

**HEAVEN AND EARTH BEFORE THE
DELUGE**

Creation and Destruction

Steven J Robinson

Sometimes the tests of hypotheses don't involve experiments, but rather observations – often of things that occurred long ago. It's hard to do experiments about cosmology, but we're completely confident in the Big Bang because we observe things predicted by it, like the expanding universe and the background radiation that is the echo of that event. Historical reconstruction is a perfectly valid way of doing science, so long as we can use observations to test our ideas (this, by the way, makes archaeology and history disciplines that are, in principle, scientific).

Jerry A. Coyne, *Faith Versus Fact: Why Science and Religion are Incompatible* (2016)

There are more things in heaven and earth, Horatio,
Than are dreamt of in your philosophy.

William Shakespeare, *Hamlet* (c. 1600)

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INTRODUCTION

The Creation was the bedrock of ancient Israel's understanding of reality. The idea was not that the deity had found a pre-existing Chaos and imposed order on it or that little by little the world had brought itself into being. He had spoken the world into existence, and was the origin of everything. He had done it 'by his great power and his outstretched arm', much as he had brought Israel out of Egypt 'with great power and with outstretched arm'. Not appreciating the implications, Jonah, an Israelite living in the 8th century BC, imagined he could escape God's presence by taking a ship to faraway Tarshish, but a violent storm blew up. In desperation, the multinational crew each prayed to their own national god to save them, but to no avail. Wondering if their prayers might be blocked, they tried drawing lots in hope of finding the cause. The lot fell on Jonah, the one passenger on the ship who, irritatingly, had been asleep all this time. "Tell us about yourself," they demanded. "I am a Hebrew, and I fear Yahweh, the God of heaven who made the sea and the land" – Israel's creed in a nutshell. "Throw me overboard, for I am the cause." Somehow the prophet knew. To the sailors the solution made no sense; the man was innocent. But when nothing else availed, they threw him over. Exercising his power over creation, Yahweh calmed the sea, as if propitiated. Jonah went down into the belly of Hades and became the Old Testament's type of the resurrection: the one who gave up his life that others might be saved.

'Sometimes,' says Jerry Coyne, 'the tests of hypotheses don't involve experiments, but rather observations – often of things that occurred long ago.' How, then, might we test scientifically the hypothesis that God created the earth, or the hypothesis that he did not, that Nature did the work? Truth to tell, we cannot. Rocks today can be described as igneous, chemical or sedimentary: solidified from magma (e.g. basalts), precipitated from water (e.g. limestones) or reconstituted from rocks that have been eroded and redeposited (e.g. sandstones). All imply a prior history. If, hypothetically, the oldest rock on earth was found to be a volcanic or sedimentary rock, we would not be able to infer that it had been created; we would infer that it had not been created.

In fact, rocks of any kind become rarer the further back one goes, and this, not because the planet was smaller back in time, but because all other contemporaneous rocks have long since been destroyed, through being subducted into the mantle. According to the non-creation hypothesis, the planet was once smaller. It accreted, little by little, from particles of dust and similarly-assembled pebbles, boulders and 'planetesimals'. But in geological terms its progression to full size was almost instantaneous (about 3 million years) and took place around 4.55 billion years ago, a date based not on any extant rock but on the assumption that the planet formed about the same time as asteroids. Created or not, earth's oldest rocks have gone: no rock on earth today is older than 4 billion years. Earth's first half billion years is missing.

So the basis on which one might argue for a created earth cannot be geological inference; it has to be historical testimony. Genesis, the first book of the Hebrew Bible, claims to be that testimony. Yahweh, the god who created all things, made known the essential details of how the earth originated, and saw to it that the details were set down in writing. Two brief chapters set forth how, from the very beginning, he established everything that was fundamental to human life: the distinction between male and female, marriage, the importance of raising children, the importance of manual labour, the importance of listening to what the Creator says is good for us. Animals were conscious beings, capable of autonomous motion, because not only at creation but also in the course of procreation God breathed into their bodies an animating spirit distinct from matter: they were 'living souls'. In Job's words, "If he should have a mind to gather his spirit and his breath back to himself, all flesh would perish together, and man would return to dust." At a time when Genesis's testimony is being rejected as never before, the question whether the testimony is true has never been more crucial.

That earth's earliest geological record is missing brings up a related question: what to do with the testimony that the land was destroyed some time after its creation in an event called the Deluge or more popularly Noah's Flood. Reduced in modern culture to a children's fable, the original story, only two pages on from the Creation, is a shocking account of corrupted adulthood. Having filled the whole earth man now corrupts the very ground he walks on. 'Every intent of the thoughts of his heart is only evil, every day.' God determines to destroy what he has made, but makes provision for the earth, once restored, to be repopulated. Humanity is 'blotted out': obliterated, not merely killed. All terrestrial animals are blotted out. The land on which all life depends is reduced to a ruin.

The Deluge is relevant today because man seems to have reached the same stage, spiritually. In the 19th century, if not already with the Enlightenment of the 18th century, Europe's intellectual and religious leaders began openly to abandon Israel's understanding of life. By the late 20th century atheism was Europe's religion, differing from other belief systems in being grounded in a reconstruction of human and cosmic history that did not depend on historical testimony. We are now seeing the final outworking of that revolution: a world so alienated from the created order that it denies the existence of the soul, normalises adulterous and homosexual relationships, is no longer being fruitful and multiplying, questions the very reality of male and female (man claiming the right to decide for himself which sex to be), and shuns manual labour.

As explained in the first volume, *When the Towers Fall* (2022), the consequences will also be the same. But this time the destruction will be by fire, not water. As the age draws to a close, the apostle warned, people will scoff and wilfully ignore the testimony that

heavens existed of old, and an earth constituted by the word of God out of water and through water, through which [heavens and earth] the then world was deluged with water and perished. But the present heavens and earth are aid up by his word for fire, kept until the day of judgement and destruction of the wicked.

As the apostle John also prophesied, the fire will take the form of mass ejections from the Sun's corona and volcanic eruptions from within the Earth. Destruction will be from both above and below. Destruction was also from above and below in the days of Noah.

A third volume is planned, *Evolution after Creation: How Life Colonised a New Earth*, telling how plants and animals recovered after the cataclysm. Marine animals appeared in the fossil record first because they reproduced more quickly and were more easily fossilised. Dated radiometrically, the record stretches over 3.9 billion years. Only the very oldest rocks contain no fossils, but for the first 3.4 billion years only microbes and algae featured. Then marine animals appeared, and after a further 0.1 billion years terrestrial animals – insects, millipedes, reptiles – along with the plants on which they depended, both for habitat and food. Finally, in the course of the 0.3 billion years leading up to the present, other kinds of terrestrial animal appeared – dinosaurs, birds, mammals – evolving and diversifying in truly wonderful ways. Fossils increased in number as the number of individual animals increased, reproducing, spreading out, colonising new environments. They were genetically pre-programmed to evolve.

Just possibly there will be time to bring out a fourth book, *Babel: How the World Learned to Speak in Tongues*. As a consequence of changes in pronunciation, grammar and vocabulary, languages, like plants and animals, speciate. Today there are some 6000 languages, grouped by their relationships into approximately two dozen macrofamilies. As we trace the family trees back, the number of speciating languages gets progressively smaller, until at the head of each tree there is just one language, and in total just two dozen languages, fundamentally unlike each other. This was not millions of years ago or whenever man might be presumed to have acquired the ability to communicate by words, but a few thousand years ago. Only the Afro-Asiatic macrofamily – including Akkadian, Egyptian and Hebrew – has a demonstrably older pedigree. When the ancestral languages are mapped, the evidence is consistent with an origination event somewhere in Mesopotamia c. 3000 BC. Perhaps the strongest evidence is the co-existence, from the moment writing was sufficiently developed for us to determine a particular language, of two completely unrelated tongues in Mesopotamia, Akkadian and Sumerian. Sumerian is unlikely to have been in existence long, since it had no relatives. Further afield, within 800 miles of Babel, there existed no fewer than eight unrelated languages. Their origin too is a mystery.

Synopsis

But to start at the beginning, *Part One* of the present volume considers what we know about the distant heavens. While Earth's origin cannot be investigated, Genesis says that the heavens were created at the same time as the Earth, and these *can* be investigated. Instead of looking down, we can travel further back in time than the oldest rocks by looking up, where, in some respects, the question is clearer. Their early history was not destroyed. In the standard narrative, galaxies were not created but formed little by little from a gaseous soup. Observations confirming this narrative would be evidence against the earth's having been created, and vice versa.

Modern astronomy began with the invention of the telescope. Two supernovae observed with the naked eye in 1575 and 1604 had already convinced Galileo that the heavens were not a changeless realm of invisible crystalline spheres. What he now saw, in 1610, was confirmation nearer to home. The Sun's face was blotched, Jupiter had satellites. Not only was Earth's position in the solar system not unique but the Moon was not the only moon. The heavens had the same mutable nature as Earth, even though what 'nature' itself consisted of in terms of elements and chemistry remained unclear.

Progress was initially slow. Hydrogen, the simplest element, was not isolated until 1766 and oxygen not until 1773. Hydrogen was not known to be the universe's most abundant element until 1925. In the 19th century, astronomers were still trying to grasp how vast the Milky Way was, all the while cataloguing faint cloud-like objects that some speculated might be 'island universes' beyond the Milky Way. In 1924 these proved to be galaxies, with the implication that the Milky Way was but one of many such. Technological advances enabled astronomers to probe ever deeper. Vistas of unimaginable immensity and glory dawned. Over the past generation astronomy has gone through a revolution greater, by far, even than that which Copernicus initiated. Although the public is largely an uncomprehending bystander, the age has received one revelation after another, as if the universe beyond our own galaxy had been waiting since the beginning of creation to be revealed in our lifetimes, for the very purpose of revealing its Maker's glory.

The latest major advance, in 2022, was the launch of the James Webb Space Telescope (JWST), bringing into view objects just a few hundred million years younger than the beginning, if time and distance be correctly calibrated. We are now in a position to determine which story is correct: the highly sophisticated Big Bang account of the universe's origin or the one that, in essence, Israel received three and a half millennia ago.

Since even basic concepts of astronomy are likely to be unfamiliar to most readers, the first four chapters' trek into the starry unknown may feel a little overwhelming at times. People believe the Big Bang story because university professors believe it, not because they understand it themselves. To perceive why it might be wrong, we need to get to grips with the phenomena requiring explanation in some detail. So gird your loins and see the trek as an adventure, as an opportunity to check whether those who

have supplanted clergymen as the purveyors of reality really do know better. The details are amazing, and the effort will repay.

The accepted narrative is this. Immediately after the beginning, the universe was a diffuse soup of hydrogen and helium, which rapidly expanded and simultaneously condensed into stars. Clusters of stars grew into little galaxies, these, by coalescing, grew into larger galaxies, and these into clusters, forming sparkling necklaces billions of light years across. This process is called ‘hierarchical merging’, because large structures are understood to have formed from the coalescence of smaller ones. The universe as a whole may have been flying apart, but the units making up its structure, from atoms to galactic superclusters, did the opposite: they contracted over time.

On this basis the youngest and most distant objects visible are predicted to have been sparse, low-mass and diffuse. In fact, they were numerous, impossibly massive and extraordinarily compact. Some galaxies were so compact that they look like single objects. Astronomers interpret these superluminous ‘quasi-stars’ – quasars – as supermassive black holes, but their brilliance indicates that they really were stars. Galaxies evolved as quasars shed most of their mass and in the process spawned the (by comparison) miniscule stars we are familiar with. Over time the ratio of stellar mass to quasar mass increased.

Quasars and galaxies multiplied by splitting. In the course of cosmic history there were multiple ‘big bangs’. Often enough we see the entities splitting, except that at such immense distances whether they were moving closer together or further apart is not discernible. A difference in wavelength (‘redshift’) tells us that one is moving toward us and the other away, but as we don’t know which of the two is closer, divergence and convergence are both possible interpretations. What makes one preferable to the other is the extreme improbability of objects converging from starting points far apart. In the case of galaxy clusters, hundreds or even thousands of galaxies are presumed to have converged towards each other.

Groups and clusters of galaxies are to single galaxies as genera, families and orders are to species, and as linguistic families and macro-families are to single languages: they imply that the individuals making up the larger structures have a common ancestor. The distant time-horizon probed by JWST is like the Cambrian period in the geological record, when a small number of dissimilar body plans – all the major divisions of animal life (or ‘phyla’ in taxonomy) – appeared out of nowhere, as complex as today’s animals. Although their ancestry is hidden, we know that they must have had ancestors because the Cambrian comes long after the beginning of geological time and because within the body plans considerable diversity is evident even then. Genealogical hierarchy grew from the top down, not bottom up. Lower levels of classification – genera and families – increased as species within the boundaries of the body plans multiplied and diversified, like the forking branches of trees in a planted orchard. Without strong evidence to the contrary, the presumption in cosmology should be that the universe’s galaxies arose from a comparatively small

number of supermassive quasars. Although they lie beyond the time-horizon penetrable by our most powerful telescopes, we know they must have existed, because at the boundary where the universe ceases to be hidden galaxies appear abruptly, as massive as their near-universe counterparts. There is no overall trend of growth.

Given that the true story is one of ultramassive objects splitting into greater numbers of less massive objects, we can extrapolate back beyond the most distant objects to others that are not detectible but would have been still more massive and more spaced out, until quasars were too far apart to have originated from yet bigger ancestors. In this way creation does not have to be mere dogma; it can be inferred.

So, on to a second critical issue in cosmology. It is easily forgotten that in the 1930s to 1960s (not that long ago) there were two competing explanations for the universe's expansion: one, that it was being eternally driven by the slow, ongoing spontaneous generation of new matter and energy, the other, that all things had a beginning in a single point. In the end, the latter view won out, and cosmologists ever since have assumed that the winner, having been tested against its rival, must be correct. Thus the pattern of many scientific papers in the field is to start with a brief summary of the paradigm, continue with a report of new results and conclude by discussing how the results can be understood in line with it.

But there was one fundamental assumption that the two rivals shared: that the universe was everywhere expanding. What if the assumption was wrong? When observational tests have been performed to compare the predictions of the Big Bang with those of a static universe, the latter have always come out better. Scientifically, the Big Bang scenario is falsified, even though it lives on. And if the universe is not expanding, we need to reverse out the calculations which assume that the light when emitted was much nearer than it actually was.

To illustrate, suppose that the Moon was found to be twice as far from us as the 240,000 miles long assumed to be the distance. Since its luminosity and angular size in the sky had not changed, we would have to conclude that the Moon's true size was double what we had thought. Similarly, interpreted in line with a static universe, galaxies would be bigger back in time, consistent with the evidence that they multiplied as primeval superquasars split. Conversely, if we assume that light sources close to the beginning are proportionally nearer than light sources close to the present because space has been expanding, then dimensions will diminish as we go back in time and appear to confirm the hierarchical merging paradigm. (Except that the masses calculated from the light's intensity do not confirm it.)

Science rightly excludes supernatural causes. To rank as a scientific explanation, any proposed cause must be a natural one – excluding, of course, the moment when natural causes themselves came into existence. Creation, if it happened, happened once for all, and necessarily in the beginning. Even when the Deluge destroyed all trace of the original world, God did not simply create the world again. The land re-formed and

revegetated naturally, and became repopulated as the pairs saved on the ark reproduced. The plagues that compelled Pharaoh to release Israel from captivity were naturally caused, albeit providentially timed. As a concept, creation implies that God did only what nature, once created, could not have done.

Like its counterpart, the Big Bang did not have a natural cause. No one knows why the cosmic egg exploded at the time it did, nor why space is expanding. The lack of a natural cause necessarily implies a supernatural cause, but since the Big Bang is intended to avoid having to invoke the supernatural, the idea is philosophically contradictory. It breaks science's principle that only natural explanations are allowed. Cosmology shuts out the one possibility that would get over the contradictoriness.

Then there is the solar system. Thanks to the many space probes launched in recent decades, scientists have learned much about the planets and their moons. Does all the new information corroborate a natural origin from a nebula of gas and dust left by stars that went supernova? The idea used to be that the planets composed a simple, temperature-related rock-gas sequence, as if having condensed from such a nebula: rocky out to Mars, gaseous out to Neptune. We now know that the greatest amount of rock beyond the Sun resides in the four outer planets – by far. Moreover, in the transitional zone between Mars and Jupiter there should have been another planet, whereas actually the region contains only 1/2000th of the mass expected, in the form of asteroids. Asteroids are the remains of larger bodies. Because of collisional attrition their numbers have been increasing and their individual masses decreasing, the opposite of the solar nebula scenario. Conversely, the amount of gas beyond Saturn would have been too thin to form giant gaseous planets.

The thousands of rocky and gaseous planets discovered round other stars also do not support a nebula origin, whether for themselves or for our own solar system. The majority of planets are closer to their sun than even Mercury is. This is problematic generally but especially in the case of giant gaseous planets. 'Hot Jupiters' could not have condensed from a nebula in their present locations, because condensation from gas requires a cold environment. They suggest that planets came into existence whole, at the same time as the stars. Stars and gaseous planets form a continuum, both originating from balls and streams of clumpy superconcentrated gas ejected from the galactic nucleus.

The solar system includes our own planet. It is safe to say that if other planets did not form naturally, then neither did the Earth. In the light of all that we know, a natural origin now looks very unlikely.

In *Part Two* we consider why it might be reasonable to treat Genesis as a reliable historical record. Israel's assertion that God created heaven and earth was based on historical tradition. The nation believed it (to the extent it did) because Moses had told them and God had told him, Moses having written down what God had told him. The first five books of the Old Testament were his authorship (although, being an actor in

the events described, he probably wrote in the first person, and the books were reworked after his death). Objective in intention and distinct from the propaganda of royal annals, they are the oldest examples of historical narrative-writing known. Much of them, like the Old Testament as a whole, can be understood as a study in unbelief, for there were many occasions when people rejected Moses' words, with often fatal consequences. They wanted Yahweh to be like the Canaanite gods that they knew from myths and graven images.

We should be wary of the impulse to discredit the writings simply on the grounds that God figures in them, as if true history must be atheistic and the books were products of an age that had deities for every aspect of human life. The author did not see the divine everywhere. He wrote of a God who was hidden and unapproachable, even though he had a personal name. He showed himself only to single individuals, and even then rarely, as a voice in dreams and visions. Moses' intimate experience of him, speaking to him on occasions 'face to face', was wholly exceptional.

The books were primarily a record of what God had progressively revealed to those individuals, in the light of which Moses felt compelled to go back to creation itself, far beyond the origin of his own tribe. Genesis was the world's first historical work, and it began by relating how the world began.

The sources on which he drew are not stated but must have been oral. Writing was a relatively late development, emerging in Mesopotamia (modern Iraq) not earlier than the third millennium. We find it hard to conceive how a pre-literate culture could have maintained an accurate memory of the past because, especially in the digital age, our own ability to remember is feeble – though professional actors and pianists remind us that it need not be so. But if there was one story whose significance demanded remembrance it was how the world began and why it came to be destroyed.

One of the ways by which ethnic groups maintained their identity was by memorising their genealogies. Starting with the tribe's progenitor, these typically ended with the last three generations of the family or individual featuring in a particular narrative. Intermediate ancestors were mostly omitted to stop the genealogy from becoming pointlessly unwieldy. Genesis includes several genealogies, implicitly indicating the route by which the narratives were passed down. The first is in two parts, one extending from Adam to a bigamist who boasts of murdering a man, one from Adam to Noah and his sons. Another, from Shem to Terah, one of whose sons was Abraham, bridges the undescribed period from the Deluge to the period when men were colonising the Near East, the setting of the remaining narrative. All these genealogies purport to be factual.

In Africa, Asia and Europe the archaeological record starts with the Palaeolithic (the 'Old Stone Age') and runs through a sequence of technological phases – Palaeolithic, Mesolithic, Neolithic, Chalcolithic – before the rise of cities and the invention of writing. While globally the phases are not entirely synchronous, the Palaeolithic began

towards the end of the geological period known as the Pliocene (5.3–2.6 Ma), the Mesolithic towards the end of the Pleistocene (2.6–0.012 Ma), and the Neolithic some time around 4000 BC. Egypt's history as a single kingdom began around 2850 BC, after which there followed a succession of dynasties datable from historical sources. The phases get progressively shorter because the techniques by which we measure prehistoric time, going back, increasingly and systematically inflate absolute time. By 2.0 Ma the radiometric clock is inflating true time by a factor of almost 400. If that seems improbable, consider that a new discovery of animal bones incised with Palaeolithic tools can push the oldest evidence of habitation in Europe by 150,000 years – even 550,000 years if one excludes finds from Dmanisi, Georgia.

Not long before the foundation of dynastic Egypt, the once common tradition about the world's early history got corrupted. Abraham recovered it through the priest-king Melchizedek, who in the midst of polytheistic Canaan (known as Palestine until 1948) still worshipped 'God Most High, the begetter of heaven and earth'. After Abraham the tradition passed down through the tribes of Israel. It told of a deity unlike the pagan deities: almighty, all-seeing, perfectly righteous. Life was significant, because men were created after the likeness of God himself and capable of moral choice; they learned about God through their interactions with each other. Sin was "crouching at the door" and had to be mastered, for on the day of resurrection their lives would be judged.

By the time Charles Darwin published his *Origin of Species*, in 1859, nearly all historians and geologists and nearly all clergymen had come to believe that Genesis's opening chapters were largely fictional. Consequently the announcement just over a decade later that ancient Mesopotamia had had its own creation and flood accounts caused a sensation. Could it be that the two parallel traditions originated in a shared memory older than the nations associated with them? Apparently educated Britons and Germans did not consider the possibility. They assumed that the Hebrew author, whoever he was, got the Deluge from the Mesopotamians. Despite its polytheism and narrative absurdities, the author must have found the story so creditworthy that he gave it, suitably revised, a prominent place in his own monotheistic history of origins.

The differing theologies are not incidental. In the Hebrew tradition God is the instigator of the Deluge and the story's main actor. Man, the pinnacle of God's creation, reproduces, founds cities, develops skills of music and metal-working. Increasingly he pollutes the world, until eventually God regrets having made mankind and washes the earth clean.

In the Mesopotamian version the gods are not concerned about man's walking blamelessly before them. There are three high gods: one rules the underworld, another the earth at ground level, another the heaven, and there are numerous lesser gods. Man is created to be their slave. As in Genesis, Ellil, ruler of the earth, regrets man's creation, but not because man is failing to live uprightly but because, having multiplied, he is making too much noise and disturbing his sleep.

Mesopotamia is effectively the whole world. Ellil lives in Nippur, other gods in other cities performing human-like roles such as vizier and canal-controller. Their antecedents are the original antediluvians. Accordingly the colonisation of the Mesopotamian plain predates the disaster; the city of Shuruppak, where it apparently started, is 'already old when the great gods decided to bring about a deluge'. In Genesis the Deluge is unambiguously global, and the settlement of Mesopotamia takes place after it, when the population has begun to recover and spread across the globe. In our terms, the period when the Near East is settled is recognisably Plio-Pleistocene. The Hebrew version is consistent with what we know, the Mesopotamian version not.

Stories of a deluge resembling the Hebrew story occur on all inhabited continents, even Australia. Scholars do what they can to undermine the testimony, attributing the similarities to the influence of missionaries or experiences of a local flood that might have got exaggerated. While the scenarios may be plausible in some instances, the crucial challenge is how to explain the Hebrew tradition. It is not just one among many, qualitatively on the same level. In several respects the story is unique: free from inconsistencies, chronologically detailed, monotheistic, placed within a historical narrative that encompasses all humanity. Global occurrences of distorted memories of the Deluge are just what one would expect if the event really happened.

We also need to consider the origins of polytheism itself. Presupposing a Darwinian history of the world, scholars imagine that polytheism preceded monotheism and developed over tens of thousands of years, as man sought to anthropomorphise his sense of unseen spirits behind the powers of nature. But this is to ignore the work of careful ethnologists such as Wilhelm Schmidt a century ago who documented that tribes remote from civilisation still retained some knowledge of a divine Father and Creator. Monotheism preceded polytheism. That much is clear even from the polytheism familiar to us from the Levant. The belief was not in many co-eternal gods but in one God – El, Atum, Zeus – who had many children. In the biblical world-view Yahweh, the Almighty, was one god but had many sons (Gen 6:2, Job 1:6, Ps 89:6). After the Deluge,

When the Most High gave to the nations their inheritance,
when he separated the sons of Adam,
he fixed the borders of the peoples
according to the number of the sons of God. (Deut 32:8)

Polytheism was not some innocent evolutionary stage in man's conceptualisation of the spirit world somewhere between animism and monotheism; it was a wilful distortion. As the Mesopotamian Deluge story exemplifies, it nullified the moral gulf between God and man, bringing God down to man's level. The understanding of him as an impartial, spiritually exalted being had been debased.

Cryptically Genesis tells us where and when the apostasy happened. The first 'mighty one' (in Sumerian *lugal*, indicating that the first king rose to power by force) was a

man called Nimrod. His new city, *Bab-el*, was to be the capital of the world's first empire. Like the Hebrew name, Akkadian *Bab-ilu* meant 'Gate of God', later modified to *Bab-ilani*, 'Gate of the gods', or in Greek, *Babylon*. Hebrew continued to preserve the singular form, maintaining that originally the Mesopotamians knew only one deity. Nimrod indeed knew him personally, for he was 'a mighty hunter before Yahweh' – the name by which Israel knew God, here substituted for the Akkadian name. Presuming on that relationship, the king built a pyramidal ziggurat close to his palace so that the Most High could descend its stairway and make his residence in the city. God declined. Instead, he divided the builders' language and forced them to disperse.

Outside of Mesopotamia there are few clear equivalents of the Babel story, and subsequent events can be pieced together only from myths. But the essence is that, having been rejected by God, the people of lower Mesopotamia, now speaking Sumerian, rejected him. They divided the godhead and instead of worshipping the one who had given them life, breath and everything worshipped his sons. The revolution can be pinned down to the beginning of what is called the Jemdet Nasr period, soon after 3000 BC. From Babel they dispersed to found kingdoms in Egypt, Elam, the Caucasus and beyond.

It is sobering to reflect that modern thought-leaders corrupt the truth in much the same way. Just as Babylonian polytheism overwhelmed primeval monotheism and Christian monotheism Greco-Roman polytheism, so in the 20th century science-inspired atheism overwhelmed Christian monotheism. Schmidt's work is forgotten or ignored. If they address the issue at all, academics assume that the Hebrews plagiarised their Deluge account from the Mesopotamians, who exaggerated a merely regional experience. The contrary testimony of similar stories across the world is nullified by a "Heads I win, tails you lose" logic: the greater the similarity, the stronger the case for missionary influence; the lesser the similarity, the stronger the case for coincidence. Geology having disproved all forms of diluvialism, unbelief is deemed on firm ground. We do not have to consider the evidence for a remembered, global, prehistoric flood because the multi-billion-year timescale established by science renders the whole idea impossible.

On the other hand, if the historicity of the Deluge is robust, that should be reason to doubt the geological timescale and the understanding of life that goes with it. I briefly explain how rocks are dated, and how dating systems depend on the assumption that rates of radioactive decay were constant through time. Other aspects of the geological evidence I leave to the sequel. For now, bear in mind that if the primeval landmass was destroyed in the Deluge, the whole geological record postdates it. The point is one few have grasped. The heavens testify of the creation, the earth of its destruction.

In *Part Three* we return to cosmology to explore the question of how asteroids originated. Though this may seem an abstruse topic, asteroids are the solar system's oldest datable objects and have long been interpreted as leftovers from the primeval nebula.

Again, hierarchical merging rules: particles of dust aggregated into pebbles, these into boulders, these into planetesimals and planets. The facts speak otherwise. The oldest particles making up the asteroids consist of melt droplets and fluffy inclusions that underwent temperatures up to 1800° C, then rapidly cooled, as in an explosion. The particles have the composition of rock but are enclosed in a fine matrix that escaped high heat. Other asteroids are igneous fragments of bodies large enough to have had their own metal core, silicate mantle and basaltic crust. There are no demonstrably pristine bodies drifting about the solar system, and meteorites – the fragments that end up on earth – cannot be used to measure the solar system's age. Asteroids are leftovers not of a constructive process but of impacts and planetary explosions.

The present solar system out to Neptune has two orbital gaps where there might have been a planet: one between Mars and Jupiter, the other between Saturn and Uranus. Large numbers of asteroids populate both gaps. The better known, because closer, are those of the 'main' belt between Mars and Jupiter. Science can no longer argue that these were prevented from forming larger bodies by Jupiter's disruptive gravity. The orbital midpoint of the belt is a sweet spot where a missing planet would neither have been unstable itself nor have disturbed the orbits of other planets.

Meteorites derive from asteroids. Except for igneous meteorites, they fall into two groups, distinguished by their isotopic ratios and reflecting a dichotomy more fundamental than differences in mineralogy. One group is believed to have originated somewhere beyond Jupiter, the other group this side of Jupiter. Chemical studies of the last twenty years thus support the existence of two former planets.

The explosions were the result of heat generated by radioactivity. Today, new elements and isotopes form only in stars, the heavier ones through reactions that happen shortly before a star explodes. (Elements are defined by the number of protons in a nucleus; isotopes have the same number of protons but a varying number of neutrons.) During the millennia leading up to the explosions new isotopes were also forming in the depths of rocky planets, some of them radioactive and heat-producing. The presence of very short-lived isotopes just before the explosions suggests that the two phenomena were linked. Nearly all the isotopes on which geological dating depends formed then. Earth and the other planets heated up before they cooled down. The period before radioisotopes existed therefore cannot be dated; it could have gone back to the beginning of astronomical time.

The 'rain' that, according to Genesis, fell from openings in the heaven during the Deluge was primarily asteroids raining down. Drops of water could not have caused all air-breathing animals to be blotted out. As for when it happened, we know of only one event that matches the Genesis account, and we would not know about it at all but for the Apollo program. Earth's rock record does not extend that far.

Some time before the Deluge, erupting magma blanketed the Moon's surface. Possibly the magma followed the gigantic asteroid impact that some argue generated the vast

Oceanus Procellarum, the dark area on the nearside's western side. Whatever the cause, the Moon must have glowed a portentous red. Then around 4.4 Ga a dense shower of asteroids pummelled the surface. The pattern of impact craters larger than 300 km allows one to constrain the event to less than four months. Shock-melted lava flooded the craters, leaving circular dark-grey patches still visible to the naked eye today. Thereafter geological activity was minor.

As the duration of the bombardment was more than three times the length of the Moon's orbit round the Earth, the Earth must have been similarly affected. The primeval landmass above the deep was reduced to a pulverised and water-flooded moonscape. All rocks studied by geologists are post-Deluge, the oldest, from the early Archaean, showing that the Earth was initially almost entirely under water. Although the immediate surroundings of the ark were dry, centuries passed before the land was fully drained.

Finally we consider the resting places of the dead. Tartarus – Abaddon in Hebrew – was where the souls of the antediluvian world resided. Hades, above it, was where those who died in the present world awaited their judgement. In ancient tradition these regions had some physical reality, just as 'heaven', where God dwelt, was a physical place. The antediluvian world was destroyed in the mid Hadean (4.4 Ga) and subducted during the Archaean (4.0 to 2.5 Ga), ending up in Earth's mantle. Hades, physically speaking, lies within the crust that replaced the old landmass and therefore lies above Tartarus. Eventually it too will pass away. There will be a new heaven and earth, a new creation that will also not take millions of years. The dead will be raised and at last God's promise to Abraham that he will bless all the nations of the earth will come to pass.

Dates

Astronomical and geological dates are as given in the literature, adopted because they provide a relative timescale and allow one to speak a common language. The present work accepts that relative timescale and seeks to demonstrate that the order of events is fully consistent with the tradition concerning a created first world, its destruction, and its subsequent recovery. In astronomy millions/billions of years are denoted by the abbreviations Gyr/Myr, in geology by Ga/Ma (gigayears/megayears). Periods this immense, where hundreds of thousands of years are just the margin of error, foster the illusion that, given enough time, natural magic can work its own wonders. Ancient BC dates are either historical or calibrated radiocarbon dates (Robinson 2021) and close to the actual chronology. The same applies when speaking of this or that millennium.

Something close to the true timescale is given in Figure 10, asserting that the universe is not much more than 80,000 years old. This will disconcert readers who have come to the book convinced that the conventional timescale is unassailable. The Intelligent Design movement, for example, has invested heavily in the Big Bang and the timescale that goes with it (e.g. Luminet 2024). Those coming to the book from a

creationist standpoint will also balk, believing that the universe is much younger than 80,000 years. The number arises from an astronomically-based calibration of the radiometric timescale, as I briefly explain (p. 57), but the focus is on creation, the evidence for which is not primarily chronological. Once we see that heaven and earth cannot have had a natural origin, the credibility of the standard timescale crumbles. The same applies once we take in the evidence for destruction. If the bombardment c. 4.4 Ga was the same event as the biblical Deluge, a chronology in which man does not appear until 2.5 Ma becomes absurd. By the time readers finish the book they should, I hope, be able to see that for themselves.

The author

This work is able to span a wide breadth of disciplines – cosmology, geology, ancient culture and literature – because it distils the result of three decades of research and reflection. At stages along the journey the subjects dealt with were studied intensively. An autobiographical 8-page summary of the journey is given in *When the Towers Fall*.

References

The purpose of references is to demonstrate the extent of background reading, give credit to others' insights and discoveries, and provide authority for statements that may seem surprising or improbable. While the book is intended for a broad readership, it calls into question the West's entire atheistic understanding of the world. That is no light matter, and therefore a large number of references are given, nearly all to the primary literature, i.e. mainstream academic journals. If desired, readers can use them to explore topics further (the introductions are usually comprehensible) and verify whatever statements seem to them doubtful. The contention is that the truth concerning the origin of the world is plain, and civilisation's 'wise men' should have perceived it for themselves.

There was a difficult choice between inserting superscript numbers that link to end-notes that link to references and the simpler but more distracting system of including in brackets author surname and date, that then link at the end to the details. I have plumped for the latter. No system is ideal, and while such insertions may feel offputtingly academic, one soon acquires the habit of skipping over them. The main advantage is that they are easier to look up, and sometimes it helps to know straight away how old or recent the knowledge is. References are profuse only in the astronomy chapters; in this field the pace of discovery is rapid and ideas often change.

There are lots of numbers in the book but no mathematics apart from some simple multiplication and division on page 26, where I explain how the 13.8-billion-year age of the universe is calculated. So as to keep the quantity of back matter within bounds, I have not included an index.