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THE FIRMAMENT AND THE WATER ABOVE

Part I: The Meaning of *raqia*^{c} in Gen 1:6-8

PAUL H. SEELY

STANDARD Hebrew lexica and a number of modern biblical scholars have defined the *raqia*^{c} (רקיע, "firmament") of Gen 1:6-8 as a solid dome over the earth.[1] Conservative scholars from Calvin on down to the present, however, have defined it as an atmospheric expanse.[2] Some conservatives have taken special pains to reject the concept of a solid dome on the basis that the Bible also refers to the heavens as a *tent* or *curtain* and that references to windows and pillars of heaven are obviously poetic.[3] The word *raqia*^{c}, they say, simply means "expanse." They say the understanding of *raqia*^{c} as a solid firmament rests on the Vulgate's translation, *firmamentum*; and that translation rests in turn on the LXX's translation στερέωμα, which simply reflected the Greek view of the heavens at the time the translators did their work.[4] The *raqia*^{c} defined as an atmospheric expanse is the historical view according to modern conservatives; and the modern view of the *raqia*^{c} as a solid dome is simply the result of forcing biblical poetic language into agreement with a concept found in the Babylonian epic Enuma Elish.[5]

The historical evidence, however, which we will set forth in concrete detail, shows that the *raqia*^{c} was originally conceived of as being solid and not a merely atmospheric expanse. The grammatical evidence from the OT, which we shall examine later, reflects and confirms this conception of

1 E.g., commentaries on Genesis by S. P. Driver, H. Gunkel, J. Skinner, G. von Rad, C. Westermann.

2 J. Calvin, *Genesis* (Grand Rapids: Eerdmans, 1948) 78-79. From the eighteenth century, e.g., A. Clarke, *The Old Testament* (New York: Hunt & Eaton, n.d.) 1.31. From the nineteenth century, e.g., G. Bush, *Notes on the Book of Genesis*, (New York: Ivison, Phinney, 1860) 33; R. S. Candlish, *Commentary on Genesis* (1868; repr. Grand Rapids: Zondervan) 25. From this century, e.g., C. E Keil and E Delitzsch, *Biblical Commentary on the Old Testament, The Pentateuch* (Grand Rapids: Eerdmans, 1949) 1.52; A. R. Fausset and D. Brown, *A Commentary on the Old and New Testaments* (Grand Rapids: Eerdmans, 1948) 5; H. L. Ellison and D. E Payne, "Genesis," in *The International Bible Commentary* (ed. E E Bruce; Grand Rapids: Zondervan, 1979) 115.

3 E.g., C. E Keil and E Delitzsch, *Biblical Commentary*; H. L. Ellison and D. E Payne, *Genesis*, C. Gaenssle, "A Look at Current Biblical Cosmologies," CTM 23 (1952) 738-49.

4 E.g., L. Haines on Genesis in the *Wesleyan Bible Commentary* (Grand Rapids: Eerdmans, 1967) 26; R. L. Harris, "Bible and Cosmology," *Bulletin of the Evangelical Theological Society* 5 (1962) 11-17; W. C. Kaiser, Jr., "The Literary Form of Genesis 1-11," in *New Perspectives on the Old Testament* (ed. J. B. Payne; Waco: Word, 1970) 57.

5 Kaiser. *Literary Form*. 52-57.

solidity. The basic historical fact that defines the meaning of *raqia*[c] in Genesis 1 is simply this: all peoples in the ancient world thought of the sky as solid. This concept did not begin with the Greeks.

The question, however, arises in the modern mind, schooled as it is in the almost infinite nature of sky and space: Did scientifically naive peoples really believe in a solid sky, or were they just employing a mythological or poetic concept? Or were they, perhaps, just using phenomenal language with no attending belief that the sky actually was a solid object? That is, were they referring to the mere appearance of the sky as a solid dome but able to distinguish between that appearance and the reality?

The answer to these questions, as we shall see more clearly below, is that scientifically naive peoples employed their concept of a solid sky in their mythology, but that they nevertheless thought of the solid sky as an integral part of their physical universe. And it is precisely because ancient peoples were scientifically naive that they did not distinguish between the appearance of the sky and their scientific concept of the sky. They had no reason to doubt what their eyes told them was true, namely, that the stars above them were fixed in a solid dome and that the sky literally touched the earth at the horizon. So, they equated appearance with reality and concluded that the sky must be a solid physical part of the universe just as much as the earth itself.

Levy-Bruhl, commenting on the beliefs of scientifically naive peoples and quoting from original reports, wrote,

> Their cosmography as far as we know anything about it, was practically of one type up 'til the time of the white man's arrival upon the scene. That of the Borneo Dayaks may furnish us with some idea of it. "They. . . consider the earth to be a flat surface, whilst the heavens are a dome, a kind of glass shade which covers the earth, and comes in contact with it at the horizon. They therefore believe that, traveling straight on, always in the same direction, one comes at last, without any metaphor, to touch the sky with one's fingers." . . . It is the same thing in the Mortlock Islands. ". . . in reply to our question as to what land lay beyond these islands, the native drew a line to the west of them and explained in a very clear and simple way that yonder, beyond the Paloas Islands, the dome of the sky was too close to the earth to permit navigation; the utmost that could be done was to crawl along the ground or swim in the sea." . . . Among the Melanesians of the Loyalty Group, "to the mind of the Lifuan, the horizon was a tangible object at no great distance. Many of the natives thought that if they could only reach it they would be able to climb up to the sky."
>
> Such an impression is not peculiar to the races of the Southern Pacific. It is to be met with in South Africa. "Heaven is for them (the Thonga) an immense solid vault which rests upon the earth. The point where heaven touches the earth is called *bugimamusi* . . . the place where the women can lean their pestles against the vault."[6]

[6] L. Levy-Bruhl, *Primitive Mentality* (Boston: Beacon. 1966) 53-55.

Among primitive African peoples various stories reflect their belief in a solid sky. The Ngombe say that when the two creatures who hold the sky up with poles get tired, "the sky will fall down." The Nyimang say that long ago the sky was so close to earth that the women could not stir their porridge properly with their long stirrers; so one day "one woman got angry and lifting the stirrer pierced the sky with the upper end."[7]

The Dogon tell of an ancient ancestor who came down from heaven "standing on a square piece of heaven. . . . A thick piece? Yes, as thick as a house. It was ten cubits high with stairs on each side facing the four cardinal points."[8]

On the other side of the world, among American Indians, the sky was also conceived of as a solid dome. As Levy-Bruhl wrote,

> In North America, in Indian belief, the earth is a circular disc usually surrounded on all sides by water and the sky is a solid concave hemisphere coming down at the horizon to the level of the earth. In Cherokee and other Indian myths the sky is continually lifting up and coming down again to the earth like the upper blade of a pair of scissors. The sun which lives outside the hemisphere slips between the earth and the sky-line in the morning when there is a momentary slit, and it returns from the Western side in the evening in the same fashion.[9]

This idea of the sky lifting up and down, opening and closing a space "between the rim of the sky and the earth" is widespread among North American Indians, some of them believing that this bellows-like movement of the sky caused wind. A number of Siberian tribes believe the opening of the sky allows migratory birds to fly out of this world in the winter and live "on the other side of the celestial vault" until spring. But birds which do not hurry "are caught and crushed between the rocks of the sky and the earth" when the sky closes down.[10]

Another common American Indian idea reflecting the solidity of the sky is the story of a hero who gained access to the sky by shooting an arrow into it and then another arrow into the first arrow and so on until he had an arrow "ladder" by which he could climb up to the sky. There are similar stories to this from all around the world. In a Chuckchee story a hero throws a needle upwards "as a dart, so that it fastens in the sky"; then he climbs up a thread hanging from the needle. In Australia it is not an arrow or a needle, but a lance that "fastens itself in the celestial vault."[11]

Still another element reflecting the solidity of the sky is the idea of a window or hole in the sky. This idea is so widespread that one observer

7 S. Feldman, *African Myths and Tales* (New York: Dell, 1963) 39-40.

8 B. Sproul, *Primal Myths* (New York: Harper & Row, 1969) 61.

9 Levy-Bruhl, *Primitive*, 353-55.

10 G. Hau, *Asiatic Influences in American Folklore* (Copenhagen: I Kommission hos Munksgaard) 78-79. cr. Sproul, *Primal*, 197.

11 Hatt, *Asiatic*, 78-79.

concluded it was "a general human trait."[12] The Seneca, for example, told of a woman who fell through a hole in the sky bringing some soil of the sky with her which she had clenched in her hands while trying "to hold on to the edge of the hole" before she fell.[13] The Navaho in their story of creation not only mention a hole in the sky but specifically describe the solidity of the sky:

> They went in circles upward 'til they reached the sky. It was smooth. [They were told of a hole in the sky.] They entered the hole and went through it up to the surface [of the second world above]. When they reached the sky [of the second world] they found it like the sky of the first world, smooth and hard with no opening.[14]

The Cherokee clearly state that the "sky vault . . . is of solid rock."[15]

In the far northern reaches of Europe and the Soviet Union the primitive peoples there also give evidence of belief in a solid sky. The Lapps say that the North Star is a nail which supports the sky, but in the last days when Arcturus shoots down the North Star with an arrow "the heavens will fall crushing the earth and setting fire to everything."[16]

In Siberia the Yakuts say the outer edge of the earth touches the rim of a hemi-spherical sky and that "a certain hero rode out once to the place where earth and sky touched."[17] In some districts the Buriats "conceive the sky to be shaped like a great overturned cauldron, rising and falling in constant motion. In rising, an opening forms between the sky and the edge of the earth. A hero who happened at such a time to place his arrow between the edge of the earth and the rim of the sky was enabled thus to penetrate outside the world."[18]

Other stories could be cited, but it is sufficiently clear that scientifically naive peoples around the world from the Pacific Islands to North America, from Siberia to Africa, have perceived the sky as a solid inverted bowl touching the earth at the horizon. Nor is this common conception of a firmament merely myth, metaphor, or phenomenal language. It is an integral part of their scientific view of the universe. It is within the context

12 Ibid.

13 Ibid.

14 C. Long, *Alpha: The Myths of Creation* (Chico: Scholars Press, 1963) 46-48. Sproul (*Primal*) also mentions an Islamic commentary which tells of boring "a hole in the sky" and an Eskimo story of a bird which pecks "a hole in the sky."

15 H. B. Alexander, *The Mythology of All Races. Vol. 10: North America* (repr. New York: Cooper Square, 1964) 60.

16 U. Holmberg, *The Mythology of All Races. Vol. 4: Finno-Ugric, Siberia* (repr. New York: Cooper Square, 1964) 221-22. Cf. the Aztec story of the sky falling down from a violent rain, in Hatt, *Asiatic*, 50. The Koran speaks of God holding up the heavens "so that they do not fall on to the earth" (22.64).

17 Hatt, *Asiatic*, 63.

18 Holmberg, *Mythology*, 308.

of geography, astronomy, and natural science that they really believe that if they would travel far enough they could "touch the sky with one's fingers," that migrating birds live "on the other side of the celestial vault," that an arrow or lance could "fasten in the sky," that the sky can have "a hole in it," that at the horizon "the dome of the sky is too close to earth to permit navigation," that where the sky touches the earth you can "lean a pestle against it" or "climb up it," that the sky is "smooth and hard. . . of solid rock, . . . as thick as a house," that the sky can "fall down" and someday "will fall down crushing the earth."

Equally important, this perception of the firmament is not selective. It is almost completely universal. True, there are occasional variations on the solid dome conception, such as several worlds piled up on top of each other, each with its own firmament; but I know of no evidence that any scientifically naive people anywhere on earth believed that the firmament was just empty space or atmosphere. The only exception to this is the Chinese and that not until AD 200. Apart from a scientific education, it is just too natural for people to think of the sky as something solid. So true is this that it is generally regarded by scholars as "the usual primitive conception."[19] One scholar goes so far as to call it "a general human belief."[20]

I. *The Ancient Eastern View of the Sky*

Since scientifically naive peoples naturally conceive of the sky as solid, it is no surprise that the records we have from the ancient East echo the same viewpoint. Thus one observer of ancient Japan reports that the sky was thought of as "an actual place, not more ethereal than the earth. ..but a high plane situated above Japan and communicating with Japan by a bridge or ladder. . . . An arrow shot from earth could reach heaven and make a hole in it."[21]

Joseph Needham tells us the Chinese had three cosmological views, but the most ancient one perceived the earth as an upside down bowl with the heavens over it as another upside down bowl, the sky having simply a greater diameter than the earth. The sun and moon were attached to the vault of heaven, which rotated from left to right carrying the heavenly bodies with it.[22] Chinese stories mention heaven and earth being separated from each other, tell us that the sky was once much nearer to earth than it

19 Freund, *Myths of Creation* (New York: Washington Square, 1965) 204. cr. Levy-Bruhl, *Primitive*, 353, and Feldman, *African*, 40. ;11:')

20 Hatt, *Asiatic*, 50.

21 Ibid., 54 n. 2.

22 J. Needham, "The Cosmology or Early China," in *Ancient Cosmologies* (ed. C. Blacker and M. Loewe; London: George Allen & Unwin, 1975) 87, 90-92.

is today, and speak of the place "where heaven and earth meet," ideas which, if interpreted within their historical context, indicate they believed in a solid sky.[23]

Interestingly, around AD 200 a school of thought arose in China that posited that the sky was empty space. This is to my knowledge the first and only time that anyone in the ancient Eastern world thought of the sky as not being solid. So novel was this idea even to the West that as late as the sixteenth century a Jesuit missionary to China wrote home saying the idea that the sky is not solid is "one of the absurdities of the Chinese"![24]

In India the earliest cosmology is found in the Rig Veda, a document from the middle of the second millennium BC. It contains a number of passages which show that Indians of that time believed in a solid firmament. In one creation hymn an unnamed god is mentioned "by whom the dome of the sky was propped up" (10.121.5; cf. 1.154.1 and 2.12.2). Another hymn asks, "What was the wood. . . from which they carved the sky and the earth?" (10.81.4). Another says, "Firm is the sky and firm is the earth" (10.173.4). Several hymns mention people who "climb up to the sky" (8.14.14; 2.12.12; 1.85.7). Several hymns mention the separation of heaven and earth. One says Varona "pushed away the dome of the sky" (7.86.1; cf. 10.82.1).[25]

Equally important, the hymns of the Rig Veda distinguish the firmament from the "middle realm of space," i.e., the space between the earth and the firmament (10.190.3; 8.14.7). Indeed, the "realm of space" and the "sky" were created from two different sources (10.90.14). The atmosphere is also distinguished from the solid firmament (2.12.2; 10.139).[26] As W. N. Brown concluded, the universe of the Rig Veda "was considered to be composed of the earth surface, the atmospheric region, and the sky surface."[27]

The Sumerologist Samuel Noah Kramer described the cosmology of the Sumerians, the founders of the first civilization, in similar terms. The earth, they thought, was a flat disc; heaven, a hollow sphere enclosed at top and bottom by a solid surface in the shape of a vault.[28] Sumerian literature, like the Rig Veda, distinguished between the firmament and the atmosphere. The Sumerians made this distinction by attributing to their air god, Enlil, the original act of separating heaven from earth. Hence Kramer noted the Sumerians believed that between heaven and earth was a substance called *lil* or wind which "corresponds roughly to our 'atmosphere,' " while they

23 Wing-Tsit Chan, *Sourcebook in Chinese Philosophy* (Princeton: Princeton University Press, 1963) 247-48; Hatt, *Asiatic*, 54 n. 1.

24 Needham, "Cosmology," 90-92.

25 *The Rig Veda* (trans. W. O'Flaherty; New York: Penguin, 1981) 28, 35, 64, 160, 161, 165,

26 (solidity of the sky); 36, 213 (separation of heaven and earth).

26 Ibid., 31, 34, 159, 160; Sproul, *Primal*, 182-83.

27 W. N. Brown, "The Creation Myth of the Rig Veda," *JAOS* 62 (1942) 85.

28 S. N. Kramer, *History Begins at Sumer* (New York: Doubleday, 1959) 77.

thought of the firmament as solid, possibly composed of tin since the Sumerian word for tin is literally "metal of heaven."[29]

We have no description of the Hittite cosmology, but we do know they thought of the sky as solid, for a recovered text speaks of a time when they "severed the heaven from the earth with a cleaver."[30]

The Egyptian Pyramid Texts (ca. 2000 BC) seem to speak of the sky as being made of metal.[31] Max Muller accepted this idea and went on to say the Egyptians apparently believed the firmament was made specifically of iron. He says, "This conception of a metal dome explains some expressions of later times, such as the name of iron, be-ni-pet ('sky metal'), or the later word for 'thunder,' khru-bai (literally, 'sound of the metal') i.e., thunder was evidently explained as the beating of the giant sheets of metal which constituted the sky."[32]

Whatever the case may be as to exactly what material the ancient Egyptians thought the sky was made of, they certainly believed it was solid. A number of texts speak of the time when the sky was literally separated from the earth. Pyramid Text 1208c specifically mentions the time "when the sky was separated from the earth," and, although this was a historic event of creation, Text 854c seems to imply that the sky was separated from the earth daily in order to let the sun enter (a concept reminiscent of American Indian ideas).

Text 1156c mentions that "his (Shu's) right arm supports the sky"; and 2013a says, "Thou art a god who supports the sky."[33] Various of the Coffin Texts (ca. 2050 to 1800 BC) reiterate these ideas of the sky needing support, e.g., spells 160, 366, 378, and 664. Pyramid Text 1040c more prosaically points to the two mountain ranges on the east and west sides of the Nile as the "two supports of the sky." In either case the fact that the sky needed supporting clearly shows that the Egyptians thought of it as solid; and Text 299a implies that if the supporting arms of Shu were hacked off, the sky would fall. Also clearly showing that the Egyptians thought of the sky as solid is the fact that they like the Sumerians and Indians in the Rig Veda distinguished between the sky (firmament) and the atmosphere. The sky

29 Ibid., 70, 83. cr. S. N. Kramer, *Sumerian Mythology* (rev. ed: Philadelphia: University or Pennsylvania, 1972) 40.

30 *ANET*, 125.

31 Adolph Ennan, *The Ancient Egyptians* (New York: Harper & Row, 1966) 5. S. A. B. Mercer understands the text (305) as being more figurative than literal (The Pyramid Texts in Translation and Commentary [3 vols.; New York: Longmans, Green, 1952]); but see J. K. Hoffmeier, "Some Thoughts on Genesis 1 & 2 and Egyptian Cosmology," *JANES* 15 (1983) 45. Cr. *RGG* (3d ed.) 3.330.

32 W. M. Muller, *The Mythology of All Races. Vol. 12: Egyptian* (repr. New York: Cooper Square, 1964) 35. Cr. E. A. W. Budge, *The Book of the Dead* (New York: Dover, 1967 repr.) ci, ciii; and Hoffmeier, "Some Thoughts."

33 Cf. *ANET*; 33 n. 2. The Deir el-Bahri papyrus picture can be seen in *IDB* 2.57.

was personified by one goddess, Nut, while the air which upheld the sky was personified by an entirely different deity, Shu.[34]

In Babylonian thought the solidity of the firmament is most clearly seen in Tablet IV of Enuma Elish, particularly in lines 137-38 where Marduk, having killed Tiamat, "split her in half like a shellfish, and from one half made and covered the heavens." Or, as Heidel translated the passage, with half of Tiamat Marduk "formed the sky as a roof."[35] The solidity of the sky is also seen in Tablet V:9-11 where Marduk "opened gates on both sides" so that the sun could pass through morning and evening; and then "In her belly he placed the zenith" (i.e., the Pole star).[36]

This brings us to the historical meaning of *raqia*^{c} in Genesis 1. Everyone agrees that raqia^{c} means "sky," but modern conservatives deny the meaning "solid sky" or "literal firmament." But on what basis can it be denied that the Hebrews believed the sky was solid? Scientifically naive peoples everywhere have believed the sky was solid, and there is no reason to believe the Hebrews were any less scientifically naive than their neighbors. Since, from a cultural standpoint, the Hebrews' pre-Solomonic architecture and pottery were "vastly inferior" to that of their neighbors, one might gather that the early Hebrews were possibly more scientifically naive than their neighbors, but certainly not less so.[37] Similarly, the fact that it was not the Hebrews but their neighbors who led the technological advance from the use of bronze to the use of iron (cf. Josh 17:18; Judg 1:19) suggests, if anything, that the Hebrews were more scientifically naive than their neighbors. It certainly does not suggest that they were less so. Nor do we know of any evidence from biblical times that suggests the Hebrews were ever more scientifically sophisticated than their neighbors.[38] Accordingly, it seems most probable that so far as the physical nature of the sky is concerned, the Hebrews, as a typical scientifically naive people, believed the *raqia*^{c} was solid.

The voice of the past would also have had a strong influence upon the thinking of the Hebrews as it has on all peoples and especially ancient peoples for whom the voice of the past was the voice of authority. For the

34 S. Morenz, *Egyptian Religion* (Ithaca: Cornell University Press, 1960) 173-74. Cf. J. A. Wilson, "The Nature of the Universe," in *Before Philosophy* (ed. H. and H. A. Frankfort; Baltimore: Penguin, 1963) 55. For texts speaking of the sky being "separated" from the earth and "supported" see Mercer, *The Pyramid Texts*, 299a, 854c, 952d, 1040c, 1101c, 1156c, 1208c, 1528a, 1778b, 2013a, 2091a; and R. O. Faulkner, *The Ancient Egyptian Coffin Texts* (3 vols.; Wanninster: Aris & Phillips, 1973) spells 61, 160, 366, 378, 664, and 948. For a picture and a statue of Shu separating and supponing the sky, see *ANEP*, 183-84, and E. Hornung, *Conceptions of God in Ancient Egypt* (trans. J. Baines; Ithaca: Cornell University Press, 1982) 68 and n. 36.

35 A. Heidel, *The Babylonian Genesis* (Chicago: University of Chicago Press, 1951) 42.

36 *ANET*; 67. B. Landsberger and J. V. K. Wilson, "The Fifth Tablet of Enuma Elish," *JNES* 20 (1961) 173. M. K. Wakeman, *God's Battle with the Sea Monster* (Leiden: Brill, 1973) 21.

37 M. Burrows, *What Mean These Stones?* (New York: Meridian, 1957) 99, 140-41, 166-8.

38 See n. 41 and cf. P. Seely, *Inerrant Wisdom* (Portland, OR: Evangelical Reform, 1989) 1-9.

Hebrews the voice of the past was the voice of the patriarchs and Abraham in particular, men who most likely held the Babylonian view of the sky as solid. The Babylonian background of Genesis 1-11 can scarcely be missed, and if one were to date that background it appears to come from the time of the patriarchs.[39] Taken within its historical context, then, the probability again is that the *raqia*^{c} in Genesis 1 was understood to be solid.

At the same time Egyptian influence should not be totally disregarded.[40] Not only did the Hebrews spend several centuries in Egypt, but Moses, through whom much of the higher theology came (and who wrote Genesis 1 according to conservative thought), was schooled in the thinking of the Egyptians. That schooling would certainly have included the assumption that the sky was solid, a belief that forty years of living with a primitive tribe (according to Exod 2:15) would only have strengthened. And, of course, the Hebrews had a continuing relationship with Egypt throughout their history. With this Egyptian background in mind we must again say that probably the *raqia*^{c} of Genesis 1 should be defined as solid.
It is true that Genesis 1 is free of the mythological and polytheistic religious concepts of the ancient Near East. Indeed it may well be anti-mythological. But, as Bruce Waltke noted when commenting on the higher theology of Israel as it is found in Genesis 1, the religious knowledge of Israel stands in contrast to Israel's scientific knowledge.[41] In addition, the religious knowledge of Israel, though clearly superior to that of its neighbors, was expressed through the religious cultural forms of the time. Temple, priesthood, and sacrifices, for example, were common to all ancient Near Eastern religions.[42] It should not surprise us then to find the religious knowledge of Israel also being expressed through the merely scientific forms of the time.[43]

Considering that the Hebrews were a scientifically naive people who would accordingly believe the *raqia*^{c} was solid, that both their Babylonian and their Egyptian background would influence them to believe the *raqia*^{c} was solid, and that they naturally accepted the concepts of the peoples around them so long as they were not theologically offensive, I believe we have every reason to think that both the writer and original readers of Genesis 1 believed the *raqia*^{c} was solid. The historical meaning of *raqia*^{c} in Gen 1:6-8 is, accordingly, "a solid sky."

39 K. A. Kitchen, *The Bible in Its World* (London: InterVarsity, 1977) 35-36. W. G. Lambert, "A New Look at the Babylonian Background or Genesis" *JTS* 16 (1965) 300. W. F. Albright, *Yahweh and the Gods of Canaan* (Garden City: Anchor, 1969) 91.

40 Hoffmeier, *Some Thoughts*, 45. cr. C. Westermann, *Genesis 1-11* (Minneapolis: Augsburg, 1984) 22-47.

41 B. Waltke, *Creation and Chaos* (Portland, OR: Western Conservative Baptist Seminary, 1974) 46.

42 H. Frankfort, *The Problem of the Similarity in Ancient Near Eastern Religions* (Oxford: Clarendon, 1951). Also M. Smith, "The Common Theology or the Ancient Near East," *JBL* 71 (1952) 135-47.

43 Cf. Seely. *Inerrant Wisdom*. 1-43.

Only by taking Genesis l out of its historical context could one say that *raqia*^{c} means merely "an atmospheric expanse" or, as the more sophisticated conservatives say, "just phenomenal language." In the ancient world the sky was not just phenomenal. The ancients did not just refer to the appearance of the sky as being solid. They concluded from the appearance that the sky really was solid, and they then employed this conclusion in their thinking about astronomy, geography, and natural science. The *raqia*^{c} was for them a literal physical part of the universe, just as solid as the earth itself. Solidity is an integral part of its historical meaning.

When the original readers of Genesis 1 read the word *raqia*^{c} they thought of a solid sky. And so did virtually everyone else up to the time of the Renaissance! After the time of Christ there were occasional dissenters, but by and large Jews and Christians, Greeks and barbarians all believed the firmament was solid.

Jews speculated as to what material the firmament was made of: clay or copper or iron (3 *Apoc. Bar.* 3.7). They differentiated between the firmament and the empty space or air between it and the earth (*Gen. Rab*. 4.3.a; 2 *Apoc. Bar*. 21.4). They tried to figure out how thick it was by employing biblical interpretation (*Gen. Rab*. 4.5.2). Most tellingly they even tried to calculate scientifically the thickness of the firmament (*Pesab*. 49a).

Christians speculated as to whether it was made of earth, air, fire, or water (the basic elements of Greek science). Origen called the firmament "without doubt firm and solid" (*First Homily on Genesis*, FC 71). Ambrose, commenting on Gen 1:6, said, "the specific solidity of this exterior firmament is meant" (*Hexameron*, FC 42.60). Augustine said the word firmament was used "to indicate not that it is motionless but that it is solid and that it constitutes an impassable boundary between the waters above and the waters below" (*The Literal Meaning of Genesis*, ACW 41.1.61).

Greeks from Anaximenes to Aristotle set forth as scientific fact that the firmament was made of a crystalline substance to which "the stars are fixed like nails."[44] This idea was passed on for centuries via Ptolemy's *Almagest*. The barbarians meanwhile worried about the sky falling on them if they did not keep their promises![45]

Astonishing as it may seem to the modern mind, with very rare exceptions the idea that the sky is not solid is a distinctly modern one. Historical evidence shows that virtually everyone in the ancient world believed in a solid firmament. Accordingly it is highly probable that the historical meaning of *raqia*^{c} in Genesis 1 is a solid firmament. Certainly anyone denying the solidity of the *raqia*^{c} in Genesis 1 bears a heavy burden of proof. It seems to me that nothing short of a clear statement to the contrary made by an OT writer could allow one in good conscience to set aside this clear historical meaning.

44 P. Wheelwright, *The Presocratics* (New York: Odyssey, 1966) 63, 153. Aristotle, *De caela* 2.8 and 3,1.

II. *The Biblical-Grammatical Meaning of* raqia^{c}

Does any statement or phrase appear in the OT which clearly states or implies that the *raqia^{c}* is not solid? Does anything in Genesis 1 state or imply the *raqia^{c}* was not (or was) solid? The fact that it was named "heaven(s)" in Gen 1:8 and birds fly in the heaven(s) (Deut 4: 17) seems to imply the *raqia^{c}* was not solid. But the word *samayim* (heaven[s]) is broader in meaning than *raqia^{c}*. It encompasses not only the *raqia^{c}* (v. 8; Ps 19:6; 148:4) but the space above the *raqia^{c}* (Ps 2:4; 11:4; 139:8) as well as the space below (Ps 8:8; 79:2). Hence birds fly in the heavens, but never in the *raqia^{c}*. Rather, birds fly upon the face or in front of the *raqia^{c}* (Gen 1:20).

This phrase *upon the face* (surface) or *in front of* the *raqia^{c}* is important in that it implies the *raqia^{c}* was neither space nor atmosphere. For birds do not fly *upon the surface or in front of* space or air, but rather *in* space or air. This distinction is illustrated in the case of fish, which no one would say swim *upon the surface* or *in front of* the water (Gen 7: 18) but rather *in* the water (cr. Exod 7: 18, 21).

Gen 1:17 also testifies that the *raqia^{c}* is not air or atmosphere for it says that God placed the stars (and probably the sun and moon) "in the *raqia^{c}* or the heavens." But the stars are not located in the air or atmosphere. So we know the *raqia^{c}* (in which 1:17 locates them) cannot be air or atmosphere. Even if 1:17 is construed as phenomenal language, the *raqia^{c}* still cannot be air or atmosphere. For the stars do not *look like* they are located in the air or atmosphere. Rather (as anyone can tell on a clear night away from city lights) they *look like* they are embedded in a solid vault which is exactly why scientifically naive peoples believe in a solid vault, and why 1:17, in accordance with that belief, says God placed the stars in the raqia^{c}. Gen 1:14-17 is such a clear proof that the *raqia^{c}* is not air or atmosphere that some conservatives have tried to dissociate the *raqia^{c}* in vv. 14-17 from the *raqia^{c}* in vv. 6-8. But the statement in v. 14, "Let there be lights in the firmament or heaven," immediately raises the question, What "firmament of heaven"? To which the context immediately replies, the firmament of vv. 6-8 which was called heaven. The contextual identity of the two firmaments is really beyond question. Taken in context it is impossible to say the *raqia^{c}* of vv. 6-8 was just air or atmosphere.

On the contrary. For when God divided the light from the darkness (two intangibles) nothing was made. But in order to divide the tangible upper ocean from the lower ocean the *raqia^{c}* was made (עשׂה). The combination or dividing two tangibles (as opposed to intangibles) with something that was made (עשׂה), a verb which often means "manufacture," implies a tangible, i.e., solid divider. It would be unnatural to use עשׂה to say that God made space. Nor is it a particularly apt word for saying God made air. If a nonsolid divider had been in mind for separating the primeval ocean, the idea could have been communicated in a much more natural way. It could have been simply said that God put room (maqom) or space (ruah) as in Gen.

32: 16 (17), or *space* (רחוק) as in Josh 3:4, between the two bodies of water. If air (a word never appearing in the OT) had been in mind as the divider, רוח ("wind") could have been used, as in Exod 14:21, or נשׁמה ("breath") as in Gen 2:7; Ps 150:6.

If the writer wanted to communicate the idea of a nonsolid divider, his choice of the word *raqia*^{c} was particularly unfortunate since its verbal cognate *raqa*^{c} ("stamp, beat, spread out") is used of hammering metal into thin plates (Exod 39:3) and hence suggests that a *raqia*^{c} was something hammered out, an idea consonant with both Egyptian and Sumerian views of the sky. In addition a Phoenician cognate (*mrq*^{c}) means "plating."[46]

Conservative writers usually try to avoid this implication of solidity by stressing the meaning "expanse" or "thinness" for *raqia*^{c} and pointing out that Isaiah also speaks of the sky as a curtain or tent (Isa 40:22) or scroll (Isa 34:4). But in Isa 42:5 the earth is called an "expanse" (*raqia*^{c}) without in any way implying that it is not solid. So even if the *raqia*^{c} in Genesis is translated "expanse," this in no way implies that it is not solid. And even though gold can be beaten very thin, it never loses its solidity.

As for Isaiah, he never says God made a curtain or tent or scroll as Genesis says God made a *raqia*^{c}. Rather he says the sky is like a curtain or tent or scroll. His statements are always poetic similes, but Gen 1:7 is not a simile (nor is it just phenomenal language). Gen 1:7 makes a prosaic statement about the creation of a part of the universe, a part just as physical as the earth, sea, sun, or moon. The statements in Genesis and Isaiah are not really comparable.

We see then that Gen 1:17 and 1:20 testify that the *raqia*^{c} is not air or atmosphere. The verbal cognate of *raqia*^{c}, as well as the use of the verb עשׂה ("made"), in 1:7 imply the *raqia*^{c} was solid. More important, the purpose and function of the *raqia*^{c} imply its solidity, for it functions as a horizontal dam (cf. 7:11; 8:2; Ps 148:4), holding back a mighty heavenly ocean. The water above the firmament is not clouds as some rationalize (and we shall delineate this fact more fully in Part II), for while the sun, moon, and stars are in the *raqia*^{c} (v. 14), the waters of the upper primeval ocean are above the *raqia*^{c} (v. 7).47 This ocean over the *raqia*^{c}, indeed resting upon it (Gen 7:11; 8:2; Ps 148:4), tells us quite clearly that the firmament is a physical part of the universe. It is not just phenomenal language as it might have been if Genesis were a modern Western book. Rather it is an ancient Near Eastern concept similar to if not related to that found in Enuma Elish Tablets IV and V
As for the rest of the OT, the word *raqia*^{c} is used a number of times but usually in contexts that do not help us define the word any further than saying it means "sky." But in Ezekiel 1 the nature of a firmament is described. This is the clearest description of a *raqia*^{c} found in the OT. It was

46 E. J. Young, *Studies in Genesis One* (Philadelphia: Presbyterian & Reformed, 1964) 90 n. 94.

47 Ibid.

a divider of some kind over the heads of four cherubim (vv. 22-25), and on top of it was a throne with a man on it (v. 26). As to the composition of this firmament, it looked like "terrible crystal or ice."

Inasmuch as the throne mentioned was apparently sitting on this firmament (cf. Exod 24:10) and the firmament looked like crystal or ice, it is apparent that the firmament is solid and is certainly not mere atmosphere or space or simply phenomenal language. Nor does anyone to my knowledge doubt that it was solid. Even conservatives admit the firmament in Ezekiel 1 is solid. Having then this clear definition of a *raqia*^{c} as a solid divider, one is hermeneutically bound to interpret the *raqia*^{c} in Genesis as solid unless there is some clear reason to differentiate the one from the other. As it turns out there is no reason to differentiate the *raqia*^{c} in Ezekiel 1 from the *raqia*^{c} in Genesis 1. On the contrary, there is good reason to identify the one with the other. For we can see in Ezekiel that above the firmament is the throne of God in glory (vv. 26-28) just as above the firmament of heaven described in Genesis is the throne of God in glory (1 Kgs 22:19; Ps 2:4; 11:4; 103:19; Isa 6:1; 14:13; 66:1). Also the firmament in Ezekiel looked like it was made of crystal, exactly the substance that primitive peoples believed the sky was made of.[48] These two similarities between the firmament in Ezekiel and the firmament in Genesis could hardly be coincidental. The firmament in Ezekiel 1 must be related to the firmament in Genesis 1, and a number of commentators have made the identification.[49] Eichrodt, for example, calls the firmament in Ezekiel a "copy of that vault of heaven." The NT confirms the virtual identity of the firmament in Ezekiel and the firmament in Genesis by combining them into one image (Rev 4:6; 15:2).[50]

We ought then on both biblical and hermeneutical grounds to interpret the nature of the *raqia*^{c} in Genesis 1 by the clear definition of *raqia*^{c} which we have in Ezekiel 1, and all the more so since the language of Genesis 1 suggests solidity in the first place and no usage of *raqia*^{c} anywhere states or even implies that it was not a solid object. This latter point bears repeating: there is not a single piece of evidence in the OT to support the conservative belief that the *raqia*^{c} was not solid.[51] The historical meaning of *raqia*^{c}, so far

48 See nn. 46, 51, and M. Eliade, *Shamanum* (Princeton: Princeton University Press, 1964) 13J-39.

49 See commentaries on Ezekiel by W. Brownlee, W. Eichrodt, C. E Keil, H. May, and W. Zimmerli. See also *b. Hag*. 12b.

50 Note the "sea"(Genesis 1) and the "eyes" (Ezekiel 1) in Rev 4:6. See also commentaries on Revelation, especially by R. H. Charles. It might also be noted that although Exod 24: 10 does not use the word *raqia*^{c}, it testifies to the solidity of the firmament as well as to the idea that it was crystalline by saying that the "pavement" under God's feet was "like the material or substance of heaven in transparency."

51 The conservative interpretation (if an interpretation that rejects the historical-grammatical meaning of Scripture can be called conservative) rests on two arbitrary assumptions. One, that ancient men would conceive of the sky the same way modern men do (cf. J. Orr,

from being overthrown by the grammatical evidence, is confirmed by it. The historical-grammatical meaning of *raqia*^{c} in Gen 1:6-8 is very clearly a literally solid firmament.

It is to the credit of E. J. Young that, although believing in biblical inerrancy as much as any other conservative, he alone did not alter or rationalize the historical-grammatical meaning of *raqia*^{c}. In his Studies in Genesis One he defined *raqia*^{c} as "that which is hammered, beaten out" and noted that "the LXX στερέωμα and Vulgate *firmamentum* are satisfactory renderings."[52]

Additionally and finally, the historical-grammatical meaning of *raqia*^{c} possibly illustrates the words of B. B. Warfield, who said as he defined biblical inerrancy, that an inspired writer could

> share the ordinary opinions of his day in certain matters lying outside the scope of his teachings, as, for example, with reference to the form of the earth, or its relation to the sun; and, it is not inconceivable that the form of his language when incidentally adverting to such matters, might occasionally play into the hands of such a presumption.[53]

Certainly the historical-grammatical meaning of *raqia*^{c} is "the ordinary opinion of the writer's day." Certainly also it is not the purpose of Gen 1: 7 to teach us the physical nature of the sky, but to reveal the creator of the sky. Consequently, the reference to the solid firmament "lies outside the scope of the writer's teachings" and the verse is still infallibly true.

1544 S.B. 34th Ave.
Portland, Oregon 97214

in principle by C. Gaenssle, "A Look"). Two, that God would not speak in Scripture to ancient men in terms of the ordinary opinions of their own day (cf. article 12 from the International Council on Biblical Inerrancy's Nineteen Articles in R. C. Sproul, *Explaining Inerrancy*, ICBI 1980, 28-27). Both assumptions are contrary to Scripture (cf. Seely, *Inerrant Wisdom*).

52 Young, Studies, 90 n. 94.

53. B. B. Warfield, "The Real Problem of Inspiration," in The Inspiration and Authority of the Bible (Philadelphia, Presbyterian & Reformed, 1948) 166-67.