

The Oort crowd

The gods truly are moving in mysterious ways.

Ken MacLeod

As we enter the first year of the 23rd century (or the last year of the 22nd — some arguments never go away) we look back with satisfaction at the triumphs of science and technology in the first two centuries of the third millennium. The advances in medicine, in biotechnology, in communications, in atmospheric engineering have been more than adequately celebrated elsewhere. They are familiar to the most isolated farmer on the barest rocks of Antarctica. But in long-term significance for the human prospect, nothing can compare to the discovery of the gods.

The word 'gods' is used advisedly. Humanity's earliest speculations about the nature of any superhuman intelligences with which it might share the Universe are, paradoxically, more relevant to our real situation than the predictions of alien contact in the once-popular genre of science fiction. It must be admitted, however, that some of its practitioners (see, for example, Boyce, 1998, <http://www.et-presence.ndirect.co.uk>) reached part of the truth.

That truth, as we all know, is that a large, undetermined and (for good reason) indeterminable fraction of the bodies in the asteroid belt, the Kuiper Belt and the Oort Cloud are the sites of complex intelligent life. The precise evolutionary route(s) from extremophilic microorganisms to intelligence, apparently bypassing multicellular organization, remain unknown and perhaps (again, for good reason) unknowable. Computer simulations have yielded interesting, if inconclusive, results (Chang-Hoskins, 2197, provides a useful overview).

Those of our readers who have benefited from advances in medicine may recollect, and our younger readers can easily retrieve, the excitement that greeted the initial, accidental discovery of an ET intelligence in 2031. The first downloads from the Gates Foundation asteroid prospector revealed, not the potential wealth of resources expected in a carbonaceous chondrite, but a complex interior structure variously described as 'crystalline', 'fractal' and 'organic'. Fortunately for scientific openness, the drilling operation was webcast live, and as the pictures slowly scrolled down the screens of a few hundred thousand space enthusiasts, the news spread across the net faster than a virus.

In those first hasty, misspelled e-mails and postings we can see — from references to the

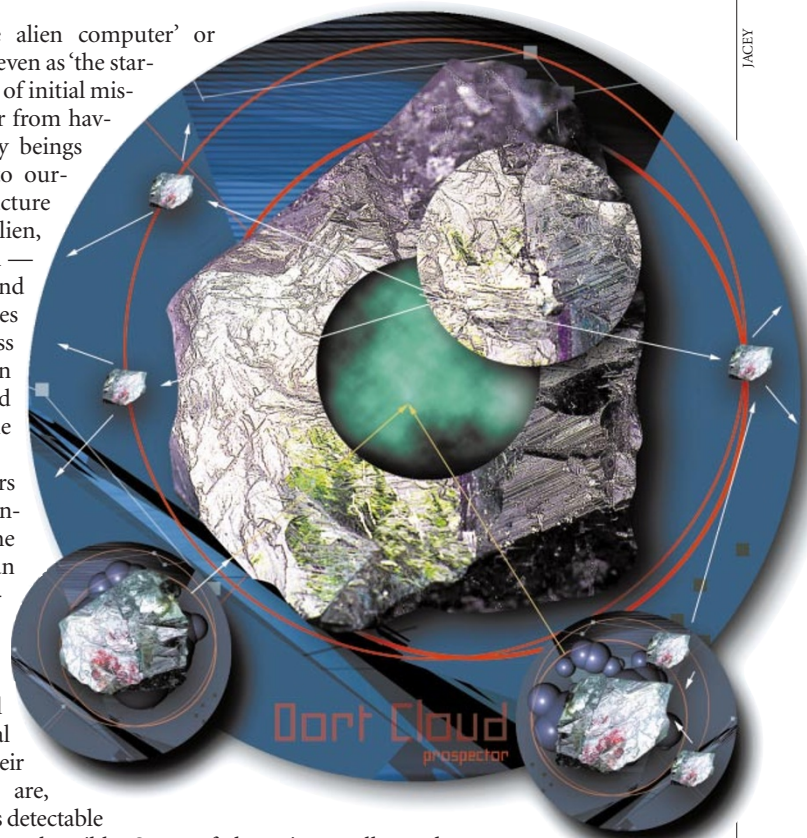
structure as 'the alien computer' or 'Asteroid City' or even as 'the star-ship' — the depth of initial misapprehension. Far from having been built by beings broadly similar to ourselves, the structure itself was the alien, or the civilization — the nature and number of centres of consciousness within it remain controversial. And it was neither alone nor isolated.

Billions of years of evolutionary 'tuning' have given the cometary minds an exquisite sensitivity to the electromagnetic output of each other's internal chemical and physical processes. Their communications are, once looked for, as detectable as they are incomprehensible. Some of the larger bodies in the Oort seem to act as relays, extending the communications net across solar and possibly interstellar distances. (As is known, the tenuous outer reaches of the Oort Cloud intersect those of their Centaurian equivalent.)

Despite strenuous efforts, no human communication with the extraterrestrial minds has been established (the results claimed by Lunan, 2049, are at best ambiguous). They are, to us, in precisely the position of the gods postulated by Epicurus, serene in the spaces between the worlds.

These gods, while indifferent, are not passive. Subtle control over their outgassings results, over very long periods, in orbital changes. More rapid processes occur within the asteroids. Careful study of recent and historical Near-Earth Objects suggests that the orbits of at least some NEOs have been the result of conscious intent.

In view of the above, it appears in retrospect unfortunate that the first probe to the Oort Cloud and beyond, launched in 2030, should have used as its initial means of propulsion a plasma sail consisting of ionized gas within a 'magnetic bubble' thousands of kilometres across, and as its secondary means a prototype 'electromagnetic ramscoop' sucking in vast quantities of



interstellar and cometary matter. Subsequent changes in the volume and intensity of intercometary communication, and in the orbits of numerous comets and asteroids, cannot be accounted for by the physical effects of its passage. They can only be considered a response.

The effect on human society of the discovery of the gods has been positive. Excluded from many of the space-based resources once thought unoccupied, we turn to a less profligate use of our planet's own. The expectations of John Stuart Mill, in his famous chapters on the "stationary state" and "the probable futurity of the labouring classes", have been largely realized.

But, as our astronomical and space-defence workers' cooperatives continue their urgent sky-watching, there may be some risk of overlooking a danger closer to home. There is no reason to suppose that extremophilic consciousness is confined to minor interplanetary bodies. Perhaps the majority of the Earth's biomass consists of subterranean extremophiles.

Watch the ground. ■

Ken MacLeod is the author of The Star Fraction, The Stone Canal, The Cassini Division and The Sky Road. His next novel, Cosmonaut Keep, expands on some of the ideas in this article.