Mr. FRIST. Mr. President, in the coming weeks the Senate will consider legislation to prohibit human cloning. In advance of that important debate, many have begun studying in a very careful way this complex issue. It is important because this issue is at the intersection of values, science, medicine and ethics.

A number of colleagues have come forward and asked me, personally, about this issue, in part because of my medical background, but also in large part because they know I am a strong advocate for and a strong supporter of stem cell research, as long as that stem cell research is conducted within a framework of a comprehensive, ethical, and moral oversight system.

The question I hear most is the following: Can one truly be an advocate for stem cell research and, at the same time, oppose human cloning experimentation? After an in-depth study of this issue from a policy standpoint, from the standpoint of being a Senator and looking at that legislation as a scientist, from a medical standpoint, I believe the answer to this question is yes.

Until now, the overall human cloning debate has been presented almost as an absolute choice between, on the one hand, medical science and the hope for cures and, on the other, ethical restraint.

This is an oversimplification that does not do justice to the clinical, scientific, philosophical, moral, ethical, and spiritual complexities underlying this discussion. I am glad to see that a number of my colleagues and people around the country have not locked into this false choice, but rather have stayed back to examine these issues carefully and deliberately.

After carefully considering all of the evidence brought forward in Congressional hearings and on the floor in support of human embryo research cloning experimentation, after considering the medical progress being made and that will be made through stem cell research, and after considering the overwhelming ethical concerns about human embryo cloning experimentation, I conclude that a
comprehensive ban on all human cloning is the right policy at this time. I intend to support legislation consistent with this policy, and I will encourage my colleagues to do so as well.

As we move forward, one must understand the fundamental fact that I hope plays out over the next several days and weeks. It is important to understand that embryonic stem cell research and human embryo cloning research are not the same thing. Human embryo research cloning -- called therapeutic or research embryo cloning -- is an experimental technique often confused with, but distinct from, stem cell research. The promise of stem cell research, for Parkinson's disease, Alzheimer's disease, diabetes, spinal cord injuries, autoimmune disorders, cardiovascular disease - the promise of stem cell research and the science can and will progress with a ban on human cloning embryo experimentation in place.

Most serious observers -- I don't want do say all -- agree that human reproductive cloning should be banned, must be banned. Indeed the legislation that will come to this floor will ban reproductive cloning. It is dangerous and it is unethical.

The question this body will be debating is whether or not this ban on human reproductive cloning should extend to all human embryo cloning. The issue is not cloning of DNA, that is going to continue no matter what; not cloning of molecules, that is going to continue; not cloning of cells other than cells that become or are an embryo, that is going to continue. That is not yet fully understood and, in truth, we have not debated the legislation on this floor. But that will become apparent.

The House of Representatives has already overwhelmingly passed strong bipartisan legislation comprehensively banning human embryo research cloning experimentation and reproductive cloning. Now is the time for the Senate to do so.

Those who favor human research cloning experiments make three fundamental arguments. First, they often point to the potential for human research cloning experiments to develop tissues that will not be rejected by patients. As a heart transplant surgeon, one who spent many years of my life transplanting hearts, this immune phenomenon is something I will come back to the floor and talk about because it is very important for us to address.

Second, advocates for human embryo research cloning and so-called therapeutic embryonic cloning experiments say it will increase the number of embryonic stem cells. We will talk about that. Finally, they say it will further basic biological knowledge. Again, we will come back and talk about that as the debate proceeds.

There are facts that will need to be presented. But moving away from the scientific
standpoint, if you look at the overall ethical and moral concern, it is this: Regardless of our religious background, most of us are extremely uncomfortable with the idea of creating cloned human embryos, doing an experiment on them, and destroying the human embryo. That is the state of the science.

If one supports human research or therapeutic cloning, given where we are today -- our understanding of science -- you are in support of purposefully creating an embryo, of removing the cells, and thereby destroying that embryo.

The other serious immediate concerns which people will talk about are concerns about women's health. Human cloning clearly will create a market for women's eggs. That is going to create powerful incentives for women to undergo an intense regimen of superovulation drugs and surgery, with potentially devastating side effects.

As a physician and a policymaker who struggles, especially since I have come to Washington, with this inherent tension between scientific progress and ethical concerns, I think there are two fundamental questions that this body needs to answer, and the American people need to answer as we debate these issues. First, does the scientific potential of human embryo cloning experimentation justify this purposeful creation of human embryos which must, by definition, be destroyed in the experiments? Second, does the promise of human embryonic stem cell research -- and, again, this is separate from cloning -- in any way depend on the experimental research cloning, the human cloning research technique or tool? To both of those questions, I answer no.

At this point in the evolution of this new science, I believe there is no justification for the purposeful creation and destruction of human embryos in order to experiment with them, especially when the promise and success of stem cell research does not -- does not -- depend on the experimental research cloning technique. As my colleagues know, I am a strong supporter of stem cell research -- including embryonic stem cell research - as long as that stem cell research is conducted within an ethical and moral framework.

Last August, President Bush outlined a scientific and ethically balanced policy that allows federal funding, through the National Institutes of Health, for embryonic stem cell research, using nearly 80 stem cell lines. This has, indeed, opened the door to a significant expansion of embryonic stem cell research within this ethical and moral framework.

Further, many people do not realize today that there are no restrictions on private research using embryonic stem cells from embryos left over after in vitro fertilization procedures. Thus, when you come to that argument of just having a technique which produces more embryos, I would argue that there is simply no compelling need for any other source of embryonic stem cells today.
The state of the science and the state of the research we will be addressing again on the Senate floor as we go forward. But given the serious ethical concerns about human embryonic cloning research and given the fact that there has been very little research done in animal models at this juncture, I find no compelling justification for allowing human embryo cloning, for either reproductive or research purposes, today.

It is important also to be clear that the legislation we will be debating allows other types of cloning research to continue -- many people do not realize that -- whether it is cloning to produce animals, cloning to produce plants, cloning any cell other than a human embryo, cloning of DNA and RNA, proteins or any other molecule. I will not go through the entire list now, but we will come back to this in the weeks ahead.

The point is, the cloning science continues. The ban is on the cloning of the human embryo: the purposeful creation of an embryo for human reproduction or for experimentation and its ultimate destruction, which is what we propose to ban today.

I would indeed argue that any potential benefit of cloning should be carried out -- should be demonstrated in animal models before going to the human model.

While there is not time to discuss in depth all these issues today, I wanted to speak based on my assessment of where we are, so that I could begin to spell out my views as we prepare to enter this debate.

I want to say, once again, I will support legislation to ban all forms of human embryo cloning, reproductive, research and therapeutic, when the issue comes before the Senate. I, indeed, will urge my colleagues to do likewise.

I yield the floor.