

some on the Earth, others at various distances, as is appropriate for them.

(Notice, incidentally, that we find an inverse-square law in gravitation, in electrostatics, in magnetostatics, and elsewhere. Is anyone going to suggest that this shows that, e.g., electrostatic forces evolved from gravitational ones, magnetostatic from electrostatic, etc.? Presumably nobody would say anything so absurd. But if resemblance proves nothing about descent here in the matter of physical forces, are we not justified in doubting that it does so in regard to living beings?)

It was also God's purpose that there should be living creatures on His world. To have suitable bodies for these creatures required some complex materials. For such materials to be possible, the laws or organic chemistry (and along with them those of inorganic chemistry) needed to be established. Again, the formation of molecules, etc., is very much tied up with electrical attraction of the various parts of matter. So the laws of electrostatics are appropriate here. The corporeal beings which were created—some of them anyway—were intended to be able to move around, in order that they combine and recombine. To permit such activity, there needs to be freedom of motion, but not absolute freedom. Things would be altogether too unstable if unlimited motion were to result from any trivial cause. So the law of inertia, and also that of friction, are most appropriately given to us.

The various laws of conservation may have been established by God so that the very existence of things would be a witness to His creative work, just as the very existence of the stones mentioned in several places in the Old Testament

was to be a witness of some mighty act of Gods. We know that matter, energy, etc., do not come into existence spontaneously. Since we know that they do exist, we should look beyond them to the Cause of their existence.

The second law of thermodynamics may not have been introduced until after the fall, as some suggest. It might be though, that God introduced it from the beginning, at least as it applies to heat, as a witness to the fact that the universe could not have existed forever, but must have had a start; and if a start, then a Starter. Even the laws of nuclear structure could have been given for a purpose. The world is to be warmed and lighted by the Sun, which, we believe, is kept hot and glowing by a nuclear reaction. Suitable laws of nuclear structure and behavior provided for this application (as we might call it); and maybe for others which are important to us, but of which we are now unaware.

Conclusion

It is clear that many other examples could be given. This point has been made sufficiently: God made the world, and He designed not only its outward appearance but also its manner of working, which we call the laws of nature. In the same way, when He established His people, Israel, he gave them appropriate laws. And the same is true of His new people, the Church; although, for several reasons, the giving of laws was not so prominent a part of His dealing with His Church. In all these cases it is clear: we should mark the laws, we should ponder on them, we should govern our actions by them; but most of all we should look beyond the law to the Lawgiver.

THE CREATION OF EVE

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In this short article the creation of Eve is considered in relation to contemporary knowledge of tissue culture, cellular differentiation, and chromosomal configurations. While nothing definite can be said regarding the mechanism of creation, the record and order of events is profoundly credible in terms of biology and theology.

The Creation Record

We are told in Genesis 2:21 that ". . . 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." This Biblical report of Eve's creation is far more credible than some critics have realized.

Obviously no detailed information is given in this passage about the processes by which God produced Eve from a rib. Therefore any discussion of actual mechanisms must be avoided as it would partake of pure speculation. But the miraculous creation operation itself may be considered against the background of contemporary knowledge.

Tissue Culture

Man is presently able to manipulate living human cells outside the body by an amazing technique known as "tissue culture." While these human tissue studies may have no direct bearing

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on the creation of Eve, they certainly do establish that even human beings can grow tissue explants outside a donor's body! Certainly no thinking person would deny God at least that much leeway in the creation of Eve!

The choice of a rib as the source of material for the creation of woman is especially interesting to a biologist. Many of the body tissues do not have the original number of chromosomes and as such could not serve as the basis for the creation of a new individual unless they were extensively reworked. Glandular tissue, for example, contains cells which have several sets of chromosomes in their nuclei, as they have become polyploid through repeated chromosome reproduction. Likewise nerve and muscle fibers become too specialized to offer great potential for further change. Red blood cells actually lose their nuclei upon maturation, and thus have no chromosomes at all!

But bone marrow is one of the tissues which contains relatively undifferentiated cells close to the original condition. Furthermore, certain bone marrow cells divide at a consistent and rapid rate, while most other cells in the adult body divide only very slowly or not at all. One might also add that bone is an organ which is near the surface and could be readily removed without serious or lasting consequences.

The Unity of Man

God's plan to create woman from a part of man has definite theological significance for the unity of the human race under Adam, as John Whitcomb, Jr., has pointed out¹. It is also obvious that creation according to the Biblical record would set forth a firm taxonomic basis for mankind as a biologic species. Thus the theological unity fits best with this obvious biological unity; and, Genesis 2 is the only adequate explanation for them both.

If Adam had been a variant among pre-hominids, as some theistic evolutionists prefer to believe, then there would have been no need for the special and miraculous creation of Eve. If an "evolved Adam" was simply the result of mutations, he could have mated with an individual of the original ancestral group. Members of following generations could have been "line bred" and selected to fix the new "human" characteristics in the same manner that stock breeders improve their animals today. Of course, thorough-going evolutionists propose just such

a scheme through the action of "natural selection." They say that man developed to his present status from an animal ancestry over a long period of time. In any such event, making Adam's mate from his own flesh would have been meaningless unless Adam himself had been created completely new and separate from other living forms. Thus theistic evolutionism is incoherent and falters on the origin of Eve.

Chromosome Configurations

Chromosomal biology may also be considered in relation to the formation of Eve. The male sex, which was created first, contains both the X and the Y chromosomes in each cell. A female or XX chromosome configuration could be understood as a repetition of one element found in the male—the X chromosome.

While this realization may shed no light on the actual mechanism of woman's creation, the facts certainly fit with the general creation order of man first and then woman—no matter how the result was accomplished. On the other hand, if a female had been the human being first created, then any new individual produced by replication of her cells would have naturally been XX or female (unless a Y chromosome were somehow introduced after creation). The production of an XX female from XY male tissue is profoundly reasonable from the standpoint of cytology.

Conclusion

Knowledge of tissue culture, cellular biology, and chromosomal sex determination in no wise detracts from the simple but accurate record of Eve's creation. Adam's words in Genesis 2:23 and 24 may be interpreted as the first love song. Adam was obviously delighted with the result of God's activity for in his song he referred to her as "bone of my bones, and flesh of my flesh." Eve, his legitimate wife, was especially "meet for him." Matthew Henry has said that:

... the woman was made of a rib out of the side of Adam: not made out of his head to rule over him, nor out of his feet to be trampled upon by him, but out of his side to be equal with him, under his arm to be protected, and near his heart to be beloved².

References

- ¹Whitcomb, John C., Jr. 1969. The origin of man, *Bible-Science Newsletter*, 7(2):1ff. February 15.
- ²Henry, Matthew. 1961. Commentary on the whole Bible. Zondervan Publishing House, Grand Rapids, Michigan. p. 7.