Search for Extraterrestrial Intelligence (SETI) - The Next Steps (34th Symposium) (IAA.1.1) (A4.) SETI II - Interdisciplinary Aspects (2.)

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"L" ON EARTH

Abstract

The Drake factor L (average lifetime of a communicative civilization) has such a strong effect on estimates of N (number of communicative civilizations in our galaxy) that frequent reassessment of our understanding of civilizations' lifespans is warranted.

Earth analogues have often been used as the basis for estimates of L, but what can we really hope to learn from the history of Earth's civilizations that might pertain to civilizations elsewhere? Are Earth analogues fit only to be used as rhetorical exemplars to shore up a priori beliefs about the probability of SETI's success or failure? Or can we actually use historical data to make meaningful generalizations about the paths that civilizations take, and how long they last? Recent archaeological work around the world is increasingly pointing to some recurring patterns of emergence and collapse, which may have some value here.

However, we can conceive of communicating civilizations so different from any on Earth that terrestrial analogues could be irrelevant. In particular, as our own computing achievements mount, there is increasing speculation that any extraterrestrial intelligence we might encounter will reside in machines, rather than organisms; this has tended to increase estimates of L. But there are assumptions embedded there too, which may derive partly from our understandings of why exactly it is that human civilizations fail. These understandings also warrant close examination, and checking against historical data.