

Thoughts on *Pioneer*

TJ 18(1) carried interesting and thought-provoking pieces by John Hartnett and Samuel Odell Campbell. Although Hartnett's *New evidence: we really are at the centre of the universe* and Campbell's *The Pioneer anomaly and MOND, a possible explanation* appear at first sight unrelated, I suspect that they both key into a critical assumption on which the whole of modern astronomy is based.

In the famous Shapley/Curtis debate on the size of the universe, Harlow Shapley stressed this assumption:

'... I desire to emphasize the fact that the nearby stars we use as standards of luminosity, particularly the blue stars of spectral type B, are members of stellar clusters. Therein lies a most important point in the application of photometric methods. We might, perhaps, question the validity of comparing the isolated stars in the neighbourhood of the sun with stars in a compact cluster; but the comparison of nearby cluster stars with remote cluster stars is entirely reasonable, since we are now so far from the primitive anthropocentric notions that it is foolish to postulate that distance from the earth has anything to do with the intrinsic brightness of stars.'

It is an essential feature of modern astronomy that the earth is not to be considered in any way special. Astronomy has now moved so far from the 'primitive anthropocentric' universe that it is usually thought unnecessary to mention that this is an assumption. But at the time of this debate the astounding results of experiments by Michelson and Morely and many others were fresh in the minds of physicists and astronomers. The equally astonishing findings of Slipher and Hubble were just emerging, and Einstein's explanations of how such observations could be interpreted apart from an Earth-centred universe were not widely known and taken for

granted as they are today.

If in truth the earth is not in any way special—and in particular if it does not occupy a special position, then it is reasonable to assume that the laws of science observed here will apply elsewhere in the universe. As soon as the earth is acknowledged to be in any way special that assumption loses reasonableness and it is no longer 'foolish to postulate that distance from the earth has anything to do with the intrinsic brightness of stars'.

Hartnett ends his *TJ* article with the significant remark

'It follows then that we must be located near the centre of the universe, which is consistent with the fact that we are at the centre of God's attention, both spiritually and physically.'

This possibility that we have a special place in the universe is an anathema to the humanist.

Campbell's review of Nottale's attempt to tackle the dilemma presented by *Pioneer* and its sister spacecraft shows how convoluted are the attempts of secular humanists to get away from this possibility. As spacecraft get further from us (in any direction) their behaviour appears to get further from that predicted by well-established Earth-based science. Scientists have spent several years searching for ways to reject the possibility that the observations could be telling us we need to re-examine our most basic of assumptions. Nottale presents a less than convincing explanation based on Einstein's dubious cosmological constant and admits that it is inadequate anyway.

Whatever the explanation offered, we have more reason than ever before to doubt secular humanist cosmology.

With all that the astronomers have been claiming based on at least this one probably incorrect assumption, perhaps we should look again at relevant statements of Scripture with an open mind. This seems particularly desirable in view of the number of articles in the *TJ* pointing out the bankruptcy of the popular big bang. Perhaps we

could even consider the 'primitive anthropocentric' cosmology suggested by Genesis 1 and scorned by Shapley.

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