

What the Old Testament Can Contribute to an Understanding of Divine Creation

Robert Miller

The Catholic University of America, University of Pretoria

Through most of the 20th century it appeared the Catholic Church had bypassed the science vs. faith controversy that plagued Protestantism.¹ Thus in 1975 Father John Hardon wrote that, 'Darwinism as such had only a minimal impact on Catholic thought, whereas it struck many believers in evangelical Protestantism like a tornado.'² After all, it was a Belgian priest, Georges Lemaître, who first proposed the Big Bang Theory in the late 1920s, and the Catholic Church took such pride in his theories that Pope Pius XI inducted him into the Pontifical Academy of Sciences in 1936. But something has changed. Nowadays, it is not unusual to see American Catholics with the bumper sticker that reads, 'I believe in the Big Bang Theory, GOD spoke and BANG! It happened!' In 2010 South Bend, IN, held the 'First Catholic Conference on Geocentrism' (the view that the sun orbits the earth), following on self-styled Catholic apologist Robert Sungenis's 1100-page, two-volume tome *Galileo Was Wrong: The Church Was Right* published originally in 2005. And as for evolution, Father Hardon simply did not live to see the tornado. In early 2009 the Pontifical Academy of Sciences held a conference on evolution and theology in honour of the bicentenary of Darwin's birth, and in November a counter-Roman 'Scientific Conference Refuting Evolution Theory' took place at the private Free University of St. Pius V. Northern Virginia's Kolbe Center for the Study of Creation gives creation science workshops to Catholic parishes across the U.S.³ What has happened?

Several factors converge to explain both the lack of crisis over evolution in the early and mid-20th century and the spike in controversy at its end and today, a controversy Benedict XVI called 'absurd'.⁴ First, few lay Catholics read the Bible before the Second Vatican Council, so the clash between science and Genesis that some Protestants perceived simply was not an issue. On the other hand, once Catholics were enjoined to read the Bible after the Council, they were typically given little in the way of positive theological exegesis of Genesis 1-2. Much of Protestant Neo-Orthodox theology had already surrendered the understanding of the empirical world and of cosmology to scientists and retreated into 'morals and meaning', and this ready embrace of Darwin, for example, already in the late 19th century in mainline Protestantism, prevented the serious work of integrating science and religion as Thomas Aquinas had done in the 13th century and Leibniz in the 17th.

Catholic religious education embraced this same compromise model. The average high school religion textbook or annotated Bible footnote did two things. It acknowledged the ancient Israelites had a simplistic, naïve view of the world that we were by no means obliged to accept. Moreover, it reduced the theological content of Genesis 1-2 to simple platitudes. Pope Benedict XVI, while still Cardinal Ratzinger, noted a catechism used widely in France that reduced the meaning of creation to the affirmation that 'the first and final meaning of life is to be found in God.'⁵

Heavenly Seat of the Divinity

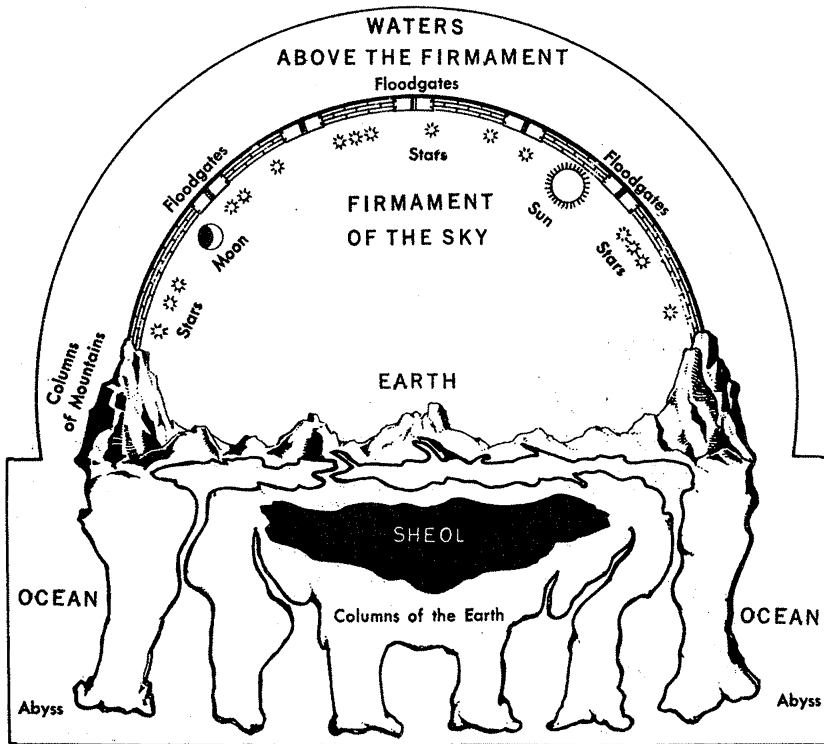


Figure 1: Supposed Israelite view of the world.

None of this was helped by an image (Figure 1) published in the New American Bible, St. Joseph Edition, which circulated widely in the United States. The impression given was that *this* was what Genesis 1 was trying to teach.⁶ No wonder the implied message was, ‘Oh, those silly Hebrews. Let’s move on to the Call of Abraham ...’

Nevertheless, Catholics took to heart both the injunction in *Dei Verbum* to learn the Scriptures and the reasoning behind that injunction.⁷ *Dei Verbum* (25) had quoted Jerome: ‘Ignorance of the Scriptures is ignorance of Christ.’ Citing Pope Leo XIII, *Dei Verbum* 24 said, ‘The study of the sacred page is the soul of sacred theology.’ There had to be *some* theology worthy of the name within Genesis 1-2. Creation was at the core of Aquinas’ theological thought and central to fundamental Catholic theology.⁸ Catholic readers of Genesis eager for ‘meat’ turned, therefore, to more literal readings.⁹ Sometimes this took the form of turning to Protestant evangelicalism itself, as Catholic groups adopted Bible studies produced by The Navigators and similar movements. In other cases, Catholic writers themselves began to promulgate theological readings of Genesis that depended on a literal Adam and Eve, even if rarely on a literal seven days.

Yet both creationist readings of Genesis and recent arguments by scientist atheists that science renders Christianity bunk bow toward science in treating the Bible as a scientific book, as if this were the only form of discourse worthy of acceptance.¹⁰ The need is for a doctrine of creation without the distraction of creationism, and from this need emerges a goal that this essay

will address: to lay out in some detail the rich ‘protology’ or creation theology that the Old Testament *can* provide, when read as the Church has always proposed. Thomas Aquinas says, ‘But how and in what order this [creation] was done pertains to faith only incidentally insofar as it is treated in scripture ... On such matters even the saints disagree, explaining scripture in different ways.’¹¹ He did not intend to jettison his Aristotelian cosmology because of a literal reading of Scripture.¹² More recently, Pope Pius XII in *Humani Generis* (1950) said that much in Genesis 1-11, for example, was ‘a simple, metaphoric way of speaking’ and that ‘in what exact sense Genesis 1-11 comes under the heading of history is for the further labors of exegetes to determine.’

When Pius XII said ‘way of speaking’, he meant genre. Repeatedly the documents of the Church stress the need to read Scripture attentive to genre. Pius’ own 1943 *Divino Afflante Spiritu* (35) urged exegetes to ‘discover what literary forms the writers intended to use.’ *Dei Verbum* affirmed, ‘Those who search out the intention of the sacred writers must, among other things, have regard for literary forms’ (12). Certainly, God is omniscient and trustworthy. Certainly, God knows about hadrons, optically violent variable quasars, and quantum chromodynamics. However, as John Chrysostom said, ‘The ordinariness of the words is made necessary by our limitations.’¹³ Ephrem the Syrian sang of ‘that Grace which bent down its stature to the level of man’s childishness,’¹⁴ as God works to clothe ‘himself in our language, so that he might clothe us in his way of life.’¹⁵ So, too, Gregory of Nyssa: ‘Like a tender mother who joins in the inarticulate utterances of her babe, [God] gives to our human nature what it is capable of receiving ... and speaks in human language.’¹⁶

Let me repeat: both creationist readings of Genesis and arguments by atheists that science renders Christianity bunk bow in the direction of treating the Bible as a book of science, as if this were the only form of discourse worthy of acceptance. Our society has reified history and science as self-evidently true and self-explanatory and the privileged forms of knowledge.¹⁷ Yet there are multiple kinds of truth: philosophical truth, moral truth, religious truth.¹⁸ Poetry is truthful inasmuch as it deposits in its semantic expressions some authentic impressions of reality. As Paul Ricoeur said, Genesis 1-2 has ‘more meaning than a true history’.¹⁹

I will devote most of my attention to Genesis. This will therefore hardly give us a ‘Biblical Protology’ (the New Testament does touch on creation, e.g., in Colossians 1 and John 1), or even an ‘Old Testament Protology’.²⁰ Creation appears in various places throughout the Old Testament, including creation language employed in cases where the intent was not to teach about creation but about something else, but those, too, are witness to the creation thinking of the day. Nevertheless, most of these passages emphasize theological truths also presented in Genesis 1 and 2.²¹ Moreover, Genesis is where the science/religion ‘fight’ rages, and, as I will show, where science and faith came into harmony.

On the other hand, given the almost certainty that Genesis 1 and 2 originate separately, one must justify combining the two chapters as I am about to.²² The general view is that Genesis 2 is the older creation story, from the so-called Yahwist Source. In this case, the so-called Priestly author of Genesis 1 or the final editor of Genesis intends the reader to read the two stories together. At a minimum, this means a theology of Genesis 1-2 obtains at a redactional or canonical level. However, I think it is stronger than this. Scholars are increasingly drawing attention to the value of reading Genesis 1-2, or even 1-11, as a unit.²³ In Genesis 1, the items of creation that God does not name are precisely the ones that man will name in chapter 2 (with one exception). In Genesis 1, the refrain repeats: ‘God saw that it was good.’ The ominous counterpart in chapter 2 is when ‘Eve saw it [the forbidden fruit] was good [for food].’ There are several other examples. With this justification, the major theological points of Genesis 1-2 emerge.²⁴

‘In the beginning, God created the heavens and the earth.’ It is not a perfect translation, but it will suffice. The first point here is that the universe exists. Science depends on this, and few would contest it, but the philosophy of ‘Solipsism’ has been around since Gorgias of Leontini in the 5th century BC.²⁵

Second, the world has a beginning. We do not have to derive this simply from the admittedly questionable translation of the first word of Genesis 1:1. 2:2 says, ‘The earth was formless and void, and darkness was over the face of the deep. And the Spirit of God was hovering over the face of the waters.’ ‘Chaotic waters’ are how all of the ancient Near Eastern societies envisioned ‘nothingness’. They have no concept of nothing, of zero, of a vacuum. Ancient Near Eastern creation stories or ‘cosmogonies’ from Egypt to Babylon that go back to the ‘very beginning’ describe a watery chaos, when everything that now is, was not. The ‘world’ is what is ordered. Now it is hard to find scientists today who do *not* think the universe had a beginning. Genesis 1 neither contradicts nor supports the ‘Big Bang’ theory or whether there was a *universe* before the ‘Big Bang’,²⁶ but it does run counter to any notion of the *world* as eternal in the sense of ‘without beginning’.²⁷

The third and most important truth of this verse from Genesis 1 is that God is, existing outside of and independent of creation.²⁸ All other Christian doctrine depends on distinction of God and the world.²⁹ A literate citizen of the ancient Near East would have found the creation story of Genesis 1 awkwardly starting *in media res*. Where had this ‘God’ come from? Most Egyptian myths and many Mesopotamian ones explained first the origin of the gods. The Bible has no such interest in ‘theogony’. As Dietrich Bonhoeffer wrote, ‘No question can penetrate behind God creating, because it is impossible to go behind the beginning.’³⁰

As the rest of Genesis 1 unfolds, we find that God is the creator of everything.³¹ Israel broke with mythology of its neighbours. The message is that the world is not a chaos of mutually opposed forces, that the sun and moon are not deities, that the sky is not full of divinities (all of which modern Physics and Biology confirm), but that all of this comes from one God.³²

The ancient Israelites were aware of the beliefs of their neighbours about the origins of the world and of humanity. The ideas of Mesopotamian myths like *Atrahasis* and the common themes of the many Mesopotamian stories of the making of the human race are deliberately refuted in both Genesis 1 and 2, as we shall see. With one myth, however, the connection may be even stronger. Although scholars are by no means as certain as it is often maintained, it is probable that the author of Genesis 1 knew the Babylonian *Enuma Elish* myth.³³ The oldest copies we possess of the *Enuma Elish* are from 1000 BC, and it likely originates at the earliest in the 16th century.³⁴ Not earlier. We cannot refer to the *Enuma Elish* as the ‘Mesopotamian Creation Story’, as there are numerous creation stories much older and they look nothing like *Enuma Elish*.

The story is on the surface nothing like Genesis. The monster Tiamat, who is also the Chaos Sea, threatens to destroy the gods, and no champion appears. Marduk, god of the city of Babylon, offers to defeat her if he can become king of the gods. He is victorious, and from her now-split carcass creates the world. When he finishes, the gods declare him king and build a temple-home for him. The subtext is kingship – both of Marduk, and the human king of Babylon, his installation as heir to the cosmic victory. The myth was ritually rehearsed in the New Year’s festival.³⁵ The full Neo-Babylonian festival ritually linked the defeat of Tiamat and creation of the world to the enthronement of the Babylonian king: the king overcoming his enemies is homologous to the god of kingship overcoming the monster.³⁶ This myth-and-ritual complex lasted into the Persian and Hellenistic periods.

A century ago, Hermann Gunkel (building on the work of others) demonstrated dependence of Genesis 1 upon *Enuma Elish*. Subsequent scholars have reiterated and honed the parallels.³⁷

The word used for the ‘deep’ in Gen 1:2, *tehum* (in singular and without definite article) must relate to Tiamat.³⁸ Both Genesis 1 and *Enuma Elish* thus start with nothing but chaos water, described using the same lexeme. Genesis 1 knows the same threefold classification of land animals as *Enuma Elish*, and creation follows the same sequence of water-firmament-land-lamps-people-rest. Marduk creates simply by his word in *Enuma Elish* 4.19–27. In 5.3–6, 12–14, the purpose of the sun and moon is the same as in Genesis 1. Humans are created with the phrase, ‘Let us make man’ in 6.5–8.

If the similarities are proof of dependence, then the differences are even more striking.³⁹ Genesis 1 has no violence, a point to which we shall return, and Genesis 1 is unabashedly monotheistic. God alone creates, and all that is, he has created. This means that every created object is contingent.⁴⁰ Duns Scotus said that nothing in creation is necessary. Therefore, everything is grace, an unmerited gift of God.⁴¹

There is another reason for highlighting the relationship between Genesis and *Enuma Elish*. The Babylonian creation story was arrived at by observation, by science. It represented the best science known in the Near East at the time.⁴² The Israelite writer of Genesis 1 was thus working at the interface of science and theology.⁴³ John Paul II said in 1988:

If the cosmologies of the ancient Near Eastern world could be purified and assimilated into the first chapters of Genesis, might contemporary cosmology have something to offer to our reflections upon creation? Does an evolutionary perspective bring any light to bear upon theological anthropology, the meaning of the human person as the *imago Dei*, the problem of Christology— and even upon the development of doctrine itself? What, if any, are the eschatological implications of contemporary cosmology, especially in light of the vast future of our universe? Can theological method fruitfully appropriate insights from scientific methodology and the philosophy of science?⁴⁴

This is our challenge today, working in the footsteps of the so-called Priestly Writer of Genesis 1.⁴⁵ There are many ways to view the relationship of science and religion,⁴⁶ but the Priestly Writer would maintain, ‘When we come to the concept of creation, we come to an area in which the relation between science and faith must be at its most intimate.’⁴⁷

Genesis 1 is an elegant, finely crafted pattern. It is not prose; its repetitions are ordered and its structure is unmistakable and tight. Space does not permit us to go verse by verse to see this inductively, but the pattern is presented by the number of creative acts on each day, the nature of each day’s product, the location of its creation, whether the creation involves ‘separation’ or not, whether the object is named by God,⁴⁸ whether God has created the object directly or delegated its creation (as ‘Let the earth bring forth the living creature’),⁴⁹ whether the object is said to be capable of reproducing more of its kind, and the verdict God declares over the creation. This chart (Figure 2) illustrates what this analysis produces.

This shows two sets of three days: in each set, there are two days of one creative act each and a third of two. The location of what is created in Days 4–6 repeats Days 1–3. The first three days give form to the formless; the second three fill the void. And so on.

This is beautiful, and it clarifies some oddities in the text. The words of vv 20–21 indicated the waters created both the fish and birds: ‘Let the waters teem with the teeming living creatures and birds that fly above the earth in the open firmament of heaven.’ This was never intended to be a biological account of the world; Israel did not think the sea produced birds. Birds and fish must be created from the waters because Days 2 and 5 are ‘water’ days. Yet birds must be created on Day 5 alongside the fish because they fill the ‘sky’ created on Day 2. The sun and moon (not so named lest they seem divine) are created on Day 4 *because* light is created on Day 1; there is no contradiction here.

Day	Creation	# of Acts	Location	Verdict	Separation ?	Named ?	Delegated ?	Reproduces ?
1	Light	1	-	Good	Y	Y	N	N
2	Sky	1	Waters	-	Y	Y	N	N
3	Land / Plants	2	Land	Good/Good	?	Y	N/Y	N/Y
4	Lamps	1	Sky	Good	?	N	N	N
5	Birds & Fish	1	Waters	Good	N	N	Y	Y
6	Animals/humans	2	Land	Good/Very good	N	N	Y/N	Y/Y

 = Giving Form to the Formless


 = Filling the Void

Figure 2: Narrative structure of Genesis 1.

The structures focus attention on the creation of humanity, with whose advent the entire world becomes ‘very good’.⁵⁰ We will return shortly to what this says in making humans the penultimate climax of creation and the Sabbath its pinnacle. For now, let us focus on the mere presence of such an amazing pattern. Cosmogonies are never written to tell audiences about the primeval past; they are written to tell about the present nature of the universe. The seven days are not a chronology of creation; they do not represent eras or stages.⁵¹ I think the point is the pattern. This means creation has a natural order, a coherence – a point science also depends on.⁵² Israel cannot write philosophy; they cannot say, ‘The universe is rational, it is orderly.’⁵³ But they can say it through pattern.⁵⁴

Everything God creates is good ... except the firmament – which I have never understood. This is fundamental theology. As intended, what exists is good. As the Medieval theologians said, *Ens et bonum convertentur*.⁵⁵

None of God’s creative acts appears difficult for him: there is no apparent exertion, God simply speaks.⁵⁶ Put theologically, this truth is that ‘without any resistance to his power, God creates’.⁵⁷ We must therefore be wary of interpretive moves on Genesis 1. The formless and void, the darkness and stormy waters of verse 2, have led commentators to rely so heavily on ancient Near Eastern analogies as to call the chaos darkness is ‘a force which must be subdued in order for the Creator’s design to come into being.’⁵⁸ However, theomachy, creation by combat, never achieved canonical status in Israel, surviving only in shadowy references in the Psalms and Isaiah.⁵⁹ In Genesis 1:21, even the *tannin*, the dragon of the Canaanite ‘dragon/chaos’ myth, shrinks to a fish.⁶⁰ Creation is good; there is no threat, and violence is an aberration.⁶¹

In fact, God does not so much command as invite, in the jussive mood: ‘Let there be...’ God creates in Genesis 1 by ‘saying’. Therefore, in a certain sense, creation is revelation. Franciscan tradition in particular speaks of the ‘book of creation’.⁶² Reflecting back on what has been said about the creator/creation discontinuity, one might say that the only continuum from God to the creation is the Word.⁶³

Genesis 1's structure is not two uniform sets of three days. The second set has enough superlative tweaks on the first to present a crescendo towards the sixth day and the creation of the human person.⁶⁴ The theological meaning of this is humanity's special dignity.⁶⁵ Gen 1:31 says that creation as a whole becomes 'very good' only after humans are created. In the biblical view, humanity is not intrinsically evil, and is neither divine nor merely natural but both, as Genesis 2 will clarify.⁶⁶

A wide-ranging history of speculation has grappled with 'in our image, after our likeness'. What does it mean to be in the image and likeness of God? We can briefly categorize the options. One set of options interprets this substantially; image and likeness is something humans *have*. Theologians speculated this might be a spiritual nature (Augustine, Aquinas), reason (Philo, the *Sibylline Oracles*; *1 Enoch*), a moral nature, or even physical appearance (Gunkel, Von Rad). In any case, 'image/likeness' cannot be limited to one aspect of the human person – the soul, for example. The text will not allow this; the whole person is in the image of God. However, the biblical text does not conform well to any of these substantial explanations.⁶⁷

A second possibility is relational aspects. To be in the image and likeness of God means to have capacity for a relationship with God (Buber, Westermann). Humanity's relationship to God is not something supplemental to human existence; our very existence is our relationship to God. More textual support obtains for viewing the male-female relationship as the definition of image (Barth, Bonhoeffer). The poetic structure of v 27 is 'God created man in his own image; in the image of God he created him; male and female he created them.' The rigors of Hebrew poetics demand that the new term 'male and female' can only correspond to 'image of God', the term that has otherwise dropped out in the third colon.⁶⁸

The context of the verses suggests a functional definition. The next verses grant humanity dominion over creation, in effect as God's vicegerent. We will return to this dominion shortly.

The philology of the relatively rare Hebrew terms for 'image and likeness', *tselem* and *demut*, suggests an iconic or theophanic interpretation. A *tselem* is an idol (the Septuagint has *icon* here). Exegetes all note that the god's *tselem* is not a god's picture but where the god can be encountered and truly worshipped. Thus to say we are the *tselem* of God is to make each other a place of encountering God. Not that people are God, but that how one relates to another is how one is relating to God. It is a small step from this to Matthew's Gospel's sheep and goats.

Moreover, in the ancient Near East, the king was regularly a *tselem* of the deity, his 'body-double' (also called *demut*).⁶⁹ This was true from 3000 BC to 600 BC.⁷⁰ In that light, Genesis 1 is a radical democratization.⁷¹ Thus, this iconic definition does not exclude the functional, dominion one. Vv 26 and 28 assign royal functions to humanity: 'let them have dominion',⁷² but with no provision for having dominion over other people. The *Enuma Elish* ends with Marduk assuming dominion over the world;⁷³ Baal becomes king at the end of the Canaanite Baal myth. In Genesis 1, the one who assumes kingship at the end of the creation story is the human. The anthropology here is exalted.⁷⁴ We shall see that Genesis 2 will help us qualify this dominion, but note even here that although humans have dominion over the animals, they are not permitted to eat them; v 29 assigned only plants as human food.⁷⁵ This is not a food chain.

Genesis 1's image and likeness are complemented by Genesis 2's dust of the earth and breathe of God. Both presentations affirm all humans are equal. Royalty have no distinct creation story. We must not understand this episode as God placing a soul within a person. The text says God breathed into man and man became alive. Israel does not hold to a separable dualistic Cartesian combination of body and soul.⁷⁶ As John Paul II said, biblical anthropology does not distinguish in man body and soul but rather body and life.⁷⁷

Regardless of whether a poetic reading of 1:27 suggests men and women in relationship image God, the verse suggest a unity and equality of the sexes. To establish that this is a theologoumenon from Genesis, we must show that Genesis 2 does not dissent in having man created before woman. In Gen 2:18–20, the woman is man’s *ezer kenegdo*, an awkward phrase that literally means ‘helper like facing him’. This is the King James Version’s ‘helpmeet’, a ‘Helper fit for him’ – clearer in Spanish: ‘como él que le ayude’ (*Biblia de Nuestro Pueblo*, Latin American Edition). The *neged* implies equality; God is an *ezer* to people in Exod 18:4, and no one else is.⁷⁸

Being made from man’s side does not indicate subordination. Nor is the man here ‘naming’ his wife in the statement, ‘This one shall be called “woman,”’ which would indicate subordination. The author has gone out of his way to put this statement in the passive voice. Eve will not be ‘named’ by Adam until after Genesis 3’s events.

Similarly, regardless of whether a poetic reading of 1:27 suggests men and women in relationship image God, Genesis 2:24–25 – ‘Therefore shall a man leave his father and his mother, and shall cleave unto his wife, and they shall be one flesh’ – indicates an ‘innate Eros’. Here is ‘sexual concourse before the Fall’, if we may call it that. Augustine and Didymus the Blind⁷⁹ rejected the Platonic view of Gregory of Nyssa and John Chrysostom,⁸⁰ and taught like the rabbis that if there had been no sin there still would have been sexual intercourse in Eden.⁸¹

This verse also denotes default monogamy nowhere legislated in the Old Testament. Both polygamy and celibacy are irregularities.

A final piece of anthropology here in Genesis 2 is the primacy of work. Gen 2:5, where ‘there was no man to work the ground’, and 2:15, ‘God took the man and placed him in the Garden of Eden to work it and watch it’, indicate at least one of the reasons God created people was to till the soil and to *avad* (work, till, serve) and *shamar* (keep, guard) the Garden.⁸² This complements the dominion from chapter 1,⁸³ and it demonstrates that ‘work is a fundamental dimension of man’s existence on earth.’⁸⁴

The final theological message of Genesis 1–2 is that the pinnacle of creation’s pattern in Genesis 1 is not humanity but the Sabbath.⁸⁵ It is the only creation that God declares not ‘good’ but ‘holy’. Genesis 2:2 states that God completed working on Day 7, not Day 6.⁸⁶ The following verses clarify that his only ‘work’ was creating. Therefore, he created on Day 7, and what he created was the Sabbath.

To understand what this means we must remember that the Israel that ‘received’ Genesis, that heard the stories, was an Israel that already knew what the Sabbath was. Whenever the Sabbath originated, it did not originate with this text. The Sabbath meant for Israel the day of rest, of human rest.⁸⁷ These verses of Genesis 2 now tell Israel God also rested on the Sabbath. It is not too much to say that this added to the theology of the Sabbath the idea that to keep the Sabbath was to emulate God, to live in his image and likeness.⁸⁸

The contribution that the Old Testament can make to protology is far from minimal. Without any nod in favour of creationism, the exegesis of Genesis 1 and other passages on creation provides great fruits for theology. When read attentive to genre, we have only begun to scratch the surface of working out the theological implications of what the text contains.

Notes

1 Joan F. Gormley, ‘Creation in the Bible: Genesis 1’ in R. Brungs (ed.), *Creation & Evolution* (St. Louis: Institute for the Theological Encounter with Science and Technology, 1998), pp. 48–75, (here p. 49).

2 John Hardon, *The Catholic Catechism* (New York: Random House, 1975), p. 91.

3 According to a 2007 Gallup survey, 21% of US Catholics identify themselves as biblical literalists; Brian B. Pinter, 'A Fundamental Challenge', *America* 205.6 (2011), pp. 11–12, 14, (here p. 12).

4 'Address to Priests of the Dioceses of Belluno-Feltre and Treviso' Vatican website, July 27, 2007, accessed June 25, 2014, http://www.vatican.va/holy_father/benedict_xvi/speeches/2007/july/documents/hf_ben-xvi_spe_20070724_clero-cadore_en.html. For wider explanation of this 'fifth wave' of creationism, see Michael Zimmerman, 'Combating the Fifth Wave of Creationism', *Theology and Science* 8 (2010), pp. 211–22.

5 Benedict XVI, *In the Beginning* (Grand Rapids: Eerdmans, 1995), pp. xi–xii.

6 I am not convinced it was even the underlying cosmology of ancient Israel. In any case, the doctrine of creation is not dependent on biblical cosmology, nor any other cosmology for that matter; Paul Langsfeld, 'Creation and Evolution', in R. Brungs (ed.), *Creation & Evolution* (St. Louis: Institute for the Theological Encounter with Science and Technology, 1998), pp. 105–60, (here p. 109).

7 *Dei Verbum* 25: 'This sacred Synod earnestly and specifically urges all the Christian faithful to learn by frequent reading of the divine Scriptures.'

8 Langsfeld, 'Creation', p. 125.

9 Pinter, 'Fundamental Challenge', p. 12.

10 Gormley, 'Creation', p. 51; Langsfeld, 'Creation', p. 110.

11 Thomas Aquinas, *Commentary on the Sentences of Peter Lombard* Book 2, d. 12 q. 1 a. 2 'Quo autem modo et ordine factus sit, non pertinet ad fidem nisi per accidens, in quantum in Scriptura traditur, ... et in his etiam sancti diversa senserunt Scripturam divinam diversimode exponentes.' Ralph McInerny, *Thomas Aquinas: Selected Writings*, Trans. and ed. Ralph McInerny (New York: Penguin, 1998), 91.

12 Walter P. Carvin, 'Creation and Scientific Explanation', *Scottish Journal of Theology* 36 (1983), pp. 289–306 (here pp. 298–99); citing *Summa Theologiae* Q68, a.3.

13 John Chrysostom, *Homily on Genesis*.

14 Ephrem, *Hymns on Paradise* 11.6–7.

15 Ephrem, *Hymns on Faith* 31.1–2.

16 Gregory of Nyssa, *Against Eunomius* 2.419.

17 W. Taylor Stevenson, 'Myth and the Crisis of Historical Consciousness' in L. W. Gibbs and W. T. Stevenson (eds.), *Myth and the Crisis of Historical Consciousness* (Missoula: Scholars Press, 1975), pp. 1–17, (here p. 12).

18 Mary K. Birge, 'Genesis' in M. K. Birge, B. G. Henning, R. M. M. Stoicoiu, and R. Taylor (eds.), *Genesis, Evolution, and the Search for a Reasoned Faith* (Winona, MN: Anselm Academic, 2011), pp. 1–40, (here p. 5).

19 Emerson Buchanan, trans., *The Symbolism of Evil* (Boston: Beacon, 1969), p. 236.

20 Zachary Hayes, *What are they saying about creation?* (New York: Paulist, 1980), p. 30. Moreover, no Catholic protology can be merely biblical.

21 S. D. Giere has collated the lexical parallels between Genesis 1 and other passages, tabulating them statistically; *A New Glimpse of Day One: Intertextuality, History of Interpretation, and Genesis 1.1-5*, Beihefte zur Zeitschrift für die neutestamentliche Wissenschaft 172 (Berlin: De Gruyter, 2009), pp. 28–29. The strongest 'intertext' is with Psalm 104, which echoes much in Genesis 1 and 2, especially the importance of 'light' and the 'breath' of God; Giere, *New Glimpse*, pp. 30–32.

22 I strongly resist any exegesis where previous conclusions about the nature of the 'source' dictate the interpretation of the passage being assigned to that source, as Edwin Firmage does with his 'Priestly' reading of Genesis 1 in 'Genesis 1 and the Priestly Agenda', *Journal for the Study of the Old Testament* 82 (1999): pp. 97–114, esp. pp. 97–100, 109–110.

23 Johannes Klein, 'Die Erkenntnis des Guten und Bösen als Gegenbewegung zur Schöpfung: Perspektiven der Zusammenschau von Gen 1–3', *Sacra Scripta* 7 (2009), pp. 135–50; Joseph Blenkinsopp, 'A Post-exilic lay source in Genesis 1–11' in Jan Christian Gertz, Konrad Schmid, and Zmarkus Witte (eds.), *Abschied vom Jahwisten* (Berlin: Walter de Gruyter, 2002), pp. 49–61, (here p. 49).

24 The root of this list is from Gormley, 'Creation', pp. 65–70; see also John M. Perry, *Exploring the Genesis Creation and Fall Stories* (Kansas City: Sheed and Ward, 1992), pp. 44–49.

25 And as recent as George Berkeley, *Three Dialogues between Hylas and Philonous* (1713) (ed.) Robert Merrihew Adams (Indianapolis, IN: Hackett, 1979).

26 Wes Morrision, 'Creation *Ex Nihilo* and the Big Bang,' *Philo* 5 (2002), pp. 1–3, 9.

27 Gormley, 'Creation,' 66.

28 Gormley, 'Creation,' p. 66; Arvid S. Kapelrud, 'Mythological Features in Genesis Chapter I and the Author's Intentions,' *Vetus Testamentum* 24 (1974), p. 183.

29 Classically defended in R. Garrigou-Lagrange, 'La distinction réelle et la réfutation du panthéisme,' *Revue Thomiste* 44 (1938), pp. 699–711. I will not enter into discussion as to how the Incarnation alters the

independence of God and creation. Sigurd Daecke argues a radical alteration is required; 'Schöpfung Gottes in der Evolution: Zum Verhältnis von Evolution, Religion und Schöpfung,' in *Gottesglaube, ein Selektionsvorteil?*, ed. S. M. Daecke and J. Schakenberg (Gütersloh: Chr. Kaiser, 2000), pp. 179–203.

30 *Creation and Fall* (New York: Macmillan, 1959), p. 17. Aquinas agrees with Augustine that time is created together with the world; Carvin, 'Creation,' p. 295. This is more accidental temporalism – for any time, God exists at that time – than atemporalism, which holds that there was a time when God and God alone existed; Thomas D. Senor, 'Divine Temporality and Creation *Ex Nihilo*,' *Faith and Philosophy* 10 (1993), pp. 87–88.

31 This is a point made strongly by Job 38:4–5, 8, 11–13, 31–33; Ernan McMullin, 'Creation *ex nihilo*: early history,' in *Creation and the God of Abraham*, ed. D. B. Burrell, C. Cogliati, J. M. Soskice, and W. R. Stoeger (Cambridge: Cambridge University Press, 2010), p. 15.

32 Benedict, *In the Beginning*, p. 5.

33 For possible echoes of *Enuma Elish* in Genesis 2, see George D. Byers, *Genesis 2,4-3,24* (Rome: Confitetur, 2007), pp. 243–53.

34 Wayne Horowitz, *Mesopotamian Cosmic Geography* (Winona Lake: Eisenbrauns, 1998), p. 108.

35 Julye Bidmead, *The Akitu Festival* (Piscataway, NJ: Gorgias, 2004), p. 60. It was recited, even if not re-enacted as earlier scholars believed.

36 Bidmead, *Akitu*, p. 83.

37 *Inter alia*, J. Richard Middleton, *The Liberating Image: The Imago Dei in Genesis 1* (Grand Rapids: Brazos, 2005), p. 131.

38 Hermann Gunkel, *Genesis* (1901; 9th ed. 1977; repr. Macon: Mercer University Press, 1997), p. 105. David Tsumura argues it was a native Hebrew word (known in Ugaritic, too) and not an Akkadian loanword, and so no connection with Tiamat can be intended (*Creation and Destruction* [Winona Lake: Eisenbrauns, 2005]). Nevertheless, the word *is* cognate and was blatantly so to the author, as Horowitz showed in 1999 (*Mesopotamian Cosmic Geography*).

39 Kapelrud, 'Mythological Features,' p. 178.

40 Some philosophers will opine that only a contingent God can create a contingent world; if God is necessary, everything that comes from him must be caused necessarily. For examples and refutation, see Francesca D'Antona, 'The Two Aspects of God,' in *International Symposium on Astrophysics Research and on the Dialogue between Science and Religion*, ed. C. Impey and C. Petry (Rome: Vatican Press, 2002), pp. 218–19.

41 Kenan B. Osborne, *The Franciscan Intellectual Tradition* (St. Bonaventure, NY: Franciscan Institute, 2003), p. 66; David L. Schindler, 'The Given as Gift: Creation and Disciplinary Abstraction in Science,' *Communio* 38 (2011), pp. 81–82.

42 Carvin, 'Creation,' p. 293.

43 Kapelrud, 'Mythological Features,' p. 181.

44 *Message to the Director of the Vatican Observatory*; repr. in *Physics, Philosophy and Theology: A quest for Common Understanding*, ed. Robert J. Russell, William R. Stoeger, and George V. Coyne (Vatican City State: Libreria Editrice Vaticana, 1988).

45 By no means am I advocating any sort of 'God of the gaps,' whereby God explains the 'ignition' of the Big Bang or quantum uncertainty proves free will. On the perils of such efforts, see John F. Owens, 'Creation and End-Directedness,' *Sophia* 49 (2010), pp. 496–97. Nevertheless, while it is bad theology to insert God into gaps of ignorance (e.g., what 'sparked' the Big Bang), God may well explain some gaps of ontology (e.g., Heisenberg's uncertainty principle, the Pauli exclusion principle, Gödel's incompleteness theorem); Robert E. Ulanowicz, *A Third Window* (West Conshohocken, PA: Templeton Foundation Press, 2009), p. 159.

46 Ian Barbour's famous categories are conflict, independence (Benedict XVI), dialogue (Pius XII), and integration (Basil, Aquinas, Lonergan, John Paul II); Ian G. Barbour, *Religion and Science* (San Francisco: Harper, 1997); *When Science Meets Religion* (San Francisco: HarperOne, 2000). This list omits 'concordism' that sees science supporting (a certain reading of) the Bible and vice-versa, as in Nathan Aviezer, 'On Contradictions between Torah and Science,' *Tradition* 24 (1989), pp. 59–68. Integration or dialogue of some sort appears requisite: we use the sciences of language, archaeology, and geography whenever we interpret Scripture; it should not be entirely different with natural sciences; E. C. Lucas, 'Some Scientific Issues Related to the Understanding of Genesis 1–3,' *Themelios* 12 (1987), p. 47. Contrariwise, science regularly inquires into hypothetical, ontological matters of particulars and causes; Scott G. Hefelfinger, 'Science, Intelligibility, Creation,' *Logos* 14 (2011), pp. 143–44. The danger is in recklessly extrapolating from science to religious questions and vice-versa. See the extensive discussion in Guy Consolmagno, *God's Mechanics* (San Francisco: Jossey-Bass, 2008), pp. 10–11, 34–35.

47 Carvin, 'Creation,' p. 290.

48 This element in itself is important, as God establishes each named creation in its own being and the relationship to God that establishes it so is truly in the creature. Each being is thus independent in its being and acting even though that being and acting are from God. See Bert Akers, 'Beauty & Communications' in *Beauty in Faith, Science, Technology*, ed. R. Brungs and M. Postiglione (St. Louis: Institute for the Theological Encounter with Science and Technology, 1994), p. 59, for discussion. Cf. Thomas Aquinas, *Summa Theologiae Ia.15.2*.

49 This is also relevant theologically; see Schindler, 'Given,' p. 83.

50 Dare we connect this with what is called the 'anthropic principle' (strong or weak)? See Chris Impey, 'Truth and Beauty in Cosmology,' in *International Symposium on Astrophysics Research and on the Dialogue between Science and Religion*, ed. C. Impey and C. Petry (Rome: Vatican Press, 2002), p. 52.

51 Yet it is a message of the text that creation did not happen all at once; Lawrence W. Fagg, *The Becoming of Time* (Durham, NC: Duke University Press, 2003), pp. 112–13, p. 98.

52 Kenneth Miller, 'Does science make belief in God obsolete?' *Templeton Foundation Series* online essay at www.templeton.org/belief/essays/miller.pdf, p. 1; there is a good deal *more* structure in the universe than physics requires, as any periodic table of elements displays. For discussion, see Impey, 'Truth,' pp. 41–42.

53 They do approach this same philosophical point by one other means, in the Wisdom Literature, by describing (Lady) Wisdom's place at God's side at creation, 'assisting' in the creative act; Robert Butterworth, *The Theology of Creation* (Theology Today 5; Butler, WI: Clergy Book Service, 1969), pp. 44–49. In Prov 8:22–31, Wisdom says, 'The Lord possessed me at the beginning of his work, the first of his acts of old. Ages ago I was set up, at the first, before the beginning of the earth ... When he established the heavens, I was there ... when he marked out the foundations of the earth, then I was beside him, like a master workman.' (English Standard Version). Wisd 9:9 says to God, 'With you is Wisdom, she who knows your works, she who was present when you made the world' (New Jerusalem Bible). The notion is also in Sir 1:4–9 and Bar 3:31–33.

54 Klaus Nurnberger, 'The Conquest of Chaos: The Biblical Paradigm of Creation and its Contemporary Relevance,' *Journal of Theology for Southern Africa* 98 (1997), p. 8. Is Genesis also implying a natural law? I suspect yes; which is why the same Israelite writer gives for the dietary laws later in the Pentateuch. Can we extrapolate this to say they affirm, with science, the laws of nature? The equation is not as simple as is sometimes presented (e.g., Stephen M. Barr, 'The Miracle of Evolution,' *First Things* (Feb 2006), pp. 31–33; and even by Pope Benedict XVI in his 19 October 2006 Address to Participants at the IVth National Ecclesial Convention in Verona), and there are a number of perspectives on the ontological status of stochastic laws of nature. See Wesley J. Wildman, 'The Divine Action Project, 1988–2003,' *Theology and Science* 2 (2004), p. 41 for summary. With regard to human biology, in a competitive world, hope, generosity, and forgiveness are excellent survival strategies, suggesting that the laws of nature and mathematics are *ethical*; Martin A. Nowak, 'Evolution and Christianity,' Intellect and Virtue Lecture presented at the Catholic University of America (Washington, 2011). On the other hand, it is not theologically necessary for random contingency to play no part in the universe, as noted by the International Theological Commission's 2004 'Communion and Stewardship,' 69 (citing *Summa Theologiae Ia.22.4 ad 1*).

55 Thomas Aquinas, *Summa Theologiae Ia.5.1*; Bonaventure, *Commentaria in Quatuor Libros Sententiarum I.1.2.2* – both citing Pseudo-Dionysius, *On the Divine Names*, chap. 5.

56 Kapelrud, 'Mythological Features,' p. 184. Creation by speech appears also in Ps 33:6–9 – 'By the word of the LORD the heavens were made, and by the breath of his mouth all their host ... For he spoke, and it came to be; he commanded, and it stood firm' (English Standard Version) – and Judith 16:14 – 'For you spoke and things came into being, you sent your breath and they were put together' (New Jerusalem Bible).

57 Gormley, 'Creation,' p. 67.

58 Bernard Batto, *Slaying the Dragon* (Louisville: Westminster John Knox, 1992), pp. 73–101.

59 Mark S. Smith, *The Priestly Vision of Genesis 1* (Minneapolis: Fortress, 2009), p. 69. For examples, see Job 26.

60 Nurnberger, 'Conquest,' p. 8.

61 Middleton, *Liberating Image*, p. 266.

62 Bonaventure, *Hexaemeron* 2.20 [5.340]. In addition, Benedict XVI, Address to the Pontifical Academy of Sciences, 31 October 2008.

63 Dietrich Bonhoeffer, *Creation and Fall; Temptation* (New York: Macmillan, 1959), p. 22.

64 Yet, 'God is not just interested in human being and human well-being ... God has a universal history with all things'; H. Paul Santmire, 'The Genesis Creation Narratives Revisited,' *Interpretation* 45 (1991), p. 378.

65 Gormley, 'Creation,' pp. 68–69. Polkinghorne lists several scientific facts that 'support a claim for unique human status'; *Exploring Reality*, pp. 41–45.

66 The ‘dust of the earth’ signifies that humans are bound to the earth in a moral and spiritual integrity; Ellen F. Davis, *Scripture, Culture, and Agriculture* (Cambridge: Cambridge University Press, 2009), p. 25.

67 This is probably for the best, as we come to discover evidence of seafaring among *Homo erectus*, music and burial rituals among *Homo neanderthalensis*, composite tools among *Homo floresiensis* (the so-called Hobbits), and art with the *Hominin X*; see Joshua M. Moritz, ‘Evolution, the End of Human Uniqueness, and the Election of the Imago Dei,’ *Theology and Science* 9 (2011), pp. 16–19.

68 Such three-part parallel structures are not as rare in Hebrew poetry as is sometimes claimed.

69 Both terms are used in the Tell Fekheriyya inscription; Middleton, *Liberating Image*, p. 27.

70 Middleton, *Liberating Image*, pp. 112–14.

71 Middleton, *Liberating Image*, pp. 204–207.

72 Middleton, *Liberating Image*, pp. 26, 51–52.

73 Humans, at the end of *Enuma Elish*, are put to work feeding the gods (i.e., supplying the temples), a feature that goes back to the earliest Sumerian creation myths. The absence of human work in Genesis 1 (and the implied human rest; see below) is remarkable; Middleton, *Liberating Image*, pp. 209–211.

74 On the applicability of the term ‘anthropology’ here, see André LaCocque, *The Trial of Innocence: Adam, Eve, and the Yahwist* (Eugene, OR: Wipf and Stock, 2006), p. 45; and Jack Katz, ‘The Social Psychology of Adam and Eve,’ *Theory and Society* 25 (1996): p. 545.

75 Gunkel, *Genesis*, p. 115.

76 LaCocque, *Trial*, p. 60.

77 John Paul II, *Man and Woman He Created Them* (Sebastopol, CA: O’Reilly Media, 2006); also John Chrysostom, *Homilies on Genesis* 13.9; Augustine *Two Books on Genesis against the Manicheans* 2.8.10; Gregory of Nyssa, *On the Creation of Man* 28.1–29.1. Genesis’ anthropology conforms well with the Thomistic definition of the soul as ‘the form of the body,’ not a ‘thing’ within the body (*Summa Theologiae* Ia.76.1); cf. Polkinghorne, *Exploring Reality*, p. 47 – certainly not the mind; Langsfeld, ‘Creation,’ pp. 140–45.

78 The noun is only God, but the verb can be anyone who subjects himself or herself to a subordinate position (Josh 10:33; 2 Sam 8:5; 1 Kgs 20:16; 2 Chron 18:31–32; 28:23; Ps 118:13). What the woman *does* to help is unclear. Man’s only work thus far has been to name animals – which is finished – and to tend and keep the Garden (see below), but Gen 3:16–19 indicates she is not a farmer. If the parallel in 3:16–19 is of her work to his, her ‘help’ would be to raise children, but that is conjecture. God does not simply bring the woman to the man because he has totally delegated the naming and the task of deciding which one is the *ezer kenegdo* to man; L. A. Sievers, ‘Genesis 2:2–3: The Filling and Emptying of Literal and Imaginative Spaces,’ *Journal of Scriptural Reasoning* 1.2 (2007): n.p. That man names the animals and that ‘whatever he called it, that would be its name’ means not only dominion over the animals, but that as creatures they are not only measured by the creative knowledge of God, as in Genesis 1, but also by the measuring human knowledge; Hefelfinger, ‘Science,’ p. 140.

79 Augustine, *City of God*, Book XIV, chap. 23; Didymus, *On Genesis* 4.14–15.

80 Gregory, *On the making of man* 17.1; Chrysostom, *Homilies on Genesis* 18.12.

81 *Genesis Rabba* 9:16a; Rashi on Genesis 3:1cf. Benedict XVI, *Deus Caritas Est*, 11. Isa 51:3 suggests Augustine is correct; Gary Anderson, *The Genesis of Perfection* (Louisville: Westminster John Knox, 2001), p. 51.

82 While *avad* can mean ‘work’ the soil, *shamar* never does. It is used with guarding or ‘keeping ordinances.’ That which is *shamared* is never something that belongs to the *shomer*. ‘Adam’ or ‘the *adam* ‘man’ ’ is both made from and assigned to till the *adamah*. *Adamah* is not soil but arable land. So *Adam* is not so much Earthling as Farmer; Ragan Sutterfield, *God’s Grandeur: The Church in the Economy of Creation* (Ekklesia Project Pamphlet 12; Eugene, OR: Wipf and Stock, 2004), p. 4.

83 Although dominion itself is defined as such care and service in Ps 72:8 and Ezekiel 34; Anatheia Portier-Young, ‘Dominion Requires Service, Caring,’ *New Southern Catholic Radical* (Spring 2005), p. 6.

84 John Paul II, *Laborem Exercens* 3.1. The *Compendium of the Social Doctrine of the Church*, 256, says, ‘Work is part of the original state of man and precedes his fall; it is therefore not a punishment or curse.’ Cf. John Damascene, *Orthodox Faith* 2.11–12.

85 Robert R. Ellis, ‘Creation, Vocation, Crisis and Rest,’ *Review and Expositor* 103 (2006), p. 317.

86 The Septuagint, Old Latin, Samaritan Pentateuch, and Peshitta all ‘fixed’ this inconsistency.

87 The Sabbath commandment is the most frequently reiterated of all commandments in the Torah, and its observance is the most unnatural of all calendric rituals; Ellen F. Davis, ‘Sabbath, the Culmination of Creation,’ *Living Pulpit* (Apr–Jun 1998), p. 6.

88 Bonaventure, *Collations on the Ten Commandments*, 4; *Catechism of the Catholic Church*, 2172; Ellis, ‘Creation,’ p. 318.