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To cite this article: Kathryn Denning (2017): Hawking Says that Discovering Intelligent Life Elsewhere Would Spark Greater Compassion and Humility among Us ... But Why Wait?, Theology and Science, DOI: [10.1080/14746700.2017.1299382](https://doi.org/10.1080/14746700.2017.1299382)

To link to this article: <http://dx.doi.org/10.1080/14746700.2017.1299382>



Published online: 30 Mar 2017.



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Hawking Says that Discovering Intelligent Life Elsewhere Would Spark Greater Compassion and Humility among Us ... But Why Wait?

Kathryn Denning

ABSTRACT

It matters how we talk to each other about METI and about contact, and Hawking could set a better example.

KEYWORDS

METI; historical analogy; contact

In his recent documentary, famed physicist Stephen Hawking prophesied that “Finding intelligent life would be the greatest single discovery in history. It would force us to change. We would have to give up the idea that we are unique. And start acting with more compassion and humility”¹

This is a prevalent traditional rationale for SETI (the Search for Extraterrestrial Intelligence)—but by now, an unnecessary and unconvincing one. It is unnecessary because SETI is a legitimate scientific endeavor that needs no heroic philosophical or moral justification. It is unconvincing because those who are excited by SETI’s *a priori* probabilities have already begun the paradigm shift that decenters *H. sapiens*; and others, in the event of a detection, might well reject the evidence or just not particularly care. And although I dearly wish I could grant Hawking’s idealistic premise, the demonstrated historical repertoire of humans confronted with unfamiliar intelligences on Earth is disheartening, and certainly includes aggressive xenophobia. There is, regrettably, no reason to suppose the reaction to a SETI detection would be uniformly uplifting. Moreover, an anthropological perspective suggests that humans are not highly prone to rationally and uniformly transforming their ideas or behavior in response to single points of scientific fact, however impressive those facts are.

However, I will optimistically guess that *one* human and his production teams *might* rethink their position and statements concerning *one* key issue, if given facts sufficiently chewy to contemplate.

I am specifically responding to the segment of *Stephen Hawking’s Favorite Places* (2016) about Gliese 832 c, in which Hawking narrates:

From Earth we cannot see what lies on 832 c, but if intelligent life has evolved here, we should be able to hear it. This planet is in range of the Breakthrough Listen project. Using the world’s most sensitive radiotelescopes, what might we hear? Maybe an alien opera, or perhaps a phone call home. One day we might receive a signal from a planet like this. But we should be wary of answering back. [Onscreen graphic of a phone: “Signal Received: Answer / Reject” i.e. pick up the phone or reject the call. Hawking selects “Reject.”] Meeting an advanced civilization could be like Native Americans encountering Columbus: that didn’t turn out so well. [Onscreen graphic: “Missile lock detected,” with alarms sounding—the

very clear implication of aggressive aliens having superior technology that is targeting Earth.] Time to leave, I think.²

It is worth responding to this. Hawking has a tremendously high profile as an influential public scientist and media figure. This documentary easily had tens of thousands of viewers within a month of its release, and clearly evidences considerable effort in its making—though the credits suggest that more film-making resources were poured into the visual effects than certain parts of the script. First, I will offer brief remarks on the central issue in this collection of commentaries, i.e. the wisdom of sending transmissions from Earth to ETI. Second, I will address the related problem of Hawking's use of historical analogies, which is, to me, just as important.

Hawking is right for the wrong reasons

On METI (Messaging Extraterrestrial Intelligence) transmissions, I think that Hawking is partly right, but for the wrong reasons. That is, I agree that actively transmitting from Earth should not be undertaken without caution and wide consultation, but from my perspective, this has nothing to do with aliens and everything to do with humans. There is disagreement about METI among the intelligent life forms that we already know, i.e. humans, and this should be handled respectfully as a matter of principle.

There has been much discussion—in print and in debates, public and otherwise—about METI, the potential characteristics of alien civilizations, and the potential impacts of contact.³ I, too, have commented at length elsewhere.⁴ Personally, I am glad that many of these discussions are now displaying more nuance and some shift in emphasis, because I doubt there is much more practical utility in further delineating potential scenarios, whether debating the physics (e.g. the detectability of “leakage,” past and proposed transmissions, the challenges of interstellar travel, etc.), the evolutionary questions (the potential characteristics of ET civilizations), or the societal questions (e.g. possible consequences of contact). These are obviously highly interesting subjects in themselves, but the basic terrain has been well-mapped and thoroughly discussed in recent decades, and there are still persistent differences of informed opinion—not least because, of course, we still have no actual data whatsoever about extraterrestrial civilizations.

For the purposes of the current METI debate, oddly enough, speculation about what intelligent extraterrestrial lifeforms would be like, or how such interaction would unfold, is nigh-irrelevant, because that speculation is necessarily too tenuous and contestable to foster strong and widespread agreement. We *do not* know, and we *cannot* know, and we *will not* know much about ETI until after a detection, and even then, there will probably be more confusion than certainty, and probably not much more agreement about what to do or say. Therefore, I propose, what matters most now is what we collectively do in situations where not everyone agrees about the risk assessment, but everyone would share the consequences: how would a reasonably evolved civil society proceed in such a situation, with zero data and abundant disagreement that cannot be argued away? This is why I argue that we need to consider the METI debate not as a technical matter, but as a *political* problem—arguably, a problem of the commons.⁵

It is unfortunate that the contemporary democracies of Great Britain and the United States, for example, provide only mixed inspiration—2016 having been a year of appallingly divisive votes with tiny margins, massive implications, and many desperately dismayed

constituents, in both nations, neither of which has the excuse of being a new democracy. Obviously, humanity's collective decision-making processes could use some refinement. Equally obviously, there *are* models for decision-making that allow for creative compromises and greater peace. It does not have to devolve to simple majority rule, the loudest voice, or the most effective media manipulation. And in cases like this, it *must* not. The larger point here is that the way we talk to each other matters, because no matter what else happens, we have to live with ourselves—with our own history, and with our own current political struggles. And what we say *about* each other during these debates also matters.

Hawking on history

This leads me to my second issue—the use of history in *Stephen Hawking's Favorite Places*, which echoes comments Hawking has made before.⁶ I am troubled by Hawking's use of historical analogies to make his point.

To revisit, in the documentary, Hawking says:

Meeting an advanced civilization could be like Native Americans encountering Columbus: that didn't turn out so well. [Onscreen graphic: "Missile lock detected," with alarms sounding—the very clear implication of aggressive aliens having superior technology that is targeting Earth.]⁷

I appreciate the need for brevity and vividness in popular science documentaries. But accuracy and fairness also matter. And on those grounds, this analogy of Hawking's fails completely. It is not merely useless, it is harmfully misleading. As I have explained at length elsewhere,⁸ casting the New World as us and Columbus as the advanced alien is neither useful nor innocent. (Ditto the Aztec and Cortés, Hawaiians and Cook, Inca and Pizarro, etc.) The ultimate outcome of the clash of the New World and the Old was categorically the result of demographic collapse due to extraordinary epidemic mortality, not due to the Old World being more advanced or technologically superior.⁹ The latter argument is simply historically indefensible. What Hawking has done here in one short sentence would take me many pages to fully dismantle: briefly, the statement actively distorts Earth's well-known human history in a way that is profoundly unfair to the cultures of the Americas (past and present), and clouds the question about METI in a rhetorically persuasive but ultimately unhelpful way.

There is an additional irony here. Hawking confidently predicts that humanity would become better-behaved when confronted with other intelligent beings, but the European invasions and genocidal wars in the Americas are historical proof that humanity's repertoire when confronting the unknown includes willful incomprehension, avarice, and cruelty.

Finally, of Earth, his favorite place of all, Hawking says in the documentary:

This remarkable planet gave us life and continues to support us even as we do it great harm. Here, I am spoiled for destinations. I could choose to visit the cradle of humanity [image of pyramids in Giza, Egypt], journey into the heart of the planet [image of an active volcano], or back into the mists of time [image of Stonehenge].¹⁰

Again, I appreciate that in popular productions like this, clichés are commonplace and that Hawking is paying homage to the wonders of Earth. But how can anyone now legitimately

suggest that Old Kingdom Egypt was “the cradle of humanity”? Or even the cradle of civilization? Ancient Egypt was one of *multiple* ancient hotspots of global cultural evolution—in the New World as well as the Old—as anyone who has picked up an introductory archaeology textbook or world history bestseller in the last several decades knows. As for “the mists of time,” evocative though Stonehenge may be, 5000 years ago (broadly contemporary with the Giza Pyramids) is nowhere near as misty as it used to be. There are many historical facts at our disposal. We would do well to use them.¹¹

The intentions of Hawking and his team are undoubtedly good. The show’s script demonstrates that they mean to spark reflection and appreciation for our home world and all the life it contains—a laudable sentiment. Perhaps next time, they will go further to model this approach. It would be so easy to treat Earth’s well-known history more fairly, and to leave viewers with a greater respect for the well-mapped diversity of cultures here at home. It need not take precious time away from the staples of this popular science genre, like speculative visualizations of the extrasolar planets we cannot really see, imaginary starships, thought experiments with black holes, etc. It would require only that, when the narrator is referring to Earth’s well-known history, certain one-liners be replaced with something better—something more honorable, something more compassionate, something humbler, something truer, something more in keeping with Hawking’s stated hopes for humanity’s further evolution. This just might help us in our task of having challenging conversations about our shared future, whether aliens announce themselves or not.

Notes

1. Stephen Hawking in “*Stephen Hawking’s Favorite Places*” (2016), <https://app.curiositystream.com/video/1697> (accessed 23 Nov 2016).
2. Stephen Hawking in “*Stephen Hawking’s Favorite Places*” (2016), <https://app.curiositystream.com/video/1697> (accessed 23 Nov 2016).
3. For example, see D. Vakoch, ed. *Astrobiology, History, and Society* (Heidelberg: Springer-Verlag Berlin, 2013, doi:10.1007/978-3-642-35983-5) and Michael Michaud, *Contact with Alien Civilizations: Our Hopes and Fears about Encountering Extraterrestrials* (New York: Copernicus Books, 2007), and the papers in “The detection of extra-terrestrial life and the consequences for science and society” organized and edited by Martin Dominik and John C. Zarnecki, *Philosophical Transactions of the Royal Society A* 369 (2011), 499–507, doi:10.1098/rsta.2010.0236, <http://rsta.royalsocietypublishing.org/content/369/19>.
4. For example, see K. Denning, “Unpacking the Great Transmission Debate” *Acta Astronautica* 67 (2010), 1399–1405, doi:10.1016/j.actaastro.2010.02.024 and K. Denning “Is Life What we Make of it?” *Philosophical Transactions of the Royal Society A* 369 (2011), 669–678, doi:10.1098/rsta.2010.0230.
5. K. Denning, “Unpacking the Great Transmission Debate”.
6. For example, *Into the Universe with Stephen Hawking* (see Peter Grier, “Stephen Hawking Aliens Warning: Should We Hide?” *Christian Science Monitor* (2010), <http://www.csmonitor.com/Science/2010/0426/Stephen-Hawking-aliens-warning-Should-we-hide> (accessed March 15, 2017).
7. Stephen Hawking in “*Stephen Hawking’s Favorite Places*” (2016), <https://app.curiositystream.com/video/1697> (accessed 23 Nov 2016).
8. K Denning, “Impossible Predictions of the Unprecedented: Analogy, History, and the Work of Prognostication” in *Astrobiology, History, and Society*, ed. D. Vakoch, (Heidelberg: Springer-Verlag Berlin, 2013, pp 301–312, doi:10.1007/978-3-642-35983-5_16).

9. Ronald Wright, *Stolen Continents: Conquest and Resistance in the Americas*. (Canada: Penguin, 1992).
10. Stephen Hawking in “*Stephen Hawking’s Favorite Places*” (2016), <https://app.curiositystream.com/video/1697> (accessed 23 Nov 2016).
11. For an extended argument regarding the use of human history in discussions about SETI, please see K. Denning, “Social Evolution: State of the Field,” in *Cosmos and Culture: Cultural Evolution in a Cosmic Context*, eds S. J. Dick and M. Lupisella, (Washington: NASA History Press, 2009), pp. 63–124. Ebook at www.nasa.gov/connect/ebooks/hist_culture_cosmos_detail.html

Disclosure statement

No potential conflict of interest was reported by the author.

Notes on contributor

Kathryn Denning, Department of Anthropology at York University in Toronto, is a Canadian anthropologist who has both studied and participated in the METI debates for over a decade.