

**BOB DOPPELT**

# Astrobiological view might help us save planet

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**BY BOB DOPPELT**

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Can viewing our planet from outer space offer insights into what's happening down here on Earth today? Can astrobiology help us overcome obstacles to addressing climate change and other ecological threats? Dr. David Grinspoon believes it can.

I spoke with him about his recent book, "Earth in Human Hands," and found hope in his perspective.

Grinspoon is a senior scientist at the Planetary Science Institute and the former inaugural Baruch S. Blumberg NASA/Library of Congress Chair in Astrobiology. He believes that humanity can find solutions to its current struggles by viewing the Earth from 280,000 miles away, as the crew of Apollo 17 did in 1972 when it took the iconic photo called the Blue Marble.

That picture of the Earth floating all alone in the vast universe, said Grinspoon, graphically shows that we live on a finite planet. No conduits connect Earth to other planets that allow new resources to be imported. Our planet's systems and organisms that interact to maintain just the right temperature to support life, generate clean air and water, and produce food and other resources are all we have.

The Blue Marble also shows no discharge pipelines that allow us to flush our waste out into space. There is no "away." Much of humanity still does not grasp this and can't see that consuming massive amounts of materials, clearing forests, burning fossil fuels, generating huge amounts of waste and continually increasing the population are profoundly altering the way our planet functions and threatening our very survival.

The effects are occurring right in our back yard. The Oregon Climate Change Research Institute recently said that if carbon emissions are not cut, within 30 years average local temperatures will likely be 3 to 7 degrees Fahrenheit hotter. By 2080, temperatures will rise by 5 to 11 degrees. Among the many effects are more frequent extreme heat and precipitation events, rising sea levels and floods between 1 to 4 feet high near Newport and other coastal towns, reduced snowpack, more frequent wildfires, and new illnesses and diseases.

We have reached a pivotal point in human evolution, said Grinspoon. Our actions, over which we seem to have little awareness or control, have effects that threaten us and most other organisms on Earth. And, the destruction is occurring in a time of — and in many ways because of — unparalleled advances in scientific and technological know-how. We are thoroughly remaking the planet, but can't seem to see it or stop.

If humans are to persist and thrive, Grinspoon told me, we must quickly update how we view ourselves and develop much greater self-control. Many doubt this can happen, but he disagrees. As an astrobiologist, he has a cosmic view — he said our inability to see ourselves as planetary change agents is not an inherent human quality. It resulted from learned, conditioned responses that developed over thousands of years to protect ourselves from previous threats.

From this perspective, he said, humanity is not evil — just confused. Our brains evolved to focus on our local environment, and we are struggling to grasp that our personal and collective actions now have global consequences.

We are also not forever stuck. Throughout history, humans have many times made big, rapid changes in response to new hazards. We are merely temporarily disoriented, leaving us less able to respond to perils that are not staring us right in the face.

The first step for change, said Grinspoon, is to understand that “the past is no longer the key to the present.” Humanity faces threats that are fundamentally different from those of even 50 years ago, and to survive we must once again swiftly adjust our thinking and behavior.

Both tremendous invention and self-restraint will be required. This can happen if we always keep the picture of the Blue Marble front and center in our minds. Every decision and every project can then be grounded in the understanding that we live on a finite planet. We can then reorient our scientific and technological

prowess to focus on how to live happy and meaningful lives by restoring rather than further degrading our only home.

Grinspoon calls this a much-needed new “planetary intelligence.” He closes his book by stating it is time to “human up.” It won’t be easy, and there will be much pain along the way. But he said he is confident we can make the changes. Given the many challenges we face, I welcomed Grinspoon’s optimism.

*Bob Doppelt of Eugene is executive director of The Resource Innovation Group and writes a monthly column for The Register-Guard on issues related to sustainability and climate change.*