

The Great Filter Theory

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Abstract

The Great Filter Theory has little to do with any wall or physical filter. It is a “probability filter” for life forms on any habitable planet. Intelligent lives capable of communicating across nearby portions of the Milky Way will face the existential challenge of passing through their own filter. If failure to pass is common, it would provide one likely solution to the Fermi Paradox. What future is increasingly probable for highly intelligent human beings on our blue planet as we push ourselves toward the test?

Enrico Fermi, a famous physicist, asked so simply in 1950: “Where is everybody?” By that he meant where are verifiable visiting aliens, given millions of possible planets with advanced consciousness that could communicate with us? The lack of verifiable interaction is just as questionable today as it was more than a half century ago. There have been several tantalizing data points regarding possible UFOs, but nothing of a repeatedly verifiable nature. Out of this Fermi puzzle has emerged the elegant idea of a great filter, where most intelligent civilizations go to die; but a few might pass through to greater glory.

The filter we envision is the summation of many centuries of accumulating and funneling choices. As our powers to choose expand, the biosphere we live in funnels us toward fewer viable

options. We are not talking about something like a coffee filter. The probabilistic filter is more like the increasing probability that a car's driver will crash in direct proportion to how much he or she has had to drink. Willpower and "freedom" at the point of deadly impact must yield to the kinetic laws of physics.

I have not invented the idea of a great filter. This idea has been around for several decades, and with several excellent minds giving their take on it. Some of these takes are found by clicking on blue links herein. Otherwise, you can just enjoy my reflecting on them in this essay.

General Filter Theory

A 2008 essay discussed a series of historical virtual filters facing life as it emerged from molecular potential over billions of years, evolving at increasing pace from primitive single cells to interstellar consciousness. There are theorized consequences if we humans appear after early filters have been surpassed; but we are yet to face our own. Briefly, this is life filter theory trying to become a general filter theory, not just discussing humanity's incipient virtual filter challenge.

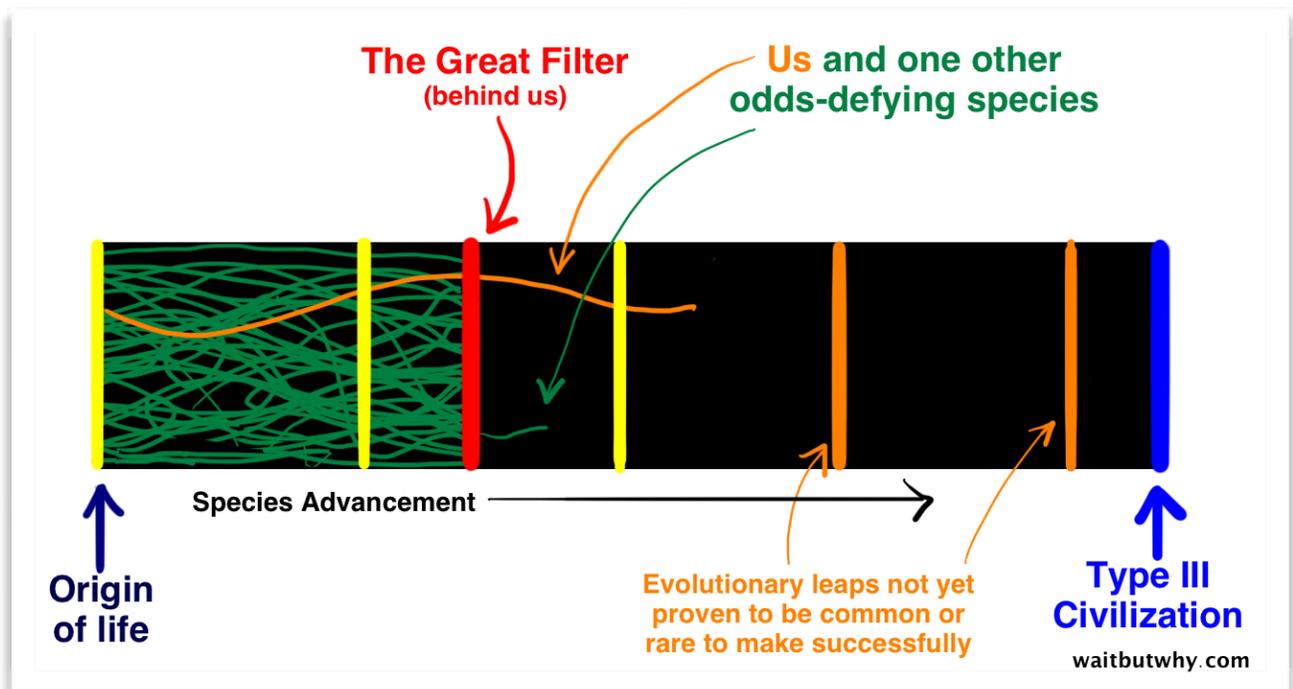
[Nick Bostrom](#) of Oxford University helps set the stage for our global drama this way:

"The Great Filter can be thought of as a probability barrier. It consists of one or more highly improbable evolutionary transitions or steps whose occurrence is required in order for an Earth-like planet to produce an intelligent civilization of a type that would be visible to us with our current observation technology. You start with billions and billions of potential germination points for life, and you end up with a sum total of zero extraterrestrial civilizations that we can observe. The Great Filter must therefore be powerful enough— which is to

say, the critical steps must be improbable enough—that even with many billions rolls of the dice, one ends up with nothing: no aliens, no spacecraft, no signals, at least none that we can detect in our neck of the woods.”

Bostrom does not mean that filters facing advanced life are rare. Life filters may indeed be common for most very simple life forms. For single-cell life to eventually evolve into something like the wisest of our species, a habitable planet has likely witnessed several life filters transcended by lower levels of life.

Here is a [conceptual historical graphic](#) showing ancestral and future life filters blocking multiple star-system candidates for high interstellar consciousness. Simply, the visible universe could host many planetary systems with only rudimentary consciousness. The assumption below is that we have already passed our filter:



What Are Type I, Type II, and Type III Civilizations?

These [three types of civilizations are only found AFTER we pass](#) through our looming life filter. Here is a description of possible futures playing out over many centuries, assuming we get there:

“A **Type I Civilization** has the ability to use all of the energy on their **planet**. We’re not quite a Type I Civilization, but we’re close (Carl Sagan created a formula for this scale which puts us at a Type 0.7 Civilization).

“A **Type II Civilization** can harness all of the energy of their **host star**. Our feeble Type I brains can hardly imagine how someone would do this, but we’ve tried our best, imagining things like a [Dyson Sphere](#).

“A **Type III Civilization** blows the other two away, accessing power comparable to that of **the entire Milky Way galaxy**. If this level of advancement sounds hard to believe, remember Planet X above and their 3.4 billion years of further development. If a civilization on Planet X were similar to ours and were able to survive all the way to Type III level, the natural thought is that they’d probably have mastered inter-stellar travel by now, possibly even colonizing the entire galaxy.”

It must be noted that the model above has an antique version of cosmic physics. Type III consciousness is already here for today’s humans (with our 100 trillion synaptic brain connections) to appreciate fundamental reality within the proper astrophysics paradigm. We already can comprehend how the greatest cosmic structures within the 4D multiverse are all dialectically composed of the smallest yin/yang, matter/energy structures.

Where Do We Go From Here?

As we approach our critical life filter, it is important to evaluate why humans haven't yet made it to a Type I civilization. The big reward for wise life on Earth for successfully navigating the death trap filter would be understanding *both* what has gotten us to this point in our cultural history – *and* to have moved in time on wise ideas for how to reform our creaky civilizations.

Humans are the only species that has achieved the sorcerer's apprentice power to screw up this garden world on a global basis. We have long been dominant aggressors, maybe even for two million years, before so-called modern humans evolved. We have power over our large opponents. We still struggle with the likes of ants, mosquitos, spiders, flies, ticks, cockroaches AND all the variants of microscopic viral, fungal, and bacterial pathogens.

Most importantly, (1) the cruel mathematics of Malthusian population growth, combined with (2) growing greed for raw resources, many of which are non-renewable, is a fatal poison. The Bronze Age green light in [Genesis 1:28-30](#) represents the very worst of tribal religious hubris. This is pious blindness speaking, not God. I doubt that any loving divine creator would trick us into eventually destroying ourselves.

As recently reported on [60 Minutes](#), the Earth's biospheric carrying capacity was last in equilibrium in 1970. Now, the hyper accumulation of resource-consuming additional billions has tipped the ecological balance from sustainability to self-destruction. It was revealed therein that we would need the fruits of five earth biospheres to provide for what we all want in 2023.

We are rapidly transitioning from the supreme hyperkeystone species to becoming just another extinct species on a planet we have uniquely devastated. We can do all this evil even without suicidal global thermonuclear warfare – or we can now replace greed with collective wisdom to turn our global Titanic around.