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## The Virgin Birth as a Biological Necessity

To the best of my knowledge no modern writer has attempted to link together the facts and hypotheses of biology, psychology, and theology, in discussing the Virgin Birth of Jesus Christ. A brief, but useful, contribution is made by the Roman Catholic, Dr. E. C. Messenger, in Vol. 2 of *The Mystery of Sex and Marriage*, but most Christians are understandably content to admit that the manner of the Incarnation must remain a mystery. Nevertheless it is right for some of us to ask the question, What is likely to have been involved if the Virgin Birth – or, more correctly, the Virginal Conception – was a fact of history? This involves looking at the origins of human personality, the mechanics of heredity, and also the continuance of the pre-existent personality of the incarnate Son.

If one accepts the pre-existence of the Son, as this is presented in the New Testament, then modern genetics would seem to suggest that the Virgin Birth was necessary for a true incarnation. One may go further and say that the Chalcedonian fathers were probably thinking on correct lines in their statements about the manhood of Christ, even though they have been accused of depersonalizing Him.

During the first three centuries the Christian Church rightly tried to formulate what God had revealed about the Person of Jesus Christ. This was necessary because people were taking isolated texts and building up ideas that were not true to the Biblical revelation as a whole. The Church followed the scientific method, which aims to take account of all observable phenomena, so as to formulate a law that will cover the total picture. Thus reputable scientists conclude from all observable phenomena that the world is round, as opposed to certain heretics who, from the observation of a few facts in isolation, conclude that it is flat.

The first set of definitions concerned the relationship of the Son to the Father, and on the total evidence the Council of Nicea in 325 declared that the Son is eternal and is essentially God, as the Father is God. The second set of definitions concerned the place of the divine and the human in Jesus Christ after the incarnation. Some would have eased the difficulty by regarding Jesus as a totally God-filled man, of the same quality as the prophets, but exhibiting the indwelling Christ, or the Holy Spirit, to a unique degree. If this view were true, the Virgin Birth must be incidental, and it might indeed be a gain to repudiate it.

Others moved towards the concept of two persons existing side by side. One cannot think of a human nature without its manifestation in a person. But in Jesus Christ there is also the divine person who has become incarnate. Thus two natures must imply two persons, even though they always act concurrently. This is a somewhat crude statement of Nestorianism. Others, to safeguard the unity of the person of Jesus Christ, regarded the humanity as virtually swallowed up by the deity. This was Eutychianism.

The Council of Chalcedon in 451 gave us the orthodox formula of One Person, recognized in two natures, 'Without confusion, without change, without division, without separation . . . not as though He were parted or divided into two Persons, but one and the same Son and only-begotten, God, Word, Lord Jesus Christ.' The title *theotokos* (literally, God-bearer) was applied to the Virgin Mary to indicate that the godhead, or the divine Person, was not somehow added to a purely human baby.

The Chalcedonian Fathers are criticized today for postulating a vague human nature for Jesus Christ without a genuine human personality. They are not actually saying this, but they are saying that the humanity was not centred in any person other than the eternal Son, who had become incarnate.

I am assuming that the Chalcedonian Definition is a proper summary of the New Testament evidence, and I want in this paper to discuss how this links up with the Virgin Birth. While the early Church accepted the Virgin Birth because it was the only record that the New Testament gives, I think it may well

be essential for the solution of certain problems about the incarnation which modern science would otherwise show to be present. In this I part company with a number of Christian writers, including Augustine (*De Genesi ad litteram*. IX. 16) and Aquinas (*Summa*. III. 31. 4), who have held that the Virgin Birth was 'most suitable,' but not necessary for a true incarnation. Aquinas naturally knew nothing of chromosomes and genes, but modern theologians should know what they are accepting or rejecting biologically.

It will be best to begin with a summary of the known facts of heredity. They may be found easily in such a book as *Human Heredity*, by C. O. Carter (Pelican). Every cell in the human body has 46 rodlike chromosomes, which are visible under the microscope. (Older books wrongly give 48.) Other creatures, including the apes, have a different number. Gorillas and chimpanzees have 24 pairs, gibbons 22. More correctly, in man there are 23 matching pairs. The whole body has been built up from one original cell by continuous cell-division. Before a cell divides, each of the 46 chromosomes itself divides longitudinally, and the separate halves move to each side of the cell, so that, when the split comes, there are still 46 in each of the two resulting cells. These chromosomes carry the genes, whose number is not known, since they cannot be seen, but whose existence, as the carriers of hereditary factors, has been demonstrated by experiment.

There are two exceptions that are relevant for our study. One is the difference between the cells in a woman's body and those in a man's. The chromosomes in a woman are in 23 pairs, with the two members of each pair closely resembling each other in size and shape. In a man there are 22 matching pairs, and one odd pair – let us refer to it as Number 7 – where the members do not match. One member of Number 7 closely matches the two Number 7s in the woman, but the other is quite different, and very much smaller. The larger is denoted as X, the smaller as Y. Thus a woman in every cell of her body has an XX chromosome, while a man has XY.

The other exception to the cell of 46 chromosomes is the sex cell in both men and women. A moment's reflection shows that this must be so. Conception occurs through the union of

two cells. If each of the two had the full complement of 46, the new cell would have 92. So for the sex cells the division occurs differently. At the final stage, instead of the chromosomes dividing longitudinally before the cell division, one set of 23 moves to one side, and the matching set to the other. Thus, when the sex cell splits, there are only 23 in each of the two final cells, and these match up to form the proper number of 46 in the new cell after conception.

The knowledge of this mechanism clears one theory out of the way. In the past some Christians have spoken of the Virgin Birth as parthenogenesis. Since parthenogenesis simply means virgin birth, the term is only meaningful if we link it with parthenogenesis in the insect world and in occasional experiments with animals. Spontaneous parthenogenesis has even been claimed by women in modern times, but in the nature of things this is hard to establish. But one cannot claim this 'natural' experience for the Virgin Mary. We noticed above that only the man carries the Y chromosome. There is no Y in any cell in the woman's body. In the other cells of his body man has the chromosomes XY matching as a pair, but in the sex cell, after the final division, one cell will have the X and the other the Y. If out of the multitude of sex cells the one that fertilizes the female ovum carries the X, then it will pair with the X in the female cell to produce a girl. If the cell carries the Y chromosome, then the pairing XY will produce a boy. Since there is no Y in the woman's body or sex cells, any child that might be produced by a freak parthenogenesis would necessarily be a girl. Incidentally beekeepers know from bitter experience that an unfertilized queen or laying workers only produce drones (males), since in bees the female carries the equivalent of YY. Similarly poultry breeders use the fact that in birds the cock has XX and the hen XY, and, since certain other physical characteristics are linked to the X and Y chromosomes in birds, by crossing two special breeds they can sex the young birds at hatching.

We turn next to the formation of personality. Fortunately we need not wrestle with its definition and description. One of the best books on the subject is Gordon Allport's *Personality*, where some fifty definitions are discussed. What concerns us is

the basic fact that from this single initial cell a person develops. In other words, the 46 chromosomes, with their genes, contain a potential person, who is unique and distinguishable from every other person, even though he and they can be comprehended under the term 'human.'

How the person will develop as a person depends upon environment. If at birth I had been taken from my own family and brought up in completely different circumstances, I should have been both the same as I am now, and yet different. Speaking very generally, my animal body would have been much the same, though not entirely so, since diet and exercise would have altered it to some degree. My mental pattern would have been different, since different patterns of thinking and response would have been imprinted on me. Thus personality has a given physical structure, with genetic possibilities which may or may not emerge, and which in any case will express themselves according to an environmental pattern. A Christian may take heart at the thought of latent possibilities that, under the drive of the Spirit, will emerge after conversion.

Enough has been said to make the point that a complete person is the result of the union of the male and female cells. Assuming that in Jesus Christ we meet God incarnate, what would have been involved biologically in God becoming Man? We are considering incarnation, and not the view that would regard Jesus Christ as a God-filled man, since this latter view puts him on the level of the prophets, albeit greater than any other prophet. He was, to use a modern slogan, 'the Man for others,' but this by itself does not answer the New Testament belief, and, as we shall see, His own belief, in His pre-existence. Nor can it do justice to the New Testament concept of redemption through the action of God-become-Man. God did not redeem us through the act of someone other than Himself.

If there is in fact a genuine Incarnation, and yet Jesus Christ was conceived normally, then we are forced into a form of Nestorianism. The Divine Person must have been added to an already existing 46-chromosome human person, since the inevitable result of normal conception is a potential person.

A way out would be to introduce the idea of the Soul as the vehicle of personality apart from the 46 chromosomes.

This would assume that creationism is a correct theory of the origin of the soul. Creationism is the doctrine that at conception ('Immediate Animation'), or at some time before birth ('Mediate Animation'), God infuses a soul into the body. Thus God might have refused to create a human soul for the child conceived through Joseph and Mary, and have substituted the divine soul of the Son. We will not spend time on this solution. Those theologians who reject the Virgin Birth are unlikely to accept creationism. And any theory which eliminates some vital aspect of man, such as soul or mind, and substitutes the divine soul or mind for it, destroys the full humanity of Jesus Christ.

The alternative theory is traducianism, which holds that the infant in its entirety, including its soul, is the result of the union of the parents. This seems to me the proper view, and it does not compel us in this paper to discuss the exact nature of the soul. We can more helpfully keep talking about the person. Yet traducianism closes the door to any incarnation of God in a child who is conceived in the normal manner, since the potential or actual soul is a manifestation of whatever is contained in the 46 chromosomes.

It is easier to be negative than positive, but we must now look at a possible solution. First, let us see what we are postulating by the Virginal Conception – and I am doing this with all reverence. My answer may be wrong, but it cannot simply be dismissed as speculative without suggesting some alternative. There is no doubt that we are postulating a miracle, and we are not trying to slip in natural causes through a technical use of the term parthogenesis. We are not attempting to explain *how* God performed the miracle, but we are considering what must have been involved if such a miracle actually occurred, just as a doctor might discuss what was involved if Christ gave sight to a man who had been born blind.

In the ovum there are the 23 chromosomes. They can only begin to grow into a boy if 23 chromosomes, including the Y, are added to them. The result will be, not two half persons, one from the father alongside of one from the mother, but one single human personality, with a single centre of awareness and

consciousness. Yet 23 chromosomes were actually the vehicles of the father's personality and 23 of the mother's.

The miracle of the Virginal Conception, then, involves the creation of 23 chromosomes, containing the Y, to be the vehicle of the divine personality. From the moment of union there begins to develop, by the normal method of cell fission, a single person, both human and divine. Thus there is a genuine incarnation. The initiation of this process is described in both the Birth narratives in Matthew and Luke as being due to the direct action of the Holy Spirit. Only so could the Child be Son of God in a unique sense. Since man alone is made in the image of God, human chromosomes could be vehicles of the incarnation, and Christ could not have become incarnate in any other animal form.

There is a further point of importance and of difference between Christ and ourselves. This is His pre-existence. There is little evidence for our own pre-existence, although Origen held such a view, and Mormons do so today. A very large number of people, especially Hindus and Buddhists, believe in reincarnation, in which case we have all been born and reborn countless times already; but again the evidence for this, apart from an act of faith and philosophy, is scanty, though it cannot be dismissed out of hand.

Jesus Christ is different. According to a number of references in the Fourth Gospel, He declared more than once that He had had a personal pre-existence with the Father. Thus 'Before Abraham was, I am' (viii. 58). 'The glory which I had with Thee before the world was' (xvii. 5). He speaks of coming from heaven (iii. 13) and from the Father (xvi. 28). Too little attention has been paid to what may well be a significant use of this word 'come' in connection with Jesus Christ in the Synoptic Gospels, e.g. 'The Son of Man came not to be ministered unto, but to minister, and to give his life a ransom for many' (Mark x. 45). 'I came not to destroy, but to fulfil' (Matt. v. 17). There are other similar references, and there is also the parallel use of the verb to refer to His Second Coming. On the lips of Jesus Christ I have little doubt that the verb describes His consciousness of having come from heaven. The word is not used by the Synoptists of the prophets, with the significant exception of



John the Baptist, who is in some sense the pre-existing Elijah, who comes as the forerunner of the Messiah (Mark ix. 11-13).

The Epistles certainly teach the pre-existence of Christ, and there is no real reason for supposing that this doctrine was the invention of the early Church. The indications are that the belief goes back to Christ Himself.

In an article in the *Expository Times* for August 1965, John Harvey writes that modern man no longer accepts such ideas as pre-existence. Yet, modern man may need to face the fact that Jesus Christ was convinced, not of everyone's pre-existence, but of His own. One can say that He was hallucinated, or that the early Church fathered the idea on Him, but there is still adequate evidence for us to ask, Suppose He had a pre-existence?

Modern Arians, such as Jehovah's Witnesses, believe in His pre-existence as the archangel Michael. Seventh-Day Adventists also identify Him with Michael, but believe that this is His pre-incarnate title, although He was fully God as the Second Person of the Trinity. Is it really worth discussing whether, if He had a pre-existence, He was a supernatural being who was less than God? Such a view would take the heart out of the redemptive work that He came to do. God would be sending someone else to suffer; He did not become Man Himself.

If He pre-existed as God, in what form did He exist? John Macquarrie in the *Expository Times* for April 1966, wrestles with the problem in the light of the concept of the Logos, or Word, but does not seem to me to do full justice to personal pre-existence. The heart of our problem lies in our desire to visualize the Trinity. In reaction against the naïve visualization of three big Men up in the sky, some professional theologians have tended to throw over the concept of Three Persons. We may need to think out fresh analogies, but these must do justice to Biblical revelation, while still falling short of enabling us to visualize God as He is. This means the acceptance of facts that God has revealed about Himself to prevent His remaining the Unknown God, without our being able to fit them all together in descriptive form. We have to do a similar thing with what physicists now know about the ultimate structure of the universe.

The pre-existence of the Second Person of the Trinity was in such a form that He was aware of having had it, i.e. it was as a personal centre of consciousness. It was not existence in a physical body, but after the same manner as the personal pre-existence of the Father and the Holy Spirit. I have deliberately used the phrase, 'Aware of having had it,' so as to avoid the issue of the nature of the full consciousness of the incarnate Christ. This needs a paper on its own.

What we have argued is as follows: The Christian Church during the first few centuries regarded the Bible as the consistent revelation of God. Accordingly they wrestled to produce positive and negative formulae, which would apply consistently to any Biblical text about the nature of God. I believe that their conclusions in the Chalcedonian Definition represent fair conclusions from the evidence.

In particular they wanted to avoid any suggestion that there was a duality of persons in Jesus Christ, though there were two natures. In the light of modern genetics, we have said that this could have been achieved only by a Virgin Birth. Normal conception would have produced a human person, to whom the Son would have had to be mysteriously added.

The miraculous conception ensured that the Person was both human through His mother's chromosomes, and could be divine through the newly-formed chromosomes. This would be a genetical equivalent of 'One Person and two Natures.' We could say that the centre of consciousness of the Divine Son was now concentrated within the space-time sequence. It is useless to try to put ourselves into His experience so as to imagine how He felt, since none of us could ever have the experience of deity. The most we can say is that, on reflection, we find that we are one thing because of our father's side, and another because of our mother's. We have inherited ways of being ourselves. It is not necessary to bring in Jung's concept of the inheritance of certain racial and archetypal responses, but at least the analogy is helpful. Then Jesus Christ after His incarnation drew not only from the racial Unconsciousness of humanity, but also from the divine equivalent to this. He had the present experience of communion with the Father that we have, but He also had the special union which enabled Him

to say, 'I and My Father are one,' and 'No one knows the Father except the Son . . .'

*Additional note*

In the discussion that followed the reading of this paper, the chairman and others raised the question of the creation of the 23 chromosomes *ex nihilo*. I certainly intended this, but obviously one may consider other possibilities.

1. God the Holy Spirit might have brought about a mutation in one of the X chromosomes within the Virgin Mary, so that it received the Y property, and thus the child of this parthenogenesis would have been a boy. I have in this paper taken the theory that personality belongs to the chromosomes as a whole, and not to the Y alone. This alternative suggestion would make Christ receive everything from the Virgin, and nothing that corresponds with what a baby receives from its father. It is hard to see how the modified Y chromosome by itself could be the vehicle of the incarnate Person. However, if one accepts creationism, one might say that God added the soul of His Son to the incipient personality that was derived wholly from Mary.

2. Since the basic compound of which chromosomes and genes are composed is deoxyribonucleic acid (DNA) and protein, these are present in every body, and what I have described as the *creation* of the extra 23 chromosomes could have been the formation of the 23 from the DNA and protein in Mary's body. The formation would have been in a combination that could be a proper vehicle for the Person of the Son, and, unlike the first suggestion, there would have been the proper fertilization of the ovum. The miracle would have been one of rearrangement rather than of direct creation *ex nihilo*. This seems sensible.

3. The question was also raised about the relevance of sex changes in human beings. There was no suggestion in anyone's mind that the Virgin Mary was sexually abnormal, but the point was whether, if one who is born a female changes later into a male, her XX cells become XY. If so, the Y must have been produced within her own body, and so presumably a Y cell might have been produced naturally within the Virgin, thus resulting in a boy-child. Since the paper was read, a

leading geneticist has confirmed what I said in the discussion, namely that in any apparent change from woman to man, there is no formation or creation of a Y chromosome. The cells remain XX. It might be helpful to add a few further particulars about this. Abnormalities have been recognized in the sex chromosomes. Thus a woman with only one X fails to develop into sexual maturity. A man with XXY develops markedly feminine characteristics. In other cases the sex chromosomes are normal, but, probably through a disturbance of the gene pattern of other chromosomes, the endocrine glands, which at the proper times should supply a true balance of hormones for the total sexual development of a man or a woman, are in some way defective. Thus a man develops abnormal characteristics of femaleness and a woman those of a man. But these do not include the production of a Y chromosome where this did not exist before, nor the loss of Y where it already existed.

4. It is not the creation or formation of the 23 chromosomes that makes Christ divine. It was pointed out that a scientist might one day synthesize DNA and proteins into precisely the 23 that I have postulated. They would not then produce a fresh incarnation, nor make the resulting child divine, although the result might be a person who had certain physical resemblances to Jesus Christ. His body would not be entirely identical, since the new 23 could not be matched with the same 23 as were present in Mary. We can say that the 23 chromosomes that God formed were the vehicle whereby the Son could become properly and personally incarnate, but not that they compelled Him to become incarnate.