

Astronomical Waste: The Opportunity Cost of Delayed Technological Development

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ABSTRACT. With very advanced technology, a very large population of people living happy lives could be sustained in the accessible region of the universe. For every year that development of such technologies and colonization of the universe is delayed, there is therefore a corresponding opportunity cost: a potential good, lives worth living, is not being realized. Given some plausible assumptions, this cost is extremely large. However, the lesson for standard utilitarians is not that we ought to maximize the pace of technological development, but rather that we ought to maximize its safety, i.e. the probability that colonization will eventually occur. This goal has such high utility that standard utilitarians ought to focus *all* their efforts on it. Utilitarians of a ‘person-affecting’ stripe should accept a modified version of this conclusion. Some mixed ethical views, which combine utilitarian considerations with other criteria, will also be committed to a similar bottom line.

I. THE RATE OF LOSS OF POTENTIAL LIVES

As I write these words, suns are illuminating and heating empty rooms, unused energy is being flushed down black holes, and our great common endowment of negentropy is