

Another Look at Mature Creation (Revised 05/13)

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One of the ways of seeking to reconcile Genesis and modern science employs the idea that God created the universe in a mature state.¹ This idea has a long history – it was suggested in the early 19th century by Chateaubriand,² developed by Penn,³ and promoted famously by Gosse.⁴ It has not, however, been generally accepted. Here I develop the idea, and address criticisms of it.⁵

Theory

The basic idea is very simple. According to Genesis, God created the universe in six days a few thousand years ago. At the end of the sixth day, it was a going concern. It accordingly appeared to have a history that it did not in reality have – trees had rings, pebbles were smooth, stars shone, and so on.

A complication is that, after the Fall, God changed the natural order to some extent. He condemned the Snake to live on its belly, Eve to a difficult life, and Adam to toil and death (3:14–19). He told Adam, ‘Cursed is the ground because of you’, and explained that it would now produce thorns and thistles.

If these statements are taken literally (which the theory allows us to do), they imply that God modified the design of the universe after the Fall (cf. Rom. 8:20–22⁶). If he carried this through consistently, so that all parts of the universe conformed to the new design, then, after the Curse, the universe would again have been a going concern, and would again have appeared to have a history that it did not in reality have. This history would necessarily have been different from the one that it appeared to have before the Fall.

The last point can be illustrated by what happened when Jesus turned water into wine (John 2:1–11). Before the miracle, the water had a certain history. When he changed it into wine, what it became appeared to have a quite different history.

¹ P.G. Nelson, *Big Bang, Small Voice: Reconciling Genesis and Modern Science* (Latheronwheel, Caithness, Scotland: Whittles, 1999, repr. 2003), Part III; ‘Mature Creation,’ *Perspectives on Science and Christian Faith* 56 (2004), 155–6, corr. 239.

² François Auguste René de Chateaubriand, *Le Génie du Christianisme* (Paris: Migneret, 1802), Part 1, Book 4, Chap. 5.

³ Granville Penn, *A Comparative Estimate of the Mineral and Mosaical Geologies* (London: Ogle, Duncan and Co., 1822).

⁴ Philip Henry Gosse, *Omphalos: An Attempt to Untie the Geological Knot* (1857; reprint, Woodbridge, CT: Ox Bow Press, 1998). Gosse weakened the case for a mature creation by supposing that all nature is cyclical.

⁵ Cf. Joshua Klose and Martin Dowson, www.hlfallout.net/~josh/apparent_age.pdf

⁶ I take Paul to be referring here to Genesis 3, not Genesis 1. His readers were familiar with the Old Testament.

Modern science studies the post-Fall universe. It explores the design of this universe, and traces its history on the assumption that it always had this design. This history is real back to the Curse, but before this, it is virtual.

Formal treatment

We can express all this formally as follows. Suppose that the original universe was a completely determined dynamical system, such that its state at noon on one day could be predicted, in principle, from its state at noon on the previous day. Suppose further that it comprised a large number of elementary components interacting and moving according to fixed laws. Then its state, as represented by the positions and motions of the components, can be expressed as a continuous function of time, $f(t)$, where $t = 0$ is the time of creation. Now since f is a continuous function, states can be calculated from f for $t < 0$. Thus, when, at $t = 0$, the system was created, it inevitably appeared to have a previous history. Not even God could create it without it having this appearance. The only exception is if f has a singularity at $t = 0$, as on the big bang model.

This analysis applies to any determined dynamical system. A simple example is a pendulum. When a pendulum is made and set in motion, it immediately appears to have been in motion before this. There is nothing its maker can do to prevent this, short of attaching a label stating the time when he or she set the pendulum going.

For a second example, consider two identical spring-driven clocks. One is wound up and started. After it has been running for some time, the second is given the same number of turns as are left on the first clock, and set running. The two clocks cannot now be distinguished. To anyone who has not witnessed the history of the second clock, it looks as if it has been running for as long as the first.

The effect of the Curse is to modify the function f to f' . The function f applies from $t = 0$ to $t = t'$, the time of the Curse, and the function f' from $t = t'$ onwards. States calculated from f' for $t < t'$ are virtual.

This can again be exemplified by a pendulum. A pendulum that has its amplitude changed at $t = t'$ will appear to have had a different history before t' than it actually had. The same applies to a clock that has its hands adjusted.

If the universe is not a completely determined system (as Bohr understood the quantum theory to imply, but Einstein resisted), the picture is more complicated. Such a system can have more than one possible history. Consider, for example, a uranium mineral. This can have an infinite number of possible histories, depending on which atoms have disintegrated, and when. (For many such systems, however, there is still only one macroscopic history. A uranium mineral, for example, has a history in which isotopic atoms, collectively, have disintegrated at a constant rate.)

Details

Extent of the Curse

Scholars differ widely over the nature and extent of the Curse. I take the Bible to imply that God made radical changes to the natural order at this point.⁷ According to Genesis, the creation, before the Curse, was ‘very good’ (1:31). After the Curse, Biblical writers rate many things in nature as not being ‘very good’. These include predation (Isa. 11:1–9 etc.),⁸ disease (Mat. 4:23–24 etc.), and natural disasters (Mat. 24:7 etc.). The list may also include the death of higher animals (cf. Jon. 4:11 etc.).

Jesus made it clear that some evils in the world have a general origin (Luke 13:4–5, John 9:1–3a). I take this to be the Curse. In Genesis, predation certainly begins after this (6:11–12, cf. 1:29–30), and in Revelation, disease ends when ‘there will no longer be any curse’ (Rev. 22:2–3).

Starlight

Starlight poses a well-known problem. If God created the universe a few thousand years ago, why is it possible to see stars that are more than a few thousand light years away? The light from such stars will not yet have had time to reach the earth.

Mature creationists answer this by saying that, when God created the stars, he also created the light emanating from them. This idea is not as contrived as it may seem. A mature creation is a mature creation. From a scientific point of view, the universe is a complex whole, with an event in one region affecting behaviour in another. Recent calculations have shown that the universe is an extremely sensitive system in this respect: even a very small event can have a significant effect, even at a great distance from it.⁹ Thus, for any part of the universe to be created in a particular state, every other part has to be created in accordance with this state.

Radioactivity

Similar considerations apply to radioactive substances. If God created other components of the universe in a mature state, then he also created these in a mature (i.e. partly decayed) state. Maturity of creation means maturity of everything in it. If Adam had been capable of carrying out radiometric measurements, he would have concluded that the rocks around him were older than they were, just as he would have concluded that other things around him (pebbles, trees, etc.) were older than they were.

I am assuming here that radioactivity formed part of the original creation, and not of the ‘corruption’ God introduced at the Fall (Rom. 8:21). If he did introduce radioactivity at the Fall, then he changed the physics of the whole universe at this point from one in which there was no radioactivity to one in which there is.

Genes

⁷ *Big Bang, Small Voice*, 50–3; ‘Genesis 1–3 as a Theodicy,’ on-line.

⁸ When the psalmist praises God for feeding predators (Psa. 104:21, 24–28), he is praising him for his providence in the world *as it now is* (cf. Mat. 5:45).

⁹ K.G. Denbigh and J.S. Denbigh, *Entropy in Relation to Incomplete Knowledge* (Cambridge University Press, 1985), 32–3.

According to the theory of evolution, plants and animals on the earth today developed from simple organisms by a mechanism involving mutations and natural selection. According to the theory, therefore, the genes of today's plants and animals are related to those of simple organisms living in the past, and a history can be constructed from them.

This again is not a problem. If the proposed mechanism is correct, not only for small changes but for big ones,¹⁰ then if God created the natural order in a mature state and cursed it, he gave plants and animals the genes that, after any modifications at the Curse, species would have had if they had evolved in the way the theory describes.

Fossils

Some scholars explain the existence of fossils by invoking the Flood. This is problematic, as I have discussed elsewhere.¹¹

On the theory of mature creation, God created the earth with some fossils in it, and incorporated further fossils after the Fall. The details of this depend on the precise relation between the original creation and the natural order after the Fall. To focus the discussion, I shall suppose that lower animals died before the Fall and higher animals after it (other possible cases can be treated similarly). If lower animals died before the Fall, the original creation would have contained fossils of these and of plants. God then incorporated fossils of higher animals after the Fall, along with marks of disease and predation.

This raises a number of questions. First, why should God create the earth with fossils in it? Are they not unnecessary? The answer to this is, once again, that, if the earth is to conform to a particular design, all the features of that design must be present. If the original design was such that, had the earth been in existence for many thousands of years, fossils would have been formed in it, then, when the earth was created, it had to have fossils in it. Otherwise, it would have failed to conform fully with the design.

Secondly, why should God add fossils after the Fall? Why not leave the rocks as they are? The answer is the same. If God changed the design of the earth into one in which higher animals die, then, to make the earth conform completely to this design, he had to remodel, not only the animals living at the time, but also the rocks. Otherwise, the biosphere would have conformed to one design and the lithosphere to another.

A final question is, why should there be fossils of species that, if the earth is only a few thousand years old, never actually existed (e.g. trilobites and dinosaurs)? The answer again is the same. If the present design of the biosphere is such that, had the earth been in existence for thousands of years, species that are not living on earth today would have existed for a while and then died out, then, to make the earth consistent with this design, God had to include, when he created and cursed it, fossils of these species. (This circumstance would arise on an evolutionary design, but does not exclude other ones.)

¹⁰ See my discussion in *Big Bang, Small Voice*, Sect. 2.4.

¹¹ 'Another Look at the Genesis Flood,' on-line.

My explanation of fossils may be illustrated as follows. Imagine a film-director making a science-fiction film about the discovery of an alien settlement in a remote part of the world and the war that this precipitates. His first idea is that the aliens should be immortal (plot 1), and he writes the script, builds the set, and starts filming on this basis. He then decides to make the aliens mortal (plot 2), so he rewrites the script, adds to the set a cemetery, and starts filming again. The cemetery contains the remains of aliens who lived and died *before* the film begins, but their inclusion is necessary if the film is to accord completely with plot 2.

Any change to a system that is carried through consistently will produce artefacts of that change. This is illustrated by the Second Coming. According to Paul, when Jesus comes again, believers who have died will be raised, while those who are living on earth at the time will be changed, ‘in a moment’, into the same state (1 Thes. 4:13–18, 1 Cor. 15:35–57). The latter will accordingly appear as if they have died and been raised like the former, even though they will not have done. This is the inevitable consequence of carrying the transformation of believers through consistently.

Adam and Eve

According to Genesis, God created the first pair of human beings (1:26–27; 2:7, 21–23).¹² They and their descendants lived around Eden until after the Flood (Chapters 10–11). As calculated by Driver,¹³ the genealogies in Chapters 5 and 11, if complete, give the date of Creation as 4157, 4243, or 5328 BC, and the date of the Flood as 2501, 2936, or 3066 BC, according to the version (Hebrew, Samaritan, or Greek respectively).

Now I have shown elsewhere that Eden was on the Turkish-Iranian plateau north of Mesopotamia, and that the Flood took place in this region in about 13,000 BC (calibrated date).¹⁴ This implies that the genealogies are incomplete, and that Creation took place well before the above dates.

Most anthropologists currently consider that modern humans evolved 200,000–150,000 years ago in Africa and later dispersed around the earth.¹⁵ They arrive at this conclusion along two lines. One depends on the identification of fossils as being of modern humans and the dating of these. The other entails the reconstruction of the historical origins of genetic variations among contemporary humans and gauging mutation rates. Both approaches involve considerable uncertainties. Mutation rates, for example, may vary with time and place.

If anthropologists are right that modern humans dispersed from Africa, this does not necessarily mean that they originated in Africa. They could have originated in the Middle East, migrated to Africa, and then dispersed.

¹² I take 2:7–25 as amplifying 1:26–30, as its introduction (2:4–6) suggests. See ‘Genesis 1–3 as a Theodicy.’

¹³ S.R. Driver, *The Book of Genesis*, 14th edn. (London: Methuen, 1943), xxv–xxviii.

¹⁴ ‘Another Look at the Genesis Flood.’

¹⁵ See, e.g., Chris Stringer and Peter Andrews, *The Complete World of Human Evolution* (London: Thames and Hudson, 2005).

If anthropologists are correct with their dating, Genesis conflates the early history of the human race. Adam and Eve lived in Eden 20,000–150,000 years ago. Their descendents moved to Africa, and then dispersed around the earth. Some stayed on in Eden and developed farming there. This is the population that, in about 13,000 BC, God condemned in the Flood.

The timescale would be shorter if mutation rates were higher, and if the oldest fossils assigned to modern humans were dated later, or assigned to an earlier species. A long timescale, however, accords with the comment of an early Armenian scholar on the genealogy in Genesis 5: ‘Some used to say that there were innumerable aeons from Adam to Noah’.¹⁶

According to Genesis, God created Adam from ‘dust from the ground’ (2:7) and Eve from one of his ribs (2:21–23). He did not evolve them. He did, however, make them to fit in with his design for the rest of the biosphere, both before and after the Curse (1:29–30, 9:1–3). This ties in with my discussion of genes.

What were in Adam and Eve’s minds when they were created? As they were mature human beings, we would expect them to have memories, yet they did not have histories (childhood, adolescence, etc.) to remember. God must therefore have told them how he had created them, as described in Genesis 2.¹⁷ Thus Adam knew that God had made Eve out of his rib (‘... she shall be called “woman” because she was taken out of man’, 2:23), and that he himself had been made out of dust, as God reminded him after his fall (‘dust you are, and to dust you shall return’, 3:19). God must also have created the couple with a knowledge of how to live, e.g. how to grow food (2:15, 3:17–19).

Anthropologists identify other *Homo* species. They date most of these before 200,000–150,000 BP, but consider some to have overlapped with modern humans. If again they are right, this means that God created the earth with the overlapping *Homo* species on it,¹⁸ and the whole biosphere to a design that, if he had created it earlier, it would have had other *Homo* species living on it. He accordingly incorporated remains of the latter in the rocks, for consistency, as he did for other animals.

Further developments in anthropology could change some of the details in this section.

Discussion

The most common criticism of the idea of a mature creation is that it makes God dishonest. To us, the universe looks old. If, in reality, it is young, and God created it to look old, is he not deceiving us?

The answer to this criticism is that it is impossible, even for God, to create a young dynamical universe without the appearance of age. We have already seen that, for a

¹⁶ Insertion in Philo’s *Questions and Answers on Genesis* 1:87 (Loeb edn., 55, note *i*).

¹⁷ Cf. Vern S. Poythress, *Redeeming Science: a God-centred Approach* (Wheaton, Illinois: Crossway, 2006), 117. While preferring to take the “days” in Genesis 1 as analogical (Chap. 10), he makes a good case for mature creation (Chap. 9).

¹⁸ It is tempting to quote Genesis 6:4a, but this is an obscure text.

dynamical system, the function that represents states for $t > 0$ automatically gives states for $t < 0$. Not even God can prevent this, except at a singularity.

‘But,’ we may say, ‘when we see fossils, we naturally think that they are of animals that once lived. If, in reality, God created them as fossils, is he not deceiving us?’

The answer is the same. If God wants the universe to be one in which fossils are formed, then he cannot make a young universe that does not contain fossils. The function that produces fossils for $t > 0$ or $t > t'$ will produce fossils for $t < 0$ or $t < t'$. If he created the universe without fossils, it would be a different universe – a universe that did not produce fossils.

The late Donald MacKay argued along similar lines in answer to Gosse’s critic, Charles Kingsley:¹⁹

... whatever the peculiarities of Gosse’s view, the point apparently missed by Kingsley is that some kind of inferable past is inevitably implicit in any ongoing system, whether with fossils or without, so that to speak of falsehood here is to suggest a non-existent option. ... If the Creator in the Genesis narrative were supposed to have made the rocks without fossils, this would not have helped, for nothing could have prevented the rocks from having some physically inferable past: their past simply would have been different and moreover inconsistent with the rest of the created natural history. On Kingsley’s argument, pressed to its logical conclusion, God ought not to have created any matter at all, since even molecules cannot help having some inferable past history!

Other arguments against the idea of a mature creation are: (1) that we could equally well say that the universe was created last Thursday;²⁰ and (2) since the idea cannot be tested, it is useless.²¹ The answer to (1) is that God has *told* us when he created the universe – in Genesis. The answer to (2) is that the usual scientific assumption, that the universe has been in existence for as long as it appears to have been, is equally untestable. As a correspondent to *Nature* observed, if God could have created the universe with the appearance of age, ‘then science would also appear to be a religion: we simply believe there was no relatively recent Creation but cannot prove it.’²²

Mature creation is not the only way of reconciling Genesis and modern science,²³ but it has the merit of being logical, and keeping close to the Genesis text. It also exposes the presuppositions of scientific history for what they are.²⁴

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¹⁹ Cited by John Sharp, www.cnetwork.co.uk/mag17.htm (MacKay himself went further than Gosse, and suggested that creation is the bringing into being of the *whole* of our space-time: past, present and future.) [Does any reader know the source of this quotation?]

²⁰ See John W. Burgeson’s review of *Omphalos, Perspectives on Science and Christian Faith* 53 (2001), 127–8.

²¹ See, e.g., S.J. Gould, *The Flamingo’s Smile* (London: Penguin, 1985), 110–1.

²² Bruce Denness, ‘Divine Artefact,’ *Nature* 336 (1988) 614.

²³ I develop another in *Big Bang, Small Voice*, Part II.

²⁴ Cf. Earle H. West, ‘Apparent Age,’ *Perspectives on Science and Christian Faith* 56 (2004), 154–5.