Centauri dreams: imagining and planning interstellar exploration

by Paul Gilster

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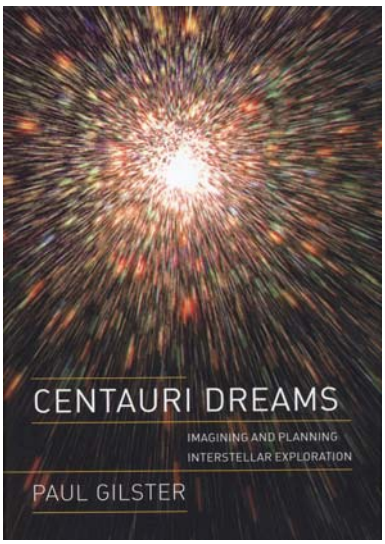

'Are we serious about reaching for the stars?' the dust jacket asks.

This book draws on many sources, including science fiction: Arthur C. Clarke, Robert Forward, Poul Anderson. Project Daedalus, the British Interplanetary Society's major study of an interstellar mission to Barnard's Star, features in virtually every chapter.

Paul Gilster writes on technology for the *News and Observer* in North Carolina and lives in Raleigh. He regards science fiction as inspirational to generations of scientists, some of whom write it. I am sympathetic to the dream, but the prose style irritated me. The tone is relentlessly positive and mostly in the present tense. Plans are usually described as 'technology'. Gilster describes Project *Orion* (a proposal to use atomic bombs to drive spaceships) as having 'advantages in the real world' with designs that 'were cheaper than chemical rockets and could produce a million times more energy.' So far as I know, *Orion* never actually flew.

The meat of the book is a compilation of ideas for interstellar travel. Gilster goes as far as discussing wormholes, as the physical equivalent of science fiction's spacewarp. Laser driven ships with vast reflecting sails and fusion powered rockets (almost normal sounding by comparison) depart for Alpha Centauri, Barnard's Star or 61 Cygni. There are some bizarre moments, as when he recommends aiming for a target close to the ecliptic to take advantage of the Earth's 30 km per second speed around the Sun. With speeds of one tenth that of light regularly envisaged, why worry about a paltry 30 kms^{-1}? Accuracy worried me at times: for instance, 100 nanometres is not one thousandth of a micron.

Just before the end there is a quote from Werhner (*sic*) von Braun, 'We can lick gravity, but sometimes the paperwork is overwhelming.'

Using the Polynesians as an example, Gilster ends on a characteristic note, that there had been 'a time before history when the Marquesas seemed as remote a target as Alpha Centauri does today; we have the example of a people who found a way to get there'. In the end, I agreed with him.

Roger O'Brien

Roger is a tutor for the Open University and has recently returned from teaching astronomy for them for a week in Mallorca.