A short history of air

Posted on 16/01/2016 by Jon Garvey

Another *BioLogos* thread on the relationship of Genesis 1 to "modern science" got me thinking more about the *phenomenology* of that, and other ANE accounts like *Enuma Elish*. By this I mean to bypass, for now, the (more important) questions of "meaning" and "genre", simply to try and get a better picture of what kind of world the ancients *saw* when they looked out of the window. It becomes quite interesting.

So, I'm convinced that the Genesis account is primarily functional (as per Walton), and essentially an account of the cosmos as cosmic temple (as per Beale, *et al*), all, of course, underpinned by the unique theology of Israel's Yahwism. And yet all those are embedded in a *description* of the formation of the world, and it's amazing how many modern assumptions we bring to bear on our understanding of that, so that we probably "see" something completely different from what an original reader would have done in the text – thus ending up making wrong assumptions about their beliefs.

I'll spend a post – maybe even two – glancing at some of these to set us thinking outside the western box. Let me start by listing some of the things we take for granted now, which we know to have been unknown then, and majoring on one.

For a start, remember there was no concept then of boundless *infinity* – that came from Greek philosophers a millennium or two later. So the idea of an infinite primoridal ocean surrounding the world (as seen in pictures of worlds supported on turtles, etc) was simply not thinkable then. Likewise, the even more sophisticated concept of God as being *outside* such an infinity in some different dimension wouldn't exist in any clear way. A bit later Solomon, indeed, recognised that "the heaven, even the highest heaven" could not contain God, which is a pretty sophisticated idea, but still not the same as "God outside space and time".

But in Genesis 1, God's "viewpoint" is expressed not as "God outside all that is", but in another typical (and in its own way sophisticated) Hebrew idiom – that of God localised as his "spirit" in order to act. But "spirit", in the sense of some immaterial essence, wasn't really an available concept either – the word is *ruach*, which means "breath", or "wind" – to which we'll return later. That means the common idea that God was there in Gen 1.2, AND his Spirit was hovering about too, helping out in some way, is wrong – God, there, is *represented* by his wind/breath, localised *above* the waters.

With the lack of infinity comes a lack of any knowledge of earth's *boundaries*, up, down or sideways. If your world is limited to a hundred miles or so in each direction, with the ground, as far as the evidence goes, going down as far as you can dig, you are quite likely not to speculate on the world's boundaries, whether as a sphere, or a disk, or whatever.

I remember that on my primary school wall was an old Edwardian world map, in which large chunks of the Antarctic coast (and all its interior) were just *left out*, rather than guessed. Similarly, the <u>first world map</u> has "the earth" as Babylon's environs – what was beyond the surrounding bitter river and islands was *terra incognita*, and just ignored. This means that an account like Genesis would be likely to be thinking principally of the "layers" from top to bottom, without much conception at all of how far things went laterally. Further, it might not

be that tempted even to ask "What's below the bottom layer, earth?" or "What's above the top layer, heaven?" That of course has a bearing on what *they* would understand by the Flood: it *can't* be "global" with no globe, or "worldwide" when the world has no known boundaries.

Another missing concept was *gravity*, because even up to Newton's time, the assumption was that material things have "weight", and go down, or maybe "lightness" and float up. Because of that, the "primeval waters" *couldn't* be thought of as "everywhere", because water has to rest on something (the earth, *eretz* in the case of Genesis, revealed and named but not materialised on Day 3). And water also has to have a flat surface because – well, because water always *does* if you've no concept of submarines or globules floating in zero-gravity – which is why there is darkness on the *surface* of the deep and God's breath hovering or brooding *over* it.

One more thing before I proceed to the main subject. It seems likely that the logical development from Yahwistic monotheism, creation *ex nihilo*, had not been conceived at this point. It isn't necessary theologically if the main point of the story is God's *ordering* of the cosmos to his purposes, but it does explain why things appear to exist before they're created. For example, although Gen 1.1 is probably a summary of the whole account ("This is how God created heaven, earth and everything in between"), still the formless and void earth (*eretz*) is there at the start in v2, and is named only once the water is taken off it and it becomes dry (and useful). Similarly, and bringing me to my main subject, we aren't told what is *above* the surface of the deep at the start (apart from darkness and God's wind/breath), though *something* is even as creation gets underway.

My last "non-existent" concept, then, is maybe surprising – "air". It was only the Sicilian Greek Empedocles who concluded c 450BC that air was something material, when a bucket inverted in water did not become filled with water, a pocket of air remaining trapped inside. It may have been seen before – but somebody needed to *clock* the significance. Before him, "air" meant something different and, significantly, immaterial.

Plato (after Empedocles) was trying to sort out what this stuff might be, and wrote:

So it is with air (aer): there is the brightest variety which we call aether, the muddiest which we call mist and darkness, and other kinds for which we have no name...

So in the pre-philosphical age, it seems, when the Greek language was formed, "aer" was the visible and palpable stuff like "fog", "aether" was the light and bright blueness "up there" in which the gods lived, maybe. What Empedocles had trapped in his bucket didn't even have a name – in effect, it didn't exist. Which means it didn't really need to be accounted for in creation.

So too, presumably, for the ANE: what lay above the primordial ocean was just a lack of anything, just as when the firmament was made, whether conceived as solid or, as I believe, something less substantial, the gap between the clouds and the ocean and the earth needed no explanation or name. It was just a gap (not a vacuum, of course – that's a much later Greek concept). When David's son Absolom gets his hair caught in a tree, he is left hanging, in the Hebrew, "between heaven and earth". There was actually no Hebrew word for air – the phrase "birds of the air" (used 22 times in the English OT) is "birds of heaven (*shemayim*).

How they, or the clouds, stayed up must have been a great mystery – but they weren't thought of as "floating on air".

That means getting one's head around the idea that breath, or wind, or spirit, is not "moved air" in early Hebrew thought, but something quite distinct (and, perhaps, essentially related to life).

Now in Sumerian theology, Enlil is indeed said to be "god of air". But again we need to get our modern heads round that not being the deity associated with oxygen, or even phlogiston. His name apparently derives from "lord of the storm", and his domain is breath and wind (things found *in* the air), and most significantly, height and breadth. That suggests that the ancient, pre-Empedocles idea of "air" was about *position* more than *substance* – the *place* above the earth, not the *stuff* above the earth.

Even now something of that sense remains – a TV aerial is named for its position, not its dependence on air. Likewise an "aerial display" refers to where you see it, not the medium in which it's conducted. Implicit in this, at least in ancient times, is that air is, essentially, immaterial:

Incorporeal or uncarnate means without a physical body, presence or form. It is often used in reference to souls, spirits, and God in many religions including Judaism, Christianity, and Islam. In ancient philosophy, any attenuated "thin" matter such as air, ether, fire or light was considered incorporeal. The ancient Greeks believed air, as opposed to solid earth, to be incorporeal, in so far as it is less resistant to movement; and the ancient Persians believed fire to be incorporeal in that every soul was said to be produced from it.

So Enlil was really the god of the *immaterial*, which was perhaps why he was considered the king of the gods and the model of kingship. I don't draw any theological parallels with the Bible account from that, but I do take it to imply that, in the phenomenological world of the ancient Hebrews, where anything else *wasn't*, such as earth, water, firmaments etc, air *was*. That, I suggest, is why the heaven of God, above the upper waters, in which appear to belong the astronomical bodies; and the realm of birds and mist, between heaven and earth, seem to be assumed, rather than described, in the Genesis account.

To me that resolves many of the conceptual problems of the false Victorian representations of a bubble-world in a cosmic ocean, as well as defusing the idea that the Hebrews (and the Sumerians, Babylonians and Egyptians, come to that) were working to a *theoretical* conception of the material universe that was grossly mistaken, but instead were describing things more or less correctly according to a phenomenology lacking many of *our* theoretical constructs, such as infinity, gravity – and air!

It may be fun to try and run the Genesis creation account in this phenomenological way, next time.

Original URL: http://potiphar.jongarvey.co.uk/2016/01/16/a-short-history-of-air/