Well, thanks. Actually, Dr. Margolis did not say it, but the reason he and Dr. Greden had me here is I am the third Viking fan that they’ve ever met in their life so there's three of us left. Actually, this is a good year though. They are going to do very well this year.

It is an honor to be here to give this particular lecture. The importance of having an ethics and value talk, I think, is self-evident at times at which things are moving fast in bio-medicine and I know that Dr. Waggoner played a pivotal role. I have been listening to some of the things he did in the department of psychiatry here and in for the medical school for many, many, many years and it is really a thrill to be able to be part of this series and watch it grow and evolve.

I am going to not leave you in suspense about what’s wrong with human cloning. My own view is not much. Things are wrong. Things need to be thought about, but I am not of the opinion that human cloning is so fundamentally wrong that it is something we ought not do. That is interesting though because we’re in a state that has banned it. California has and so has Michigan. There are certainly other states moving in that direction. As you know, there's a federal moratorium on research on human
cloning. Federal funds are not to be used for that purpose. Some other nations have banned human cloning. France, Germany, Japan, Portugal, Denmark, just to name a few, have all banned human cloning. So it is certainly something that a lot of people think apparently there’s a lot wrong with. What I’d like to do for this lecture is tack in the following direction. I am going to tell you a little bit, just a quick reminder about what some of the interest in cloning is all about as best a philosopher can describe. Science and the question/answer period people can jump up and correct the things I get wrong, but I will feebly try to say something about why people were so excited about adult cell cloning. And then say a few words about something very different from human cloning. And this is partly just the philosopher’s trick of getting you to think about something with some of the emotion detached.

I am going to spend a little bit of time asking you why you shouldn’t clone your pet. Some of you know that there’s a project underway at Texas A&M that just got funded to clone a dog named Missy. Has anybody been to the Missy site on the Internet? It is an interesting website. It leads off with a code ethics about cloning your dog and what you should do, what you shouldn’t do, and why it should be done. A wealthy family has said they would put forward 2.3 million dollars to have their dog, Missy, cloned. A friend of mine that I know at Texas A&M and the vet school has agreed to set out to do this project. So is this a good thing? Would we be well-served
by cloning our pets? It might give us an angle on the issues of ethics of human cloning that maybe gives us a little distance so we can talk a little bit more about the rights and wrongs of it. Then I will come back and offer you a few thoughts about the ethics of human cloning having set the stage in that fashion.

Well, some of you may recall that what has set off the current frenzy about cloning was the appearance of Dolly, who actually was born in July of 1996 but whose birth announcement became public in February of 1997. I was always a little befuddled about why people were so excited about Dolly just as a clone because as some of the scientists in the room will know, it has been possible to make clones, and indeed, a number have been made of animals, even mammals, doing embryo splitting. You can divide an embryo and produce copies. It has been done, certainly not considered remarkable around veterinary schools to divide embryos at four and eight cell stages and make duplicate copies of animals. So it is not just that we copied an animal that is the source of interest. It certainly was true that for adult cell cloning, the kind of cloning that Dolly represented, people had done it with frogs.

I remember myself being forced to read J.B. Gurdon’s articles in *Scientific American* reprints in college biology class and understanding a little bit about what some of the techniques were for nuclear transplant cloning from adult cell DNA sources. And Dolly represented a mammal and that was certainly the first mammal to follow that technique. But again, it was a little
puzzling about why the reaction. And just in case you forgot, the reaction was incredible.

The front page of the New York Times on the day they announced Dolly’s birth had three ethical speculations about why this might not be a good idea. One was it might be bad to generate a means to immortality. Another was it would be bad if you could use this technique to make armies of fiendish soldiers who would attack Washington, D.C. By the way, subsequently I noticed that when that objection was brought up, the location of the attack was changed because people did not seem to mind attacking Washington, D.C. So they found other places to talk about. And there was a third objection that showed up on that same initial spade of reactions in the New York Times and the Washington Post, in addition to immortality, in addition to having clone armies, this was actually my favorite, it might be bad because we’d use this to make clones to use as sources of organs and tissues. That later evolved into an even weirder objection which became what I sometimes call the headless clone phenomena that we would make mutant creatures.. We would make these headless things and form them, but that day, the first day, people worried that if you had cloning techniques, you might create basically portable organ farms of clones who would be around to keep you alive if one of your organs failed.

And things got worse from there. Something about cloning has to go beyond the technology. I mean, if you look at it from a scientific point of view,
people were thrilled to find out that you could pull genes out of an adult cell from a mammal, somehow insert them into an enucleated egg, fire it up with a little electricity and get the darn genes to turn back on again and govern the development of another creature. And that was very interesting. I think that people thought that mammalian DNA would not do that and Dolly did that. But that is not what got the media excited about human cloning.

Human cloning has continued to represent a much broader set of issues. It is not about human cloning that the ethical debate has swirled. It is about genetic engineering. And I think cloning is a stand-in or a kind of place holder for a lot of concerns about where is genetics going and what are we going to do with genetics? The reason I say that is in some ways, you’re not going to ever be immortal by cloning yourself. Having a DNA copy--well, let’s put it this way. If you have a twin and your twin dies, I am sure they take very little solace in the fact that you’re still alive in terms of their views about being on this earth. They consider themselves--we consider them very dead even though their twin may continue to go on. We have no problems with personhood or personal identity in saying that even though people are absolutely genetically identical, when one of them dies, a person has died. And they do not continue to exist because their genetic copy in bodily form, imitation still goes on. There’s never a doubt that the road to immortality is not through cloning. You might have the road to vanity which is a separate problem, but you do not have the road to immortality.
It is also the case that I know we cannot get far in our society about consensus on matters of morals, but it is probably the case that even this society in love with self-determination and autonomy could bring itself to think that it wasn’t a great idea to make a person to kill them for their parts. This probably is not a cutting edge type of policy solution to the shortage of organs and tissues. To breed people to kill them is probably not going to fly very far so I would not worry about seeing clones made, even the headless ones who, somebody pointed out to me, maybe they do not have rights. Maybe we could kill them. They couldn’t consent.

And certainly the clone army business presumed a kind of genetic reductionism about what you would have to do to get people to turn into battling mimics. I do not know that we have any idea how to create the developmental circumstances, the environment, the surrogate mothers, the apparatus it would take to breed tens of thousand of soldiers or killers or something that would come after us. I do not think that that kind of picture is accurate to what the role of genes versus what the role of environment is for forming behavior and character. I am not saying it could never be done, but it would be one massive undertaking to get it done and it certainly would be beyond the capability of anybody to do it now.

Probably more indicative of how bereft we are for dealing with the impact of the announcement of Dolly and cloning and what genetics is doing was the fact, and I was going to sneer about this for a few minutes and then get past
it, but I cannot because he’s back. Richard Seed, the most felicitously named exponent of genetic views in the history of biology announced--I will tell you this story. It started the complete frenzy about human cloning. I gave a talk in Chicago, something similar to what we’re doing here about the ethics of cloning. I was trying to say, “Look. Let’s be reasonable about what cloning can do and what it cannot do and there are things to think about. But let’s not sort of go out of our minds about what the real dangers are in terms of making robot clones and organ farms and this sort of stuff.”

Richard Seed got up from the audience at the end of that talk and he announced after my talk that while I had raised some issues about why it might not be good to make a human clone that he was going to make a human clone and no one would stop him. I thought that was a very interesting comment. I did not spend a whole lot of time answering it. I thought, “Well, good luck to you. I wish you well on your mission.” My talk was taped. Some of you may have heard it. It was broadcast on public radio. So was Richard Seed’s question or declaration. At that point, Richard Seed became legitimate because public radio had broadcast his plan. And so the rest of the media rushed in to ask Richard Seed about his plans. Now Richard Seed is an indication of what we’re worried about with genetics, represents what I am going to refer to throughout these remarks as the nut factor. That a nut will get this technology and do harm to us and you
couldn’t get a better nut than Richard Seed. He was the paradigm of sort of the nut factor in genetics.

Richard Seed had no background in biology. Richard Seed had no training or skills. I am more likely to be able to clone something than Richard Seed is and I have no chance. I mean, I have watched people do sort of cell cloning and I once went to Robert McConnell’s lab in Minnesota and watched some frog cloning, but I cannot do it. And I have no doubt that Richard Seed cannot do it. Moreover, even if you wanted to start a project or a company to do cloning of humans or anything else, you probably would not find a man who has no money and is bankrupt to affiliate with to launch your organization, and that is Richard Seed. He has no money. His house was seized for taxes. He has absolutely no ability to raise money. I do not think venture capitalists are hanging around his small, under court order house in Chicago waiting to partner with him. So he is probably not the guy that is going to be the first to clone a human being. I thought he’d gone away. In fact, it was the one reason I was grateful to Monica Lewinsky. She took his microphone away and it was the end of Richard Seed. End of the chase Richard Seed around and tell people, “No, he is not going to clone anyone. No, he does not know how. He does not have any contacts. He does not have any money. He does not have any science. Nobody takes him seriously. He is not.” And then he announced two days ago that he was going to clone himself and that he had asked his wife to serve as his
surrogate mother. And there are wire stories running again. And people are calling me up saying, “So what do you think now about--can he really get this done?” His wife is post-menopausal. She is seventy years old. It is patently immoral to even ask her to even contiplate pregnancy carrying anybody’s child. So in some ways, Richard Seed, the only way I can explain him as a phenomena aside from wanting to know why public radio kept telling us that he was a legitimate person, thereby putting him into the national dialogue is that he represents a fear. He represents a fear about what happens when technology falls into the wrong hands. What happens when you cannot stop technology? What happens when genetics is put in the power or the service of someone with no ethics, no morals, no values and basically someone who is going to go ahead for business reasons or personal reasons or whatever. That is something we are worried about with genetics, although it is not really something we really worry about with cloning. It is what we worry about with genetic engineering. Who will be in charge? How can we control them? Can we ever stop anything?

There is a cousin to this fear, which I do think is interesting the reactions, and that reaction was what I am going to call, for those of you who spend any time in the state of Iowa being punished or for cultural exchange reasons. Minnesotans understand Iowa is a barren wasteland far, far below us. The problem with the state of Iowa, if you look down that way, is that it has a senator by the name of Tom Harkin who normally I like and admire
and think is a fine fellow. But Tom Harkin jumped up right after Dolly’s birth was announced and some of this controversy begun and he said, “Well, there is really nothing we can do. Science is basically going where it is going and all we can do is get out of the way.” I mean, I am not paraphrasing, or we will be crushed under the juggernaut. But there is no stopping it. He said--I mean, the metaphors were, once the genie’s out of the bottle you cannot get it back in. And once science and technology take off, no one, no mortal being can ever do anything to bring it to a halt.

Now Tom Harkin clearly has never sat on the appropriations committee for the NIH because I can tell you, I have seen things brought to a screeching halt, things that I thought shouldn’t be halted in this country. Embryo research, fetal tissue transplant research, we were talking this morning about research that is been stopped in New York State on institutionalized children with severe mental retardation stopped cold. It is not true that you cannot bring things to a halt in science. And in fact, if you take a broader historical perspective, you can see that there are many areas of research where because of human subjects protection, informed consent requirements, and peer review, a lot of experiments have been slowed if not stopped. It is just not true. It is a false sense in the history of science to say that science goes where it wants to go. Science needs money to get there. These days it often needs teams of people to take it there. That is why also I am not too worried about Richard Seed and his home cloning company. And it is simply false
to suggest as Harkin did take the position--I will name it Harkinism that we cannot do anything, that we’re just--the only thing we can do is get out of the way once genetics gets rolling.

But the Harkinism view and the nut factor view are very important in trying to understand what was going on with cloning because I think they are the legacy of something else. And they are the legacy of the age of physics, and specifically, nuclear physics. What happened to cloning is it got caught up in the cultural phenomena, I think. The cultural phenomena was we were told in the forties and fifties that atomic power would be a wonderful boon to humanity, that it would produce electricity so cheaply that it would not be metered. Remember that phrase? And then a large number of Americans spent the rest of the century hiding under their desks and digging big holes in the basement because of the Cold War. It was not a technology that delivered. And then the fear was, if you want to take it in two directions, one, once the nuclear genie is out of the bottle, anybody can get it and terrorize you with it. And two, if a nut gets it, they’ll do terrible harm. Those are the fears of nuclear power, of the misuse or misapplication of nuclear knowledge. I do not believe they have any relevance to what cloning is all about.

Let’s say, just for the sake of argument that I am a clone. Could be. Do not know. If I am, I actually pose no threat to anybody here. I am just a person who was made in a different way, but I am not a threat, a public health
threat. No one could take me and use me to their evil purposes particularly just because I am here. The metaphor that genetic engineering or cloning, if it fell into the wrong hands could be used to imperil the rest of us, I think is a false metaphor. It is from a different technology and a different situation. Even if a nut were to make 100 clones, one might say, “Well, is it good? Is it bad? Is it safe?” Some other things we will talk about in a little bit, but the one thing I would not worry about a whole lot is that they would endanger the world or pose a public health threat to the rest of us. That is not what cloning is about. That is now how it works. That is not where its ethical punch is. But because our society has a legacy of dealing with atomic power, nuclear weapons, if you will, nuclear power, the dangers of that plus the emerging threats of biological warfare, the emerging threats of terrorism, these metaphors are driving a lot of what the reaction is to cloning even though I do not think those are the appropriate metaphors. There are things I think we need to be thinking about, but I do not think those are what they are.

So the science that was exciting about cloning was for scientists, understanding what you could do to get genes to turn back on and understanding a lot about the properties of DNA in adult cells, that people had assumed once they had sent out their final messages to make specialized cells and organs, they had done their job, they would never recreate a creature again. And yet for Dolly and the mice that were
produced in Hawaii and the report that come from Japan about cows, it looks that some cells, not maybe all adult cells, but in some cells you can get them to turn back on and govern development of a new organism. So that is the exciting science.

Well, what I have tried to say to you is the ethical objections go way outside what makes that all of interest and excitement within the scientific community. Their worries and some ways in which the culture is painting fears because of history, legacy of misuse and misapplication of say knowledge in nuclear physics and just worries more particularly about where is genetics taking us anyway? Should we be immortal? Is it arrogant to kind of engineer ourselves? Should we use others, genetically engineer them to our purposes? That is the body parts business and so on. These sorts of worries combined with the history that produced this nut factor worry and the Harkinism view that we cannot stop anything so it is all going to go off the rails, they are, I think, not so much and inappropriately linked up to cloning. I do not think cloning has to carry the weight. There are certainly issues to be talked about with genetic engineering. That is for sure. But I do not think cloning is there. And I will tip my hand about human cloning. I said, “What’s wrong with it?” I am going to tell you something’s wrong with it in a minute, but we’re going to take a voyage off to pet land here. But before I tell you about pets and before I tell you some things I think might be wrong although not so wrong as to ban it, just things to think about
or things to be worried about with human cloning, I will say this. I believe that there will be a human clone. I hope there’s no public radio here because then they’ll start coming to me and I will have to go around saying, “And I am going to make it in my basement”. I am sure some day, someone will clone a human being. I actually think that will be moderately interesting and fairly a matter of relative reproductive indifference to what human beings are doing. I do not think a lot of people are going to want to reproduce asexually. Most people find it more alluring to mix their gametes with a partner in the passion of sexuality. I think making something in a dish will not be all that attractive to most people age say, sixteen to forty. There may be some who say they cannot reproduce by any other means other than to clone themselves if they have fertility problems or perhaps are gay or maybe very old. But I do not think that is going to turn out to be a majority way to reproduce and I think partly due to human nature and certain drives and impulses wired into us, our tendency will be to still mate and exchange gametes and take the genetic lottery in some ways and see what happens.

Cloning, copying ourselves, literally copying your genes to send them on to somebody else, I do not think is going to be a very big activity for humans. I mean, it is going to be a really big activity for animals. One way to put this simply is if you think about your pets, and I am heading here, most of us love our animals literally for their bodies. My son has a hamster. I have got cats. We’ve got dogs. We’ve got animals coming up the wazoo in my
house. I usually try to admire and love or engage with people for their minds. I tend to favor interest in animals for their bodies. The further away they become from pet status, the more my interest in their bodies grows. Dolly looks to me like lamp chops walking around. Maybe a blanket. And for a large part of humanity not convinced of the moral standing of the animals, they use animals and exploit them for their bodies. Cloning is very good when you’re trying to replicate bodies. It is not very good when you’re trying to replicate minds. And so I suspect for another reason, human cloning as a reproductive act is not going to turn out to be as attractive once people understand what they can and cannot really do with it.

If you ask me what the future will bring, I will tell you a few human clones for odd purposes that will, of course, be the subject of intense fascination perhaps in the media. But the future as genetically engineering ourselves and whether that is a good or bad thing to do, to enhance ourselves, improve ourselves, change our genes. Who actually would really want to send on to future generations their asthma, diabetes, depression, and baldness, all of which you send on with the clone? It is cruel. Who really wants to be you again? That rotten, defective body and flawed recessive genes, bad diseases, terrible.

Better, you should genetically engineer your children. The goal, morally, is to do better by your children, improve them, try to make their lives better, give them more abilities and capacities, but that is going to require genetic
engineering, not some kind of vanity license plate reproduction. So I do not think cloning actually is going to have much of a big future. I could be wrong. But I think in the animal world it will.

Let’s spend a second looking at animals just to see if we can tease out maybe from that case example what some of the things are that might be wrong about cloning humans or animals. One of the things that people sometimes say about human cloning is, “Well, no one should interfere with it or ban it because people have a fundamental right to reproduce and they should be able to reproduce without interference from anyone ever.” We do not encounter this issue with animals. We rarely recognize a fundamental right to reproduce of animals actually unless they are deer in our parks and then we will not do anything to interfere with them. But normally we spay them and neuter them and do other things to them. This deer crack I am making is because where I live in Philadelphia, the deer are eating the park to oblivion but no one is willing to neuter them, kill them, or do anything to them. They actually have established a fundamental right to reproduction. But short of the deer--it is a Bambi factor problem. We do not recognize any fundamental right of animals to reproduce. So we can put aside what sometimes distorts this debate about the rights and wrongs of cloning although I am going to come back to it about do humans have a fundamental right to reproduce. So we can say that animals generally do not. So that
opens the door up. Why would we think about cloning animals, cloning our pets in particular?

Let me tell you a couple of things that people have said on the Internet that I have pulled down. There’s a place called Canine Cryobank which offers pet cloning but what they are promising is that they will store cells from Fido or Fluffy and when cloning techniques are perfected, you’ll be able to get Fido or Fluffy back. There’s another Internet site called Genetipet. It is a company in towns in Washington near Seattle actually. They sell a kit for extracting blood from your pet to be sent to their frozen storage facility. Costs you 200 dollars to do that and 200 dollars to store a little bit of your pet. Their advertising says, “Our idea is basically this. Your pet is gone but only in a sense. Not really. He’s not totally gone if we still have his blood and his DNA. If we do not save your pet’s DNA now, no amount of money will be able to bring him or her back once the DNA is lost. If scientists are able to create higher life forms through genetic engineering, then we are ready. We have the material stored here and ready to go. If it does not happen, what have you lost? Money. But that is the risk.”

Those of us who are pet lovers really could have them back again. So that is Genetipet. And then there’s the Misiplicity project. This is the Texas millionaire I mentioned before who is now ponied up or promised to pony up $2.3 million to a group of Texas A&M led by Mark Westhuesen, very competent animal biologist veterinarian, to undertake the work to clone their
pet. Their pet, Missy, is a Collie/Husky mix that they got at the pound, is now 11, they love the dog very much. I am not going to go into the detail of their website, but basically what they are saying is they love their dog and they want to see their dog restored to them and they would like to have Missy cloned because they love her so much. They love her bark. They love her behavior. They love her cute little idiosyncrasies. The way she brings her bones in and the slippers in and the whole thing. That that is their dream.

Well, what’s wrong with this? Why should anybody object if someone wants to bring Missy or Fluffy or whoever back? Obviously one thing wrong with it is what was wrong with those early objections to human cloning. These people are all of the opinion and in fact being told in part by places like Genetipet that they are going to restore their pet if they do this, that their pet will be back. That is very unlikely. The pet is not going to come back. Something that looks like the pet may come back. And I would even go so far, being a believer in genetics that an animal may come back with dispositions, behaviors that resemble many of the things that their pet once had. But strange as it may seem, one of the reasons that people love their pets is exactly what was said on the Missy site. Their little idiosyncrasies, little habits, their little nuances, it is their individuality that they like. They do not fall in love with a generic cat. They do not fall in love with a generic dog. They like the little tricks and stunts that their--I
mean, if I ask my son why he likes his hamster, which is the stupidest thing I have ever seen in my life, he will tell me that it quivers in a certain way and squeaks when he comes and does all this stuff. I do not know. I mean, I think it is all accidental contingent behavior, but I cannot break this news to him. But he loves the little idiosyncrasies of this thing, Nuget, the hamster. And that is exactly what he identifies with. He’s not identifying with dispositions and the soft-wiring propensities and the general propensity to hoard and chew on little seeds and store things and run forever in endless circles in the little plastic rotating cylinder. He loves his nuances. But the nuances are what you’re not going to get back in cloning because it is training and environment and development that is going to have to shape and produce them. If Missy comes back or his clone somehow, she won’t have lived a few years in the pound and all the little things that she learned and all the little peccadilloes that she has are going to have to be reproduced somehow. But can they be because they cannot recreate the past that brought those things to bear. Maybe they can. I am actually somewhat skeptical that they are going to be able to feel that Missy has come back to them given the way she’s going to behave. The very things that we might think are trivial and slight differences from the point of view from dog behavior, 95 percent of her behavior being the same, it is the five percent that made them fall in love with her. And they won’t get that back. That is the part that is shaped by other factors and forces.
So I believe in part that one reason that it is bad to clone something is if you dream not so much of immortality, that is too strong, but if you believe somehow you’re going to get back what you’ve lost, you cannot bring back what you’ve lost because you cannot put the same genes in the same river of environment twice, so to speak. Time changes. Those factors change. It would be very tough to recreate all those variables. And if we really do admire and engage one another as people as well as our pets for the small differences and the little nuances and the funny little habits and the little traits, those will be the hardest of all to get back. We will know right away that it is not the same dog because even though she does bring our slippers, she zigzags this way when she does it as opposed to zigzagging that way when she did it. Why? I do not know but that is not the same dog. It is a pretty close copy. Reminds me a lot of old Missy, but it is not Missy.

And so one reason to be nervous or worried about cloning pets or people I think that comes out of the animal case may be that we hope or we dream that somehow we’re going to be able to replicate what is lost. But I think what we know about genetics, what we know about behavior, what we know about what makes us identify with one another as individuals is precisely what cloning cannot bring us. So we risk some disappointment.

Another odd fact about cloning and why you might not think it is a good idea for animals is, weirdly enough, it may make them more disposable. It may make them more of a production so that if I said--well, put aside the
details of cloning. Is it safe? Will the animals age right? You might say another reason to be nervous about pet cloning is precisely what makes Missy fun is that there aren’t other dogs like her. But what if you really could reproduce her? And what if you get pretty close to a lot of the same behavioral and temperamental and physical attributes? Would you in fact have cheapened her value by making her something that you can create? Now I am here to tell you, I have been to puppy mills. I know what it means to mass produce animals for laboratory experiments and other purposes. I know that we do that already so to speak. We have as close to cloning in many arenas of animal production as you would ever want to see. Almost none of those animals wind up being pets. They have no individuality. It is their production line apparatus that makes it hard to relate to them. It probably tells us something about a problem in human cloning. Here’s what I’d say the problem is.

The danger of human cloning, when you think about what might be wrong about cheapening pets because you can mass produce them and almost turn them into throw away items, you can get another one sort of like that. Do not worry about it. The first one did not work out. We will make you another one. When you move that into the people arena, you do not want to find people’s individuality challenged or compromised because they feel somehow that their uniqueness is not so unique. That their feeling of individuality is threatened. Actually, I think that is what its issue--what
people are trying to express when they object to cloning. In a society that is obsessed with individuality and individualism, that is us, more than any other society on earth, the prospect of having many copies is terrifying because we love our individuality, even if it is only 99 percent copying because I am still making some room for the environment and developmental differences. Even if I was a complete genetic reductionist, which I am not, but I am a strong believer in a lot of power in genetics making us who we are, I still believe that it frightens us to think that we might make ourselves less unique, less special because we are copyable.

And so that is the message that you can see about what really might be frightening people, particularly in individualistic Western societies about cloning. It is not so much that nuts will come around and--well, I mean, it is a fear like that. But what they are trying to say is, “I do not want to be devalued. I like my specialness. Do not take away what was different about me. Do not tell me anybody can make me again and again and again.”

Which leads me to a third kind of worry. This does not come from pets. The two points I made do come out of the pet--thinking about pets and why you might or might not want to clone them. They might disappoint you and you might cheapen their value if you could actually do it, but the other reason I think human cloning is suspect has absolutely nothing to do with anything about danger to others or threats to the rest of us. What’s gotten lost in the ethics of human cloning discussion is the question that I think is at
the core of this. And these two points about losing individuality and finding yourself perhaps bothered that you couldn’t bring back what you had lost, a disappointment, point me toward the issue, is it in anybody’s interest to be made as a clone?

That, I think, is a very interesting question. And it is gotten almost no attention in all these debates. Why would not it be in your interest to be made as a clone? I am going to give you three things to think about. I do not think any one of them overwhelms the argument to say, “Well, we would never clone anyone then.” But I think they are things to think about. In all of reproductive technology, I have to sneer now and say, when we talk about reproductive technology, what we tend to do is say, “If the parents want it, if the woman wants it, if the man wants it, then it should just be done and that is the end of it and we will have no laws and no one will get in the way.” Remember I mentioned that fundamental right to reproduce? Stay out of my face and do not tell me anything. Well, the truth is that there is a reason to be concerned about new technologies for making people, whether it is test tube babies or cloning because you do want to ask, “Is that going to be good for the person who’s made in this way? Will it put them in any position where they are burdened or saddled?” I will give you a simple example.

I have had women at University of Pennsylvania who have asked that we take sperm out of their husband who died unexpectedly. And some of you know I have been writing about this and published some studies about post-
mortem sperm procurement. One of the terrible issues about doing something like this is is it good to make someone who has no dad? Is it good to honor somebody’s wish to make a person after the dad is dead when in fact the mom may be acting out of guilt or emotional trauma? The man’s died unexpectedly. She wants the sperm taken. Does she know what she’s doing? Is she going to feel the same way about this a year or two years or four years from now? What if you take the sperm and make the baby and the mom remarries and does not want a reminder of the former husband? It is a new life. Things have changed. So there are things that you need to think about. I will give you the ultimate case. Soon we’re going to be getting adept, it started, at freezing eggs. Should we ever make babies from dead parents when mom and dad are both dead and we pull the egg and the sperm out and fertilize them and make something later? Do you need anybody’s permission or you just do it?

When we ask questions about reproductive technology, the interest of the parties who want to use it are very important. But what we tend to look away from is what does it do to the person who is made this way? And that is what I want you to be thinking about with human cloning. And I have been trying to push there from the pet examples.

The three other points I want you to think about is this first. Why might it not be a good idea to be a human clone? Because if you are the copy of someone you are the involuntary subject to the most systematic genetic test
ever done. You will know all of the things that are under genetic control or predisposition that will happen to you except you will know them by watching them unfold in the person from whom you are cloned. We argue a little bit these days about things like, “What kind of counseling would we supply to someone if they knew they were at risk of Huntington’s disease?” And we thought about a genetic test or BRCA1 and two testing for breast cancer. And I think most of us would agree that we shouldn’t force someone to have a test for Huntington’s disease or breast cancer if they do not want it. They should choose to know. Clones will not choose. They will know they are bald at thirty. They are impotent at forty. They are ridden with stomach cancer at fifty. They are depressed. Is not this a morbid life? Who is this clone parent? Who do we make them from? But they are going to know a great deal about what will await them, what will happen to them, what their future holds because it is going to be written in terms of a biological program that is unfolding 20, 30, 40, 50 years ahead of them. That is a problem. It may not be an overwhelming problem as a reason not to make a human clone, but it is a problem.

You might put it this way. The philosopher Joel Feinberg once wrote many years ago, “Children are owed an open future. You should be able to chart your course as to what you want to be.” If you have all this genetic information thrust upon you because of the way you were made, it may limit who you can be because you cannot be as free knowing what you know
about how you are going to look, what you will be like, what will happen to you in many ways because of this forerunner. Twins do not have this problem. They age simultaneously. Clones will have to look forward. You might call it the Dorian Gray problem. You are going to see yourself age. No matter what you do, you are going to know these facts and fates that await you.

The second issue I want you to think about is, is it a good idea if you are a human clone and made in this way, from the point of view of your interest to look like somebody else exactly who has had a life in front of you? And this again relates to the question of the psycho-social emotional burden. Let me give you an example by describing as the Woody Allen syndrome. Some of you know that Woody Allen married his adopted daughter. Some of you thought that might have been weird. Why? Because normally we think that it is a bad idea to mix parenting with sexual affection for marriage purposes, that you should not mix the roles. Now he is not biologically related to the woman that he is now married, who he helped to raise. So it is not a question of incest. There’s something else going on about roles. If I make a clone of my wife because I love her dearly and now the clone grows up, what is happening in my relationship to my daughter? I am looking at the person I fell in love with. I am looking at the person I had all kinds of feelings about except she’s now 30 years younger than her clone mom. And how do my psycho-social emotional reactions go as I try to deal with this
person who is becoming somebody else that I had all kinds of feelings about but here they come again in this bodily-shapen form that I am very familiar with but in fact might have all sorts of older feelings about because this is the person from long past--my appearance, not the same person. I have already explained it is not re-creation. But many things are going to be triggered if you will, psychologically, biologically, emotionally by seeing a particular appearance and presentation.

That is at one extreme. Clones would face many of those challenges as well if I made a clone and I was just single and the clone person came here and stood here. People would say, “Oh, I bet you’re interested in bio-ethics, huh?” Well, actually, no, I am not. Now a lot of us have to deal with the legacy of our parents and the legacy of our fathers and what they wanted us to be and explain why we’re not architects or lawyers or engineers or plumbers or whatever their dream was or baseball players. It is one thing to deal with a legacy that is psychological. It is another thing to deal with a legacy that is complete appearance imitation. Much tougher to fend it off. Much tougher to carry the burdens. So that might be a problem for a clone. It may not be in your interest to have to lug around the weight of someone appearance-wise in a society very sensitive to that that went before you. I am not saying it is overwhelming. I am not saying it is a reason to ban it. I am just saying it is something that we have to be thinking about when we ask, “What are the reasons you would want to clone someone? And is that
worth the potential cost to their psychological or their, if you will, individual options and choices for what they might become?"

Probably the other type of reason to worry about human cloning, and I saved this to last because I did not want you to obsess about it is, it is not clear that it is safe. Now safety has been the thing that national commissions have worried about and safety has been the thing that probably has driven more bans of cloning than anything else I know. It is not safe. In medicine if you had done an experiment where you had successfully cloned one sheep, 20 mice, even though the mice reproduced, and two apparent cow clones, you would not start clinical human trials. Well, you might in certain institutions, but you would be wrong to do that. That would not be--you would not be right to do that. We do not know what age Dolly is aging at. We have no idea what her dispositions are to disease and disorder. We do not know what really has been created and it is going to take a while to study that, to get a handle on that. You certainly may make an argument that it would be prudent to have a moratorium on human cloning for a few years just to see about safety and risk. What’s the aging process? Will Dolly drop dead as a seven year old animal, the cells from which she came, or a new animal that is just lugging along some oddball genetic misinformation that is not going to harm her? I have no idea. I am certainly willing to defer to experts who study this and think about this. But it has to be shown before you would get anywhere near human beings.
Having said that, that to me is an argument for a moratorium, not a ban. That is an argument for waiting, proceeding with caution and prudence. The other arguments I tried to present to you today are closer to arguments about why you might say it might not be a good idea to do it. It might not be a good idea to do it. Does it threaten our individuality? Does it make us feel somehow that we have to live up to somebody else’s future? Are we lugging baggage through life that we do not want because we know many things that are going to await us? Are we finding ourselves being reacted to and responding to people in ways that we do not like because we look and appear so similar to those who went before us? In that sense, it seems to me—there’s a fundamental question about, is it in our interest to be a clone? Is it in the best interest of a person to be made in this way?

My own view is there is not anything fundamentally essentially wrong with human cloning. My own view is too, that the discussion about human cloning to date has gone off the rails with the kinds of objections that have greeted it. To recap to you, the nut factor worry, the Harkinism, we cannot control it. It is going to crush us, kill us, run us over, something. We will exploit people using it in terms of turning them into our tissue farms and so forth. None of this, I think, is what we need to be worried about with human cloning. I have hinted to you that I do not think human cloning is going to turn out to be all that much of interest, so the debate will be, if you will—and the way I think we ought to think about it and the way I’d like you to think
about it, should we allow people to exercise the option of human cloning knowing that the psychological emotional best interest arguments and what they have to overcome? Could they be overcome? Should we ask people to subject themselves to an assessment? Counseling? A review?

Well, that gets us to the final comment I want to make. People have said, “Well, we cannot do that because no one can interfere with anybody’s right to reproduce.” The one thing I want you to understand as you leave here today, if you get nothing else out, a right to reproduce comes in two shapes. Philosophers like to talk about two kinds of rights. There are positive rights and negative rights. The easiest way for me to explain to you why there is a limit on reproductive rights is for me to point out to you--well, you know, I have been thinking that one of the things I might want to do after this lecture, I will be pretty tense, I think I’d like to exercise my right to reproduce. And I have been looking at the women in the audience and I have got some in mind that I am going to tell them I want my right to reproduce. And I am going to claim it. You guys can try this in bars and things. It does not work very well.

Clearly, something is odd about saying that you have a right to reproduce that is unlimited, that is unbounded. It is true that there is a right to reproduce recognized morally and legally, in fact, both in United Nations documents and in certain American laws about the right to be left alone and not interfered with when you are reproducing. That is a privacy zone if you
want to think of it that way. It has nothing to do with the entitlement to reproduction. The state does not supply you with girlfriends. I cannot get a mate. I cannot run around saying, “Well, I really want to reproduce now.” I have tried that. Nothing happens.

So you do not have a positive right. You have a negative right to reproduction. It is perfectly legitimate if we choose to do so, to ask people who want to use technological means and assistance to facilitate reproduction, to submit to some sort of review or deliberation about why. Why do they choose to do this? We can do this on two grounds. There is no entitlement to a technological assistance in reproduction. If you are lucky enough to be fertile you can go to the bedroom with a willing mate and make all the babies you like. If you are unlucky enough to be infertile, you need adoption. You need IVF. You may need cloning, but in this era we feel that it is appropriate for society to step in and say, “Before we pay for that or before we make this available to you, if we want to, we can restrict who can use this and why.” We might say, “If you’re 80 years old, we do not make orphans.” We haven’t. I think we should. We could. We might say, “It is not good to make children from two dead parents.” We might even say, “Not good to make people when the gametes from which we are getting the people, there has been no permission.” If I were to run around here and take samples of all your cells after you had left and find Richard Seed and his clone company and make copies of all of you, you might feel offended.
saying, “I should have the right to control my reproduction. You should not have the right to reproduce me without my permission.” Of course, cloning would not really--to work would give me the option of reproducing you by getting a piece of your Kleenex. We would just go out and say, “Oh, I have got the DNA. I can make Art whenever I want. Sneeze again, Art. We will have another 20.”

So there’s clearly something wrong about saying this whole discussion is off the rails because we have a fundamental right to reproduce. It is a negative right. It is a right to be left alone. When technological assistance is required, when entitlement or empowerment is required to reproduce, society can--it hasn’t chosen to do much of this, but it could set limits, ask for justification. What I have tried to do today is to convince you that it is not clearly in the best interest of a person to be made as a clone. So it would be reasonable to perhaps set some steps out that people would have to overcome before they would be allowed to do it. I am not saying they could not. But the psychological, emotional, and individuality worries about the best interest of the to-be-cloned person seem to me to be appropriate reasons to limit access to technological assistance in this area. Again, not that you could not meet it. Not that there are not ways for you to say, “I can handle it. I know I am not going to get emotionally entangled the way you are talking about it. I can respect the individuality. Do not worry. I can deal with all this.” I can imagine someone meeting the arguments, but they must
be met. They should be met. And I hope, in fact, that we do not listen to Tom Harkin in that we begin to craft policies that will allow them to be met in the years to come.

Thanks.