The Myth of the Solid Dome (Part I)

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Introduction

Comparing and contrasting Genesis with ANE creation myths and cosmology is an exercise influenced by the initial stance a scholar has towards the biblical text. A fundamentalist stance will produce a different result to that of a historian with a modern scientific outlook. The latter will be comfortable treating some or all of the elements of Genesis as mythical because of similarities that exist between Genesis and the ANE creation myths. The former will instead see the differences and argue that Genesis is a unique text that is true to the facts now and then. This essay is a theology paper set in this polemical context.

The method of biblical interpretation used here then is to first establish the meaning of a word or statement with regard to the literature in which it occurs, working our way out from the sentence to the wider literary units of discourse, book and canon. Our second step is to test this conception against ANE ideas to see if it is the same or if it represents a plausible competing conception in the context of the Ancient Near East.

The claim is made that *rāqîaʿ* (KJV, 'firmament'[1]) is a cosmological term meaning a solid 'dome' or 'vault'. This choice is followed by some major translations and many critical commentators:

> And God said, "Let there be a dome (*rāqîaʿ*) in the midst of the waters, and let it separate the waters from the waters. Gen 1:6 (NRSV)

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[1] We will use this archaic term (which derives from the Latin Vulgate) in a neutral way, while discussing the competing alternatives of 'expanse' and 'dome'. While we are concerned with the meaning of the Hebrew and the correct translation into English, it is worth noting that other target languages have different problems; see the remarks on 'firmament' in S. F. Westberg, "Some Experiences in the Translation of Genesis and Exodus into Lingala" *BT* 7/1 (1956): 117-122 (118); W. J. Bradnock, "Questions and Answers" *BT* 7/1 (1956): 163-164.

Conservative commentators tend to favour the meaning of 'expanse' which in turn allows them to offer a harmonization of the Bible and Science.[1]

In order to establish the meaning of *rāqîaʿ* as a 'solid dome', one scholar, P. H. Seely, makes two arguments. The first is that,

- 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 *raqiaʿ* in Genesis 1 is a solid firmament.[2]

- The second argument is lexical and linguistic and seeks to show that associated prepositions, related verbs and other uses of the word *rāqîaʿ* in the Hebrew show that the word means a 'solid' firmament. We will consider this second argument first and then look at ANE mythology in a later paper.

These two arguments are configured[3] to establish the point that the solid firmament is that of a 'vault' or 'dome'. This geometric claim is based on the historical evidence which is used to supplement the linguistic argument that the firmament is solid.

J. J. Pilch's interpretation of the firmament and the waters above the firmament is stated as follows:

> The first creation story in Genesis reports how God created the world on the foundation of a watery abyss. God made a dome (or "firmament") to separate these waters into a mass above the dome (Ps. 148:4) and a mass beneath the dome (Gen. 1:6-7). God named this dome "the sky" (šāmayim, Gen 1:8). It is as firm and solid as the earth (Job 37:18), yet the psalmist says that God stretched out the heavens "like a tent" (Ps. 104:2; see also Isa. 40:22). This sky is supported by pillars (Job 26:11). A countless number of stars (Gen

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[1] So, for example, the standard critical Bible dictionary favours "dome-shaped covering over the earth"—see M. C. Reddish, "Heaven" in the *Anchor Bible Dictionary* (6 vols; ed. D. N. Freedman et al; New York: Doubleday, 1992), 3:90-91. A standard conservative dictionary offers "expanse of the sky" D. T. Tsumura, "לרָקִיעַ" in the *New International Dictionary of Old Testament Exegesis* (5 vols; ed. W. A. VanGemeren; Carlisle: Paternoster, 1996), 3:1198.

[2] P. H. Seely, "The Firmament and the Water Above, Part I: The meaning of *raqiaʿ* in Gen 1:6-8" *WTJ* 53 (1991): 227-240 (236). [Available online.]

[3] This is an important point. In Seely's treatment, the solidity thesis is better supported than the dome/vault thesis.

> 15:5) were affixed in the sky (Gen 1:14-18), but the sun and moon coursed across it. There were also windows in the sky (Isa 24:18) through which God could shower the earth with gifts or punishments: rain (Gen. 7:11; Luke 4:25; Acts 14:17), manna (Exod. 16:14; Ps. 78:24), even wind or spirit (Num. 11:31; Job 26:13; Ps. 135:7; Jer. 10:13; Matt. 3:16; Acts 2:2; 1 Pet. 1:12).[1]

This view is illustrated in Wyns article elsewhere in this issue (p. 14) and he cites some of the scholarship *pro* and *con* which should be consulted. A Bible reader might suspect that Pilch was being far too literal in his reading and this is correct.

The alternative view is that Biblical Cosmology is much like what we see around us today. There is the land stretching before us; we look up and there is the sky, an open expanse in which the birds fly, and in which we see the stars; we see the sun and the moon moving in front of each other, and we see the moon changing shape; on the seashore we see the sea stretching before us, and under the earth there is subterranean water which comes out of the ground; rain comes from the clouds above; and, as we turn our head 360 degrees, looking up and around us on a clear day we see that the sky meets the ground as a dome.

This view is not our current scientific cosmology, nor is it particularly scientific but that does not make it false, as truth and falsity here is all about **appearance**. We should not read modern concepts of the planet, the solar system and the universe into Genesis. Equally, we should not read ANE cosmology into Genesis when such cosmology goes beyond **the language of appearance**. The problem with the interpretation of Genesis 1 is that it has been read through the ideas that readers have had about cosmology down the centuries which has led to errors.

The Noun 'Firmament'

Is 'solidity' part of the meaning of the noun *rāqîa*ʿ? The database of texts is small—Genesis, Daniel, Ezekiel and Psalms.

Psalms

The first Psalms' text suggests that 'spatiality' could be an aspect of the meaning of *rāqîa*ʿ but not 'solidity'.

> Praise ye the Lord. Praise God <u>in</u> his sanctuary: praise him <u>in</u> the firmament of his power. Ps 150:1 (KJV)

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[1] J. J. Pilch, *A Cultural Handbook to the Bible* (Grand Rapids, MI: Eerdmans, 2012), 7.

> Praise the Lord! Praise God in his sanctuary; praise him in his mighty expanse. Ps 150:1 (NASB)
>
> Praise the Lord! Praise God in his sanctuary; praise him in his mighty firmament! Ps 150:1 (NRSV)

There is a parallelism in Ps 150:1 between 'sanctuary' and 'firmament' where praise is to take place. A sanctuary is a spatial structure and the preposition 'in' (Heb: *b*) is appropriate for talk about such a structure. This could be a reference to the typical 'heavens' of the sanctuary on earth or the heavens where the angels praise God. The firmament is characterized as 'of his power (*ʿōz*)' which associates God with the firmament and the expression of his 'power'. This could be recognition of God's governance of the earth from heaven. Interestingly, the NRSV does not choose 'dome' for *rāqîaʿ* here (unlike in Genesis and Ezekiel), presumably sensing its inappropriateness and preferring what is today the more obscure 'firmament'.

The associations for *rāqîaʿ* here are **not those for a surface but for a space**. Within the Genesis account, a spatial aspect is supported by the factual detail of there being 'birds *of* the heavens' (Gen 1:26; cf. Deut 4:17) and the naming of the firmament as 'the heavens'. In its own terms, Genesis is about the creation of these 'local heavens' that are the firmament rather than any wider concept that we may impose from our modern understanding or even from the rest of the Bible.

Seely does not discuss the linguistic contribution of Ps 150 to *rāqîaʿ* and affirms,

> …the word *samayim* (heaven[s]) is broader in meaning than *raqiaʿ*. It encompasses not only the *raqiaʿ* (v. 8; Ps 19:6; 148:4) but the space above the *raqiaʿ* (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 *raqiaʿ*.[1]

There are a number of problems with this analysis:

(1) Lexicons typically give several meanings for many words; which meaning we have in a text depends on the context of that text. The claim that *šāmayim* has a broader range of meanings doesn't of itself settle its particular meaning in Genesis 1.

[1] Seely, "The Firmament and the Water Above, Part I", 237.

(2) His Psalms' texts cited don't include the word *rāqîaʿ* and so they don't show any relation of 'encompassing'. There is no 'above' or 'below' preposition in those texts to establish the relations asserted between the spaces.

(3) There are many uses of *šāmayim* (398) and very few uses of *rāqîaʿ* (15; 3 outside Genesis and Ezekiel); to assert that birds never fly in the *rāqîaʿ* is not statistically significant. Once the *rāqîaʿ* has been named *šamayim* it is unexceptionable for *šāmayim* to then be the main term of use. The contrast that birds never fly in the *rāqîaʿ* is misleading.

(4) There being spaces above and below the *rāqîaʿ* does not exclude the *rāqîaʿ* **itself** being spatial. There is no 'hence' to be had from Seely's premises to his conclusion.

(5) Even if we agreed that *šāmayim* is broader in meaning and encompasses the *rāqîaʿ*, there is nothing in this argument that carries the implication that the *rāqîaʿ* is solid.

In the light of (1)-(5), we can instead observe that the **naming** of the firmament as 'the heavens' involves paronomasia: it is a typical aetiology explaining a Hebrew term. The waters (*mayim*) have a firmament between them and so it is called *šāmayim*.[1] In Gen 1:6-8 therefore the firmament and the heavens are co-extensive.

The second Psalms' text is less conclusive,

> The heavens are telling the glory of God; and the <u>firmament</u> proclaims his handiwork. Ps 19:1 (NRSV)

The parallelism in the clauses here reflects Genesis where the firmament is called 'the heavens'. The text ('the firmament proclaims the work of God's hands') could be an anthropomorphic metaphor in that it is just the wonder of what was made that 'proclaims' the work of God's hands. Psalms 8:3 provides the obvious interpretation:

> When I look at thy heavens, the work of thy fingers, <u>the moon and the stars</u> which thou hast established… Ps 8:3 (RSV)

Again, perhaps oddly, the NRSV does not choose 'dome' for *rāqîaʿ* for Ps 19:1. So, as in the case of Psalm 150, the parallelism suggests that the meaning of *rāqîaʿ* could

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[1] Another example nearby is the term for the woman *'ishshāh* who was brought out of the man *'îsh*.

have a spatial aspect but there isn't anything in this text to exclude the idea of surface.

Ezekiel
In Ezekiel, the appearance of a firmament is described in comparative terms ('likeness'),

> Over the heads of the living creatures there was the <u>likeness of a firmament</u>, like an eye of ice/frost, fearful, spread out (*nātah*) above their heads. Ezek 1:22 (RSV revised)

This is **not** the actual Genesis firmament; further, what we have described is not *as such* a firmament—it is something *like* a firmament (there are others?). The aspects of a firmament that are being picked up are (i) the appearance like an eye of ice/frost; and (ii) the stretched-out nature of what was seen above the heads of the living creatures.

The Hebrew is lexically 'as an eye of ice/frost'. Translations vary, for example, the NRSV has the rather dynamic "shining like crystal" and the KJV has "as the colour of the terrible crystal". The comparison 'as an eye of' uses the ordinary common noun for an 'eye'. However, in the construct state, as part of an expression, we have a figure of speech as is obvious elsewhere:

…like the color of gum resin Num 11:7 (NRSV)

…like in colour to polished brass Dan 11:6 (KJV)

These are the two occurrences of the comparison outside Ezekiel and translators render the figure dynamically in terms of colour. Other versions may not use the word 'colour' but an expression of appearance such as 'the gleam of' or 'the appearance of'. So, the comparison is **not about composition** ('ice/frost' or 'crystal') and therefore indicative of solidity; it is about colour and appearance. Colour is a phenomenal quality and hence Seely just gets it wrong when he avers,

As to the composition of this firmament, it looked like "terrible crystal or ice."[1]

Composition is not an aspect of meaning for the figure 'as an eye of…' but instead appearance and colour. The Hebrew is equally rendered as 'ice' or 'frost'—either is

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[1] Seely, "The Firmament and the Water Above, Part I", 239.

possible, but of the seven occurrences of this figure, 'crystal' is only preferred for Ezek 1:22 following the lead of the LXX and possibly also the NT (Rev 4:6). This is just interpretation on the part of the Septuagint translator and it misapplies the NT. Since the figure is about *appearance* and not composition, there is no reason to discard 'ice/frost' for 'crystal' just because we have a theophany. Of course, 'ice/frost' and some 'crystal' are not unlike in colour.

Within Ezekiel, elsewhere, the comparison is consistently used in respect of colour and appearance (phenomenal qualities). The KJV and NRSV choices for the figure are:

…like gleaming amber/ as the colour of amber Ezek 1:4

…like the colour of burnished brass/like burnished bronze Ezek 1:7

…like unto the colour of a beryl/ like the gleaming of beryl Ezek 1:16

…as the colour of amber/ like gleaming amber Ezek 1:27

…as the appearance of amber/ like the appearance of brightness, like gleaming amber Ezek 8:2

…as the colour of a beryl stone/ like gleaming beryl. Ezek 10:9

We can only guess at the colour indicated by 'eye of ice/frost'—perhaps a transparency or translucency, but the verb 'to stretch out' is a clear description.

Seely argues,

> 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.[1]

The relevant verse is,

> ...there was a voice above and in respect of the firmament that was over their heads, when they stood, and had let down their wings. And from above and

[1] Seely, "The Firmament and the Water Above, Part I", 239.

> in respect of the firmament that was over their heads was the likeness of a throne, as the appearance of a sapphire stone: and upon the likeness of the throne was the likeness as the appearance of a man above upon it. Ezek 1:25-26 (KJV revised); cf. Ezek 10:1

The use of the definite article here is anaphoric and the added detail is that there was a voice 'from above and in respect of' (quoting Gen 1:7) the firmament that was over the heads of the living creatures.

There is no verb for 'to sit' being used here and so Seely's "apparent sitting" is unwarranted and being deployed to bolster his 'solidity' thesis. The prepositions used can be 'upon' or equally 'above'; in addition, the extra preposition adds the idea of '(from) above) which would be one way to suggest distance between the throne and the firmament. So, we cannot infer that the throne is literally 'on' the firmament. Accordingly, there is nothing in the prepositions chosen to argue that the throne was "apparently sitting on this firmament".

We can decide our choice of preposition on the basis of what was being seen and this was a whirlwind, a cloud and a fire (Ezek 1:4); this phenomenon does not suggest solidity; rather, it suggests that 'above' is the correct reading of the preposition—the throne is not 'on' the firmament. Again, we don't have the actual firmament of Genesis 1 described and the detail given doesn't include a word from which we can argue that 'solidity' is an aspect of the meaning of *rāqîaʿ*. A reasonable guess here is that what was being seen in the whirlwind was colour *extended* above the heads of the living creatures and below the throne. Seely is simply wrong to say that we don't have phenomenal language. What we have in Ezekiel is a theophany in a whirlwind with an element that corresponds to Genesis.

There isn't an identity between the two firmaments but a **relation of representation**:[1] the firmament seen in Ezekiel's vision is represented by the Genesis firmament. This is an important point because in visions of the divine throne there is the element of that which is stretched out before the 'throne':

- In Rev 4:6, 15:2 this is the sea of glass like crystal mingled with fire.
- In Exod 24:10 it is a pavement of sapphire like heaven for clearness.

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[1] Hence, Seely is not quite right to affirm, "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)"— Seely, "The Firmament and the Water Above, Part I", 239.

There are interesting differences to note here: a sea of glass is not a pavement but both are on the horizontal plane before the 'throne'. This is obviously a **different geometry** to that proposed by Seely for the firmament (dome/vault (?)) and a better fit for our proposal (expanse). The use of the verb 'to stretch' also supports 'expanse'.

The sea of glass is not a 'sea'; it is 'glass' and, moreover, mingled with fire which is odd. We know this because the waters are above the firmament; they are not the firmament. The glass is like crystal and this connects to the 'ice/frost' of Ezekiel. That is, the comparative relation is carried over: the firmament of Ezekiel is 'like an eye of ice/frost'; the glass of Revelation is 'like crystal'—this is about colour and appearance. The mingling of the fire adds to the mental picture.

The comparative element is also in Exodus, but now it is '*like* heaven for clearness'. This is an obvious correlation with 'the firmament' in Genesis which is called 'heaven'. The pavement is clear like heaven—which rather identifies transparency/translucency as a quality of the firmament.

Ezekiel, Revelation and Exodus give us three different visions of the divine throne, but they are not descriptions of the actual firmament of Genesis. The Revelation and Exodus visions stress the appearance and the colour of what is being seen, but the 'solidity' of a pavement or glass is not found in the description of the firmament of the whirlwind, cloud and fire of Ezekiel's vision.

The lack of a solid material word like 'pavement' and 'glass' in Ezekiel is telling; we cannot infer for its vision the presence of a solid firmament. The absence of the word *rāqîaʿ* in Exodus is to be noted, but clearly a pavement is solid, as is the glass in the vision of Revelation. The close association of Ezekiel, Revelation and Exodus, and their evident relevance to the understanding of Genesis, shows that what we have in the first two days of creation is a **natural display** of the 'throne-room' presence of God, but the leading evidence here is Ezekiel and its firmament of the whirlwind, cloud and fire.

Daniel

Daniel's reference to the firmament of Genesis has nothing for the ideas of 'solidity' or 'spatiality', but rather, any information about the semantics of *rāqîaʿ* is dependent on Genesis:

> And they that be wise shall shine as the brightness of the firmament; and they that turn many to righteousness as the stars for ever and ever. Dan 12:3 (KJV); cf. Ezek 8:2

The definite article here, with the mention of the stars, tells us that the firmament has brightness, which we can reasonably take to be from the stars. The verb 'to shine' with 'the stars' is a simile of the warning that the wise among the resurrected represent; its homonym (*tsāhar*) is mostly used for warning (e.g. 2 Kgs 6:10). The association of the stars with the firmament picks up on the Genesis detail of lights being 'in' (*bᵉ*) the firmament of heaven. The preposition is consistent with the firmament being conceived as an expanse as well as rather than a solid dome upon which the stars might be said to be placed.

Placing Daniel alongside Ezekiel, we have a term that can be used in similes for a local phenomenon (a whirlwind) and for the location of the stars.

Summary
While we have the most references to the firmament in Genesis, the evidence so far suggests that the firmament is **spatial**; it has **colour and light**; it is **stretched**; and it has **birds**. There is nothing so far to suggest a solid dome or a surface, but we still have to look at Genesis.

Related Verbs and Metal-Working

The related verb to *rāqîaʿ* is *rāqaʿ*. It means 'to beat out, spread out'. It is used in metalworking, e.g. "And they did beat the gold into thin plates" (Exod 39:3). Or again, bronze censors were hammered out as a covering for the oblong altar (Num 17:4; cf. Jer 10:9). Clearly, 'shaping' into a dome or any other shape is not part of the meaning of the verb. But also, neither is the verb tied to metal-working:

> Can you, with him, spread out the skies (*shachaq*), strong as a molten mirror?
> Job 37:18 (NASB)

Here, the skies are spread out (*rāqaʿ*), but no vault or dome-like shape is indicated in the use of the verb. Likewise, the earth is 'spread out' (*rāqaʿ*, Ps 136:6; Isa 42:5; 44:24), but shaping is not part of the sense and neither is 'to make solid/solidify' or 'to work with metal'. The verb therefore does not offer us semantic ingredients to allow us to say 'solid dome' is the meaning of *rāqîaʿ*; rather, the Isaiah texts *parallel* the verb with 'stretch out the heavens' which reinforces the meaning of 'spread out' for the verb. If something is spread out, stretched out or beaten out, what do we say that we have in front of us? It depends on what it is, but if it was the sky or the earth (rather than a bronze plate), the natural suggestion for *rāqîaʿ* would be 'expanse'.

The bronze or the gold, and the earth or the skies are not being made in the *rāqaʿ* texts; they are there to be beaten out or spread out. This suggests that *rāqîaʿ* would

be used to describe a **characteristic** of (to use our examples) gold, bronze, the earth and the skies. This is turn shows that a question like 'What is the firmament?' is misconceived.

The Job text is interesting in that the 'skies' (*shachaq*, 7x) or, more likely, 'clouds' (*shachaq*, 11x) are spread out but compared to a molten mirror. They are not said to be made of metal or to be a mirror, but to be *like* a molten mirror. The Hebrew for 'mirror' is unique and is translated in the LXX by a word for 'appearance/vision/spectacle'.

The chapter in Job is about an approaching weather phenomenon. The most likely aspect being referred to is stretched-out cloud in the distance reflecting light (Job 37:15). This is an important point because the idea of the firmament as a 'dome' is mythopoeic, but Job is describing appearances. We can think of this contrast in terms of perspective: in Genesis is the narrator looking to the distance towards the horizon and referring to an expanse, or is he looking straight-up and describing a vault? The narrator's point of view in Gen 1:2 is that of someone seeing the Spirit of God hovering **in the distance** over the face of the waters but here the 'face of the waters' is not necessarily the 'face of the deep' and could imply the waters nearer to land. The verb used to describe the action of the Spirit of God is 'hover' and the form of the verb is used once elsewhere to describe the hovering of an eagle (Deut 32:11) over her young. The verb implies a land-based point of view for the narrator seeing the Spirit metaphorically hovering in the distance over water (waiting and looking). The metaphor carried by the verb is of instinctual protection and care.

Related Nouns, Adjectives, and Thinness

One related adjective is *riqua*ʿ for something 'hammered' as in 'hammered plate' (Num 16:38, NASB, NRSV). The use is unique but this one example does not suggest we have something dome-shaped for *rāqîa*ʿ. Another related adjective is *raq* meaning 'thin/lean' (Gen 41:20, 27) which illustrates a consistency with *riqua*ʿ—of something hammered out (like a thin metal plate).

The related noun *rāqîq* is translated 'wafer' or 'thin cake' (e.g. Exod 29:2) which shows that we have here a family of words. This evidence lends support to seeing 'thinness' as an aspect of the meaning of *rāqîa*ʿ—'Let there be a thin expanse in the midst of the waters'.

Prepositions and the Birds

Although we can treat 'in' (*bᵉ*) neutrally with regard to the lights[1] 'in' the firmament, the preposition 'in' often carries a spatial connotation; however, this is not conclusive for determining whether *rāqîaʿ* has a spatial aspect.

Another prepositional phrase '*al pᵉnē* is used with 'firmament' in respect of the birds,

> And God said, "Let the waters bring forth abundantly the moving creature that hath life, and fowl that may fly above the earth in the open ('*al pᵉnê*) firmament of heaven." Gen 1:20 (KJV)
>
> Then God said, "Let the waters teem with swarms of living creatures, and let birds fly above the earth in the open ('*al pᵉnê*) expanse of the heavens." Gen 1:20 (NASB)
>
> And God said, "Let the waters bring forth swarms of living creatures, and let birds fly above the earth across ('*al pᵉnê*) the dome of the sky." Gen 1:20 (NRSV)

The different Hebrew preposition here is to be noted: the lights are 'in' the firmament but the action verb 'fly' has dictated the use of a different preposition for birds. The KJV and NASB also add an idiomatic element by adding 'open' to their rendering of the prepositional phrase. It makes little difference that the translations opt for 'in' and 'across' because each translation committee is following their respective idea about what they take to be 'the firmament'. Who is right?

There are 129 occurrences of the prepositional phrase '*al pᵉnē* in the Hebrew Bible. The two main renderings for the phrase are 'upon the face of' and 'in front of/before' or close variations: the first of these is typically used in contexts where the associated noun denotes something *down* relative to the narrator's point of view—i.e. 'upon the face of the waters' (e.g. Isa 19:8; Hos 10:7) or 'upon the face of the ground/earth' (many examples); and the second is typically used for relations along the *horizontal* relative to the narrator. So, for example, Jerusalem is 'before' the Mount of Olives (Zech 14:4); dust is cast 'before' the wind (Ps 18:43); the ark is before the Holy of Holies (2 Chron 5:9); and Jachin and Boaz are before the temple (2 Chron 3:17). Thus, one main use of the preposition is about 'being upon' something and the other principal use is about a relative position in spatial terms.

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[1] In the account, it is the sun and the moon that is 'set' in the firmament (Gen 1:14, 17-18) not the stars—the stars are mentioned in parenthesis.

Rarer usage of the preposition includes priority in rank (Deut 21:16) and correspondence in measurement (2 Chron 3:8). Equally, the kind of use we have in Gen 1:20 is exceptional because it is used with that which is 'up' rather than that which is either 'down' or in a relative position along the 'horizontal'. The sense of 'being upon' conveyed typically with 'upon the face of the ground' or 'upon the waters' is not the same as that which would be conveyed by being 'upon the face of' a dome, vault or ceiling. When we have rare (or unique) examples of Hebrew syntax, it is difficult to know precisely what is meant.

One way to proceed is to look at close parallels. So, there is a concept of being *under*[1] (*b*ᵉ) a roof as well as *on* a roof (Gen 19:8; Josh 2:8; Jud 16:27; 2 Sam 11:2)—but no use of *upon the face of* a roof. This analogous example of which prepositions are chosen does not lend support to the proposal that the firmament is a solid dome.

Or again, there is a regular concept of being 'under' (*tachath*) heaven (Deut 2:25; etc.) as well as a concept of heaven being 'over' (*'al*) someone's head (Deut 28:23); the birds fly 'in' (*b*ᵉ) heaven (Deut 4:17; Prov 30:19; Jer 8:7); winds blow 'in' heaven (Ps 78:26); there are things 'in' heaven (Exod 20:4); thunder sounds 'in' heaven, as well as hail and lightening (1 Sam 2:10; Ps 18:14; Jer 10:13); and God is 'in' heaven (e.g. Ps 115:3). The point here is that spatiality is indicated for the heavens and the firmament is called 'the heavens' (Gen 1:8). There doesn't seem to be scope for the idea of a *solid* firmament in this line of evidence. However, Seely makes the contrast,

Rather, birds fly upon the face or in front of the *raqia*ʿ (Gen 1:20).[2]

Seely hedges his bets for the preposition with "upon the face or in front of", but he does not do the analysis necessary to ascertain how to distinguish the two senses. The two senses are not equivalent and come in different contexts of use for the preposition (as we have seen).

As a choice for Gen 1:20, the prepositional function of 'being upon' seems implausible compared to the main alternative of 'before/in front of' the firmament. However, the NASB and KJV include 'open' for the preposition to give respectively 'in the open expanse' and 'in the open firmament'. Seely does not discuss this third

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[1] The question here is that if the firmament is a dome, why is the preposition not 'under' in Genesis? It is assumed that the face of the dome is the underside, but why is it not the topside that is the face above which there is a throne as in Ezekiel?

[2] Seely, "The Firmament and the Water Above, Part I", 237.

option. This further choice for the preposition is reflected elsewhere in the phrases 'in the open field(s)' (Lev 14:7; 17:5; Num 19:16; 2 Sam 11:11; Jer 9:22; Ezek 29:5; 32:4; 33:27; 39:5) and 'in the open valley' (Ezek 37:2 (KJV)). What the translators are sensing is idiomatic use of the prepositional phrase and seeking to convey that in the English.[1]

This is a **third kind of use** of the prepositional phrase and it is neither like the 'upon' or 'before' senses. We can appreciate the distinct nature of this use by comparing it with typical examples of the *positional use*:

Positional Use	Expansive Use
died before Gen 11:28	let the living bird loose into the open field Lev 14:7
before Mamre Gen 23:19	sacrifices…which they offer in the open field Lev 17:5
that *is* before Egypt Gen 25:18	whoever in the open field touches the slain Num 19:16
served as priests before their father Aaron Num 3:4	encamped in the open field 2 Sam 11:11
before the son of the hated Deut 21:16	the carcases of men shall fall as dung upon the open field Jer 9:22
passed on before the king 2 Sam 15:18	him that is in the open field will I give to the beasts to be devoured Ezek 33:27

These uses show (mainly static) position before in time; position before in a geographical space (cities, hills, etc.); or position before an individual. However, since a field is an open space or an expanse, the third kind of use of the prepositional phrase is typically rendered as 'in', except where the verb is directional we have the more appropriate 'into' and 'upon' prepositions.

With Gen 1:20 using a dynamic verb of movement ('birds fly') the positional sense of the prepositional phrase is ruled out by the pattern illustrated in the table for typical positional uses; an expansive kind of use is intended. This is why not only the

[1] Equally, when translators sense a better match in English they will not be overly literal with a translation. So, for example, where we have cities on the top of a hill, they are said to 'look down upon the face of (*'al p*ᵉ*nê*)' another city, but translators render the Hebrew as 'looking towards' or a close variation (Num 21:20; 23:28).

NASB and KJV use 'in' but other versions like the NET ('across the expanse of the sky') and the ESV ('across the expanse of the heavens') follow this understanding.

However, Seely further affirms,

> This phrase *upon the face* (surface) or *in front of* the *raqiaʿ* is important in that it implies the *raqiaʿ* 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.[1]

This further affirmation continues the mistake of thinking only in terms of 'upon the face' or 'in front of', and it compounds that mistake with an illicit inference that *rāqîaʿ* is 'neither space nor atmosphere'. These notions are not in play with the translations 'in the open firmament/expanse', whether Seely means 'outer space' or just 'space' (it is not clear)—similarly 'air' is not part of the meaning of *rāqîaʿ*.

Readers, Hearers, and the Stars

What knowledge did the first hearers and/or readers of the Genesis account bring to the table? Seely argues,

> Gen 1:17 also testifies that the *raqiaʿ* is not air or atmosphere for it says that God placed the stars (and probably the sun and moon) "in the *raqiaʿ* or the heavens." But the stars are not located in the air or atmosphere. So we know the *raqiaʿ* (in which 1:17 locates them) cannot be air or atmosphere.[2]

This is an argument based upon what *we* know rather than what the first hearers or readers might have known. Further, it is straw man for someone arguing that 'expanse' is the meaning of *rāqîaʿ* rather than "air or atmosphere". Finally, it equates 'physical location' with the sense of 'set…in' for Gen 1:17 without any argument.

The Genesis account has no relative positional information regarding the lights and the waters. Commentators have asked how the waters can be above the stars in the firmament, but asking this question fails to take into account the limitation of the narrator's **point of view**. The question assumes that the narrator is looking straight up and describing a vault, but in fact he is looking to the horizon and describing an expanse. We know this because the narrative description in v. 2 is all about *contact* with the surface of the deep/waters.

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[1] Seely, "The Firmament and the Water Above, Part I", 237.
[2] Seely, "The Firmament and the Water Above, Part I", 237.

Once it is realized that the narrator is on the ground looking towards the horizon (the perspective of v. 2), it can be understood that the account is not fixing relative positions (falsely) of the waters and the stars in a solid firmament. Rather, at first, an expanse is brought about as the waters rise; subsequently, lights appear in that expanse. Their appearance is **not** related to the waters above the expanse but to the withdrawal of the Shekinah Light of Day One. The waters are not in the picture of Day Four; just the firmament. We cannot assume that the waters are there in a permanent way as a feature of the atmosphere. It is not difficult to picture the sun, moon and stars appearing low above the horizon. The account therefore has historical resonance.

In phenomenal terms, the sun and the moon are seen today 'in' the sky (irony). We have no reason to suppose that human visual experience has been different in the past when local atmospheric conditions prevent humans on the ground seeing the sun and the moon in the sky. The question therefore is whether 'seeing' or 'needing to see' the sun and the moon (or the stars) is a presupposition of the Genesis text. In fact, seeing and measuring the sun and the moon is presupposed by the text because one purpose of the lights is for signs seasons, days and years. However, the *location* of the lights is not important for this purpose—planetary satellites or a solar system and their location are therefore not the focus for the text. Such a focus foists modern concerns on the text.

We need to be careful not to smuggle in modern ideas about the planet, the atmosphere or outer space into a linguistic discussion of an ancient term of reference like *rāqîa*' and also when considering the import of a preposition like 'in' (*bᵉ*).

What the original readers/hearers knew or believed is one thing; the meaning of a word in Hebrew is another. For example, if we place to one side our knowledge of the planet, the solar system and outer space, we might affirm some simple observational things about the original readers/hearers such as that they would have had notions of distance and depth in respect of the heavens. They would have seen birds and clouds pass in front of the sun, moon and stars; they would have seen the moon pass in front of the sun; we might also say that they had a notion of the air that they breathed; *and so on*.

Seely goes on to compound his misdirection,

> 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*ʿ.[1]

Seely continues to think in terms of 'location' and about the stars, rather than the 'lights' and what it means for them to be given 'in the firmament' (Gen 1:17). He also offers a guess as to why scientifically naïve people believe the stars were embedded in a solid vault (cf. Eliphaz—Job 22:14). However, the scenario of the text is not about the stars and it is not about location, so this argumentation is a red herring.

The scenario for the text is set in v. 2 and it is about darkness and the Spirit of God over the face of the deep-waters. This scenario is nothing like seeing the stars on a clear night. When the text then describes the making of an expanse between the dark-waters of the theophanic cloud and the deep-waters, again, this is nothing like looking up and imagining a vault. When the text then describes giving lights to rule in this firmament, the narrator hasn't moved his position; he is still looking towards the horizon from the land. The expanse he sees there is the space where God commands that the lights 'be' to rule over the day and the night. The metaphor of rule signifies their being in the firmament rather than the Shekinah Light.

Making the Firmament

The second separation of the Genesis account of creation is that relating to the waters, so that there are waters above and below a firmament.

> And God said, Let there be a firmament (*rāqîa*ʿ) in the midst of the waters, and let it divide the waters from the waters. Gen 1:6 (KJV)

> Then God said, "Let there be an expanse (*rāqîa*ʿ) in the midst of the waters, and let it separate the waters from the waters." Gen 1:6 (NASB)

> And God said, "Let there be a dome (*rāqîa*ʿ) in the midst of the waters, and let it separate the waters from the waters." Gen 1:6 (NRSV)

Set against the scene setting of v. 2, the firmament is **seen in relation to the waters rather than a land** that was without form and void. This is an important limitation because it prevents us thinking of the atmosphere of the planet as a whole and think instead of a more local phenomenon. A detail given (and stressed twice) concerns 'a surface'. In terms of the narrator's perspective, this detail fixes the **line of sight** as

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[1] Seely, "The Firmament and the Water Above, Part I", 237.

one that is towards the horizon rather than upwards into the middle distance of the sky or more vertically towards the heavens. This militates against there being a dome-cosmology implied in the use of the word *rāqîaʿ*.

> And God made the firmament, and divided the waters which were under the firmament from the waters which were above the firmament: and it was so. Gen 1:7 (KJV)
>
> And God made the expanse, and separated the waters which were below the expanse from the waters which were above the expanse; and it was so. Gen 1:7 (NASB)
>
> So God made the dome and separated the waters that were under the dome from the waters that were above the dome. And it was so. Gen 1:7 (NRSV)

The verb here is *ʿāśāh* and this is very common and has a broad range of meanings, with "to do, to make" (BDB, 793) being the most common and the most likely sense for this statement. What God did was to separate the waters and bring about a firmament between the two waters. The conjunction here is epexegetical, i.e. the dividing of the waters specifies what the making of the firmament consisted in—so, the use of the verb 'to make' doesn't imply anything about whether the firmament was solid. Of course, if the firmament was a solid divider, it would not be *between* the two bodies of water; rather, it would just be *under* the heavenly waters—it would have no function in respect of the earthly waters.

Further, if the firmament was 'solid' then the natural verb to use would have been *rāqaʿ* ('to hammer out, spread out, stretch out')—the related verb to *rāqîaʿ*; instead we have the general 'doing' verb *ʿāśāh*. Moreover, if reference to a 'divider' was intended, a different noun related to the verb 'to divide' would have been chosen instead of *rāqîaʿ*. The sense of *rāqîaʿ* is not that of a 'divider' because what is beaten out (*rāqaʿ*) is not just plating material (Exod 39:3), but enemies (2 Sam 22:43); the earth (Isa 42:5); and even just a gesture (Ezek 6:11). The minimum that the verb suggests for the noun is the basic idea of 'that which is beaten or stretched /spread out', for which we have the abstract noun in English—'expanse'. If we want to ask what is between the waters below and above, we might say that it is the air or the atmosphere, or it is empty space, *and so on*. When we do this, we are bringing our perceptions to the table rather than showing that such observation is part of the meaning of *rāqîaʿ*.

In short, the related verb cannot contribute any more detail about the nature of 'that which is beaten or stretched/spread out'. In the absence of other detail in the text, it

is the interpreter's imposition to add details like, 'dome', 'solid', 'divider', 'air', 'atmosphere', 'outer space', 'space', *and so on*.

Seely's contrary argument is stated in this way,

> 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*ʿ was made (*'āšāh*). The combination or dividing two tangibles (as opposed to intangibles) with something that was made (*'āšāh*), a verb which often means "manufacture," implies a tangible, i.e., solid divider. It would be unnatural to use *'āšāh* to say that God made space. Nor is it a particularly apt word for saying God made air.[1]

There are a number of points to make about this contrary argument. First, we don't know that the darkness in Gen 1:2 was an intangible; secondly, we need to consider whether the waters above the firmament are an 'ocean' in biblical terms; and thirdly, we need to ask whether *'āšāh* is an inappropriate verb for making an expanse.

Seely's opponent is someone arguing that God made a planetary atmosphere, air itself, or the 'space' between earthly and heavenly ocean-waters. However, if the scene in v. 2, of darkness upon the face of the deep and the Spirit of God upon the face of the waters, is one of dark-waters enveloping God's presence at creation, hovering upon the face of the deep-waters, then the making of the firmament is just the making of an *expanse* separating such dark-waters from the deep-waters; any physics is irrelevant From the perspective of a narrator looking towards the horizon, the choice of Hebrew verb is therefore quite natural, as it is the general Hebrew verb for 'to do/make' (cf. Isa 63:12).

This raises the question as to why we have an 'expanse' rather than another concept such as 'space' (Josh 3:4, *rāchōq*; Gen 32:16, *revach*); or why do we not have 'air' or 'wind' (Exod 14:21, *rūach*) as that which divided the waters? Perhaps the word for a 'place' (Ezek 43:7, *māqōm*) would have been better?[2] The problem with the question is that it could be asked for any of these alternatives if they had been chosen. The question is really about determining why the theology of the concept of an 'expanse'

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[1] Seely, "The Firmament and the Water Above, Part I", 237. [Seely uses Hebrew script for *'āšāh* which I have changed to the transliteration.]

[2] These are questions posed by Seely, "The Firmament and the Water Above, Part I", 237.

is different from that of a 'place' or a 'space' or the 'air' or 'wind'. Here, the obvious proposal is that the 'expanse' **separates** God.

The Heavens

The firmament is called 'the heavens' and commentators usually assume that 'the heavens' *embrace* the firmament, i.e. they say that the two are not co-extensive. They make this judgment in order to make sense of the biblical data: the birds fly *in* heaven; God dwells *in* heaven; and the sun, moon and stars are *in* heaven. This is one way to harmonise the biblical data, but in its own terms Genesis 1 is a self-consistent account; there is no distinction between the firmament and 'the heavens'—there is identity.

It is significant that the verb 'to stretch' is used of the created heavens:

> Thus saith God the Lord, he that created the heavens, and stretched them out; he that spread forth the earth, and that which cometh out of it; he that giveth breath unto the people upon it, and spirit to them that walk therein… Isa 42:5 (KJV); see also Isa 44:24

The simile is that of a curtain belonging to a tent:

> It is he that sitteth upon the circle of the earth, and the inhabitants thereof are as grasshoppers; that stretcheth out the heavens as a drape, and spreadeth them out as a tent to dwell in… Isa 40:22 (KJV revised)

The Tabernacle (alluded to here) was an angular tent (not a dome-like structure), and it required drapes to be stretched out supported by poles, and inside there was a curtain separating the two holy places. This is the simile that Isaiah uses to describe heaven as the dwelling place of God. The motif of 'stretching' the heavens is common in Isaiah and elsewhere (Isa 40:22; 42:5; 44:24; 45:12; 48:13; 51:13).[1] The point here is that this simile of the drapes of an angular tent fits with the notion of the firmament as an expanse (or even an expansive thinness) that **separates** where God dwells.

Modern readers will try to make sense of this language in relation to their understanding of the planet, the solar system and outer space, but this is an exercise in interpretation rather than anything to do with the meaning of *rāqîaʿ*.

[1] For a discussion, see N. C. Habel, "He who stretches out the Heavens" *CBQ* 34 (1972): 417-430.

Understanding *rāqîaʿ* is just a matter of correctly analysing its occurrences in actual usage, taking into account related words in Hebrew and other Semitic languages. How we understand heaven vis-à-vis our modern knowledge is irrelevant to the linguistics. The simile of a drape contributes nothing to the meaning of *rāqîaʿ* except that it is consistent with the firmament understood as expansive and thin.

Conclusion

We have set out the linguistics of *rāqîaʿ* and argued that it means 'expanse'. The expanse is whatever God did with the sky to separate the waters. 'Expanse' is a common choice for translators and commentators. The alternative of 'dome/vault' and the insistence that the *rāqîaʿ* is solid is based on a faulty analysis of the Hebrew linguistics.

The liberal-critical interpretation of scholars such as Seely rests on two assumptions:[1] i) that God cannot *teach* everybody particular details about his work of creation, but only the general truth that he is a creator; and ii) that God cannot teach everybody *new things* about creation, things that oppose ANE ideas, but only use the cosmological ideas of the peoples. However, God chose the Hebrews out of all the nations of the earth and it is consistent with this rather singular choice that there be a rather singular revelation. The liberal-critical reading is a denial of the revelation that we have in Genesis.

The conservative interpretation is better (although not perfect). It recognises that God can communicate using the language of the day; it is just that there is no evidence that this is what he has done in the foundational account of Genesis 1. It recognises that we can mis-interpret Genesis to make it conform to our scientific understanding; but equally, it sees that we can mis-interpret Genesis by making it conform to the 'scientific' (mythical) understanding of its day (a mistake of the liberal-critical scholars). And so instead, it provides an interpretation based on the premise that God can teach men using their language for **describing what they can see**—darkness, light, land, water, sea, lights, cattle, birds, *and so on*. There is nothing mythical in this language and so God is not using the ANE cosmological ideas of the day.

The book 'A Cultural Handbook to the Bible' (reviewed elsewhere) is a book aimed at a general readership, written in an accessible style with lots of useful information. There are many sections presenting different information and readers should get a general picture of the book from the previous reviewer. The main problem with the

[1] N. K. Weeks, "Cosmology in Historical Context", *WTJ* 68 (2006): 283-293 (284).

book is its presentation of Biblical Cosmology. Pilch presents a common view in scholarship but it is not the only view as we have seen in this first part of our article.

Modern readers of English versions are used to differing translations of terms like *rāqîa'* (KJV, 'firmament') and this is an illustration of differences of opinion among translators and therefore scholarship. Readers also bring their own background of ideas to Scripture and this influences their interpretation. We have ideas about the sky, the solar system and the universe and we can (mistakenly) just read these ideas into the Bible without allowing the Bible to guide our thinking. Equally, we can interpret a Bible text through the lens of socio-cultural information from the ANE and fail to appreciate that the Bible text is not carrying *that* information. These are the pitfalls in this area and readers should be aware that Pilch is presenting a common view but not the only view.

How do you approach an interpretation that is new to you or one to which your first reaction is negative? One of things you would do is jot down all the texts (biblical and non-biblical) that the author uses and comments upon and perform your own analysis. Christadelphians have a tradition of doing textual analysis of biblical texts and providing alternative analyses to church scholarship. We have done this in this essay.

The point here though is that the same kind of analysis is needed for the Ancient Near Eastern (ANE) texts and *all* the relevant texts have to be done. Pilch and Seely require this response because they interpret Biblical Cosmology to be similar and comparable to ANE cosmology. In **Part Two of this essay** (in the next issue) will analyse the ANE texts.