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## Poetry in the Abstract

What happens when scientists write haiku?

By Christopher Cokinos (<https://theamericanscholar.org/author/christopher-cokinos/>) | April 15, 2021

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Twenty years ago, planetary scientist Allan Treiman inadvertently started a new literary genre: the science-presentation haiku. For a paper he was giving at the annual Lunar and Planetary Science Conference (LPSC) in Houston, Treiman was working on an abstract to summarize how using a small spectrometer could transform student understanding of spectra. And, like a color hidden in white light, out came a haiku:

Bright leaves on dark sky

Beyond the brilliant rainbow

Vision fades away

The poem conforms to the most commonly accepted haiku structure of five syllables in the first line, seven in the second, and five in the third. Originating in the 13th century, the Japanese form is, of course, globally famous for its simplicity and its emphasis on clear, intense observation of nature, as well as how, at its most refined, the flow of imagery can become epiphanic.

The composition of haiku abstracts slowly caught on among conference attendees, and a contest was eventually started—this year’s conference saw about 250 submissions. In 2019, Erin R. Kraal won the award for this poem, based on a paper called “Geomorphic Mapping of Landslides in Aram, Valley, Mars”:

Sudden wall collapse

Petals of debris lay down

Valley feels deformed

Treiman’s former intern Elise Harrington wrote this in 2015 about a shared research project:

The hills grow brighter

As you climb, but the summits

Remain in darkness

The haiku poeticized differences in radar reflections from two landmarks on Venus’s highlands.

“To me,” Treiman says, “besides being a nearly literal description of the radar images we were studying, this invoked an image of gurus on mountaintops, and, in a very Zen fashion, that enlightenment seems to recede the closer one approaches it.”

As Treiman, a principal scientist at Houston’s Lunar and Planetary Institute (LPI), explains, “The notion of haiku followed a change in the way that abstracts for the LPSC were presented. The conference has long abstracts, two full pages, almost a ‘letters’ scientific article. For years, since its inception, the conference abstracts had been published hard copy in thick yellow paper-bound volumes. This became so burdensome that the LPI published a separate program brochure for the meeting and asked each author to provide a short description of the longer abstract.”

Thus the motivation for the haiku—well, that and the memory of high-school classes in which he was required to write some. “Fortunately, they are lost,” he says of his earliest attempts. “But I must have absorbed some haiku sensibility—ambiguous multiple meanings, maybe brooding, faintly ominous. But before that 2001 haiku, I had never written of my own volition a poem of any sort.”

The 2001 abstract concerned a hand-held infrared spectrometer that Treiman himself built. He explains that the first line—“bright leaves on dark sky”—“is a literal description of how a tree looks in infrared photos. The rest manages to sound mysterious, but literally says that we cannot see infrared light.”

The president of the Haiku Society of America, Jay Friedenberg, himself a scientist, did not know about the LPSC contest—and is delighted by its crossing the infamous “two culture” divide, which C. P. Snow posited in 1959, arguing that science and the humanities had become split, to the general detriment of society. Friedenberg, a psychology professor at Manhattan College, not only writes and helps promote haiku in English, he also studies the empirical basis of visual beauty. He notes that both science and haiku “boil things down to their essentials.” He calls the LPSC contest an “abstract of an abstract.”

At the same time, he explains that while haiku is universally taught as a five-syllable line followed by a seven-syllable line followed by another five-syllable line, this was a kind of historic mistake of translation that “grafted” Japanese syllabics onto English. “It’s stuck,” he says, but it’s “not the

way that modern English poets write” haiku. “It’s a lot more open than that,” with the three lines just conforming to short/long/short. There are even English haiku that are one or two lines long.

The most essential elements are capturing a moment as imagistically as possible, says Friedenberg. The poems need to be concrete, but the imagery can be of any sense, and, ideally, the modern haiku, like those of Japan in prior centuries, will make some kind of implicit statement about nature, human nature, and the relationship between the two, especially by drawing a contrast.

In Basho’s famous haiku, the silence of the scene is underscored by the sound of splashing: In Alan Watts’s translation, it goes like this:

The old pond,  
  
a frog jumps in:  
  
Plop!

The founder of the Haiku Foundation, Jim Kacian, writes that this poem was first brought into English in a 1915 book called *Japanese Lyrics* by translator Lafcadio Hearn. Kacian says that Ezra Pound’s famous “In a Station of the Metro” is “generally acknowledged” as “the first fully realized haiku in English.” Kacian notes its “haiku sensibility” as separate from the rigid 5/7/5 form so dutifully followed by schoolchildren across the United States. After Pound, many poets turned to this form in English. They include Amy Lowell (an early Imagist), Charles Reznikoff, Carl Sandburg, various African-American writers such as Sonia Sanchez, Native American voices such as Gerald Vizenor, Beat writers, and, more recently, poets within a thriving culture of journals and anthologies in which haiku practices are enacted, studied, and modified. Consider this beautiful poem in the haiku spirit by Robert Boldman:

walking with the river  
  
the water does my thinking

Most LPSC haiku abstracts are decidedly less literary, focusing on pithy science summary and even humor, like this 2019 Honorable Mention in the non-haiku category from Melinda Jo Rucks:

Mars is red

Neptune is blue

Tissintite is cool

I can't write a haiku

Meteorite specialist Ralph Harvey likes to “sprinkle a few limericks as well,” he says. “Nothing has given me greater joy than encouraging grad students to get crazy with that short summary in their first formal abstract. For some, it’s like uncanny laughter heard echoing in the daunting Halls of Science; they have trouble dealing with it. For others, an incredible spark of joy in the tedious process of scientific writing. The rest of us never took ourselves seriously in the first place.”

From the ridiculous to the sublime, science-abstract poetry at the LPSC continues its joyful presence. Last month, judges ranked these four in order as the year’s best:

“B is for Bennu.”

Is that good enough for you?

Spectra disagree.

—Andrew S. Rivkin, Abstract #1945, “Hydrated Minerals on B-class Asteroids”, A. S. Rivkin, E. S. Howell, J. P. Emery, M. Richardson

Oceans long since past

Dry, cracked ground, no trace remains

But the taste of salt.

—Elise Michelle Harrington, Abstract #1490, “Detailed Chloride Mapping in Terra Sirenum, Mars,” E. M. Harrington, B. B. Bultel, A. M. Krzesińska, S. Werner

Compare day and night:

The surface cools, bedrock shines

The fines fade away.

—Justin C. Cowart, Abstract #1112, “Compositional Analysis of Martian Regolith and Surface Deposits Using THEMIS Repeat Imaging Over the Diurnal Cycle,” J. C. Cowart, A. D. Rogers

She sways to and fro

Plunging us into darkness

When will summer come?

—Samuel F.A. Cartwright, Abstract #2533, “The Lunar Season Calculator: An Accessible Tool for Future Mission Planning,” S. F. A. Cartwright, J. M. Bretzfelder

Two of the honorable mentions caught my eye:

Glaciers dwelled here once

In ancient tilted Mars, now

Paraglacial grounds.

—Lisette Elena Melendez, Abstract #2284, “Quantifying the Environmental Response to Deglaciation in Martian Craters During the Late Amazonian,” L. E. Melendez, E. R. Jawin, J. E. Panzik

Sand grains on Titan

Under wind or river flow

Roll and rest. Not grow.

—Mathieu G.A. Lapôtre, Abstract #1135, “Interplay Between Grain Sintering and Transport-Induced Abrasion in Creating Sand-Sized Sediments on Titan,” M. G. A. Lapôtre, M. J. Malaska, M. L. Cable

Might some of the scientists find that the haiku themselves are not just “summaries,” but new windows on their work? Treiman wonders that too. “No one has mentioned to me that writing the haiku affected their perceptions of the problems or solutions,” he admits. “My guess is that most did not, because most people write their haiku at the very last minute, long after the research and abstract are completed. And, just reading the haiku, most of them are simple recountings of ...

conclusions. That is, to some extent, what we ask for.” But he asks, “Does the poetry help us understand the science? Ideally it should, especially for haiku sensibility, which ... is built on showing the reader a different way to see the world.”

Although the LPSC authors “tend to use conventions not commonly employed among modern haiku writers, like excessive use of punctuation and anthropomorphism,” says Friedenberg, “it is understandable, since like any genre, a good haiku requires understanding of the techniques and lots of practice and feedback, which can’t be expected of scientists who are probably using the form for the first time.”

But one researcher well-familiar with the form is Erin R. Kraal, an associate professor of physical sciences at Kutztown University, where, she says, she uses “haiku as active learning/pedagogical technique in many of my science classes. It forces students to focus in on key ideas and moments, then look for connections. It’s also unexpected, so students can feel creative and playful while they think about new science knowledge, which can sometimes be intimidating.” She also writes haiku as part of personal journaling. “I do think haiku helps me as a science communicator,” Kraal says, “because it causes you to reflect carefully on the meaning of each word and how ideas link together.”

When I mentioned the idea of pitching a science-communication and haiku workshop to the Lunar and Planetary Sciences Conference, Friedenberg liked the idea. For now, there’s a possibility that conference haiku abstracts might find a second home. Friedenberg agrees that the International Association of Empirical Aesthetics conference—which has hosted scientist-painters—might be amenable to the idea. Pending the outcome of Covid-19 travel restrictions, the next meeting of that organization is set for this September in London. Perhaps there will soon be haiku about the neural substrates of beauty along with those about spectra, sand grains, and ocean salts on this and other worlds.

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