

THE CHALLENGE OF MODERN BIOTECHNOLOGY

SCOTT RAE
TALKS TO
PETER HASTIE

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Recently, Peter Hastie spoke with Dr Scott Rae, Professor of Philosophy of Religion and Ethics at Talbot Theological Seminary, Biola University, Los Angeles, on the subject of biotechnology. Dr Rae holds an MA and PhD in Social Ethics from the University of Southern California, and a ThM from Dallas Theological Seminary. His major interest is in how Scripture applies to current social issues. He specialises in the subjects of medical and bioethics and business ethics.

He is the author of a number of books, *The Ethics of Commercial Surrogate Motherhood: Brave New Families?* 1994, *Moral Choices: An Introduction to Ethics* 2000, *Brave New Families: Biblical Ethics and Reproductive Technologies* 1996, *Beyond Integrity: A Judeo-Christian Approach to Business Ethics* with Kenman L. Wong 1996, *Embryo Research and Experimentation* 1997, *Bioethics: A Christian Approach in a Pluralistic Age* co-authored with Paul M. Cox, 1999, *Body and Soul: Human Nature and the Crisis in Ethics* co-authored with JP Moreland, 2000. He is also a consultant ethicist for a number of hospitals in Southern California.

Dr Rae is married and has three boys. He lives in Irvine, California, and when he is not teaching ethics and philosophy, he is coaching his boys' sports teams in soccer, basketball and athletics.

Scott, do you think that the new challenges coming through biotechnology are the most momentous ethical issues that we have had to face during the last century?

Yes I do. I think the desire of biotechnology to remake our humanity is the most significant ethical challenge of our day. It is much more momentous than any challenge that is coming through the environmental movement. The environmental movement simply wants to talk about our external surroundings. However, biotechnology raises questions about who we are as individuals and human beings. The desire of biotechnologists to perfect our humanity challenges some of our metaphysical assumptions about what constitutes a human being.

One of the major problems that we face is that our secular culture doesn't have the moral language to deal with these issues properly. Secularism, which exalts the culture of autonomy, doesn't have any real moral resources to put limits on biotechnology. All it does is draw up various procedures, but for the most part, they all end in consent.

C.S. Lewis once warned that a society that uncritically accepts the wonders of biotechnology will eventually undermine the basis for human dignity. Do you think he is overstating the position?

No. I don't. I think Lewis' concerns for the loss of human dignity have been realised. The

frontal assault on human dignity began in earnest over twenty years ago as we developed new technologies to do abortions and to allow people to follow through with assisted suicide. I find it ironic that we use assisted suicide and euthanasia as a means of ensuring death with dignity when, theologically of course, there is nothing dignified about death. Death and dying represent the ultimate triumph of sin. In modern secular culture we presume that we can somehow have a dignified death by using technology to circumvent the normal process of dying. This is nonsense. In reality, the only dignity in dying is that you face the reality of your loss of control and faculties with courage and resolve. That is what brings dignity.

Why is it that secularists seem to dominate the discussions that are taking place at the moment in bioethics, and not Christians?

The reason Christians are not treated with more respect in bioethical debates is that we always try to simplify the discussions so that the average person can understand it. We love to popularize things. Of course, we need to do that but not at the expense of making a significant contribution to high-level academic discussions. It is in these discussions that the agenda is set which shapes further dialogue about bioethical issues. Catholics tend to understand this issue better than most Protestants. In fact, there is a fairly prominent Catholic adviser on Barack Obama's new Bioethics Commission in the U.S., which is a huge coup. However, evangelicals need to commit themselves to high-level academic involvement in this area and abandon some of their anti-intellectualism. Evangelicals on the whole are too interested in being popularizers and don't engage at a sophisticated level in the really tough questions.

While some Christians express concern about moral issues like abortion and euthanasia, there seems to be more confusion within the Christian community about issues like the new reproductive technologies? Is this true, and if so, why?

I think the reason is that the Bible is very clear about abortion and euthanasia. It doesn't take much to draw a line in the sand on these questions. However, when it comes to thinking about genetic and reproductive technologies, the Bible speaks less directly to those matters. It's hard to quote a chapter and verse on them. So, there is a little bit more room for ambiguity, and there is room for good people to agree to disagree about some of these things.

Our problem is that as Christians we often don't deal with ambiguity well. We are a very black-and-white culture on ethical issues. I have to tell my students routinely that not everything is black-and-white and comes tied up in neat little packages. If you are looking for these sorts of answers, you'll discover that they are hard to find in these areas.

For instance, I think there is room for argument over whether Christian couples can engage in in-vitro fertilisation. My own view is that I think there are ways that it can be done, but it has to be done very carefully and with well thought-out guidelines that must be in place beforehand. The way it is presently done, both in the US and in Australia, makes it problematic. I am a little bit reluctant to draw a hard line and say, "Well, we should never do it". I don't think that is quite the case.

Do you have any explanation why so few pastors seem to be interested in these issues when

lots of people are facing the possibility of childlessness?

If the average pastor is paying careful attention to what is going on in his congregation he will be aware that this is a live issue for growing numbers of people. If he doesn't see a need to address it, this is an indication that he believes in an essentially privatized faith. Many churches today believe that faith is private and personal. We have adopted the stance that culture has forced upon us.

For example, when somebody asks, "How is your spiritual life?", what they generally want to know is how your 30 minutes a day devotional time with God is going. This is a very private view of spirituality. We have so reduced the notion of spirituality to what happens in the private sphere that we are not all that interested in what is taking place around in the wider world.

What is the major theological starting point for understanding what modern medicine, science and technology should be used for? Where do we go in the Bible in search for an answer for that question?

I would start in Genesis 1 and 2 with the dominion mandate. Human beings have been mandated to exercise responsible stewardship and dominion over the creation. Further, we believe that God in His common grace has given human beings the tools to unlock what He has embedded into His creation. However, since Adam's disobedience our calling to exercise dominion needs to be seen more in terms of alleviating or reversing the effects of sin upon us. It seems to me that we can trace the theological rationale for medicine back to the Fall in Genesis 3 when disease, decay and death first entered into human experience. I think of medicine as part of the God's good gift of common grace to human beings to enable them to exercise their dominion mandate from Genesis 1 and 2.

Do you think that Christians should be involved in medicine and play a leading role in it?

I think medicine is an area which stands in continuity with Jesus' healing ministry. It is also entirely consistent with the compassion of God. I believe that the Catholic Church has taken a positive lead in this area which explains why they have become so involved in the care of the sick and health care. Certainly, Christians should see medicine, nursing and other health care professions as important Christian callings.

Many evangelicals would disagree with you in that assessment. They would claim that evangelism and pastoral care have a far higher priority. What's your response to that?

I agree that evangelism is of the highest priority, but we need to be careful what kind of conclusions we draw from that proposition. For instance, it doesn't follow that we should all be full-time evangelists.

Further, we need to take seriously that God has plans for individuals as well as the social order when we are thinking in terms of His kingdom. The prophets are very clear that when the kingdom is consummated there will be a just social order that will ensue. It seems to me that we have a kingdom-based responsibility in the interim to preach the gospel and disciple men and

women as well as attend to God's world. After all, this world is to be transformed, not destroyed.

However, we need to be really careful about how we do this, because some people will say, "Well, you're just polishing the brass on the Titanic". Now the New Testament tells us that prior to the Lord's return, apostasy will be at an all-time high. Does this mean we should no longer proclaim the gospel because there seems so little progress in the preaching of the Word? Would anyone suggest that preaching in such unfavourable times is nothing more than re-arranging deck-chairs on the Titanic? I would think that in such circumstances our duty was to redouble our efforts. My own view is that the biblical standard by which we should assess our efforts, both in evangelism and in the church's social mission, should be faithfulness rather than 'success.' It is not about how many people we win to Christ; it is about how faithfully we proclaim the gospel by both word and deed.

Should Christians consider healing ministries as an important calling?

Those are crucial arenas of service because medicine is in danger of being entirely secularized. There is now a strong trend towards treating us as bodies and not persons. Medicine is fast becoming an assembly-line practice and not a ministry to a person. When it becomes a way of generating income and revenue as opposed to a service, then the whole nature of medicine begins to change.

What distinctive contributions do Christian doctors and other healthcare workers make to the practice of medicine and healing?

I think their work is an extension of Jesus' healing ministry. God, in His providence is using physicians, nurses, social workers, therapists, emergency room personnel, to administer healing in the world today. In a similar way, God uses people in the food industry to feed people, and in the clothing industry to clothe people. In His providence, God has chosen to use those professions to further His work in the world. And if this is God's work, it has eternal significance. I like the way RC Sproul talks about life when he says, "Right now counts forever". If you are practicing medicine faithfully as part of your service to Christ, that has eternal significance.

I am deeply troubled by the dichotomy we now see in Christian circles between so-called 'ministry' (what takes place in the church) and work in other areas. 'Ministry' simply means service, and in the New Testament the arena in which that service occurred always had to be supplied; it was never assumed as it is in our discussions today. When we say that someone "is entering the ministry" we all know what they are doing, but in the first century all that was meant was that they had entered into an arena of service. When pastors step down from their pastorates, it is incorrect to say that they have left the ministry; instead, they have simply changed arenas of service. The only way you leave the ministry is by defecting from the faith. Regardless of the field in which you serve, if you are following Jesus you have entered full-time ministry/service at the moment you came to faith.

What sort of problems does this modern view of ministry cause?

It is doing two very harmful things. First, it is taking some of our brightest and most committed brothers and sisters out of an area of life in which they are desperately needed to be salt and light. When we discourage people from serving in ways beyond specific church ministries we are effectively putting the salt back into the salt shaker. Then the second thing that we are doing is that we are demoralizing our business and professional people, because they are made to feel that they are second-class spiritual citizens. They are simply regarded as pockets to be picked.

'Pay and obey'?

'Pay and obey'. That's right! I have also heard it put like this, 'Pray, pay and get out the way'. It is just a thoroughly unbiblical notion. Paul tells the Colossians that whatever you do, it is the Lord Christ you are serving. We mustn't forget that he was speaking to slaves who were doing the most menial and mindless tasks. Nevertheless those jobs had dignity because they were a mode of service to Christ. It breaks my heart to see people giving up their calling in medicine to go into a pastoral ministry when they have the gifts and passion to continue in their healing ministry. I think it's tragic.

Thinking about the latest developments in reproductive technology, is it possible today to select the sex of your child?

Yes, it's possible.

Do you think there is anything intrinsically wrong with what people call 'family balancing'? If you have three boys and you want a fourth child, is there anything wrong with balancing it by going for a girl?

Personally, I wouldn't encourage it. I think setting specifications on your children violates the idea of children being a gift from God. So, I wouldn't encourage it. I also think it reflects a low view of the sovereignty of God. My wife and I have three boys, and who is to say that our family is unbalanced? They are the children that God gave us.

However, assume that for some reason that you are involved in this process. If so, you need to know that there are three ways to proceed and two of them are intrinsically immoral. The first is to find out the gender by ultrasound, and then abort the child if you don't like its sex. This is intrinsically wrong.

The second way, which is also wrong, is to undergo in-vitro fertilisation, screen the embryos and then discard the embryos that are not of the desired gender. Both of these methods are immoral. There is a third method, called micro-sort technology. This is a sperm-separating technology that gives you roughly an 80-90% likelihood of the desired gender. It's expensive – I think it's around US \$5000-6000 - and it's all done prior to conception. I wouldn't say that it's intrinsically immoral. Nevertheless, a Christian couple should pause before they go down that road because I think the Bible tells us to think of children as a good gift from God. If this is so, then we should receive them gratefully, open-handedly, and without strings attached.

How about other forms of selection? How about eye colour, body shape, even IQ? Is there a

problem in making those sorts of choices if we have the means available?

Well, thankfully that is a theoretical question for the time being.

What, we can't choose eye colour?

We really don't have the means to do that at the moment. All we can do is increase the odds. For example, if you have blue eyes and you wanted to produce a blue-eyed child, you could select an egg donor who has blue eyes. So, you can match the traits of donors and that is about the best that can be done at the moment. Nevertheless, there is no guarantee even with this method because recessive genes can always rear their heads and knock out the best-laid plans. However, as I have already mentioned, the basic problem with all this is that it runs counter to the notion of accepting our children open-handedly and gratefully as God's good gifts. I think it also runs the huge risk of reinforcing some harmful stereotypes about personal traits and body shapes and such like.

Can you explain to us the mechanics of selection? How many embryos do you need to produce a reasonable selection, and what happens to the embryos that aren't used?

Well, scientists try to max it out. So, the woman, prior to the eggs being harvested, will be given special hormones that will allow her to release as many eggs as possible. The aim of this procedure is to obtain the maximum number of suitable eggs.

So, theoretically the woman could produce, say, ten children?

She obviously couldn't carry them all, but she could have ten embryos, which is effectively ten children but without the possibility of gestating them. She could have twenty eggs and easily half of those could be fertilized, if not more. Then the doctors screen for certain things that are clearly genetically indicated, like certain genetic diseases, gender and things like that, and the ones that are not used they discard. Obviously, there are real ethical issues with this.

From a Christian point of view, can you comment on the status of the embryo? How should we think about it? Does it have a moral status?

Yes, it does. The Scriptures think of the embryo in personal terms from the earliest point of pregnancy. The idea of embryos outside the womb is not something that we would expect Scripture to address. From the earliest point of pregnancy what is growing in the womb has the moral status of an image-of-God-bearing person. We know that from the account of the incarnation and David's account of his conception in Psalms 51 and 139 that the embryo is considered a full person with full moral standing from the earliest point of pregnancy.

From a philosophical point-of-view it makes the most sense to use conception as the point at which an embryo acquires its moral status. Every other point of its existence is either arbitrary or has nothing to do with its intrinsic nature. For example, some people say that an embryo/fetus becomes a person at viability. However, viability is irrelevant to the nature or being of a human embryo or fetus. Science can't determine the status of a human being. It is incapable of resolving

a fundamental philosophical question.

As a Christian ethicist, what for you is the most important way of establishing the notion of human dignity?

I think human dignity can only be grounded properly in the notion of humans being made in the image of God. There is no adequate grounding for human dignity on a naturalistic basis. It is only on a theological basis that you can have human dignity properly grounded and adequately protected. The idea that human beings have dignity in the culture today is a widely accepted notion, but people are simply borrowing capital from our Christian forbears on this. There is no adequate way that you ground respect for human dignity in an evolutionary view of the world. Human dignity on this basis, as the psychologist Steven Pinker puts it, is a useless and silly concept.

Many people today who suffer paralysis, heart problems, and Parkinson's disease are being treated with adult stem cells with great success. Is there really any need for experimentation with stems cells from embryos?

In my opinion, there is not. Of course, this view is vigorously contested by the scientific community. Embryonic stem cells have a slight advantage over adult stem cells because they tend to multiply longer and more effectively when they are in culture. In terms of today's treatments and therapies, I am not convinced that there is a real need for using embryonic stem cells.

So most of the therapies are that are currently in use are derived from adult stem cells?

Yes, as far as I am aware, that is the case. Increasingly, what scientists who are involved in this research are telling us is that stem cells derived from non-embryonic sources have many of the same properties as embryonic stem cells. The conventional wisdom is that embryonic stem cells are like a blank slate that they can be engineered into pretty much anything, but that adult stem cells are further down the developmental path and have greater limitations. However, we are now discovering that some adult stem cells, particularly those harvested from bone marrow and from umbilical cord blood, share many of the same properties as embryonic stem cells. It's very exciting stuff that is taking place. I was debating the director of the Stem Cell Institute at the University of California, Irvine, and he said publicly that once we are able to reverse-engineer adult stem cells to an embryonic stem cell-like status, then he would give up working on embryonic stem cells.

Are there any medical problems related to the use of embryonic stem cells?

There is a huge comparability problem because, just as a bone marrow donor has to be an exact match with the recipient, so a stem cell donor has to be an exact match as well. The vast majority of embryonic stem cells that are derived from embryos in storage today are useless for the average patient as a direct form of treatment.

So you actually have to go and create an embryo with somebody who is in your family?

Yes, or you can do it with yourself. The best way to do that is to clone yourself, but that is a very tricky business. That is the only way to ensure that embryonic stem cells will be compatible. Of course, the best way to do this is if you derive the stem cells from your own bone marrow or other parts of your own body and then the compatibility is assured.

Does biotechnology hold out any real hope that we can bring about a world where suffering and disabilities are totally eliminated?

I think our modern secular culture believes that biotechnology provides us with the only hope for the sickness and suffering that's our lot.

What is really missing today is a positive Christian articulation of the virtues of accepting some of the givens in life. We accept our eye colour and hair colour as givens from God. Those aren't things that we are called to change. The hope is that we can realize the eradication of our fallen human nature. It is the ultimate triumph of what Francis Bacon suggested was the goal of medicine in the first place, which is the mastery of the human state. I don't think that Bacon quite envisioned what that would look like today. I don't think he ever foresaw that we would one day take control of our own nature. He simply envisioned that we would master the external forces and sources of suffering that are inflicted upon us.

Technology has allowed us to slowly gain dominion over the whole creation and biotechnology is helping us to get dominion over ourselves. How dangerous is it to do this?

The way we talk about this is very interesting. I think it represents a very significant but subtle threat. It's akin to the frog in the kettle where the temperature rises slowly and the frog expires before it realises what has happened. Most people today are talking in excited terms about the potential of biotechnology. However, for the most part, they haven't grasped the underlying dangers that accompany it.

What dangers are you talking about?

The main danger, I think, is that our humanity is under threat. We shouldn't forget that most of the people who are exploring how to perfect our physical being are materialists. They see everything in purely physical terms and think of people as nothing more than their parts and properties. They don't regard us as having an underlying humanity. For them, biotechnology is simply the attempt to re-engineer the body. If the day ever comes when a majority of people think of a human being as nothing more than a collection of parts and properties, then that will be very bad news for the unborn, the elderly, people in comas, and those who can't perform a lot of bodily functions.

If the materialist view ever gains ascendancy in our culture, then concepts like moral responsibility and criminal justice will come under serious threat too. If we are nothing more than our parts and properties and we don't have an enduring nature, then it is quite plausible to say that if I commit a criminal act today, then a year from now I will be a different entity from the one that committed the act. To my knowledge, no one has really had the stomach yet to

follow through with this idea and say that we can evade responsibility by claiming that we are different persons.

What changes have been taking place in people's thinking that now allows them to think of the human body and its organs as simple commodities?

The revolution in reproductive technology has been the driver behind this idea. We now have eggs for sale and wombs for rent. Business has seen an opportunity here and now we are outsourcing these services to other parts of the world. We have created a whole industry in America that has become known as 'reproductive tourism'. We now have a commercial bazaar for our reproductive materials. Some people have extended this idea and have suggested that if we can reproduce babies by using human sperm and eggs which are excess to our needs, why can't we do this with kidneys when we don't need both of them to survive? At the moment we are not too far away from looking at some human beings as sources for biological spare parts.

Where do you think the commodification of body parts is leading?

I think we are going to see more and more body parts that will become marketable items. Part of the reason for this has to do with the globalization of economic life in general.

So, people will sell or be sold for their body parts?

There will be increasing numbers of people who will be selling their organs to escape poverty. Further, unscrupulous business interests will exploit this market and thus will begin a new wave of human trafficking.

So people will be kidnapped and have their organs taken?

Yes, that's right. It doesn't take a lot of imagination to see that happening in countries where there are few human rights or where there is very weak law enforcement. The human trafficking network is very sophisticated today. Criminals will be hard to catch. But it might be a while before that sort of thing starts because there are probably too many people who are willing to sell a kidney to escape poverty.

So what is happening now?

In the US at the moment people are using the internet to get past the donor registry and jump spots on the list for organ donations. They are already using the internet to arrange for private sales of organs. The other place I think we will see this happening is with children who are being put out for adoption. We will see them sold by their parents. In fact, most people in the developing world would rather see their children sold to affluent middle-class families than into prostitution or slavery. I think we will see that as an application of human trafficking as well.

Is there a link between pro-choice views on abortion and embryo experimentation?

Yes, there's a definite link. Adoption facilities are also facilitating the adoption of embryos that

have been left over from IVF treatment. Pro-choice feminists object vehemently to these being called 'adoptions' because the suggestion, of course, is that there is a parallel between what is an adoptable newborn and an adoptable embryo, which they want nothing to do with. If you Google 'embryo adoption' or the 'snowflake program' you'll see that there are a number of places that supply this option today.

Is there a difference between wanting a child and wanting a perfect child?

There is a huge difference. It comes down to whether we have any rights in these matters. We have a limited right to attempt to procreate. We do not have the right to a child, or to a child that meets certain specifications, still less to the 'perfect child'. I think it's also important to point out, just as an aside, that none of us are genetically perfect. We all have genetic glitches.

Is there any connection between the eugenics movement in the early 20th century and the biotech movement in the early 21st century, and if so what is it?

Yes, there is a connection. The eugenics movement in the US exercised such influence in the 1920s that it led to the United States Supreme Court suggesting that men and women with certain mental disabilities, or even habitual criminal activity, could be involuntarily sterilized. As William James Bryan, who was a very well-respected justice and a Christian, put it (to his shame), that “three generations of imbeciles are enough”. That decision wasn't overturned until 25 years later. It is not well known that the founder of Planned Parenthood, Margaret Sanger, was a vocal advocate of eugenics in the 1920's. So, that is a dark part of American history.

The parallel between the two movements is seen in their shared beliefs that we can somehow engineer all of our flaws and faults out of our natures. They also share a common view that there are medical solutions to emotional and spiritual issues. For instance, there are many today in biotechnology circles who believe that we can deal with habitual criminal behaviour with drugs.

Do you think it is okay for Christians to undergo IVF procedures? Are there any moral problems involved?

There are certain problems, however I would say generally “yes”, but under certain conditions. The first condition is that every embryo that you create in the lab is entitled to be implanted, which in a best-case scenario is with the couple themselves. If they are for some reason not able to do that, then they are obligated to find a compatible couple to adopt their embryos. That would be one. No embryos should be discarded.

So, the other couple would be surrogates?

No, the other couple would be adoptive parents. Now, the second parameter on this is that under no circumstances should the couple ever be in a position to selectively abort some of the fetuses. You can always avoid that by just limiting the number of embryos implanted to the number that you can safely carry.

So the technology exists that if I said I want three children potentially, I can actually

fertilize or create three embryos?

You would probably have to create more embryos than that, but you can limit the number that are actually implanted into the womb.

What happens to the others?

The others are frozen and put into storage for use at a later time. That is why I say that every one that is created in the lab must have an opportunity to be implanted.

The responsibility is on the couple to ensure that their children that they create in the lab are adequately cared for. If you can't do that, or if you don't have the stomach for it, then don't go down that road. Just don't go there.

Are there any serious medical problems that IVF increases the risk of?

The evidence is a little spotty on this. There is some suggestion that there is a slightly higher instance of some genetic abnormalities. I wouldn't say that that is particularly conclusive evidence. So, it is just not particularly clear.

Why do pastors maintain silence on IVF? I mean, you don't hear many people preaching about it.

Well, because for one it is complex. Scripture is not as clear about it as we like and I think we are afraid to offend couples who have already gone down that road. It's the same reason that we don't preach on abortion that much. We are trying not to offend people who have had abortions. The down side of that is that people don't ever hear the truth.

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