

from the New York Academy of Medicine, and the Surgeon General's Medalion for significant and noteworthy contributions to the health of the Nation.

These awards all testify to the fact that Dr. Satcher is a talented, compassionate doctor, researcher and administrator who, throughout his career, has committed himself to caring for those less fortunate and to focusing on preventative health care. Dr. Satcher's lifelong commitment to improving the health of the American people began not long after he survived a near fatal brush with whooping cough as a child. Because of this experience, he understands how important it is to have a Surgeon General who communicates clearly with the people about health-related issues and policies that can literally save their lives. He has strong and practical positions on ways to improve the public health, and as Surgeon General and Assistant Secretary of Health, he will provide a positive and articulate voice on some of our Nation's most important health issues.

The Atlanta Journal and Constitution stated in an editorial endorsing Dr. Satcher:

He is the right man at the right time for these positions.

I can think of no truer statement, Mr. President. So I look forward to concluding this debate, hopefully, on a positive note. I look forward to seeing Dr. Satcher confirmed as our Nation's Assistant Secretary of Health and Surgeon General. America needs a Surgeon General. We need that leadership, and Dr. Satcher is the best person for that job.

#### HUMAN CLONING PROHIBITION ACT

Mr. HARKIN. Mr. President, I, as in morning business, want to digress here just a moment, if I might, to talk a little bit about another issue that is going to be coming up here tomorrow. I understand we are going to be voting on cloture on a bill that has not gone through any committee, hasn't had any hearings. It involves an area of science and medicine which very few, if any, of us in this entire body are qualified to vote on with short notice, without proper hearings and proper input. Yet, it's trying to be rammed through here. I am talking about the bill regarding cloning research.

Now, there has been a lot of, I think, undue, inflammatory kinds of statements and comments made about this cloning research. It seems odd to me that on something that has so much potential to alleviate human suffering and which is also, I will be frank to admit, fraught with perils of ethics and bioethics—it seems odd to me that a bill of that nature would be rushed so soon to the floor of the Senate. It seems to me that this is the kind of bill that ought to go through a lengthy and involved hearing process, to bring in the best minds, ethicists, physicians,

doctors, researchers, those involved in gene therapy, those who have been involved in cloning research in the past, to hear their views on this. And then out of this, perhaps we can develop a more reasoned, logical, bipartisan approach on the issue of cloning research.

So I have to ask, what is this so-called rush? Why bring it out on the floor like this without the proper kind of hearings, because there is a hidden political agenda? Is this to inflame fears among people? Well, I hope not. To take away that apprehension, I think the best thing would be to refer this to committee and have hearings on it. I serve on the Labor, Health and Human Services Committee, and I would assume that committee would be the proper one to have the hearings, at least some of them, plus those on the House side. So I want to speak about it in that context.

Mr. President, each year, too many of our loved ones suffer terribly. They are taken away from us by diseases like cancer, heart disease and Alzheimer's. For many years, I have worked hard to expand research into finding cures and preventative measures and improve treatments for the many conditions that rob us of our health. Over the last several years, there have been major breakthroughs in medical research. We need to make sure that our world-class scientists continue to build on this progress, but that we also say to young people who are in college today, maybe even in high school, who are thinking of pursuing research careers, that we welcome their inquisitiveness, we welcome their experimentation, we want there to be no bounds put on their inquiries by a rush to judgment by the Congress of the United States, which is ill-equipped to make such a judgment. I think our actions here send a very chilling message to young people, who want to go into biomedical research, that somehow there is going to be the heavy hand of "Big Brother" Government overlooking their research, telling them you can do this but not that, or you can go no further than that, or you can ask this question, but you can't ask that question. I think this bill that we have, again, pushed before us in this rush, can have that kind of chilling effect.

Now, another area of research that has been ongoing for a long time—this is nothing new—has recently captured public attention. That is the research into cloning, cloning cells. Now, there is a man in Chicago—I don't know him and I never have met him—and his name is Richard Seed. Well, he caused quite a sensation a few weeks ago by saying he intends to clone infertile people within the next 2 years. Well, when I first heard this, I said, who is this guy? I never heard of him and I have been involved in research, medical research for a long time. Well, I found out that, quite frankly, he is a very irresponsible individual. He doesn't have the expertise himself. He

doesn't have the laboratory, the money, or the wherewithal. I think most researchers and policymakers that I know who know of this person say that he is both out of the mainstream and that his plans for cloning are, at the very least, premature.

Now, again, from all that I have read—and now I have seen him on television—I think that Mr. Seed is more interested in getting his name in the paper than actually carrying out any legitimate scientific research. This is the unfortunate part of it. Why should the irresponsible actions of an individual like Mr. Seed lead to irresponsible actions on our part, because that is exactly what we are doing? Is Mr. Seed irresponsible? I believe so, absolutely. As I said, he doesn't have the expertise, the lab, or the wherewithal to even carry out this research. So he is making very irrational, irresponsible, inflammatory statements. But then why should we respond irresponsibly? I think we should respond responsibly and very carefully to an area of scientific research that can hold so much promise to alleviate pain and suffering and premature death all around the world.

Let's not act irresponsibly because one person in America has spoken irresponsibly. S. 1601, the bill we will be having a cloture vote on tomorrow, bans the use of cloning technology called somatic cell nuclear transfer. To create an unfertilized egg cell, even if this egg cell is for research, is totally unrelated to the cloning of a human being. For example, if the cell is grown under special laboratory conditions, it does not become a child, or a baby, but instead becomes specific tissue such as a muscle, nerve, or skin.

Just think of the potential of this kind of technology. I have looked into this a lot over the last several years. Science makes genetically identical tissues and organs for the treatment of a vast array of diseases.

I gave a sort of off-the-cuff set of comments last summer when this issue came up with Dolly, the sheep that was cloned in Scotland. Dr. Wilmut was at our committee. I talked about the need to continue research into cloning of cells. I said it was going to happen in my lifetime. I certainly stand here and hope that it does.

Shortly after that, I was at a restaurant in a small town in Iowa. A person came up to me, a friend of mine. I went over to their booth to see them. There was a woman there whom I had never met, a rather young woman with her husband. I was introduced to them. Just right out of the clear blue she said, "Thank you for what you said about cloning and taking the position you did on cloning." I don't even think it was in the newspaper. It was on television, I think. CNN may have carried that type of thing. But I was curious as to why this young woman, who, if I am not mistaken, lives on a farm, I believe—I can't quite remember that detail. I asked her, "Why are you so interested in this?" She said because she

has a rare kidney disorder. She is hoping because of rejection possibilities that there might come a time when we could actually grow the kind of tissue that would develop into a kidney to replace her kidney so that there wouldn't be that possibility of rejection. She got it. She understood it.

That is what we are talking about. Those are the kinds of possibilities that I believe will happen in my lifetime if we do not act irresponsibly and irrationally.

This bill, S. 1601, would make it a crime to conduct some research seeking to generate stem cells to treat a wide variety of and a wide range of deadly and disabling diseases.

S. 1601 could ban blood cell therapies for diseases such as leukemia and sickle cell anemia, nerve cell therapies for Alzheimer's disease, Parkinson's disease, Lou Gehrig's disease, and multiple sclerosis. It could ban nerve cell therapy for spinal cord injuries, a very promising area of research for cloning. It could ban pancreas cells to treat diabetes, skin cell transplants for severe burns, liver cell transplants for liver damage, muscle cell therapies for muscular dystrophy and heart disease. This bill before us could ban research on cartilage cells for reconstruction of joints damaged by arthritis or injuries. It could ban cells for use of genetic therapy to treat 5,000 different genetic diseases, including cystic fibrosis, Tay-Sachs disease, schizophrenia, depression, and other diseases. S. 1601 could permanently ban all of this type of research.

In addition, under this bill, scientists could be thrown in jail for 10 years if they conduct this research—research which may not have any single thing to do with cloning a human being.

Last year, during this hearing on human cloning research, someone asked, "Are there appropriate limits to human knowledge?" Quite frankly, I responded—and I respond again—to say that I do not think there are any appropriate limits to human knowledge, none whatsoever. I think it is the very essence of our humanity and human nature. As long as science is done ethically and openly and with the informed consent of all parties, I do not think Congress should attempt to place limits on the pursuit of knowledge.

To those who suggest that cloning research is an attempt to play God, I invite you to take your ranks alongside Pope Paul V who, in 1616, persecuted the great astronomer Galileo for heresy—for saying that the Earth indeed revolved around the Sun and not otherwise.

But we don't have to go back that far. Not too long ago in our Nation's history, Americans viewed artificial insemination as abhorrent and its use was banned as being morally repugnant—even for animals; even for animals. There was an attempt to ban artificial insemination. Of course, now that is about all we use on the farm these days. Heart transplants were

scorned and X-rays were considered witchcraft. But today we don't think twice about test tube babies, in vitro fertilization, or organ transplants.

Throughout the 1950s, whenever we pushed the bounds of human knowledge, there has always been a constant refrain of saying, "Stop—you are playing God." But if a couple did not have a baby and decides to seek artificial insemination, is that playing God? If a patient is dying of kidney disease and a doctor decided to transplant healthy kidneys, is that playing God? If a patient is dying of heart disease and receives a heart transplant, are we playing God?

Others say that human cloning research is demeaning to human nature. I am sorry; I don't think so. I think that any attempt to limit the pursuit of human knowledge is demeaning to human nature. I think it is the very essence of our humanity to ask how and why and if and what. I think it is demeaning to human nature to raise unfounded fears among the people of America. I think that is demeaning to human nature.

As I said, I think the finest part and the very essence of our human nature and our humanity is to ask why, how, and what if. It is our very humanity that compels us to probe the universe from the subatomic to the cosmos, and, yes, from blastocysts to the full human anatomy. Our humanity compels us to do that.

However, I must admit that I think it is rightly proper for us as policymakers to ask how human cloning research is going to affect our Nation. It is right and proper for us to examine the use of public funds for scientific research.

But I urge my colleagues to proceed with caution on this legislation. What we are talking about here is not the cloning of a human being. What we are talking about is the cloning of cells, and without further research and appropriate regulations, many people will die and become ill and spend very, very miserable lives when that could otherwise be alleviated through this cloning research.

So I have to ask: Why the rush to pass hastily drafted legislation on this very complex technical subject? We need to take the time to consider what could be the unintended consequences. The U.S. Congress and the Senate should tread very softly before sending scientists to jail for what could be promising research to cure diseases and disabilities.

Mr. President, there was an article in Time Magazine dated February 9, 1998, called "The Case for Cloning." I ask unanimous consent that this article be printed in the RECORD.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

[From Time magazine, February 9, 1998]

THE CASE FOR CLONING—THE BENEFITS OF THIS BOLD TECHNIQUE OUTWEIGH THE RISKS, AND THE DANGER IS NOT WHAT YOU THINK

By J. Madeleine Nash

An elderly man develops macular degeneration, a disease that destroys vision. To bolster his failing eyesight, he receives a transplant of health retinal tissue—cloned from his own cells and cultivated in a lab dish.

A baby girl is born free of the gene that causes Tay-Sachs disease, even though both her parents are carriers. The reason? In the embryonic cell from which she was cloned, the flawed gene was replaced with normal DNA.

These futuristic scenarios are not now part of the debate over human cloning, but they should be. Spurred by the fear that maverick physicist Richard Seed, or someone like him, will open a cloning clinic, lawmakers are rushing to enact broad restrictions against human cloning. To date, 19 European nations have signed an anticloning treaty. The Clinton Administration backs a proposal that would impose a five-year moratorium. House majority leader Dick Armey has thrown his weight behind a bill that would ban human cloning permanently, and at least 18 states are contemplating legislative action of their own. "This is the right thing to do, at the right time, for the sake of human dignity," said Armey last week. "How can you put a statute of limitations on right and wrong?"

But hasty legislation could easily be too restrictive. Last year, for instance, Florida considered a law that would have barred the cloning of human DNA, a routine procedure in biomedical research. California passed badly worded legislation that temporarily bans not just human cloning but also a procedure that shows promise as a new treatment for infertility.

Most lawmakers are focused on a nightmarish vision in which billionaires and celebrities flood the world with genetic copies of themselves. But scientists say it's unlikely that anyone is going to be churning out limited editions Michael Jordan or Madeleine Albright. "Oh, it can be done," says Dr. Mark Sauer, chief of reproductive endocrinology at Columbia University's College of Physicians and Surgeons. "It's just that the best people, who could do it, aren't going to be doing it."

Cloning individual human cells, however, is another matter. Biologists are already talking about harnessing for medical purposes the technique that produced the sheep called Dolly. They might, for example, obtain healthy cells from a patient with leukemia or a burn victim and then transfer the nucleus of each cell into an unfertilized egg from which the nucleus has been removed. Coddled in culture dishes, these embryonic clones—each genetically identical to the patient from, which the nuclei came—would begin to divide.

The cells would not have to grow into a fetus, however. The addition of powerful growth factors could ensure that the clones develop only into specialized cells and tissue. For the leukemia patient, for example, the cloned cells could provide an infusion of fresh bone marrow, and for the burn victim, grafts of brand-new skin. Unlike cells from an unrelated donor, these cloned cells would incur no danger of rejection, patients would be spared the need to take powerful drugs to suppress the immune system. "Given its potential benefit," says Dr. Robert Winston, a fertility expert at London's Hammersmith Hospital, "I would argue that it would be unethical not to continue this line of research."

There are dangers, but not the ones everyone's talking about, according to Princeton

University molecular biologist Lee Silver, author of *Remaking Eden* (Avon Books). Silver believes that cloning is the technology that will finally make it possible to apply genetic engineering to humans. First, parents will want to banish inherited diseases like Tay-Sachs. Then they will try to eliminate predispositions to alcoholism and obesity. In the end, says Silver, they will attempt to augment normal traits like intelligence and athletic prowess.

Cloning could be vital to that process. At present, introducing genes into chromosomes is very much a hit-or-miss proposition. Scientists might achieve the result they intend once in 20 times, making the procedure far too risky to perform on a human embryo. Through cloning, however, scientists could make 20 copies of the embryo they wished to modify, greatly boosting their chance of success.

Perhaps now would be a good time to ask ourselves which we fear more: that cloning will produce multiple copies of crazed despots, as in the film *The Boys from Brazil*, or that it will lead to the society portrayed in *Gattaca*, the recent science-fiction thriller in which genetic enhancement of a privileged few creates a rigid caste structure. By acting sensibly, we might avoid both traps.

#### WHO COULD BENEFIT?

Cloning might help patients with Parkinson's and other brain diseases by providing them with neural tissue that is genetically identical to their own.

Burn victims could receive soft, new skin, which would be grown in a laboratory and wrapped around injured areas like a bandage.

Patients with chronic myelogenous leukemia could gain reliable source of healthy bone marrow, which might eventually result in a cure.

Combined with gene therapy, cloning may make it possible for scientists to eliminate the transmission of Tay-Sachs and other inherited diseases.

Mr. HARKIN. Mr. President, for example, I want to read a couple of things from the article. It says:

House Majority Leader Dick Armey has thrown his weight behind a bill that would ban human cloning permanently. "This is the right thing to do, at the right time, for the sake of human dignity," said Armey. "How can you put a statute of limitations on right and wrong?"

Right and wrong? It is wrong to conduct cloning research that might enable us to grow a liver out of a person's own DNA? To grow skin out of a person's own DNA? Perhaps even to grow heart tissue, or even a full heart, out of a person's own DNA, so there would be no rejection possibilities? It is wrong to do research in cloning of cells that might permit my nephew, Kelly, who, at the age of 19, got injured in the military, his spinal cord was broken and he has been a quadriplegic since and still holds out the hope that research someday is going to enable him to walk again? And, yes, cloning research might be able to rebuild those kinds of cells from his own DNA that will get those nerve endings going again so that my nephew can walk again. That research is wrong? I ask who appointed the House majority leader as the arbiter of what is right and wrong in biomedical research?

Well, as the drafter of this article went on:

... hasty legislation could easily be too restrictive. Last year, for instance, Florida

considered a law that would have barred the cloning of human DNA, a routine procedure in biomedical research.

You might say that's not what we are doing here. But we could be sending the wrong signals to State legislatures, again, to try the same thing:

Cloning individual human cells [the writer goes on], however, is another matter. Biologists are already talking about harnessing for medical purposes the technique that produced a sheep called Dolly. They might, for example, obtain healthy cells from a patient with leukemia or a burn victim and then transfer the nucleus of each cell into an unfertilized egg from which the nucleus has been removed. Coddled in culture dishes, these embryonic clones—each genetically identical to the patient from which the nuclei came—would begin to divide.

The cells would not have to grow into a fetus, however. The addition of powerful growth factors can ensure that the clones develop only into specialized cells and tissue. For the leukemia patient, for example, the cloned cells could provide an infusion of fresh bone marrow, and for the burn victim, grafts of brand-new skin. Unlike cells from an unrelated donor, these cloned cells would incur no danger of rejection, patients would be spared the need to take powerful drugs to suppress the immune system.

And this, I think, says it all:

Given its potential benefit," says Dr. Robert Winston, a fertility expert at London's Hammersmith Hospital, "I would argue that it would be unethical not to continue this line of research.

Mr. President, I hope that tomorrow, when we vote on this, that the Senate will choose to be on the side of the Galileos, those who want to expand human knowledge, those who will not be constricted by outmoded and outdated ideas, who understand it's the very nature of our humanity to ask how and why and what if. No, not to be on the side of those who wanted to keep the Sun moving around the Earth, but to be on the side of progress and advancement, enlightenment and unlimited human potential.

S. 1601 needs to be amended drastically. Frankly, it needs to be sent to committee. There is no rush. Dr. Seed—is that his name? Yes, Dr. Seed from Chicago is not going to clone any human being. No reputable scientist or doctor that I have spoken to, and I have spoken to quite a few of them, believes he is anywhere near that for years and years and years. But he is making a name for himself. He is on all the talk shows, that's for sure. He has become notorious, a public figure, and I guess a lot of people like to do that.

But just because he's irresponsible doesn't mean we ought to be irresponsible. Let's take a careful look at this. Let's have our hearings. Let's bring in the experts. Let's bring in the bioethicists, the people from all the different communities, to see what parameters, if any, should be drawn on this. The parameters of S. 1601 are too constrictive.

To send scientists to jail for up to 10 years for doing the kind of research that can enable my nephew to walk again is not the kind of legislation that we ought to be passing here.

Mr. President, I yield the floor and suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call will roll.

The bill clerk proceeded to call the roll.

Mr. ASHCROFT. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

#### EXECUTIVE SESSION

NOMINATION OF DAVID SATCHER, OF TENNESSEE, TO BE AN ASSISTANT SECRETARY OF HEALTH AND HUMAN SERVICES, MEDICAL DIRECTOR OF THE PUBLIC HEALTH SERVICE, AND SURGEON GENERAL OF THE PUBLIC HEALTH SERVICE

The Senate continued with the consideration of the nomination.

Mr. MCCAIN. Mr. President, I wish to speak briefly about the nomination of Dr. William Satcher to become the United States Surgeon General and Assistant Secretary of Health and Human Services.

I have been closely following the Senate debate regarding Dr. Satcher's nomination and his qualifications to serve as the next Surgeon General and Assistant Secretary of Health and Human Services. In particular, I found his views regarding partial birth abortion and his role in clinical AZT trials to treat patients infected with HIV in Africa and Southeast Asia disturbing.

While Dr. Satcher initially expressed his opposition to partial birth abortions, he also stated that he shares President Clinton's view that a ban on this procedure should include an exception for cases in which the procedure might be needed to protect the health of a pregnant woman. This raises serious concerns for me, since I am adamantly opposed to partial birth abortions except to save the life of a woman. This is a procedure which is inhumane and offensive to anyone who values human life. No matter what a person believes regarding the legalization of abortion, we should all be appalled and outraged by the practice of partial birth abortions.

Since these concerns were raised, however, Dr. Satcher has provided written assurances regarding his intentions if nominated. Dr. Satcher wrote, "I have no intention of using the positions of Assistant Secretary for Health and Surgeon General to promote issues related to abortion. I share no one's political agenda and I want to use the power of these positions to focus on issues that unite Americans—not divide them." Dr. Satcher also wrote that he would promote a message of abstinence from premarital sex and behavioral responsibility to our youth. This is a commendable objective that should be promoted among our nation's youth.