

ON GOD AND GENETIC ENGINEERING

Neville Fletcher

Fundamentalist Christians, and no doubt Muslims too, appear to be violently opposed to any type of genetic engineering performed on human cells, and even more strongly opposed to any form of human cloning. While it is the practice of these people to be vociferously opposed to any scientific advance that they do not understand, it is perhaps surprising that they choose these two issues upon which to make their strongest stand. Why surprising? Because the *Bible*, which they believe to be literally true, almost provides the recipe for how to do it!

Let us suppose, for the purposes of this small piece, that they are correct. If we consult the book of *Genesis*, beginning at Chapter 2, verse 17, we find the words:

So God created man in his own image, in the image of God created he him; male and female created he them.

The qualifier "in his own image" is important to those who believe in the teaching of the *New Testament* about Jesus being literally the "Son of God", a point to which I return later. For the present we note that, beginning at verse 18, we find a detailed description of the method used by God to create the female of the human species.

And the Lord God said, It is not good that the man should be alone; I will make an help meet for him.

Going then to verses 21 and 22, And the Lord God caused a deep sleep to fall upon Adam, and he slept: and he took one of his ribs, and closed up the flesh instead thereof; and the rib, which the Lord God had taken from man, made he a woman, and brought her unto the man. 1 There are several interesting surgical features about this description. The first is the employment of anaesthetic



when performing the operation, surely the first recorded instance of such a procedure. The second is the closing up of the wound after removal of the rib. Most interesting however are the other implications. Since God is said to be all-powerful, and certainly the Bible records him as having "made" Adam, one wonders why he did not simply "make" a woman. Instead, he chose to undertake a cloning operation using tissue from one of Adam's ribs. But more

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than that, it was not a simple cloning procedure, since that would have resulted in another man. Instead, God chose to perform a molecular-genetic operation upon the DNA retrieved from the rib so that the Y-chromosome of the X-Y pair was converted to X, giving the X-X pattern that characterises a female. Adam apparently was aware of the nature of the operation, since he is recorded in Verse 23 as saying This is now bone of my bones, and flesh of my flesh: she shall be called Woman, because she was taken out of Man. God had set Adam to live in the Garden of Eden and to care for it, and after Eve was created she lived there too.

All was well until the serpent, also known as Lucifer, the bearer of light and bringer of enlightenment, persuaded them to eat of the Tree of Knowledge, with consequences we must leave to be discussed elsewhere.

Let us instead turn now and look at some later Biblical events. The *New Testament* is, of course, even more important to Christians than is the Old, so let us reconsider what it tells us about the birth of Jesus, who is regarded as the Son of God. According to the Gospel according to Matthew, Chapter 1 verse 18:

When his mother Mary was espoused to Joseph, before they came together, she was found with child of the Holy Ghost.

The other Gospels have similar stories, for example Luke Chapter 1 verse 35:

The Holy Ghost shall come upon thee, and the power of the Highest shall overshadow thee: therefore also that holy thing which shall be born of thee shall be called the Son of God.

These accounts reflect the custom, common among rulers of the time and later even among the nobility of England and Europe of *Droit de Seigneur*, by which nobles were entitled to have sexual intercourse with virgins on their estates immediately before they were to be married.

In the later middle ages in England, reference to this custom was preserved during the wedding ceremony when the Lord lay for a moment symbolically upon a bed beside the bride, thus effectively renouncing his "right". Details of this are outside the scope of this short essay, except to note that (from a scientific perspective at least), for Jesus to have been really the "Son of God" relies upon the fact that God made man "in His own image" so that there was enough genetic and chromosomal similarity for the fertilised egg to be viable. If this genetic similarity had not existed then God would have had to rely once more upon cloning and genetic engineering, since a simple clone of Mary would have had two X chromosomes and so be female.

One might remark, in passing, that presumably there was some barrier that allowed expression of some genes in God that were suppressed in man. According to Lucifer, the serpent, in *Genesis* Chapter 3, verse 5, the fruit of the

tree of knowledge went some way towards removing that suppression:

For God doth know that in the day ye eat thereof, then your eyes shall be opened, and ye shall be as gods, knowing good and evil.

Indeed, once the suppression had been at least partly removed by eating that fruit, men and women began to examine and emulate some of the feats of God, though it took a long time and much experimentation. The achievements of science have indeed brought us to the stage where we can replicate many of the acts of God as recorded in the *Bible*. It is this that has brought us close to performing some of those acts referred to above. But the whole enterprise is not without risk.

Even God, who was deemed to be all-knowing and all-powerful, made many mistakes in creating the world, and humans in particular. It is perhaps true that God gave man freewill, and certainly religion blames all the world's troubles upon that, but if God is truly all-knowing and almighty, then he created man with just this end in view.

Indeed the same goes for his joy in "watching a sparrow fall" and in following the fate of small animals as they fall prey to larger carnivores. He also, in the view of fundamentalists, is responsible for the creation of diseases and plagues and for having set up the Earth and the solar system in such a way that droughts, floods and earthquakes kill people. Perhaps, however, it all makes the world a more interesting place to watch!

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