

unanimous consent that the clerk read the titles of the bills for a second time en bloc.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered. The clerk will report.

The legislative clerk read as follows:

A bill (H.R. 4181) to amend the Internal Revenue Code of 1986 to permanently extend the marriage penalty relief provided under the Economic Growth and Tax Relief Reconciliation Act of 2001.

A bill (S. 2370) to amend the Fair Labor Standards Act of 1938 to provide for an increase in the Federal minimum wage, and for other purposes.

Mr. McCONNELL. I object to further proceeding en bloc.

The ACTING PRESIDENT pro tempore. Objection is heard. The bills will be placed on the calendar.

MORNING BUSINESS

The ACTING PRESIDENT pro tempore. Under the previous order, there will be a period for the transaction of morning business for up to 60 minutes with Senators permitted to speak for up to 10 minutes each, time being divided equally between the two sides.

Mr. McCONNELL. I suggest the absence of a quorum.

The ACTING PRESIDENT pro tempore. The clerk will call the roll.

The legislative clerk proceeded to call the roll.

Mr. BINGAMAN. Mr. President, I ask unanimous consent that the order for the quorum call be dispensed with.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

ORDER OF PROCEDURE

Mr. BINGAMAN. Mr. President, I ask unanimous consent that the previous quorum call and any other quorum calls during this morning's business be charged equally to both sides.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

ENEMY COMBATANTS

Mr. BINGAMAN. Mr. President, there are a couple of news events in the last 24 hours or 48 hours that I thought deserve some comment.

Let me first talk a moment about the atrocities and abuse of enemy combatants—prisoners—in Iraq which has been a major concern. Many of my colleagues have commented upon the horrific images that have come out on television and in the papers. I have not seen as yet many comments about the Pentagon's response. That is what I wanted to comment on briefly.

Officials within the Department of Defense have known at least since January that prisoners held as enemy combatants in Iraq have been subject to maltreatment, and to physical and sexual abuse. We know this because in January the Department of Defense re-

lieved the camp commander of her duties and ordered an investigation. The investigation was completed in February. The 54-page report that was issued, as I understand it, contains horrifying details about these abuses.

Yesterday, on the CBS news program "Face the Nation," Bob Schieffer, the host of that program, interviewed General Myers, Chairman of the Joint Chiefs of Staff. Bob Schieffer asked about this report. He said, "There is a 53-page report that Sy Hersh of the New Yorker has obtained which says that the situation was even worse. How could this have happened? What is going to occur?"

The part that I thought was most disturbing was the response by General Myers to the question: "Why would you not have seen the report?" The investigation was carried out in December. The report was completed in February. "Why would you not have seen the report?" And the response was: "It is working its way up, up the chain. I will see this report. I am sure it just hasn't come to me yet."

This is an unacceptable response. If this is a concern of our Department of Defense, if this is a concern of the Chairman of the Joint Chiefs of Staff, how can he state in May that he has not seen the report or demanded to see the report, and that it is, as he understands it, "working its way up" and will eventually come to him?

I don't think that is the level of concern we ought to be demonstrating in our Department of Defense for this kind of circumstance. It is not the level of concern the American people would expect of their military commanders for this type of conduct.

I would think if the general believed swift action was required he might have directed those in the command—in his command and, of course, that is everyone in the military—to get that report to him immediately upon completion, and to give him concrete action items they were intending to take to deal with the situation.

Leadership and responsibility flow from the top in our military. We all know that. For the Chairman of the Joint Chiefs of Staff to handle this matter in this way and indicate that, on May first, he has not seen the report but he assumes it is working its way up through the chain of command, demonstrates to all members of the military that humane treatment of prisoners is not a priority for our military in Iraq.

That is unacceptable. That is unacceptable to this Senator. It is unacceptable, I believe, to the American public. I hope we can get a different reaction from the Pentagon and a more acceptable reaction from the Pentagon to this horrific state of affairs that has come to our attention.

ENSURING AMERICA'S FUTURE COMPETITIVENESS

Mr. BINGAMAN. Mr. President, I also want to comment about another

subject which is not as much on the minds of the American public, but it clearly is on the minds of some.

There is an article that I ask unanimous consent be printed in the RECORD immediately following my remarks from today's New York Times by William Broad entitled "U.S. Is Losing Its Dominance in the Sciences."

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

(See exhibit 1.)

Mr. BINGAMAN. Mr. President, I also ask unanimous consent that a speech Senator DASCHLE gave 2 weeks ago to the American Association for the Advancement of Science be printed in the RECORD following my remarks.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

(See exhibit 2.)

Mr. BINGAMAN. Mr. President, the author of this report on the front page of the New York Times today, Mr. Broad, points to several trends that are working against the United States with regard to our world leadership position in science and technology. He points out the percentage of patents issued to Americans is declining. He points out the portion of published research attributable to Americans in top physics journals is decreasing. He points out the number of Nobel Prizes awarded in the basic sciences to Americans is decreasing. He points out the number of doctoral degrees granted in science and engineering in this country is on the decline. He points out the declining percentage of science and engineering doctoral degree candidates from foreign countries who are planning to stay in the United States after they graduate. This last phenomenon I referred to has been dubbed "the reverse brain drain." He talks extensively about that.

The simple fact is, the world has become a highly competitive place with regard to science and technology leadership and talent and investments. We have historically believed we were the leaders in the world in this arena, and we have taken for granted the fact that promising young scientists and engineers from other countries would all want to come here, to stay here, and contribute to our continued world leadership. All of that is now in danger of changing.

We ignore this challenge to our long-term economic security at our own peril. This challenge requires strong efforts by our Government and our industry to counter the strong efforts that are being made in other countries, and to match the strong efforts that are being made in other countries in this field.

So what needs to be done? Let me list briefly six areas on which I think we ought to take aggressive action. The first area relates to research frontiers. We need to start by focusing on broad support for basic science and engineering research across the board, as well -

as on targeted investments in critical emerging technologies that will drive future job growth and economic growth in this economy.

Unfortunately, in terms of broad-based basic research support, we have a pattern of underfunding across the physical sciences and engineering, and that is in comparison particularly to what we have been doing in biological and life sciences for several years. I do not advocate reducing our commitment to the biological and life sciences, but I strongly advocate a comparable commitment to maintaining our leadership in the physical sciences and engineering.

In terms of targeted research and development, there are many areas where there are promising developments that we should be paying attention to. Let me cite three examples. One is high-end computing. Japan today is the world leader in high-end computing with their Earth Simulator supercomputer. That is a sad statement to make on this Senate floor.

The ACTING PRESIDENT pro tempore. The Senator's time has expired.

Mr. BINGAMAN. Mr. President, I ask unanimous consent that I be permitted to continue for another 5 minutes.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

Mr. BINGAMAN. That is a sad statement because I can remember a decade ago when the United States was the unrivaled leader in high-end computing. We need to do much better in this field.

Senator LAMAR ALEXANDER and I have introduced the High-End Computing Revitalization Act. I hope that the leadership in the Senate will see fit to move this legislation this year, and that we will receive strong support from our colleagues.

Nanotechnology is another area. Although Congress passed a nanotechnology bill last year, and the President signed the bill with great fanfare, the truth is, we are not putting the needed funding into it. The administration has not requested sufficient funding. We are not committing the money. This is another major shortfall.

The next specific area I believe we need to target is next-generation lighting. I have spoken several times about that on the Senate floor. Semiconductor lighting has the promise to greatly increase the efficiency of lighting devices and also to create an enormous number of jobs. The estimate is this will be a \$12 billion per year industry for these devices in the future. The question is, where will the leadership be in developing these devices? Will we maintain some of that leadership in this country? And where will the high-wage jobs be created by this? I hope those jobs will be created in the United States, but Congress needs to act to ensure that.

A second area deals with the training of scientists and engineers. An enormous amount needs to be done to bet-

ter prepare our own students for careers in these fields. We do too little in those areas. We need to do better. We now have the added concern that the foreign students who have traditionally come here to study are, first, finding visa problems that keep them from coming here; and, second, are deciding not to stay once they complete their education but go back to their home country. This is a precursor to the shifting of more and more research and development activity out of this country and into other countries around the world, which I think is a very bad trend for our economic future.

The third area is infrastructure. The National Science Foundation estimates there are roughly \$10 billion of unfilled needs for science and engineering facilities at universities. Unfortunately, the system we have in Congress today to fund these needs is through random, uncoordinated earmarks to appropriations bills. This is totally unacceptable. We need a merit-oriented solution that involves a look at the merits of the request and the need, and also the commitment that State and local governments are willing to make to creating this infrastructure.

The fourth area is finance. We need public policies and strategies to expand the pool of risk capital for entrepreneurial investment.

A fifth strategy is public-private sector interactions. We need to fully fund the Advanced Technology Program and the Manufacturing Extension Partnerships. The administration's request that we zero-fund the Advanced Technology Program is totally wrong-headed, in my view, and clearly needs to be rejected by this Congress. We should have the Federal Government take a stronger role in supporting science parks and incubators around this country as well.

The final area I would mention is regulation and trade policy. We need to recognize the strategic importance of legal or regulatory structures to high-technology industries. We need to increase the efforts to protect intellectual property, to support fair competition regimes, to enforce legitimacy and transparency in the global market system, and to assure access by U.S. companies to these markets.

We need to spend some time better monitoring and being sure we are getting fair treatment under the trade agreements we have already entered into instead of rushing forward pell-mell trying to find new agreements we can sign.

We need to focus on export promotion. There is way too little attention to export promotion.

We need to focus on assistance programs for those people who are displaced and those communities that are damaged by increased trade. The current administration and, unfortunately, the Congress in the last few years have not done what needed to be done in this area. We have no formal science and technology policy. The ad-

ministration has undermanned and seemingly neglected the Office of Science and Technology Policy.

In previous remarks to the Senate, I have gone through a list of the proposed cuts by this administration to basic science and applied research in the Department of Defense, the Department of Energy, the Agriculture Department, in the transportation sector, the Department of Energy's Office of Science, the Advanced Technology Program in the Department of Commerce.

These include:

\$660 million in cuts proposed for basic and applied research at the Department of Defense, the sort of research that has the greatest potential for dual use and effective spin-off to the civilian high-technology industries;

\$63 million in cuts for energy conservation R&D at the Department of Energy;

\$183 million in cuts for FY 2005 for agricultural research;

\$24 million in cuts for transportation research; and

\$68 million in cuts for the Department of Energy's Office of Science, a major supporter of basic physical sciences and engineering research—we have 40 Democratic Senators and 15 Republicans on a letter asking for increased funding rather than cuts here—and;

total elimination of the Advanced Technology Program at the Department of Commerce, a loss of \$171 million for new technologies that otherwise would have been enabled and brought to commercial reality. This is a highly successful program praised by the national academies and even the President's own budget language, cut for short-sighted ideological reasons.

For the sake of our future national competitiveness, we need to face up to the challenges and technological revolutions of the 21st century and ensure that the United States has an effective plan for taking them on. It would be my hope that the coming Presidential election will serve as an opportunity to reflect on the ineffective ways in which we are currently addressing these issues, and to put forth the case that we need a comprehensive change in our policies to ensure our future competitiveness.

I yield the floor.

EXHIBIT 1

[From the New York Times, May 3, 2004]

U.S. IS LOSING ITS DOMINANCE IN THE SCIENCES

(By William J. Broad)

The United States has started to lose its worldwide dominance in critical areas of science and innovation, according to federal and private experts who point to strong evidence like prizes awarded to Americans and the number of papers in major professional journals.

Foreign advances in basic science now often rival or even exceed America's, apparently with little public awareness of the trend or its implications for jobs, industry, national security or the vigor of the nation's intellectual and cultural life.

"The rest of the world is catching up," said John E. Jankowski, a senior analyst at the

National Science Foundation, the federal agency that tracks science trends. "Science excellence is no longer the domain of just the U.S."

Even analysts worried by the trend concede that an expansion of the world's brain trust, with new approaches, could invigorate the fight against disease, develop new sources of energy had wrestle with knotty environmental problems. But profits from the breakthroughs are likely to stay overseas, and this country will face competition for things like hiring scientific talent and getting space to showcase its work in top journals.

One area of international competition involves patents. Americans still win large numbers of them, but the percentage is falling as foreigners, especially Asians, have become more active and in some fields have seized the innovation lead. The United States' share of its own industrial patents has fallen steadily over the decades and now stands at 52 percent.

A more concrete decline can be seen in published research. *Physical Review*, a series of top physics journals, recently tracked a reversal in which American papers, in two decades, fell from the most to a minority. Last year the total was just 29 percent, down from 61 percent in 1983.

China, said Martin Blume, the journals' editor, has surged ahead by submitting more than 1,000 papers a year. "Other scientific publishers are seeing the same kind of thing," he added.

Another downturn centers on the Nobel Prizes, an icon of scientific excellence. Traditionally, the United States, powered by heavy federal investments in basic research, the kind that pursue fundamental questions of nature, dominated the awards.

But the American share, after peaking from the 1960's through the 1990's, has fallen in the 2000's to about half, 51 percent. The rest went to Britain, Japan, Russia, Germany, Sweden, Switzerland and New Zealand.

"We are in a new world, and it's increasingly going to be dominated by countries other than the United States," Denis Simon, dean of management and technology at the Rensselaer Polytechnic Institute, recently said at a scientific meeting in Washington.

Europe and Asia are ascendant, analysts say, even if their achievements go unnoticed in the United States. In March, for example, European scientists announced that one of their planetary probes had detected methane in the atmosphere of Mars—a possible sign that alien microbes live beneath the planet's surface. The finding made headlines from Paris to Melbourne. But most Americans, bombarded with images from America's own rovers successfully exploring the red planet, missed the foreign news.

More aggressively, Europe is seeking to dominate particle physics by building the world's most powerful atom smasher, set for its debut in 2007. Its circular tunnel is 17 miles around.

Science analysts say Asia's push for excellence promises to be even more challenging.

"It's unbelievable," Diana Hicks, chairwoman of the school of public policy at the Georgia Institute of Technology, said of Asia's growth in science and technical innovation. "It's amazing to see these output numbers of papers and patents going up so fast."

Analysts say comparative American declines are an inevitable result of rising standards of living around the globe.

"It's all in the ebb and flow of globalization," said Jack Fritz, a senior officer at the National Academy of Engineering, an advisory body to the federal government. He called the declines "the next big thing we will have to adjust to."

The rapidly changing American status has not gone unnoticed by politicians, with Democrats on the attack and the White House on the defensive.

"We stand at a pivotal moment," Tom Daschle, the Senate Democratic leader, recently said at a policy forum in Washington at the American Association for the Advancement of Science, the nation's top general science group. "For all our past successes, there are disturbing signs that America's dominant position in the scientific world is being shaken."

Mr. Daschle accused the Bush administration of weakening the nation's science base by failing to provide enough money for cutting-edge research.

The president's science adviser, John H. Marburger III, who attended the forum, strongly denied that charge, saying in an interview that overall research budgets during the Bush administration have soared to record highs and that the science establishment is strong.

"The sky is not falling on science," Dr. Marburger said. "Maybe there are some clouds—no, things that need attention." Any problems, he added, are within the power of the United States to deal with in a way that maintains the vitality of the research enterprise.

Analysts say Mr. Daschle and Dr. Marburger can both supply data that supports their positions.

A major question, they add, is whether big spending automatically translates into big rewards, as it did in the past. During the cold war, the government pumped more than \$1 trillion into research, with a wealth of benefits including lasers, longer life expectancies, men on the Moon and the prestige of many Nobel Prizes.

Today, federal research budgets are still record highs; this year more than \$126 billion has been allocated to research. Moreover, American industry makes extensive use of federal research in producing its innovations and adds its own vast sums of money, the combination dwarfing that of any other nation or bloc.

But the edifice is less formidable than it seems, in part because of the nation's costly and unique military role. This year, financing for military research hit \$66 billion, higher in fixed dollars than in the cold war and far higher than in any other country.

For all the spending, the United States began to experience a number of scientific declines in the 1990's, boom years for the nation's overall economy.

For instance, scientific papers by Americans peaked in 1992 and then fell roughly 10 percent, the National Science Foundation reports. Why? Many analysts point to rising foreign competition, as does the European Commission, which also monitors global science trends. In a study last year, the commission said Europe surpassed the United States in the mid-1990's as the world's largest producer of scientific literature.

Dr. Hicks of Georgia Tech said that American scientists, when top journals reject their papers, usually have no idea that rising foreign competition may be to blame.

On another front, the numbers of new doctorates in the sciences peaked in 1998 and then fell 5 percent the next year, a loss of more than 1,300 new scientists, according to the foundation.

A minor exodus also hit one of the hidden strengths of American science: vast ranks of bright foreigners. In a significant shift of demographics, they began to leave in what experts call a reverse brain drain. After peaking in the mid-1990's, the number of doctoral students from China, India and Taiwan with plans to stay in the United States began to fall by the hundreds, according to the foundation.

These declines are important, analysts say, because new scientific knowledge is an engine of the American Economy and technical innovation, its influence evident in everything from potent drugs to fast computer chips.

Patents are a main way that companies and inventors reap commercial rewards from their ideas and stay competitive in the marketplace while improving the lives of millions.

Foreigners outside the United States are playing an increasingly important role in these expressions of industrial creativity. In a recent study, CHI Research, a consulting firm in Haddon Heights, N.J., found that researchers in Japan, Taiwan and South Korea now account for more than a quarter of all United States industrial patents awarded each year, generating revenue for their own countries and limiting it in the United States.

Moreover, their growth rates are rapid. Between 1980 and 2003, South Korea went from 0 to 2 percent of the total, Taiwan from 0 to 3 percent and Japan from 12 to 21 percent.

"It's not just lots of patents," Francis Narin, CHI's president, said of the Asian rise. "It's lots of good patents that have a high impact," as measured by how often subsequent patents cite them.

Recently, Dr. Narin added, both Taiwan and Singapore surged ahead of the United States in the overall number of citations. Singapore's patents include ones in chemicals, semiconductors, electronics and industrial tools.

China represents the next wave, experts agree, its scientific rise still too fresh to show up in most statistics but already apparent. Dr. Simon of Rensselaer said that about 400 foreign companies had recently set up research centers in China, with General Electric, for instance, doing important work there on medical scanners, which means fewer skilled jobs in America.

Ross Armbricht, president of the Industrial Research Institute, a nonprofit group in Washington that represents large American companies, said businesses were going to China not just because of low costs but to take advantage of China's growing scientific excellence.

"It's frightening," Dr. Armbricht said. "But you've got to go where the horses are." An eventual danger, he added, is the slow loss of intellectual property as local professionals start their own businesses with what they have learned from American companies.

For the United States, future trends look challenging, many analysts say.

In a report last month, the American Association for the Advancement of Science said the Bush administration, to live up to its pledge to halve the nation's budget deficit in the next five years, would cut research financing at 21 of 24 Federal agencies—all those that do or finance science except those involved in space and national and domestic security.

More troubling to some experts is the likelihood of an accelerating loss of quality scientists. Applications from foreign graduate students to research universities are down by a quarter, experts say, partly because of the Federal government's tightening of visas after the 2001 terrorist attacks.

Shirley Ann Jackson, president of the American Association for the Advancement of Science, told the recent forum audience that the drop in foreign students, the apparently declining interest of young Americans in science careers and the aging of the technical work force were, taken together, a perilous combination of developments.

"Who," she asked, "will do the science of this millennium?"

Several private groups, including the Council on Competitiveness, an organization

in Washington that seeks policies to promote industrial vigor, have begun to agitate for wide debate and action.

"Many other countries have realized that science and technology are key to economic growth and prosperity," said Jennifer Bond, the council's vice president for international affairs. "They're catching up to us," she said, warning Americans not to "rest on our laurels."

REMARKS OF SENATE DEMOCRATIC LEADER
TOM DASCHLE TO THE AMERICAN ASSOCIATION
FOR THE ADVANCEMENT OF SCIENCE

Thank you, Dr. [Shirley] Jackson, for that warm introduction, and for the tremendous work you are doing. Few people alive today can claim to have done as much to advance both the cause, and the frontiers of science.

It is a great honor for me to address such a distinguished group of scientists and thinkers. Since my childhood, I've been fascinated with science, perhaps because I knew my father had hoped to become a geologist before World War II called. But any child of South Dakota grows up with an appreciation for the impact science has on our lives. Whether it's the work of agricultural geneticists improving crop yields, or simply paleontologists explaining the fossils of Rapid City's Dinosaur Park, science has a special place in South Dakota. I chose a different path than a life of science, but I've always been mindful of John Adam's letter to his wife, Abigail, in which he wrote, "I must study politics and war [so] that my sons may have liberty to study mathematics and philosophy." Sooner or later, every elected official needs to come up with a justification for the demands of public office to their husband or wife. I wish I could come up with something as good as John Adams.

Whatever Adams motivation was for the comment, I share his understanding of the relationship between politics and science. Elected officials have an obligation to maintain our nation's prosperity and peace, not merely for their own sake, but because they provide our citizens the liberty to pursue the higher callings of the mind. History best remembers not the civilizations that have done the most to expand their borders, but those civilizations that have done the most to expand the boundaries of human understanding. These are the accomplishments that resonate through the centuries, and it is the work of America's scientists that will serve as our testimony to history.

For all the grandeur of intellectual pursuits, America's interest in scientific progress has a pragmatic urgency as well. Today, your discoveries matter more to our every day life than at any other point in human history. Biotechnology and genetics, not to mention the steady progress of medical science and nanotechnology, are extending and improving our lives. The physics of computer science is sparking new industries that employ millions of Americans and enhance the productivity and well-being of countless more. On the battlefield and in the laboratory, the war on terrorism is being waged, not just with soldiers, but with software armed with artificial intelligence algorithms. America's health, prosperity, and security are tied to your success. And as a result, our obligation to ensure you have the freedom and resources necessary to advance your work is more pressing than ever before.

This tension between science for the sake of human understanding, and science for the sake of human well-being has marked our history since its first days. Even de Tocqueville thought democracies were ill-equipped to support pure scientific research. The more democratic a society, he wrote "the more will discoveries immediately ap-

plicable to productive industry confer gain, fame, and even power on their authors."

But our Founding Fathers had different ideas. Many, most notably Jefferson and Franklin, considered themselves men of science and the government they designed their most daring and novel invention. Jefferson once wrote to a friend, "We have spent the prime of our lives procuring the precious blessing of liberty. Let [young men] spend theirs in shewing that it is the great parent of science and of virtue." So vital was this idea to the American experiment, that the very first coin minted in our country bore the motto, Liberty, Parent of Science and Industry.

When Jefferson sent Merriwether Lewis across the continent to map the land that held our nation's future, he understood the expedition would have two results. It would serve practical purposes such as easing the westward expansion of the nation and creating new trade relationships with the Indian populations. At the same time, the expedition captured Jefferson's scientific heart. In fact, his first choice to lead the expedition was a French botanist. Jefferson changed his mind, and after offering Lewis an education in botany, geology, geography, and the finer points of navigation, he gave the Lewis a broad and simple directive: explore. The information Lewis and his men brought back represented immense steps forward for American sciences from anthropology to zoology and many in between.

In many ways, Jefferson's leadership and the Lewis & Clark expedition established the model for government's partnership with science. And in the 200 years since, government support for scientific research had helped invent the telegraph, split the atom, conquer space, create the Internet, map the human genome, and much more. No nation has ever made such an enduring and significant investment in science, and no nation's scientists have done as much to demystify our world and better the quality of life on earth.

In the years before World War II, America became the adopted home of a generation of scientists fleeing fascism in Europe. Never was the importance of a free society to science more clear. The physicist Emilio Sergré was among those who came to America, emigrating in 1938, and eventually working on the Manhattan Project. "America," he wrote at the time, "looks like the land of the future."

America has always been the land of the future. Throughout our history, we have maintained a remarkable devotion to the simple idea that our children's lives should be better, safer, and richer than our own. This simple idea that we call the American dream has been made real because of the myriad contributions of Americans scientists.

Today, we stand at a pivotal moment. For all our past successes, there are disturbing signs that America's dominant position in the scientific world is being shaken. According to a recent study, America's rate of scientific discovery is lagging behind that of European countries. The number of scientific papers published by American researchers declined last year, and has been flat for the past several years. In contrast, every country in Europe has increased its rate of discovery. In the last two decades of the 20th century, France, Germany, and the United Kingdom doubled their production of doctorates in science and engineering. Japan doubled its production of science and engineering doctorates in just one of those decades. If this stagnation is allowed to continue, it will have profound implications for every aspect of American society. If we are to remain the land of the future, we must reaffirm the

partnership that created America's dominant position within the world of science.

Regrettably, rather than strengthening this partnership, I fear that the Bush Administration has allowed it to erode in two critical ways. First, the Administration is abdicating its responsibility to provide scientists with the funding cutting-edge research demands. As you know, the federal government has seen its R&D investments steadily decline as a share of the U.S. economy, bringing the federal investment down to levels not seen since the mid-60s. Public-sector investments in advanced research have declined sharply, relative to our economic growth rate, and barely kept pace with inflation. This year, federal funding for research is set to increase 4.7 percent. However, the entire increase would go to the Department of Defense and Homeland Security for the development of weapons systems and counterterrorism technology. Make no mistake, these are necessary investments that will make our nation safer. But the remaining federal R&D budget that supports research into health, environmental, biological, and other sciences, will all see funding reduced.

In my home state of South Dakota, for instance, the Earth Research Observation System is facing the possibility of deep cuts in staff due to cuts to their budget. Their work helps us become more responsible stewards of the environment, while increasing the yields of farmers all over the world. And yet, this work is endangered due to draconian budget cuts.

But the administration's disregard for science extends beyond budgetary choices. Just last month, the Union of Concerned Scientists released a report charging the White House with systematically working against the spirit of objective science. The report states that the Bush Administration has suppressed or distorted the scientific analyses offered federal agencies to bring these results in line with administration policy. Time and time again, the Administration is choosing politics over real science.

Consider the administration's response to global warming. Even though the scientific community is united on the fact that fossil fuel production and consumption has contributed to global warming, the White House deleted that finding from its 2001 report on Global Warming, and in its place inserted a reference to an opposing study that was financed by the American Petroleum Institute.

In addition, when the administration has had the opportunity, it has stacked the deck by staffing research boards and advisory councils with under-qualified researchers who have shown allegiance to the White House's political goals. Just recently, the President dismissed two advisers from his Council on Bioethics because they were outspoken proponents of research on human embryos.

This is not real science. This is vending machine science. The administration thinks it can pull a lever and get the results it wants at no cost. But the costs are extraordinary. If history shows anything, it's that a bet against science is a bet you cannot win. For the sake of short-term political posturing, the White House is putting the long-term security, health, and prosperity of our nation at risk.

Just as importantly, America's reputation as a home for cutting edge science is being diminished. I am hearing from more and more friends in the science community that they are concerned about the support and reception their work will receive in the years to come. They worry that the administration's failure to provide intellectual leadership will erode the high standing American

science has achieved since WWII. And I fear their apprehension is well justified.

But we should be honest with ourselves. Outside the scientific community, there is no hue and cry for more government funding of R&D. There is no widespread public outrage when the administration disregards the unequivocal judgment of the scientific community. And it's unlikely that the science gap growing between the United States and other developed nations will become a major issue in the upcoming Presidential campaign.

This represents a failure on our part. We have not done enough to show the American people the connection between the work underway in your laboratories and the problems that affect their lives. This must change. The stakes simply could not be higher. What future challenge will we fail to meet because America's scientists were not given the tools they need to discover new answers to old questions? When rumors of a Nazi bomb program reached President Roosevelt, he said simply, "Whatever the enemy may be planning, American science will be equal to the challenge." Will future presidents be able to speak with such confidence?

The challenge to the American scientific community is to rebuild the link not only between science and government, but between science and society. I believe we can do so, if we return to the model established by Thomas Jefferson. There is an implicit ongoing debate within the government regarding what kind of research is most important to support. Some suggest that we should put no limits on the kind of research we support and have faith that advances in theoretical science, regardless of the field, will inevitably translate into practical applications that improve human life.

For others, that approach is too abstract. There are real problems, and to spend taxpayer dollars on anything but the most pragmatic search for solutions seems high-minded, but naive. There is merit to each approach. Both kinds of research are critical.

But Jefferson offered a third way, and, I believe, the right way to make the best use of government's resources, and gain the full support of the American People for the efforts of science. Merriwether Lewis's expedition represented a basic attempt to enlarge the scope of America's understanding of the world around it. It was the stuff of doctoral dissertations. At the same time, because the mission was targeted at the urgent needs of an expanding nation, the voyage captured the support of Washington and the imagination of our young country.

America saw another tremendous example of this in recent years in the Human Genome Project. The effort pooled the combined wisdom of biology, chemistry, physics, engineering, mathematics, and computer science, tapped the strengths and insights of the public and private sectors, brought together 1,000 researchers from six different nations to reveal all 3 billion letters of the human genetic code. Few endeavors have brought together such diverse disciplines for a single and pure pursuit of scientific knowledge. The discoveries of the Human Genome Project have created extraordinary promise in the field of medicine, and brought to life an industry that could lead the American economy for a generation to come.

It has been nearly four years since the human Genome Project concluded its primary objective. If the science policy of this Administration has failed in any way, it has failed here: it has yet to point the way to the next great frontier of human understanding. It has yet to call scientists from every discipline to a single mission of public service.

Today, we need to rally once again around common goals, and put the broad interests of

the nation ahead of the narrow boundaries of scientific disciplines. Surely there is no shortage of challenges. Should we not set our nation's physicists, chemists engineers, and geologists to the task of freeing our nation from the need to import oil? Can we create the scientific and technological foundations for affordable, carbon-free energy sources? Can we "level the playing field" for American researchers that lack the resources of our nation's wealthiest universities? Is it beyond our imagination to address the major challenges of developing countries—such as cures and vaccines for AIDS, TB and malaria? In addition to the obvious moral and ethical imperative to do so, the economic and foreign policy benefits from harnessing our scientific and technical talent to foster sustainable development would be profound.

Let me suggest one final goal that could occupy the best efforts of scientists from every discipline for a generation to come. Now that we have surveyed the map of human life, let us turn our attention to that which makes human life unique: the mind. What challenge would be beyond our reach if we truly understood how we learn, remember, think and communicate? What could we accomplish if our education policy was bolstered with a new understanding of how children learn? How much safer could our neighborhoods be, if neurophysiology solves the puzzle of addiction? What industry would not be strengthened by a more complete picture of the workings of the mind? There is perhaps no field in which major advances would have more profound effects for human progress and health than that of neuroscience. If the American scientific community could come together and communicate to the nation the kaleidoscopic possibilities that could result if we unlocked the secrets of the mind, we could not only achieve untold advances in science, we could open a new chapter in the story of America's support for science.

Investments in science and technology are the ultimate act of hope, and will create among the most important legacies we can leave. America is still, as Emilio Segré said decades ago, the land of the future. We have held that honor since this continent was discovered by a daring act of science more than 500 years ago. We have earned it anew with each passing generation because America's scientists and public officials have understood the importance of applying the power of American curiosity to most intractable American challenges.

The hallmark of American science is not that we have been able to overcome each new frontier. The hallmark of American science is that having conquered one, we impatiently seek out new, more distant and difficult frontiers. America will be able to call ourselves the land of the future so long as we dream that the future holds a better life for ourselves, and so long as those of us who, in Adam's words, study politics, continue to invest in your ability to make that dream real.

RESERVATION OF LEADER TIME

The ACTING PRESIDENT pro tempore. The Senator from Arizona.

Mr. KYL. Mr. President, I ask unanimous consent that the time for the two leaders be reserved for their use later in the day.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

OVERTIME REGULATIONS

Mr. KYL. Mr. President, I rise to speak to the legislation we are going to

be taking up when we go back to S. 1637, called the Jumpstart Our Business Strength Act, which will attempt to modify the law relative to how we treat manufacturing firms in tax policy to comply with rulings of the World Trade Organization and related legislation.

There is an amendment pending that will be offered by Senator HARKIN that relates to final regulations issued last week by the Department of Labor. I would like to speak to why we should quickly dispense with that Harkin amendment to move on with the S. 1637 and not get bogged down in the regulations that were issued by the Department of Labor.

The regulations issued a final rule to update the previous regulations that implemented the Fair Labor Standards Act. That act implements rules guaranteeing overtime pay for certain nonwhite collar workers—in other words, when somebody works longer than the period they would ordinarily be required to work, what circumstances the employer is required to then pay overtime pay for that additional work. The rules the Department of Labor has had in effect have not been modified for over a quarter of a century. The salary levels to which these regulations apply have not been changed since 1975. The duties test has actually not changed since 1949. That is the test that tries to define whether a worker is a white collar worker who would be exempt from this requirement or a blue collar worker who would be guaranteed overtime if they worked longer than they are supposed to. What this has done is to leave employers with very obsolete job classifications, things such as straw boss and leg man, other titles for work that have not been performed for years. That needed to be fixed.

The Department of Labor had been struggling to try to bring it up to date and get final rules into place, which now has been done. A lot of the concerns expressed by supporters of the Harkin amendment are based on interpretations or misreadings of the previously proposed rule. But a lot of that has now been cleared up in the final rule made effective last week. Much of the criticism should fall by the wayside.

Let me describe what the final rule does. It would guarantee overtime benefits to 1.3 million low-wage workers who before were not entitled to overtime pay. Under this rule, 6.7 million new employees must be paid overtime regardless of their duties. That is 1.3 million more than is currently the case. It would raise the minimum salary level at which workers are ensured overtime pay from \$155 to \$455 a week or \$23,660 annually. That is the largest increase since the law was enacted in 1938. Under the previous regulations, individuals earning the minimum wage, which would be about \$10,700 a year, were not guaranteed overtime.