

Cloning, What if?



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2017

Introduction

Cloning, or Somatic Cell Nuclear Transfer (SCNT), is the process of asexual reproduction that bypasses the normal process of conception to produce a person with the exact DNA, genome and genetic structure as their somatic donor.

There are two categories of cloning; reproductive cloning, in which the embryo (see below *Original Sin* for the process of cloning) is implanted inside a uterus and allowed to go full term to bring forth a cloned offspring, and therapeutic cloning, where the embryo is never implanted but is studied, experimented on or harvested for stem cells.

There are currently 31 countries including Australia, France, Germany and Russia who have outlawed both reproductive cloning and therapeutic cloning, and an additional 15 including Japan, the UK and Israel that allow therapeutic cloning but have outlawed reproductive cloning. Out of these 46 nations only 7 including Italy, Switzerland and Ireland (not Australia) have also outlawed stem cell research. While individual states in the USA have outlawed cloning there is no federal prohibition.

(Wheat/Matthews - www.ruf.rice.edu/~neal/stemcell/World.pdf)

There are also no international prohibitions or regulations on cloning. (Deutsches Referenzzentrum für Ethik in den Biowissenschaften - www.drze.de/in-focus/research-cloning/legal-aspects?set_language=en)

I am opposed to all forms of cloning, as are the Roman Catholics and United Methodists (Chapman: 93-95). However, despite my opposition cloning is not outlawed internationally, and even in those places where cloning is outlawed, legislation is always subject to change. Within the future the laws around cloning may change, cloning may become more common and human reproductive cloning may become a regular practice.

If such an occasion were to arise then we could most likely be faced with a situation where clones become an integrated part of society. Clones could be walking down the street, working alongside us, living next-door and attending our churches. If this were to happen what would we do?

At the moment the Church is focused on answering questions in regards to the process of cloning and has focused a lot of attention on the prevention of cloning. I, however, am less concerned with prevention and more concerned with reaction. This paper is not aimed at determining whether or not cloning should or shouldn't happen. Instead, my goal is to look at how the Church should react if human reproductive cloning became a common occurrence. While I am opposed to all forms of cloning, I am less worried with preventing cloning and more worried about how I, as a pastor, would react if I had a congregational member who was a clone.

In this paper I would like to address some theological and ecclesiastical issues of human cloning such as: What do we do if a clone wishes to join our congregation? Do we baptise clones? Do clones go to heaven? "Will clones be made in God's image and likeness? Will they have eternal souls? Will God hold them responsible for their sins? Do they have the capacity to worship God? Will they be sinners by nature and by choice?" (Lester/Hefley: 14,43) and also some socio-political issues such as: Will cloning destroy the traditional family? Will clones provide humanity with a new soldier/slave class? Do clones possess all the rights and responsibilities of a natural born human? Are clones to be treated like a new subhuman species, homoreplica? Is it okay to let clones be experimented on? Should clones be allowed to marry?

Before I can look at the implications of human reproductive cloning, I need to answer four foundational questions:

1. Do clones possess an individual personhood?
2. Do clones possess Original Sin?
3. Do clones possess the Image of God?
4. Do clones possess an individual soul?

Nature's "Clones"?

Many theologians believe clones already exist in the form of identical (monozygotic) twins (Polkinghorne: 37, Shinn: 115, Lester/Hefley: 27). While identical twins do come from a single egg and do share the same DNA and genotype, they are not typically clones, at least not in the same way as those born of Soma Cell Nucleus Transfer (SCNT). "Cloning is very different to twinning. Unlike clones, twins are not the copies of another person." (Sutton:72) Clones face a very different reality to that of identical twins. With identical twins they are both formed at the same time from the same egg, neither one is the source of the other (Chapman:101).

In addition to this twins are produced from a zygote (fertilized egg) while clones are produced from a manipulated oocyte (unfertilized egg) (see below *Original Sin*). In this way clones are produced without a sperm and therefore experience a number of theological issues involving Original Sin and the Image of God that identical twins don't have to face.

However, issues like individual personhood and individual soul are two questions that are relative to both identical twins and clones. In regards to issues of identity and individuality identical twins are probably our best window into understanding the individual personhood and eternal soul of clones (Cole-Turner: 122).

Personhood

The first foundational question surrounding cloning is "do clones possess an individual personhood?" This question would seem to be an easy one to answer, yes, of course clones possess their own individual personhood. "We can clone or copy genes, we cannot clone or copy the organism... every organism, and certainly every human person, clones or not, is unique." (Cole-turner: 125). However, some have not seen this to be such a clear matter. As Bruce says, some identify human individuality solely with genetic identity (:8). As Peters says, the first assumption is that for a person to have an individual identity they must have an individual genome. (:16)

This seems nonsensical; clones share completely different bodies, therefore, of course they possess their own individual personhood:

"Most of the religious participants recognized that each person is a unique expression of the interplay between genes and environment and therefore a clone would not simply be a carbon copy of the person from which his or her genetic structure was obtained... a person created through cloning will be unique in many ways." (Chapman:101)

Genotypes (genetic traits) and phenotypes (environmental traits) are not the same thing. (Lebacqz: 50) A clone may be a copy of a person's genome, but they are not a copy of the person. The clone will develop in a different uterus, family and society. (McLean: 17)

"Clones would have different phenotypes (just like identical twins), a different sense of self, different thought processes, and different ethical responsibility. Their biological uniqueness would remain, let alone their spiritual uniqueness, which lies in their relation to God. Our value rests upon a dignity bestowed by God and is independent of our genetic status. Our identity before God comes from God's ongoing grace and from our desire, or lack of it, to live in close communion with him. This is not biologically based."(Jones: 28)

When it comes to understanding individual personhood we can learn a lot from identical twins. Even though identical twins came from the same zygote, developed in the same womb, share the exact same DNA, genome and genotype, they are both separate and unique individuals. Each twin possesses their own interior consciousness, sense of self, thought process and ethical responsibility. "Despite parents who may occasionally dress them alike and treat them alike, they grow up as separate and distinct individuals." (Peters: 17) Environment plays an important role in a person's development, twins may be very similar in many ways, but they are also very different unique individuals with unique traits and personalities. (Cole-Turner: 123)

The reality of identical twins are a perfect example of the individual personhood of clones; clones are nothing more than a twin delayed in time (Peters: 17), they are both individual persons each with their own self-consciousness (Shinn: 115).

Biblical Examples of “Cloning”

There are two issues that emerge when we try to use the case of identical twins to understand the theological implications of clones. The first is that identical twins are born of fertilized zygote and clones are born from an unfertilized oocyte. The second is the lack of Biblical examples. There are a total of three sets of twins recorded in the bible, Jacob and Esau (Gen. 25:21-26), Perez and Zerah (Gen. 38:27-30), Thomas and his twin (John 11:16; 20:24; 21:2). Of these three cases it is unknown whether any of them were identical, in fact, the text is clear that Esau and Jacob were fraternal twins (Gen. 25:25-27, 27:11).

However, there is in Scripture two cases of incidents that are similar to cloning and could possibly be considered a form of cloning: the creation of Eve and the Virgin Birth of Jesus. (see Grieger: 21-23, Lester/Hefley: 45-48, 32-34)

I'd like to preface both of these accounts by saying that they are special divine circumstances performed by the intervention of God; therefore they should not be used as proof texts to defend the practice of cloning. In addition neither account is like the modern day process of cloning and remain very different to the SCNT procedure. However, I do believe both accounts can shed some theological light on the issue of cloning. I'll deal with account of Jesus' Virgin Birth later (see below *Original Sin*) but for now I wish to draw your attention to the account of Eve's creation and how it can shed some light on the individual personhood.

In Genesis 2:22 God created Eve from the genetic material of Adam's rib. "Recent biological research confirms the feasibility of a woman being created from a man." (Grieger: 21) Women possess an XX chromosome while men possess XY. When cloning a person with XX genetic material you can only ever produce another female. However, if the genetic material is XY it is possible to remove the Y chromosome and double the X chromosome to produce a female instead of a male (Grieger: 22, Lester/Hefley: 47). Genetically speaking Eve would have possessed the same DNA as Adam except she lacked a Y chromosome.

Eve's creation was a special divine creation unlike modern day clones. However, like modern day clones she was not produced from a zygote and she would have shared the same genetic material as her donor.

Original Sin

St. Augustine of Hippo taught that Original Sin was passed down by the semen (*City of God Book 13 Chapter 14* - www.newadvent.org/fathers/120113.htm). St. Thomas Aquinas also taught that Original sin is transmitted to the children, not by the mother, but by the father (*Summa Theologiae First Part of the Second Part Question 81* - www.newadvent.org/summa/2081.htm#article3). Sin entered the world through Adam not Eve (Rom. 5:12) and humans are described as being made in the Image of Adam (Gen. 5:3). Original Sin is passed down from the father, through the semen.

Unlike other forms of artificial reproduction, Artificial Insemination (AI) or In Vitro Fertilization (IVF) or Gamete or Zygote Intra-Fallopian Transfer (GIFT/ZIFT), the SCNT process does not require any sperm. Unlike ZIFT or IVF in which the sperm and egg are mixed in a Petri dish and then the fertilized egg (zygote) is placed inside the woman's fallopian tubes or uterus, SCNT is a spermless procedure. In SCNT the nucleus in a mature unfertilized egg (oocyte) is destroyed, thus removing its DNA and making it a blank slate. The nucleus is then removed from the donated somatic cell (non-reproductive cells, from the Greek *soma* meaning 'body') and transferred into the now blank egg. The egg (oocyte) is then subjected to a mild electric shock and manipulated in order to trick the oocyte into functioning like a zygote. Once it begins to divide (just like a fertilized egg in IVF) it is placed

into the woman's uterus where it will grow into a fetus and if it survives the full term, it will be born as genetic replica of the somatic donor. (Lester/Hefley:13, Kass:331, Fitzgerald:8-10, Ontario Consultants on Religious Tolerance - www.religioustolerance.org/clo_ther.htm)

There is a second type of "cloning" known as Artificial Twinning (AT). The AT process is very similar to IVF in which the sperm and egg are mixed in a Petri dish to form a zygote. The zygote is then forced to split thus artificially creating identical twins. At this stage the multiple zygotes are placed into multiple uteri. The clones (twins) are then born from different women. AT is a very uncommon form of cloning and SCNT is the preferred method of cloning. The AT method of cloning is nothing more than an artificial way of producing identical twins (The Association of the British Pharmaceutical Industry - www.abpischools.org.uk/page/modules/cloningnew/typestwinning.cfm?coSiteNavigation_allTopic=1). These "clones" are produced from both an egg and a sperm and are no different from humans produced through conception AI, IVF, or GIFT/ZIFT. These "clones" are not clones at all but simply identical twins which developed in separate wombs. As these twins were formed from sperm and egg like natural identical twins they would possess Original Sin, passed down from their father, just like any other human born from a zygote.

There is a third type of cloning which exists. This is known as parthenogenesis (Greek of virgin creation/birth) in which the egg doubles its chromosomes and functions as a zygote, eventually producing a cloned offspring of the mother. Parthenogenesis has only been observed in reptiles and invertebrates and cannot occur in mammals, let alone humans. While natural parthenogenesis is impossible in humans, however, hypothetically speaking an artificial parthenogenesis (AP) could be possible. It is possible to manipulate an oocyte to function like a zygote (as seen in the SCNT method), if this was done to an egg which retained its original nucleus then an artificial form of parthenogenesis would occur.

Some sceptics of the Virgin Birth claim Jesus was born through parthenogenesis, however, parthenogenesis creates an exact clone of the mother thus creating only female offspring. Jesus was male and thus possessed a Y chromosome. Jesus' Y chromosome was most likely a special creation of God. (Lester/Hefley:33) He received His flesh (and His X chromosome) from Mary (FC.Epit. XII.3, FCSD XII.25, Athanasian Creed .29), in this way His DNA is a replica of Mary's except possessing a Y chromosome, in the same way that Eve was a DNA replica of Adam except lacking a Y chromosome (as mentioned above in *Biblical Examples of "Cloning"*).

The importance of this is that Jesus was born from an unfertilized egg. St. Augustine of Hippo and St. Thomas Aquinas taught that since Jesus was born without Original Sin because He was not born by the will of man (John 1:13) and not conceived by human semen (Siefert - www.memoryhole.net/~chris/research/original_sin.html, Imtiaz - www.academia.edu/11843735/saint_augustines_doctrine_of_original_sin) Henceforth, if Original Sin is passed down by the semen and Jesus was born without Original Sin by divine parthenogenesis, then logically speaking clones born by SCNT or AP would be born without Original Sin. Scripture teaches that Original Sin is present from the point of conception (Ps. 51:5), but what happens when there is no point of conception? Article II of the Augsburg Confession says that all humans who are born and conceived in the natural way have Original Sin. What then of clones who are not born in the "natural way"?

We could argue that male clones would inherit Original Sin from the male nucleus transferred into the egg (see below *Image of God*). This argument, however, still raises questions over female clones as they are born from an egg and a female nucleus. (Hodge - www.answersingenesis.org/sin/original-sin/sin-nature-passed-through-fathers-genetic-line/)

The solution to this problem would be to say that Original Sin can be passed down by the mother. In fact Psalm 51:5 states that “in sin did my **mother** conceive me” (emphasis mine). This could suggest that sin can be transferred by the mother; however, this is not strong evidence as this is referring to conception and a woman cannot conceive without sperm from a man.

Now Scripture teaches that sin comes from Adam and not from Eve (Rom. 5:12, 1 Cor. 15:21), this is due to the fact that Adam was the head (Eph. 5:23) and was responsible for the pair. This does not mean that Original Sin cannot be passed down by a woman, since a woman is a descendant of Adam and her clone would be too. The Formula of Concord Solid Declaration even suggests that Original Sin is passed down by both father and mother. FCSD Article I.7 says that “Original Sin is transmitted through carnal conception and birth from father and mother through the sinful seed,” and I.27 says that “the nature of all human beings conceived and born in natural fashion by father and mother inherit the same deficit and corruption.” Again this uses the term conception and natural fashion, and clones are born neither naturally nor through conception. However, both statements say that Original Sin is from both father and mother. Also in Art. I.9 the Concordists in reference to Romans 5:12 state that this inherited defect comes from Adam and Eve. Henceforth Original Sin is passed down by the “sinful seed” not only the seed of the father (sperm) but also the seed of the woman (egg). Henceforth, all clones possess Original Sin by virtue of the woman’s seed (egg).

This, however, raises a serious issue concerning Christ. If we were to teach that Original Sin can be passed down by the seed of the woman wouldn’t that mean that Jesus, who is born only of the seed of woman (Gen. 3:15), received Original Sin through the flesh of Mary. This is blasphemous, as Jesus was like us in every way except for sin (FCSD I.43, Heb. 2:17, 4:15).

Aquinas taught that Jesus did not contract Original Sin because He didn’t have a father (ST Art. 4) and objects to the belief that Original Sin comes from the mother as well as the father (ST Art. 5). Aquinas states that “Original Sin is contracted, not from the mother, but from the father,” and believed that if Adam sinned and not Eve their children would have had Original Sin, but if Eve had sinned and had not Adam, then their children would not have contracted Original Sin.

As stated above, I believe the Scripture and the Book of Concord states otherwise. In FCSD Art. I.44 it says that Jesus took on human flesh “but did not take Original Sin upon Himself,” suggesting that Original Sin was bound to the flesh that He received from Mary, but Jesus in virtue of His divinity did not take Original Sin upon Himself. In fact, this is what Augustine taught. Augustine did teach that Original Sin is passed down seminally but he also taught that Christ “having become man, but still continuing to be God, never had any sin, nor did he assume a flesh of sin, though born of a maternal flesh of sin. For what He then took of flesh, He either cleansed in order to take it, or cleansed by taking it.” (*On Merit and the Forgiveness of Sins, and the Baptism of Infants* Book 2 Chapter 38 - www.newadvent.org/fathers/15012.htm) Thus, Augustine taught that Original Sin was passed on by Mary to Jesus but He did not take on Original Sin. Jesus avoided Original Sin by His continued divinity either cleansing the flesh prior to the Incarnation or by the Incarnation. How Christ cleansed the flesh is not important, what is important is that He cleansed it. I personally would prefer the latter view that the flesh was cleansed by uniting the humanity with the divinity (2 Pet. 1:4).

In conclusion all clones, whether born from SCNT or AP, bear Original Sin which is passed down to them by the egg. Christ, having been born by divine parthenogenesis, avoided Original Sin due to His divinity.

When the Book of Concord talks about those being born of natural birth inheriting Original Sin (AC II.1, FCSD I.27), and thus those unnaturally born being born without Original Sin; the unnaturally born is not a reference to cloning. Neither Melancthon nor Chemnitz knew of cloning when they wrote the Augsburg Confession and Formula of Concord. Instead, what they meant by natural birth is any human apart from Christ, who alone is conceived and born through unnatural divine means. Thus what is meant in these articles is that all humans inherit Original Sin (clones included) yet Christ who was unnaturally conceived and born, was without Original Sin. “There is no reason to believe that clonal people will not be sinners, just as we are.” (Lester/Hefley:48)

Image of God

When God made man he created **him** in the Image of God, male and female He created them (Gen. 1:27, 5:1). In order to determine whether clones possess the Image of God we must determine how the Image of God is received. Adam, the first human, was specially made in the Image of God; but what about his descendants? Scripture teaches that we bear the Image of God; in Genesis 9:6 murder is said to be sinful because man is made in the Image of God, and in James 3:9 cursing is said to be wrong, for man is made in the Likeness of God.

Firstly, what is the Image of God? According to Mohler Jr. the precise nature of the Image of God is unknown. (:95) Aquinas connected the Image of God to consciousness and intelligence, Calvin connected the Image of God to the ability to glorify God, while the Lutheran Reformers connected the Image of God with righteousness, holiness and knowledge of God. In the Apology to the Augsburg Confession Melancthon connects the Image of God to knowledge of God, fear of God, love of God, trust in God, faith in God, confidence in God, a wisdom and righteousness that would grasp and reflect God. (Apol. II.14-22). Chemnitz follows the same line of thinking and connects Image of God to truth, holiness and righteousness (FCSD I.10).

Chemnitz refers to Original Sin as a complete absence of Original Righteousness, a complete absence of the Image of God, that Original Sin replaces the Image of God. This teaching is Scriptural, Colossians 3:9-10 talks about taking off our old self and putting on our new self which is renewed in the Image of the Creator. Quoting St. Ambrose the Apology says that a soul that is without God is without the Image of God (II.19). Our old self, without Christ, is completely corrupt but our new self is created to be like God in true righteousness and holiness (Eph. 4:24). By putting on the new self, we bear the Image of God, because our new self is clothed in Jesus Christ (Rom. 13:14, Gal. 3:27) the true Image of God (2 Cor. 4:4, Col. 1:15). This would make sense, Adam and Eve in their Original Righteousness bore the Image of God. The Image of God was lost due to the Fall but restored and renewed in Christ. Taking all this into consideration, does this mean that non-Christians do not bear the Image of God? If yes, this has dire implications, as Genesis 9:6 states that murder is wrong because it is wrong to kill someone who bears the Image of God. Thus if non-Christians don't bear the Image of God, then logically it would not be sinful to murder non-Christians. This sounds like a returning to the dreadful Crusades where the Church taught that "thou shalt not kill" only applied to Christians and that the Crusaders were allowed to kill Jews and Muslims.

I seriously doubt that Chemnitz would be suggesting that it is okay to murder non-Christians, and I doubt that he was saying non-Christians don't bear the Image of God at all. This section of the Formula is regarding the complete corruption of human nature by Original Sin. Chemnitz is trying to say that through the complete corruption of Original Sin, humans lack all good in spiritual matters and have a complete absence of any ability in anything that relates to God. Original Sin deprives the unrenewed human of the gifts, power and capacity to initiate anything spiritual. It is for this reason "that by my own understanding or strength I cannot believe in Jesus Christ my Lord or come to Him." (SC.2.6)

How then do we know that non-Christians bear the Image of God? We know this in three ways. 1. If the Image of God is connected to knowledge of God, then all people bear the Image of God because all people have a knowledge of God. Even though nonbelievers are ignorant of the LORD our God (1 Sam. 2:12, 1 Cor. 15:34, Gal. 4:8, 1 Th. 4:5), God has made Himself known and plainly revealed Himself through nature, so that even the Gentiles knew God (Rom. 1:18-21). The foolish atheist may say there is no God (Ps. 14:1) but even they, deep down, know that there is a reality higher than themselves. This mere knowledge of a higher being will not save you (FC.Epit. III.6) for even the demons know there is a God, and they shudder for fear of Him (Jas. 2:19). Even the Jews know of the LORD God, yet because they do not have faith in Christ they will not be saved (Rom. 10:1-4).

2. If the Image of God is connected to righteousness and holiness, then all people bear the Image of God because, even though without Christ our good works are nothing but filthy rags (Isa. 64:6) all people still perform righteous deeds. As Christians we do righteous deeds through the power of Christ

(Eph. 2:10, 2 Tim. 2:21) but even the pagan unbelievers still do righteous deeds (Matt. 5:47, Luke 6:32-33).

3. In the Formula of Concord Epitome Article VI(.2) on the Third Use of the Law, Chemnitz connects the Image of God with the Law of God written on our hearts. He states that Adam and Eve did not live with the Law before the Fall. Instead, the Law was written on their hearts, because they were created in the Image of God. We know from Scripture that Christians have the Law written on their hearts (Jer. 31:33, Heb. 8:10, 10:16) and thus we have the Image of God, but we also know that non-Christians have the Law written on their heart (Rom. 2:15) and thus also bear the Image of God. Even though the Image of God has been corrupted by sin, it has not been removed. Every human being is made in the Image of God (Mohler Jr.: 95).

Adam's descendants bear the Image of God, but if Adam alone was originally created in the Image of God, then how do we receive it? How did Eve receive the Image of God if only Adam was created in the Image of God?

The answer to the first question is given in Genesis 5:3 where Seth is born in the Image of Adam. Adam has the Image of God and Seth bearing the same image as Adam also bears the Image of God. (Sutton: 32). But what of Eve? Did she get her Image from Adam or did God make it especially for her like He did for Adam? (Lester/Hefley: 47) Scripture does not tell us specifically where Eve got her Image, but nowhere in the Genesis account is woman said to be made in the Image of God. Instead in 1 Corinthians 11:7 man is said to be the Image and Glory of God while woman is the Glory of Man. Following the same method as we did for Seth this would confirm that Eve got her Image from Adam.

Now, one could argue that both these accounts are from Adam, thus suggesting that the Image of God is passed down by the father only. This would lead us to a similar struggle that we faced with Original Sin being passed down by the father, and clones being produced without a father (especially female clones which lack both sperm and male DNA). We already established that Original Sin could be passed down by the woman, so why not the Image of God?

To answer this question I decided to once again ponder the parthenogenesis of Jesus. Jesus received His humanity from Mary (FC.Epit. XII.3, FCSD XII.25, Athanasian Creed .29), and if not for His divinity, He would have also received Original Sin from her. (Augustine – On Merit and the Forgiveness of Sins, and the Baptism of Infants Book 2 Chapter 38 - www.newadvent.org/fathers/15012.htm) However, did Jesus also receive the Image of God from Mary? Now we know from Scripture that Jesus, as the God Incarnate, is the Image of God (2 Cor. 4:4, Col. 1:15), thus in virtue of His divinity Christ is the Image of God. However, with respect to His humanity did He also, like us, bear the Image of God? Scripture is not clear on this point, except that Hebrews 2:17 says that Jesus became like us in every way. In regards to His humanity Jesus has become just like us. (Augustine – City of God 9:17 - www.newadvent.org/fathers/120109.htm) Thus by virtue of His humanity Jesus was born with the Image of God, as we are, and having no earthly father He must have received the Image from Mary as He did His humanity. Thus clones receive the Image of God from their donor.

Herman Bavinck said that “man does not simply bear or have the Image of God; he is the Image of God.” (cited in Mohler Jr.: 95) Humans are made in the Image of God and by virtue of our creation and birth as humans we are born in the Image of God. By the very virtue of our humanity we bear the Image of God. “Both Christianity and Judaism conceptualize the human person as the Imago Dei.” (Chapman: 149) Thus we receive our Image of God through and from our parentage when we come into physical existence. Natural born humans receive their Image of God from their parents just as they receive their physical bodies (as Seth did from Adam) and clones would receive their Image of God from their donor just as they did their body (as Eve did from Adam). A clonal person would then bear the Image of God as much as anyone else. (Lester/Hefley: 47)

Soul

The final foundational question we need to answer before we look at the issues of having clones in the Church and society is, do clones have souls?

Chapman states that despite any theological concerns, there is a complete consensus among theologians that any child that is produced by cloning will be a full human being, created in the Image of God, with their own unique soul (:98).

In order to agree with such a statement we must determine how a clone gets a soul, and in order to do that we must discuss how anyone gets a soul.

The Catholic Church teaches that soul (or spirit) is present from the point of conception (Lester/Hefley: 49). The Church Father Tertullian believed that life starts at conception because the person's soul begins at conception (*A Treatise on the Soul* Chapter 27 -

www.newadvent.org/fathers/0310.htm). But how does a person get a soul? There are numerous theories that have been proposed, many of which have been condemned, such as: reincarnation, God creating all the souls during Creation and placing them into human bodies upon conception, a pantheist theory that all souls are one with God's soul (Emanationism), and the bizarre belief that angels turn into human souls by taking on flesh (see Jerome's *Apology Against Rufinus*). However, there are two views that have held strong throughout the tradition of the Church, Creationism and Traducianism.

Creationism is the belief that God creates a new soul and infuses it with the human at the point of conception; a view held by many of the scholastics such as Peter Lombard and Thomas Aquinas and is held by the Roman Catholic Church and many Reformed.

Traducianism, from the Latin *tradux* meaning to shoot or sprout, is the belief that while God created Adam's soul just as He did his body, every other soul is inherited from the parents as is the body (the same as Original Sin and the Image of God). This view was held by Tertullian, Augustine, most of the Western Fathers (according to Jerome – *Letter to Marcellinus and Anapsychia* Chapter 1 -

www.newadvent.org/fathers/1102165.htm), Martin Luther (Anderson - www.academia.edu/6968072/Seeds_of_the_Soul_Traducianism_Religion_and_Theories_of_Heritability_in_Protestant_Europe), the Eastern Orthodox, and many Lutherans. (www.theopedia.com/traducianism)

If we take the Creationism view then the answer to where clones get their souls is that God just created a new soul for the clone at the point of conception (or the point the oocyte was manipulated to function as an embryo). Thus Eve (the first clone) got her soul infused with her body at the point of her creation.

However, if we adopt the Traducianism view, then the soul, along with Original Sin and the Image of God are passed hereditary from parent to child (and donor to clone).

While the debate over Creationism and Traducianism is an open question (*The Word Shall Stand* Art 11.2: 78) in many churches, I like most of Lutheranism hold to Traducianism. I also believe that a Traducian view is of greater benefit in regards to cloning, especially since the Traducian view lines up with what has already been stated concerning Original Sin and the Image of God.

Therefore I would like to take this point to argue in favour of Traducianism.

As stated above, Jerome stated that most of the Western Fathers believed that just as body is born of body so too soul is born of soul (*Letter to Marcellinus and Anapsychia* Chapter 1 - www.newadvent.org/fathers/1102165.htm).

In addition, Martin Luther in his disputation against *Peter Herzog Concerning the unity of the Essence and Distinction of the Persons* in 1545 (see *Luthers Works* Weimar Edition vol.39.II: 337-401) argued in favour of Traducianism. Luther said that "I, on account of my rustiness [that is his plain and simple thinking], think that the soul is ex traduce." (Quoted in Anderson:4)

Luther even said that, "they who think that the soul is ex traduce, seem to have judged not entirely inconsistent with the scriptures." (:3)

On that note what does Scripture say in regards to Traducianism?

First, Genesis 2:2 declared God's work of Creation ended on the Seventh Day of Creation, thus how could God daily create new souls if His work of Creation is finished?

Second, only Adam is ever said to have received a soul directly from God (Genesis 2:7), just as Adam alone was made in the Image of God (Genesis 1:27). In the same way that Eve is never said to be made in the Image of God, she is never said to have received a soul from God. Thus, Eve must have received her soul from Adam as she did her Image. In fact Tertullian stated that from the one man (Adam) comes the outflow of men's souls (*A Treatise on the Soul* Chapter 27).

Third, following on from that, Adam managed to pass on immaterial matter such as the Image of God (Genesis 5:3) and Original Sin along with the material matter of the flesh, so why not the immaterial soul as well? As Luther said "I conclude wholly in private that the soul is born ex traduce, because it is a difficulty otherwise to consider sin ex traduce and not to consider the soul ex traduce." (Quoted in Anderson: 4) In other words Luther found it difficult to except an inheritable view of Original Sin without excepting an inheritable view of the soul. In addition to that the human body and soul are joined together in the one person and are not separated. (Lester/Hefley: 49)

The Lutheran Confessions teach us that God creates our body and soul (FC.Epit. I.4). At face value it appears that the Book of Concord teaches Creationism of the soul. Except that it says God created body and soul. The Confessions go on to cite Job 10:8 which says that God fashioned and made me, together all around. Using Job, the Confessions teach that God creates my entirety, body and soul. Thus, God creates the soul in the same way he creates the body, through the material and immaterial matter inherited from the parents. As Tertullian said the body and soul are conceived and formed together, simultaneously (chap. 27). Luther too, believed that the soul was created ex traduce just as the body was, "we know that God creates the heart ex traduce, why not the soul?" (Quote in Anderson: 6)

Forth, in Hebrews 7:10 Levi is said to have been in the loins of Abraham when he met Melchizedek. This is three generations back (Levi-Jacob-Isaac-Abraham). As the physical material of Levi existed only in the loins of Jacob, this must be referring to the spiritual immaterial side of Levi's soul.

Fifth, the soul exists from the point of conception. Psalm 51:5 teaches that we are sinful from the point of conception, thus God would have to have created a sinful soul, yet God only creates Very Good things (Gen. 1:31). Luther himself argued this point, "if we teach that the soul is not ex traduce, and yet it has sin, then from where does it have sin?" (Quoted in Anderson: 3) Luther even goes on to say that those who reckon that the soul bears Original Sin and that the soul is created ex nihilo (out of nothing) insult the Creator. (:3) To say such a thing is to turn God into the creator of Original Sin.

As this point I would also like to respond to the four common texts used to defend Creationism of the soul.

First, Ecclesiastes 12:7 says that when we die the dust returns to the ground and the spirit returns to God who gave it. I ask, was our body made from dust? No, only Adam's. This reference to dust is a reference to Adam, from whence our body originally comes. Therefore, in the same way the spirit which is given from God was given to Adam, we only inherit it as a descendant of Adam.

Second, Isaiah 42:5 says that God gives breath (soul) and life to the people of Earth. Of course, God gives us our breath (soul) in the same way that He gives us our life, through the conception of sperm and egg. Thus, we receive our soul in the same way we receive our life, from our parents in conception.

Third, Zechariah 12:1 says that God forms the spirit of man within him. This does not talk about God creating man's soul (spirit) but that God shapes and forms it within us. God shapes, forms and transforms our spirit through His Spirit (Rom. 12:2, 2 Cor. 3:18).

Fourth, in Hebrews 12:9 God is called the Father of our Spirit. Again this is not referring to the creation of the soul but to God as our Heavenly Father (Matt. 6:9, Luke 11:2, Rom.8:15, 2 Cor. 6:18, etc.).

Thus I believe that in accordance with the Scriptures, the Church Fathers, Luther and the Lutheran Confessions that humans receive their soul ex traduce; that humans inherit their souls from their parents, just as they do their bodies, Original Sin and the Image of God. Naturally born humans receive their souls from their parents and clones receive their soul from their donor (as Eve did from Adam).

Therefore we can safely say that clones have souls, just as Eve, the first “clone”, had a soul. Whether a clone’s soul is created or passed down ex traduce all clones have a soul. This would seem logical. The Hebrew word for soul is *nephesh*. *Nephesh* means life (not to be confused with *ruach* which means breath). In Genesis 2:7 God breathed (*naphach*) the breath of life (*nishmat hayyim*) into Adam and he became a living soul (*nephesh hayyah*). *Nephesh* is connected to life, see Genesis 9:4 the life (*nephesh*-soul) is in the blood. *Nephesh* is the substance that animates the body and gives it life (Evans: 28) (I do not at this time wish to diverge into a debate over the difference between soul and spirit, and trichotomy or dichotomy). Thus, any person that has life has a soul (even animals have souls by virtue of being alive, see Genesis 9:4,10,12,15,16 etc.). Henceforth, regardless of how they receive their souls, clones have souls by virtue of being alive.

One question that still remains, that should be obvious, is do clones have individual souls? Just as some people struggle to believe that clones have an individual personhood, so too do some wonder whether a clone has an individual soul.

Both Peters and Cole-Turner refer to a Time Magazine article *Can Souls be Xeroxed?* (:17, :124) which asked whether the soul would be copied along with the DNA. Jones states that contemporary thinkers might determine DNA to be the new seat of the soul (:22). Some are even worried that if we use DNA from a dead body that the soul would return from heaven to take on the new body (Cole-Turner: 124). This is nonsense. We can clone genes but cannot copy the soul (:125).

If we take the Traducian model and believe that the soul is propagated ex traduce, then we could say that the soul is transferred to the clone from the donor via the DNA (as the soul is transferred via sperm and egg), but that does not mean that this is one soul in two bodies, 50% in the donor and 50% in the clone, but this is a new soul, just as my soul is not still joined to my mother’s and father’s souls but it is its own unique independent individual soul. As Peters says, if a soul can be Xeroxed then the result is two souls not one (:18). Just as an original document and the Xeroxed copy are not one document but two.

The best example for this is identical twins. Just as identical twins share the same genome but not the same body neither do they share the same soul. “No reputable theological position has ever held that two twins share a soul.” (Peters: 17)

The soul is present from conception, from the point the sperm fertilizes the egg and a zygote is formed. When this zygote splits in two, the soul is not divided 50/50 but instead each twin has their own unique soul. This is another reason why I favour Traducianism over Creationism. In the case of identical twins, the Creationism model would suggest that God created a soul for the zygote and upon splitting God had to create another soul for one of the twins. In this way one has the original soul and the other has a new soul. This seems ridiculous. But if we use the Traducianism model, the original zygote inherited its soul from its father and mother and upon splitting the soul split. Not one soul splitting 50/50 but two unique souls. In this way neither one is the source of the other (Chapman:101).

Taking all this into account, I believe that it is safe to say that clones do possess a soul, and that their soul is a new unique individual soul, different and separate from the soul of their donor. If in the future, we are faced with a situation where clones are living and worshipping among us “the church will declare, as it must, that all clones have souls and must be treated with respect and love.” (Byers: 74)

Implications of Cloning – Theological-Ecclesiastical

Having answered my four foundational questions I have established four foundational statements that will help us to answer the theological-ecclesiastical and socio-political issues that will arise if cloning becomes a commonplace:

1. Clones are unique individual humans
2. Clones are born with Original Sin
3. Clones bear the Image of God
4. Clones possess their own unique individual soul

If/when cloning becomes commonplace, and clones begin to live among us, eventually they will seek to join the Church and become Christians. Especially if the Church believes that clones are humans with Original Sin and a soul, and must therefore minister to and evangelise them.

First, do we baptise clones? Yes. If clones are normal humans with a soul, and Original Sin and Actual Sin, then they, like the rest of us, need Baptism, Confession/Absolution and Holy Communion.

Second, should we ordain clones? Yes. As long as the clones are male, then they can be ordained. (1 Cor. 14:34,35, 1 Tim. 2:11–14)

Third, do clones go to Heaven? Yes. Clones are normal humans with an individual soul. As long as they are truly Christian they will be saved. Clones, like any human, are justified by grace alone through faith alone (AC. Art. IV.1).

Fourth, should cloning be condemned as a sin? This is an interesting question that I wish to leave open. The Catholic Church has determined that things like birth control are sinful (Lester/Hefley: 49).

Does this also mean that cloning is sinful? I oppose cloning as unnatural procreation, but does that make it sinful? This is a question the Church must ask itself. If yes, what would be the implications? One important point that must be made is that if cloning was deemed sinful, this means that the sin would be committed by all those involved in the cloning process including the donor, if their DNA was provided voluntarily. The clone has not sinned, but is merely the result of sin, just as a child conceived through rape or incest has not sinned but is the result of a sin that occurred.

A fifth question, which I will address in the section on socio-political issues, is, should the Church bless clonal marriage? Either inter-clonal (clone to human) or intra-clonal (clone to clone)?

Implications of Cloning – Socio-Political

In addition to my four foundational statements I wish to add a fifth statement in regards to socio-political issues:

5. Clones, despite their process of procreation, are ordinary human beings, made in the Image of God. Clones bear all the rights and responsibilities of any other human being. Clones are ordinary and equal homosapiens and should not be treated like a subhuman homoreplica race. “Religious thinkers, virtually without exception, asserted that if humans were ever cloned, the resulting person would have the inherent value, dignity and moral status common to all of humanity and should be vested with the same civil rights and protections.” (Chapman: 93)

If/when cloning becomes commonplace, and clones begin to live among us, there are going to be a number of issues that society and the Church (as a part of society) will have to face.

First, does cloning destroy the traditional family structure? Yes. Cloning will indeed affect the traditional family structure (dad, mum, children). If the donor and clone live in the same family there will be much confusion of the family structure, the donor and clone are father, son, brother, twin, the relationship becomes confusing (Waters: 84). Cloning brings about a multitude of parents, e.g. egg donor, nucleus donor, womb mother, rearing parents. (Tiefel:50). Cloning will also separate human

reproduction from the marital relationship, in fact from any relationship (Mohler Jr.: 100). However, cloning won't separate reproduction from sexual intercourse and relationships more so than any other form of artificial reproduction. Also, while cloning does affect the family structure, so do a number of other things like homosexual marriage, homosexual adoption, divorce, etc. Cloning would simply be one more card to add to the pile.

Second, will cloning have a psychological affect on the clones? Undoubtedly yes. Cloning will have a huge affect on the psychological well-being of a clone. Cloning will create serious issues for identity and individuality (Kass: 332). The family identity will be confused and mixed around. As mentioned above, if a clone lives with their donor there will be confusion over their relationship to their donor. "No parent is going to be able to treat a clone of himself or herself as one treats a child generated by the lottery of sex." (:333) The psychological burdens of knowing one is a clone will far outweigh any benefits (Chapman: 92).

Third, will clones face social discrimination? If so, how will this affect the Church? And what should the Church do in response? After the identity and relationship crisis, the biggest struggle clones will face is social discrimination. (Byers: 74) Knowing that someone is a clone, rather than natural born, will create a new class distinction and a new form of discrimination. (Byers: 75) Clonism will soon become the newest trend for discrimination and social justice. The Church should speak out against this, as clones are not subhuman homoreplicas but homosapiens made in the Image of God and worthy of respect. However, if the social justice warriors claim this minority and begin to push back in aggressive and violent retaliation to the point where anyone who disapproves of cloning will be labelled as a bigoted clonist or clonophobe, any Church that holds a position against cloning will be villainised. Therefore, it will be important for churches to get on the front foot, and establish firm positions on cloning early on. Churches should oppose the process of cloning and hold firm to their position in the face of any socio-political pressure, however, the Church needs to care for the individual clones and not discriminate against them because of the process of their procreation.

Fourth, who will be responsible for the wellbeing of the clone? This is an important issue that can only truly be answered once human reproductive cloning begins to take place and become commonplace. Byers in his article *An Absence of Loves* asks who will be responsible for raising the child clone? Who will pay for their medical and other expenses? Will their donor be their legal guardian? Or their donor's parents? Or the government? Or some laboratory or biotech company? (:74) Human clones will produce a radical shift in the structure of society that has not been experienced before. There will be children who have only one "biological parent". Human clones will bring brand new issues for social, political and legal structures that can only truly be answered by the governmental system that oversees them.

Fifth, can clones be used to replace those who have died? The answer is no. Yet strangely enough, this question is one which commonly arises. From trying to revive heroes of the past like Mozart or Luther, to trying to revive a deceased parent, spouse or child (Lester/Hefley: 61). This idea is ridiculous, a clone derived from a dead child or parent would not in any way restore the deceased person (Polkinghorne:37). They may bear the same DNA (genotype) but the mind and personality (phenotype) will be completely different. The genes will be the same but the memories and thought patterns will not be the same (Lester/Hefley: 62).

Just imagine how this clone will suffer psychologically knowing they are merely a replacement of someone else. Imagine a family, in which a child had died, whether by stillbirth, miscarriage or even later in life. And the family's solution was to have another child to replace the one they lost. Imagine how that child would feel knowing they are only a replacement. No human being is replaceable. The desire for a clone to replace the lost loved one will only cause the clone grief and suffering. They'll have to live with the reminder that their existence is nothing more than the replacement of another (Fitzgerald: 12). Each clone is a unique human, with their own individual personhood; they cannot and should not be cloned as a replacement for the dead.

Sixth, should clones be allowed to get married? Should the Church bless or oppose clonal marriage? This is an issue that I would like leave as an open question. At face value, the answer should be yes. Clones are normal people with the same urges as anyone else (Lester/Hefley: 60). Why should we

stop clonal marriage? The issue is less with clonal marriage and more with clonal people mating and producing children, either with natural born humans or with other clones. Clones are already born with defects and deformities due to their clonehood (Kass: 332), which could be passed on to further generations. In fact, there is an almost certainty that any children born of clones will suffer great defects and deformities. Interbreeding of clones will affect the genetic diversity and structure of the human genome. The genetic structure of humans requires a composition of genes from two donors, in this way nature overcomes some of the inherent weaknesses in either donor. Every human being possesses harmful mutations; cloning will keep these in circulation. Widespread cloning and clonal breeding will lead to a decrease in genetic quality (Lester/Hefley: 59, Paris: 47, Martyn:78, Jones: 27-8). Speaking from a genetic biological point of view, inter-clonal and intra-clonal breeding should be avoided, if not forbidden.

Thus, what is the Church's role in regards to clonal breeding and marriage? The Church condemns sexual relations outside of marriage, and praises sexual intercourse within marriage. Therefore, if the Church is to make any statement regarding clonal breeding, it must talk in terms of clonal marriage. The Church could not condone clonal breeding outside of marriage, and the Church could hardly suggest that clonal marriage is okay as long as childbearing doesn't occur. Thus, I leave the reader with an open question, should the Church bless clonal marriage? Or should the Church oppose clonal marriage on the grounds of genetic corruption?

Many theologians have suggested that the reason incest was allowed in Genesis, but later condemned in Leviticus, is because the human genetic structure has gradually declined after the Fall and early on the genes could support incest. But as the genes degraded further the human genome could no longer support incest and thus God introduced a new Law forbidding incest in order to protect the genetic structure of man (Batten/Catchpoole/Sarfati/Wieland: 134-9). Thus, does the Church have the responsibility or the right to introduce a new law forbidding sexual relations with a clone?

Seven, should clones be used as objects? Is it okay to clone people for organs (harvest clones)? Or to be used as slaves, soldiers or prostitutes? No. Clones are not subhuman beings. Clones are not the property or slave of anyone (not even their donor), but a person with all the rights and responsibilities of any other human (Robertson: 321). In the 2005 film *The Island* the rich clone themselves. These clones are then kept healthy and raised to eventually be killed and cut up so that their organs may be harvested for their rich donors. This may seem just like science fiction but a repeated defence in favour of cloning is that they could provide an organ donation for their DNA donor, as the body's antibodies would regard the organ as its own and not reject it (Lester/Hefley: 29, 60-1, Robertson: 323). While this is true, we merely assume that the clone would be willing to donate their organs. While clones would make excellent sources of organs (except that the organ would suffer genetic corruption) we cannot simply create harvest clones. Harvest clones will most likely be treated as nothing more than objects (Chapman: 100). We cannot do this, we cannot simply treat clones as objects and not people (Jones: 26). We cannot create them expecting to get their organs. To do so would be to remove their rights and dignity. Not to mention the psychological burden of knowing you were created only to give up your organs; that you are nothing more than a bag of organs created to fix your DNA donor.

In addition to not creating harvest clones, we should also not produce sex clones, soldier clones or slave clones. Byers stated that cloning creates an opportunity to produce a new subpopulation of soldiers, slaves and prostitutes (:72). Lester and Hefley declare that such things might seem to be science fiction but already people have suggested cloning the top soldiers to create armies of elite soldiers (:58) (which won't be so elite due to the genetic defects experienced by clones).

If the Church truly believes that clones are normal humans, made in the Image of God, then they will have to speak out against such inhuman and subhuman treatment if these events ever occur.

Eight, should clones be experimented on? In addition to not treating clones like objects, slaves, soldiers or prostitutes, we should also not allow clones to be treated like lab rats. The first few human clones will inevitably be subjected to a range of scientific studies and experiments (this will lessen as cloning becomes more common). During the WW2 period Nazi Germany, Japan and America used forced human guinea pigs to help foster the war effort (Martyn: 75). In the name of scientific progress

many humans were subjected to inhuman conditions. If human reproductive cloning takes place undoubtedly many human clones will be subjected to subhuman treatment and seen as nothing more than lab rats. If human reproductive cloning occurs, the Church will assuredly have to speak out against such inhuman and subhuman treatment.

Nine, what about the inhuman treatment of cloned embryos? If we are to take seriously the pro-life slogan that life starts at conception (Tertullian: A Treatise on the Soul Chapter 27), that the human life in all stages of life has intrinsic God-given value, worth and dignity (Hanson: 60,63), and that the embryo bears the Image of God (:62), why, then, do we allow the continued use of therapeutic cloning and embryonic stem cell research? Unlike the hypothetical situation of reproductive cloning of humans in the future, therapeutic cloning and experimentation on embryos is a present reality. If we are concerned with experimenting on humans, then we should be concerned about the experimentation on, and discarding of, created embryos. Each clone, whether embryonic or adult, is a human being (Byers:72). Every embryo bears the life and soul of the clone. It took Dolly 277 tries to produce a single cloned sheep (Tiefel: 49, Chapman: 80, Robertson: 326). Consider how many tries it will take to produce a human clone. Even if we manage to clone a human on the 100th try that is still 99 lives that have perished. And this is not even mentioning the wanton destruction of embryos that takes place in therapeutic cloning and stem cell research.

With reproductive cloning, the embryo is placed into a womb with the hope of going full term and producing an offspring. With therapeutic cloning, which, I remind you, is legal in fifteen countries that have outlawed reproductive cloning, the embryo will be allowed to grow in the Petri dish for up to fourteen days. The embryo will either be experimented on, or most likely its stem cells are extracted either for research or used to grow cloned organs (Ontario Consultants on Religious Tolerance - www.religioustolerance.org/clo_ther.htm). In doing so the embryo which bears the life and soul of the clone is destroyed. The embryos are created for destruction (see Peters/Bennett: 68). One major issue with human cloning is the destruction of clonal life in experimentation. Such wanton destruction of unborn human beings should be opposed (Lester/Hefley: 74). The embryo should be protected from conception onwards. Thus the Church should object to any form of embryonic research as it discards, destroys, and experiments on human life at the most vulnerable stage of life (Hanson: 60, see also Cohen: 66-7).

Ten, what rights do the dead possess in regards to not being cloned? I wish to end this section on socio-political implications with a question concerning the dignity of the dead. Many people have aspirations of cloning the heroes of the past. However, what about the respect and dignity of the dead? Should not the dead be left alone in peace?

Whose consent is needed in order to produce a clone? Will the DNA donor's consent be enough or does the DNA donor need to have consent from the egg donor? Does there need to be continued consent? Or does there need to be a specific number of potential clones that must be consented to? (Martyn: 78) These are all serious questions that need to be taken into consideration. My solution is that in order for a human clone to be produced there needs to be full consent from both DNA and egg donor; and there needs to be continued consent for every clone that is born. In this way donors retain full right over their bodies, eggs and DNA. As for deceased persons I believe that regulations will need to be made in order to defend their dignity. My suggestion is that, just as people must legally declare themselves an organ donor or donate their body to science prior to their death so too people will have to make a legal declaration making themselves a clone donor prior to their death. In addition to this the donor will need to organise some procedures and regulations concerning the number of clones that may be produced. Either by providing a limitation to the number of clones that can be produced from their DNA, or by naming a clonal executive, who will be responsible for the donor's DNA after their death, and who can give consent on their behalf.

Conclusion

While reproductive human cloning is currently outlawed in many countries, including Australia, legislation is subject to change. If the laws change and cloning becomes a common practice, there is a likelihood that clones will become an integrated part of society. In this hypothetical future, clones will become commonplace in our cities and our churches. If such a circumstance arises, the Church and the wider society will be faced with a number of issues that will need to be addressed. Thus, I am urging the Church to make a start and begin to put in some precautions now, while cloning seems far off. In doing so the Church needs to retain four foundational points: clones are unique individual human beings with the same rights and responsibilities as the rest of us, they have Original Sin and the Image of God and each clone possesses their own individual soul.

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