



Cyclists Inspecting Ancient Petroglyphs, Utah, 1998: Texas-based photographer Terry Falke captures several of the exhibition's themes in this image of cyclists examining petroglyphs and bullet holes in a stratified rock face by the side of the road in Utah. "You've got the ultimate strata, which is man-made, so the idea is that we are impacting, we're leaving our mark on the Earth over time as well," says Talasek. (Terry Falke)

What Does "Deep Time" Mean to You?

An art exhibition at the National Academy of Sciences offers perspective on our geological past and future

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Earth is roughly 4.5 billion years old—a number that is hard for humans to grasp. “For someone whose life expectancy is usually less than 100 years, it’s nearly impossible to imagine something so vast as geological or deep time,” says J.D. Talasek, director of [cultural programs](#) at the National Academy of Sciences in Washington, D.C.

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To help us wrap our heads around this time scale, Talasek and his team identified 18 works by 15 artists across the country that provide some perspective. A light installation that evokes the infinite scope of time, a traditional oil painting that looks like rock strata and a sound sculpture that reads seismic waves like a musical score are among the pieces on display in "[Imagining Deep Time](#)," an exhibition now at the National Academy of Sciences headquarters through January 2015.

The concept of "deep time" dates back to 18th-century geologist [James Hutton](#), who proposed that Earth was a lot older than [6,000 years](#), as most people thought at the time. However, writer John McPhee officially coined the term in his 1981 book *Basin and Range*, saying:

"Numbers do not seem to work well with regard to deep time. Any number above a couple of thousand years—fifty thousand, fifty million—will with nearly equal effect awe the imagination."

McPhee went on to describe our place on the geological time scale with this metaphor:

"Consider the earth's history as the old measure of the English yard, the distance from the king's nose to the tip of his outstretched hand. One stroke of a nail file on his middle finger erases human history."

As Talasek argues, the best way to imagine deep time is through metaphor and that's where art can lend a hand. "That's what artists do. They deal in visual metaphors. So this seemed like the perfect sort of area to explore," he says.

In the exhibition, certain visual motifs—lines, arrows and circular patterns—are used to capture the abstract concept of time. Photographer [Sharon Harper](#), for instance, depicts the cycles of the sun and moon as seen through a telescope.

Other artists convey time through portraits of geological strata. A composite image by geologist-turned-photographer Jonathon Wells depicts the city of Boston sitting atop

massive rock formations, as it might be viewed from the bottom of the Boston Harbor. Meanwhile, [Rosalie Lang](#) paints rock faces from photographs that she takes of formations along the California coast.

“The idea is that art is a cognitive tool, a way of understanding,” says Talasek.

Some work in the exhibition harks back to the influence of museums, textbooks and movies, which have in essence provided a way for viewers to travel back in time and imagine dinosaurs and other organisms that once inhabited Earth. Clay aquarium scenes constructed and photographed by [Alison Carey](#) are based on 21st-century data but evoke 18th-century dioramas of geological eras.

But, unlike the frozen image of a diorama or a photograph, time doesn't stop, and some works in the exhibition play off the idea that we're on a continuum. For instance, a light installation by South Korean artist [Chul Hyun Ahn](#) entitled “Void” conveys time's depth using a simple trick of mirrors and LED lights.

The exhibition doesn't directly reference the [Anthropocene](#), the proposed geological era of human influence that some scientists think we're currently experiencing. Yet it's clear from [David Maisel](#)'s aerial photographs, which depict mining sites in Utah, that we're altering our landscape, and that humans have to make decisions with regard to energy and climate that will impact the future. “We're a species that has trouble planning for our retirement, never mind what's going to happen thousands of years down the road,” says Talasek.

“Considering our brief amount of time on Earth, no other species has had such an impact on the way the Earth is moving forward,” he adds.

[“Imagining Deep Time”](#) is on view at the National Academy of Sciences (2101 Constitution Ave., N.W.) through January 2015. On September 18, 2014, the NAS will also host a [DC Art Science Evening Rendezvous](#) on the exhibition, featuring artists [Rachel Sussman](#) and [Byron Wolfe](#), as well as other speakers.