



Origins

Editorial Note: The book of Genesis, initially drafted about 1000 BCE, is the first proto-historical treatise ever written. Genesis “opens . . . in past tense, ‘*Bereshit Bara Elohim . . .*’ (Initially created God . . .) but immediately . . . adopts a present continuous tense ‘. . . *veRu’ah Elohim merahefet al pnei haMayim*’ (and the spirit of God is hovering over the face of the Deep . . .). And from there onwards . . . the writing is future tense, ‘*va ’yomer Elohim . . .*’ (and God would say . . .).”¹ Thus, Genesis addresses God’s continuing Creation (*creatio continua*) – past, present, future.² This makes it possible to address the nature of “origins” from scientific and biblical perspectives without conflict or exclusion.

Origin of the Universe

An analysis of the oldest stars suggests that the universe is approximately 13 billion earth-years old. An analysis of chemical elements suggests that the universe is about 14.5 billion earth-years old.³

Origin of the Solar System and Planet Earth

There are many billions of galaxies within the universe and comparable billions of stars within each galaxy. The sun is a star located on the outer edge of the Milky Way galaxy. It forms the solar system that moves both with and within the galaxy. The oldest meteorites have been dated back 4.56 billion earth-years and represent the age of the solar system itself. When the same analysis is applied to rocks on the earth, the oldest rocks are about 3.8 billion years old.⁴

Origin of Life

“A long path leads from the origins of primitive ‘life,’ which existed at least 3.5 billion years ago, to the profusion and diversity of life that exist today.”⁵ Multicellular animals first appeared about 670 million years ago. The earliest apes emerged 25 million years ago, while the primate ancestors of human

beings (e.g., *Australopithicus afarensis* and *Australopithicus anamensis*) first appeared approximately 4 million years ago.^{6, 7} “Our own species, *Homo sapiens sapiens* [wise, wise man], evolved probably from *Homo erectus* about 100,000 years ago . . . It is because of their larger brain capacity that *Homo sapiens sapiens* achieved modernization by using specialized tools and cooking . . . ”⁸

Origin of Language

“It is commonly thought that language is such an inherent part of the human constitution that it must go back . . . through the tribal ancestry of man to the very origin of the genus *Homo*. . . . But . . . [i]f early man . . . had even a primordial speech, why is there so little evidence of even simple culture or technology? For there is precious little archaeologically up to 40,000 B.C., other than the crudest of stone tools. . . .

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“Because language *must* make dramatic changes in man’s attention to things and persons, because it allows a transfer of information of enormous scope, it must have developed over a period that shows archaeologically that such changes occurred. Such a one is the late Pleistocene, roughly from 70,000 B.C. to 8000 B.C. . . . [During this period t]he hominid population exploded out of the African heartland into the Eurasian subarctic and then into the Americas and Australia. The population around the Mediterranean reached a new high and took the lead in cultural innovation, transferring man’s cultural and biological focus from the tropics to the middle latitudes. His fires, caves, and furs created for man a kind of transportable microclimate that allowed these migrations to take place. . . .

“The first stage . . . of language . . . [was] the development . . . of *intentional calls*. . . . [The next step involved the differentiation of sounds on the basis of their intensity. This differentiation of sounds involved “modifiers.”] This age of modifiers perhaps lasted up to 40,000 B.C. . . . The next stage might have been an age of commands, when modifiers, separated from the calls they modify, now can modify men’s actions themselves. . . . [This probably occurred] from 40,000 B.C. up to 25,000 B.C. . . . [Next,] the first sentences with a noun subject and a predicative modifier . . . may have occurred somewhere between 25,000 and 15,000 B.C. . . . [But] one further step had to be taken, the invention of that most important social phenomenon – names. . . . It is . . . as late as the Mesolithic era, about 10,000 B.C. to 8000 B.C., when names first occurred.”⁹ This gradual emergence of human language was essential to the development of mankind’s bicameral mind.

Origin of the Bicameral Mind

The term *bicameral* means “composed of two houses, chambers, or branches.”¹⁰ With respect to the mind, the term *bicameral* refers to the two sides of the human brain – the left (side) hemisphere and the right (side) hemisphere. In right-handed persons the speech areas of the left hemisphere control the various aspects of language – articulation, vocabulary, inflection, grammar, meaning and understanding. Surprisingly, in right-handed persons the right hemisphere has little or no role in human speech. “In fact, large amounts of right hemisphere tissue . . . have been cut out in human patients because of illness or injury, with surprisingly little deficit in mental function. . . . [What, then, is the purpose, role or function of the right hemisphere of the brain?] The answer is clear if tentative. The selective pressures of evolution which could have brought about so mighty a result are those of the bicameral civilizations. The language of men was involved with only one hemisphere in order to leave the other free for the language of gods. . . . [T]he record of a huge time span . . . [reveals] the plausibility that man and his early civilizations had a profoundly different mentality from our own, that in fact men and women were not conscious as are we, were not responsible for their actions, and therefore cannot be given the credit or blame for anything that was done over these vast millennia of time; that instead each person had a part of his nervous system which was [assumed to be] divine, by which he was ordered about like any slave, a voice or voices . . . which empowered what they commanded and were related to the hallucinated voices of others in a carefully established hierarchy. . . . [T]he astonishing consistency from Egypt to Peru, from Ur to Yucatan, wherever civilizations arose, of death practices and idolatry, of divine government and hallucinated voices, all are witness to the idea of a different mentality from our own.

“But it would be an error . . . to regard the bicameral mind as a static thing. True, it developed from the ninth millennium B.C. to the second millennium B.C. with the slowness that makes any single century seem as static as its ziggurats and temples. Millennia are its units of time. But the tempo of development at least in the Near East picks up as we reach the second millennium B.C. The gods of Akkad, like the ka’s of Egypt, have multiplied in complexity. And as this complexity develops, there is the first unsureness, the first need for personal gods to intercede with the higher gods, who seem to be receding into the heavens where in one brief millennium they will have disappeared. . . .

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sapiens himself . . . The gods were in no sense ‘figments of the imagination’ of anyone. They *were* man’s volition. They occupied his nervous system, probably his right hemisphere, and from stores of admonitory and preceptive experience, transmuted this experience into articulated speech which then ‘told’ the man what to do. . . . [Apparently,] such internally heard speech often needed to be primed with the props of the dead corpse of a chieftain or the gilded body of a jewel-eyed statue in its holy house.”¹¹ There is strong evidence, therefore, that the Creator-God employed one hemisphere of the human brain to pedagogically direct the early cultural development of mankind and the emergence of human civilization.

Origin of Civilization

“Throughout virtually the entire span of time that human beings have existed on earth, they lived as roving bands, migrating from one campsite or cave to another, hunting and gathering their food and other necessities. The tools used by these hunter-gatherers were made primarily of stone. . . . The long period of rudimentary developments in stone tool technology is therefore known as the Paleolithic (Old Stone) Age, . . . [which reached] to 20,000-10,000 years ago. People may have intermittently supplemented hunting and gathering by selecting certain strains of plants and breeding certain animals. Yet the basic hunting-gathering economy prevailed in the Near East until roughly 10,000 B.C., when attempts at plant domestication and animal raising began to crystallize and to alter the course of human history.

“Refinements in stone tool manufacture occurred throughout the Paleolithic period. By 10,000-9000 B.C., archaeological evidence implies a gradual change in food-procuring methods from intensive hunting and gathering to the earliest domestication of plants and animals. Changing human needs and the new methods of food production were accompanied by a new tool kit; the era from about 9000 B.C. to 3000 B.C. has thus been termed the Neolithic (New Stone) Age. The first permanent settlements appear at or just before this time in the archaeological record. . . . [This] adoption of a sedentary (settled) food-producing mode of existence was one of humanity’s most daring steps . . . [T]he changes it wrought – loss of mobility, population growth, and the accumulation of goods – had massive implications for subsequent stages in the rise to civilization.”¹²

“Here then is the beginning of civilization. Rather abruptly, archaeological evidence for agriculture such as the sickle blades and pounding and milling stones of Eynan [northern Galilee] appear more or less simultaneously in several other sites in the Levant and Iraq around 9000 B.C., suggesting a very early diffusion of agriculture in the Near Eastern highlands.

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At first, this is as it was at Eynan, a stage in which incipient agriculture and, later, animal domestication were going on within a dominant food-collecting economy.

“But by 7000 B.C., agriculture has become the primary subsistence of farming settlements found in assorted sites in the Levant, the Zagros area, and southwestern Anatolia [Turkey]. The crops consisted of einkorn, emmer, and barley, and the domesticated animals were sheep, goats, and sometimes pigs. By 6000 B.C., farming communities spread over much of the Near East. And by 5000 B.C., the agricultural colonization of the alluvial valleys of the Tigris-Euphrates and Nile was rapidly spreading, swelling populations into an intensive cultural landscape. Cities of 10,000 inhabitants, as at Merimde on the western edge of the Nile delta, were not uncommon. The great dynasties of Ur and of Egypt begin their mighty impact on history. The date 5000 B.C., or perhaps five hundred years earlier, is also the beginning of what is known to geologists as the Holocene Thermal Maximum, lasting to approximately 3000 B.C., in which the world’s climate, particularly as revealed by pollen studies, was considerably warmer and moister than today, allowing even further agricultural dispersal into Europe and northern Africa, as well as more productive agriculture in the Near East. And in this immensely complex civilizing of mankind, the evidence . . . suggests that the *modus operandi* of it all was the bicameral mind.”¹³

Origin of Writing

“Archaeological discoveries suggest that Egyptian hieroglyphs may be the oldest form of writing. The earliest evidence of an Egyptian hieroglyphic system is believed to be from about 3300 or 3200 BC. The Sumerians of Mesopotamia also were writing before 3000 BC.

“At about the same time, so-called Proto-Elamite writing developed in Elam [southwestern Iran]. This system has yet to be deciphered, and nothing can be said of its nature at the present time except that . . . [similar] systems of writing also developed, at a later date, in the Aegean, in Anatolia, in the Indus Valley, and in China . . . From these logo-syllabic systems, syllabaries were borrowed by other peoples to write their own languages. The syllabary in its simplest and most reduced form (that is, signs for consonants plus any vowel)

was borrowed by the Semitic peoples of Palestine and Syria from the Egyptians, leaving behind the logograms and more complex syllables of the Egyptian system, during the last half of the 2nd millennium BC [1500-1000]. . . . This syllabary was almost ready-made because Egyptian writing had never expressed vowels. The earliest such semialphabetic writing is found in the so-called Proto-Sinaitic inscriptions, which date back to about 1500 BC. Another such system, dated to about 1300 BC, was found at Ugarit on the northern Syrian coast, but in this case the writing was inscribed on clay in the manner of Mesopotamian cuneiform. Similar writing systems were developed by the other peoples of this region, and it was from the Phoenicians that the Greeks borrowed their writing system. The Greeks took the final step of separating the consonants from the vowels and writing each separately, thus arriving at full alphabetic writing about 800 BC.”¹⁴

Origin of the Breakdown

“[An ancient Sumerian saying stated,] ‘Act promptly, make your god happy.’ In other words, don’t think but act immediately in terms of what your god tells you to do. . . . [This] bicameral mind was working well until the 2nd millennium B.C., when things began to go to hell. In an attempt to control a population that was beginning to become conscious, government . . . often resort[ed] to extreme forms of militarism. . . . [Furthermore, w]riting had numerous effects upon . . . relationships with the gods. It reduced . . . dependence upon them and at the same time reduced the hallucinations. Once the word of god was written down things really changed. We could ignore it if we wanted to. We could now listen to the word of god or not as opposed to the direct hallucinatory relationship that the bicameral mind experienced. In a sense, it was the written word that may have been one of the first wedges between man and god. Of course the written word is directly connected with consciousness, so in a sense it was the development of consciousness that also created a wedge between man and god.”¹⁵

But the expansion of populations and the emergence of writing were not the only factors that led to the breakdown of the bicameral mind. “The historical context of all this was enormous. The second millennium B.C. was heavy laden with profound and irreversible changes. . . . The collapse of the bicameral mind was certainly accelerated by the collapse . . . of a good part of the Aegean people’s land. This followed an eruption or series of eruptions of the volcano on the island of Thera, also called Santorini, . . . barely sixty-two miles north of Crete. Then, it had been part of what Plato and

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later legend called the lost continent of Atlantis, which with Crete made up the Minoan empire. The major part of it and perhaps parts of Crete as well were suddenly 1000 feet underwater. . . .

“Geologists have hypothesized that the black cloud caused by the eruption darkened the sky for days and affected the atmosphere for years. The air shock waves have been estimated at 350 times more powerful than a hydrogen bomb . . . A . . . huge tidal wave followed. Towering 700 feet high and traveling at 350 miles per hour, it smashed into the fragile coasts of the bicameral kingdoms along the Aegean mainland and its islands . . . A civilization and its gods had ended. . . .

“Some believe [that this catastrophe] . . . occurred in 1470 B.C. Others have dated the collapse of Thera between 1180 and 1170 B.C., when the whole of the Mediterranean, including Cyprus, the Nile delta, and the coast of Israel, suffered universal calamity. . . . Whenever it was, . . . it set off a huge procession of mass migrations and invasions which wrecked the Hittite and Mycenaean empires, threw the world into a dark age within which came the dawn of consciousness . . .

“Huge migrations begin moving into Ionia and then south. The coastal lands of the Levant are invaded by land and sea by peoples from eastern Europe, of whom the Philistines . . . were a part. The pressure of the refugees is so great in Anatolia that in 1200 B.C. the puissant Hittite empire collapses, driving the Hittites down into Syria, where other refugees are seeking new lands. . . . The chaos is widespread and continuing. In Greece it is darkly known as the Dorian invasions. The Acropolis is in flames by the end of the thirteenth century B.C. Mycenae no longer exists by the end of the twelfth century B.C. It has been ground out into legend and wonder. . . .

“In the south, more of these refugees, called in hieroglyphics the ‘People of the Sea,’ attempt to invade Egypt by the Nile delta at the beginning of the eleventh century B.C. Their defeat by Rameses III can still be seen on the north wall of his funerary temple at Medinet Habu in western Thebes. . . . And so the People from the Sea are pressed back eastward into the clutch of Assyrian militarism.

“And finally all these pressures become too great for even Assyrian cruelty. In the tenth century B.C., Assyria itself cannot control the situation and shrivels back into poverty behind the Tigris. But only to breathe. For in the very next century, the Assyrians begin their reconquest of the world with unprecedented sadistic ferocity, butchering and terroring their way back to their former empire and then beyond and all the way to Egypt and up the fertile Nile to the holy sun-god himself . . . And by this time, the great transience in mentality had occurred. Man had become conscious of himself and his world.”¹⁶

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Conclusion

This summary of God's continuing Creation (*creatio continua*) briefly traces the origin of the universe, the solar system, this earth and its life, of mankind, language and bicameral consciousness, and of civilization and writing. It must be followed by an account of the events that accompanied the emergence of self-consciousness.

Notes and References

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2. See John Polkinghorne, *Reason and Reality: The Relationship between Science and Theology* (Philadelphia: Trinity Press International, 1991), pp. 70-73.
3. See Edward L. Wright, "Age of the Universe" (Nov. 1999), at www.astro.ucla.edu/~wright/age.html "Earth-time" is defined by the periodic rotation of the earth on its own axis each day, the revolution of the moon around the earth each month, and the revolution of the earth around the sun each year. Such time measurements are not absolute but relative. Thus, where space contracts (e.g., black holes), time expands; and where space expands (e.g., outer edge of the universe), time contracts. This is based on the constant velocity (space/time) of light. See *Microsoft Encarta Online Encyclopedia 2001*, s.v. Einstein, Albert, at encarta.msn.com/encyclopedia_761562147/Einstein_Albert.html.
4. See *ibid.*
5. "Evidence Supporting Biological Evolution," *Science and Creationism: A View from the National Academy of Sciences*, 2nd ed., at books.nap.edu/html/creationism/evidence.html.
6. See *ibid.*
7. See "Australopithecus afarensis: The Story of Lucy," at www.wsu.edu:8001/vwsu/gened/learn-modules/top_longfor/timeline/afarensis/afarensis-a.html.
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16. Jaynes, *Origin of Consciousness*, pp. 209-216.