE REST OF THE WORLD-- WHILE OUR STRONGEST ALLIES CONCENTRATED ON TAKING OVER OUR ECONOMY AND OUR JOBS HERE AT HOME.

THERE IS ONLY ONE FITTING ANSWER TO THIS NOW: CHALLENGE OUR FOREIGN COMPETITORS THE SAME WAY WE PROTECTED THEM FROM THE SOVIET THREAT FOR FOUR DECADES. QUICKLY TURN OUR DEFENSE INDUSTRIES AND SCIENTIFIC LABORATORIES TO THE TASK OF BUILDING ADVANCED PRODUCTS FOR AMERICAN INDUSTRY TO HELP US CATCH UP-- DON'T DISMANTLE OUR GREATEST REMAINING TECHNOLOGICAL STRENGTH THAT WE NEED TO COMPETE WITH ASIA AND EUROPE.

THE PRESIDENT AND CONGRESS MUST IMMEDIATELY ORDER OUR DEFENSE INDUSTRIES AND LABORATORIES TO REDIRECT THIRTY PERCENT OF THEIR EFFORTS IN THE NEXT TWO YEARS TO THE DESIGN AND IMPROVEMENT OF NEW AND BETTER COMMERCIAL PRODUCTS IN COOPERATION WITH AMERICAN INDUSTRY. IF OUR DEFENSE INDUSTRIES AND SCIENTIFIC LABORATORIES ARE GUARANTEED NO LARGE CUTS IN THEIR BUDGETS FOR A YEAR OR TWO, THERE WILL BE A STAMPEDE ON THEIR PART TO FORM JOINT VENTURES WITH AMERICAN INDUSTRY FOR THIS PURPOSE. WITHIN TWO YEARS, PRIVATE INDUSTRY WILL BEGIN PAYING FOR THOSE PROJECTS WHICH HAVE SHOWN ENOUGH IMPROVEMENT IN AMERICAN COMPETITIVENESS TO JUSTIFY CONTINUED FUNDING. BY THAT TIME, MANY IN THE DEFENSE INDUSTRY WILL HAVE MOVED INTO PRIVATE ENTERPRISE. THE TRANSITION FROM DEFENSE TO INDUSTRY WILL TAKE PLACE ON ITS OWN FROM THERE ON. NO NEW BUDGETS ARE REQUIRED. JUST KEEP IN PLACE WHAT WE HAVE FOR A WHILE--AND USE IT WISELY WHERE IT IS.

AFTER SEEING THE TECHNOLOGY THAT WAS DISPLAYED IN THE DESERT WAR, I THINK MOST WOULD BELIEVE THAT OUR DEFENSE INDUSTRIES, TURNED LOOSE WITH THE SAME MONEY, COULD HELP AMERICAN MANUFACTURERS BUILD SUPERIOR CARS, OR TURN OUR DEFENSE ELECTRONICS TECHNOLOGY INTO NEW AND EXOTIC CONSUMER PRODUCTS.

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A Man of of Many Talents

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THE WHITE HOUSE
WASHINGTON

DATE: 4-7-92

TO: DR. ALLAN BROMLEY

FROM: CLAYTON YEUTTER
Counsellor to the President for
Domestic Policy

Allan, your reactions??

FAX: THE WHITE HOUSE (202) 466-2397
ATTENTION: MARILYN, CHIEF OF STAFF'S OFFICE

MARCH 26, 1992

TO: PRESIDENT GEORGE BUSH
SAMUEL SKINNER, CHIEF OF STAFF
BRENT SCOWCROFT, NATIONAL SECURITY ADVISOR

SUBJECT: A MAJOR NO-NEW-COST, ALL-WIN DOMESTIC INITIATIVE
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FROM: DR. BILL WATTENBURG, THE UNIVERSITY FOUNDATION
CALIFORNIA STATE UNIV. CHICO.
CONSULTANT, LAWRENCE LIVERMORE NATIONAL LABORATORY
(916) 894-6844 FAX 893-1317

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March 24, 1992

DON'T DESTROY OUR DEFENSE INDUSTRY--REDEFINE THE ENEMY

MOST OF US, I BELIEVE, HAVE THE UNEASY FEELING THAT ANY SO-CALLED "PEACE DIVIDEND" BY QUICKLY CUTTING DEFENSE SPENDING WILL BE SQUANDERED BY OUR VOTE-BUYING POLITICIANS ON GIVE-AWAY PROGRAMS FOR THE LEAST PRODUCTIVE PEOPLE IN OUR STRUGGLING ECONOMY. THIS WILL BE ECONOMIC DISASTER. IT WILL ONLY ADD NEW TAX BURDENS ON THE WORKING PEOPLE--WITH NO NEW PRODUCTS FOR THEM TO BUILD AND SELL TO THE WORLD. WE WON'T BE ABLE TO SUPPORT EVEN OUR MOST DESERVING RETIRED PEOPLE WITH A SECOND-RATE ECONOMY.

OUR PRODUCTIVE CITIZENS PAID DEARLY, AND GLADLY IN MOST CASES, TO WIN THE COLD WAR FOR THE REST OF THE WORLD-- WHILE OUR STRONGEST ALLIES CONCENTRATED ON TAKING OVER OUR ECONOMY AND OUR JOBS HERE AT HOME.

THERE IS ONLY ONE FITTING ANSWER TO THIS NOW: CHALLENGE OUR FOREIGN COMPETITORS THE SAME WAY WE PROTECTED THEM FROM THE SOVIET THREAT FOR FOUR DECADES. QUICKLY TURN OUR DEFENSE INDUSTRIES AND SCIENTIFIC LABORATORIES TO THE TASK OF BUILDING ADVANCED PRODUCTS FOR AMERICAN INDUSTRY TO HELP US CATCH UP-- DON'T DISMANTLE OUR GREATEST REMAINING TECHNOLOGICAL STRENGTH THAT WE NEED TO COMPETE WITH ASIA AND EUROPE.

THE PRESIDENT AND CONGRESS MUST IMMEDIATELY ORDER OUR DEFENSE INDUSTRIES AND LABORATORIES TO REDIRECT THIRTY PERCENT OF THEIR EFFORTS IN THE NEXT TWO YEARS TO THE DESIGN AND IMPROVEMENT OF NEW AND BETTER COMMERCIAL PRODUCTS IN COOPERATION WITH AMERICAN INDUSTRY. IF OUR DEFENSE INDUSTRIES AND SCIENTIFIC LABORATORIES ARE GUARANTEED NO LARGE CUTS IN THEIR BUDGETS FOR A YEAR OR TWO, THERE WILL BE A STAMPEDE ON THEIR PART TO FORM JOINT VENTURES WITH AMERICAN INDUSTRY FOR THIS PURPOSE. WITHIN TWO YEARS, PRIVATE INDUSTRY WILL BEGIN PAYING FOR THOSE PROJECTS WHICH HAVE SHOWN ENOUGH IMPROVEMENT IN AMERICAN COMPETITIVENESS TO JUSTIFY CONTINUED FUNDING. BY THAT TIME, MANY IN THE DEFENSE INDUSTRY WILL HAVE MOVED INTO PRIVATE ENTERPRISE. THE TRANSITION FROM DEFENSE TO INDUSTRY WILL TAKE PLACE ON ITS OWN FROM THERE ON. NO NEW BUDGETS ARE REQUIRED. JUST KEEP IN PLACE WHAT WE HAVE FOR A WHILE--AND USE IT WISELY WHERE IT IS.

AFTER SEEING THE TECHNOLOGY THAT WAS DISPLAYED IN THE DESERT WAR, I THINK MOST WOULD BELIEVE THAT OUR DEFENSE INDUSTRIES, TURNED LOOSE WITH THE SAME MONEY, COULD HELP AMERICAN MANUFACTURERS BUILD SUPERIOR CARS, OR TURN OUR DEFENSE ELECTRONICS TECHNOLOGY INTO NEW AND EXOTIC CONSUMER PRODUCTS.

IF WE CAN REGAIN EVEN ONE THIRD OF THE AUTOMOBILE MARKET OR THE CONSUMER ELECTRONICS MARKET WE LOST WHILE WE WERE FIGHTING THE COLD WAR, THE JUMP IN OUR GNP AND TAX BASE WILL MAKE UP FOR CONTINUING OUR PRESENT DEFENSE BUDGET FOR THE NEXT TEN YEARS. WE WILL HAVE ANOTHER TEN MILLION JOBS IN PRIVATE INDUSTRY-- INSTEAD OF TWO MILLION MORE UNEMPLOYED IF WE DISMANTLE OUR DEFENSE INDUSTRIES AND THROW AWAY OUR REMAINING TECHNOLOGICAL LEADERSHIP.

THE IMMEDIATE RELEASE OF HUNDREDS OF THOUSANDS OF DEFENSE EMPLOYEES INTO OUR STRUGGLING ECONOMY BEFORE THERE ARE NEW PRODUCTS TO MANUFACTURE WILL DEPRESS OUR ECONOMY EVEN FURTHER. IT IS FAR BETTER FOR THEM TO STAY IN PLACE AND REDIRECT THEIR DESIGN EFFORTS TO IMPROVING AMERICAN COMPETITIVENESS FOR THE NEXT FEW YEARS--AND INSURE THAT OUR DEFENSE TECHNOLOGY IS FULLY TRANSFERRED TO INDUSTRY. THE HIGHLY TRAINED PROFESSIONALS IN OUR DEFENSE INDUSTRIES WILL TURN THEIR TALENTS TO PRIVATE ENTERPRISE AS QUICKLY AS THEY MET THE SOVIET CHALLENGE IF THEY KNOW THERE IS NO OTHER CHOICE. BUT THEY MUST BE GIVEN THE CHANCE. THEY DID THE JOB FOR US IN WINNING THE COLD WAR.

THINK FOR A MOMENT ABOUT WHAT WE WOULD STILL BE DOING TODAY IF THE SOVIET NUCLEAR THREAT STILL EXISTED. WITHOUT QUESTION, WE WOULD CONTINUE TO PAY THE FULL DEFENSE COSTS FOR EVER MORE ADVANCED AND EXPENSIVE WEAPONS TO COUNTER THIS THREAT--AND FALL FARTHER AND FARTHER BEHIND OUR COMPETITORS IN WORLDWIDE COMMERCIAL MARKETS. BUT WE HAVE BEEN BLESSED WITH A WINDFALL.

THE AMAZING DISAPPEARANCE OF THE THREAT OF NUCLEAR ANNIHILATION IS BLESSING ENOUGH--EVEN IF WE WERE FORCED TO CONTINUE SPENDING THE MONEY. INDEED, WHAT DO YOU THINK THE ANSWER WOULD HAVE BEEN FROM MOST ANY THINKING PERSON TWO YEARS AGO TO THE QUESTION: "IF WE COULD BUY A GUARANTEE THAT THE SOVIET UNION WILL NEVER MOUNT A NUCLEAR ATTACK, WOULD YOU APPROVE THE SAME DEFENSE BUDGET FOR THE NEXT TWENTY YEARS?" NOT MANY WHO UNDERSTOOD THE EVENTUAL PROBABILITY OF MUTUAL ASSURED DESTRUCTION WOULD HAVE SAID "NO". SO HOW CAN WE BE SO STUPID THAT WE DON'T COUNT OUR BLESSINGS NOW AND GLEEFULLY DEVOTE THE SAME TWENTY PERCENT OF OUR NATIONAL BUDGET TO OUR REMAINING ENEMY--ECONOMIC SURVIVAL--BEFORE WE END UP AS THE REAL LOSERS?

WE HAVE LOST WELL OVER FIFTY PERCENT OF OUR FORMER ECONOMIC SUPERIORITY TO OTHER COUNTRIES WHICH DEVOTED ALL THEIR ENERGIES TO TAKING OUR COMMERCIAL MARKETS AWAY FROM US-- WHILE WE WERE FIGHTING THE COLD WAR FOR THEM. THE U.S. IS NOW LIKE THE EXHAUSTED RUNNER WHO FINISHED THE MARATHON--AND THEN DISCOVERED THAT THE OTHERS WHO DROPPED OUT AND SAT COMFORTABLY ON THE SIDELINES HAVE EATEN ALL THE FOOD AT THE WINNERS TABLE.

OUR DEFENSE WORKERS CAN HELP AMERICA BUILD AGAIN THE FINEST AND MOST ADVANCED PRODUCTS IN THE WORLD--IF WE KEEP SOME FOOD ON THE TABLE FOR THEM. BUT TIME IS RUNNING OUT. OUR GOVERNMENT MUST NOW IMMEDIATELY CONCENTRATE THE BEST WE HAVE TO THIS TASK. THERE WERE FEW COMPLAINTS THAT OUR TAXPAYERS WERE SUBSIDIZING OUR DEFENSE INDUSTRY TO COUNTER THE SOVIET THREAT WHEN WE FEARED FOR OUR LIVES. OUR DEFENSE INDUSTRY CAN NOW HELP RESCUE THE TAXPAYERS.

DID WE WIN THE COLD WAR TO CONDEMN OUR FUTURE GENERATION TO A SECOND-CLASS STANDARD OF LIVING?--WHERE OUR COLLEGE GRADUATES WILL BE LUCKY TO WORK FOR THE FOREIGN OWNERS OF AMERICAN INDUSTRY? I DON'T THINK SO. WE HAVE ONE QUICK WAY TO STOP THAT. HOWEVER, IN THE MIDST OF A POLITICAL CLIMATE WHERE MANY THINK THEY SEE AN EASY WAY TO PUT MORE MONEY IN UNPRODUCTIVE POCKETS, IT WILL TAKE BOTH WISDOM AND GUTS TO DO WHAT MUST BE DONE. TO GUARANTEE OUR ECONOMIC SURVIVAL, WE DESPERATELY NEED NOW MORE OF THE KIND OF LEADERSHIP THAT FINALLY PUT AN END TO THE SOVIET THREAT TO THE FREE WORLD.



Bill Wattenburg

A Man of of Many Talents

Who is the man behind the microphone on Saturday and Sunday nights? A truck driver? A football player? The youngest-ever Ph.D. graduate in science & faculty member of UC Berkeley? Best-selling author? Will the real Bill Wattenburg please stand up.

The fact is Dr. Bill Wattenburg is all of the above and then some! He is also one of the most popular and controversial public figures on West Coast talk radio and you can hear him on KGO every Saturday and Sunday night from 10pm to 1am.

When asked how he got where he is today, Bill says it began when his father walked up to him one afternoon on a logging job and threatened to "knock him on his butt" if he didn't get on the Greyhound bus that night and go to UC Berkeley where he had been offered a scholarship. He was fifteen years old and had never been out of the mountains of Northern California, except for a few trips to nearby Reno. His high school physics teacher had given him SAT and National Science Foundation exams before he graduated and had insisted that he apply to several universities. He had never opened the envelopes that came back. But his father, who never finished high school, had read his test scores and the scholarship offers.

Seven years later, in 1961, Bill finished with a Ph.D. in electrical engineering and physics at Berkeley and was offered a position as assistant professor of electrical engineering. The following year he was captivated by President John F. Ken-

nedy's call for an end to atmospheric nuclear testing and the development of cleaner underground testing procedures. Subsequently, he took a leave of absence to move to the Livermore National Laboratory where he worked in the physics division on the design of nuclear devices and the first underground nuclear tests. He then spent six months at the Nevada nuclear test site as a group leader in the successful testing of their designs. He was the co-inventor of still-classified nuclear test measurement and diagnostic procedures that are the basis of United States nuclear test ban treaty verification procedures today.

In 1964, Bill returned to teaching and research at Berkeley. Three years later, he co-founded Berkeley Scientific Laboratories (BSL) with physicist Dr. Donald Glaser (1960 Nobel Prize) and served as president of the rapidly growing company for the next five years. The scientific staff at BSL assisted in the design and testing of the spacecraft guidance computer for the Apollo man-to-the-moon project and later developed the first small medical data computer systems used by hospitals around the world to automate testing procedures in clinical and radiology laboratories.

Wattenburg left BSL after it had grown to a multi-million dollar enterprise and was acquired by a conglomerate. He returned to teaching. "It's best you turn your product over to professional directors, get the hell out of their way, take your money and go build something else. Besides, I have to try something new every few years anyway." And indeed he has.

Bill also holds dozens of patents and patent applications on ideas as diverse as computer design; medical diagnostic instruments; power line communications; tennis training devices for handicapped people; credit card security schemes; and home alarm systems. Asked which one he was most proud of, he singled out the home alarm systems he invented in 1967. He holds the original patent on the use of existing electrical house wiring as a means for communicating alarm signals from sensors, such as smoke detectors, to receivers placed elsewhere in the building. This scheme is now used by many all over the world. He also invented one of the first inexpensive smoke alarms for homes which has been installed in hundreds of thousands of homes throughout the U.S. in the '70s.

Wattenburg's media career began in 1972

when KGO's program director at the time, Bob Benson, asked him to do a few Sunday afternoon talk shows "just for fun." He has never left the microphone since, except for a year off to do a television show. During a typical three hour talk show, he will answer callers' questions on a variety of subjects ranging from the latest discoveries in science or medicine to car repairs to elementary school math. He seldom has guests in the studio and promises his audience only one thing: "You listen to this show for the next three hours and I guarantee that you and I both will learn something that we never heard about, cared about or thought about before." In his time off, when he's not writing or playing roles in Clint Eastwood movies, Bill enjoys a good game of tennis and plays in many tournaments around the country. He also spends two to three weeks each year fighting forest fires with U.S. Forest Service teams. Bill Wattenburg is, indeed, a man of many talents.

From The KGO Radio Resource File...

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- * Sally Socolich, bargain hunter
Bargain Hunters Hotline (newsletter)
P.O. Box 144
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- * Dan Cassidy, Nat'l Scholarship
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(707) 546-NSRS
- * Bob Brinker's Marketimer Newsletter
(201) 359-8838
- * Mark Anderson, Lemon Law Attorney
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Special show numbers:

Dr. Dean Edell's
Healthtalk(800) 548-TALK
Bob Brinker's
Moneytalk(800) 423-TALK