

# Haikus and Landays in Science

Jalees Rehman

**Correspondence to:**

Jalees Rehman, M.D.  
University of Illinois at Chicago, College of Medicine  
Departments of Medicine and Pharmacology  
835 South Wolcott Ave, Room E403, Chicago, IL 60612, USA

**Email:** [jalees.rehman\[at\]gmail\[dot\]com](mailto:jalees.rehman[at]gmail[dot]com)

**Scientific Blog: The Next Regeneration** <https://thenextregeneration.wordpress.com/>

**Personal Blog: Fragments of Truth** <http://www.fragments-of-truth.blogspot.com/>

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## Haikus and Landays in Science

*Summer grass:  
That's all that remains  
Of warriors' dreams.*

– Basho



My favorite scientific experiments are those that resemble a haiku: simple and beautiful with a revelatory twist. This is why the haiku is very well suited for expressing scientific ideas in a poetic form. Contemporary haiku poets do not necessarily abide by the rules of traditional Japanese haikus, such as including a word that implies the season of the poem or the 17-syllable (5-7-5) structure of three verses. Especially when writing in a language other than Japanese, one can easily argue that the original 5-7-5 structure was based on Japanese equivalents of syllables and that there is no need to apply this syllable count to English-language haikus. Even the reference to seasons and nature may not apply to a modern-day English haiku about urban life or, as in my case, science.

Does this mean that contemporary haikus are not subject to any rules? In the introductory essay to an excellent anthology of English-language haikus, *Haiku in English: The First Hundred Years* (1), the poet [Billy Collins](#) (2) describes the benefit of retaining some degree of structure while writing a haiku:

Many poets, myself included, stick to the basic form of seventeen syllables, typically arranged in three lines in a 5-7-5 order. This light harness is put on like any formal constraint in poetry so the poet can feel the comfort of its embrace while being pushed by those same limits into unexpected discoveries. Asked where he got his inspiration, Yeats answered, “in looking for the next rhyme word.” To follow such rules, whether received as is the case with the sonnet or concocted on the spot, is to feel the form pushing back against one’s self-expressive impulses. For the poet, this palpable resistance can be a vital part of the compositional experience. I count syllables not out of any allegiance to tradition but because I want the indifference and inflexibility of a seventeen-

syllable limit to balance my self-expressive yearnings. With the form in place, the act of composition becomes a negotiation between one's subjective urges and the rules of order, which in this case could not be simpler or firmer.

The 17-syllable limit – like any other limit or rule in poetic forms – provides the necessary constraints that channel our boundless creativity to create a finite poem. It is a daunting task to sit down with a pen and paper and try to write a poem about a certain topic. Our minds and souls are flooded with a paralyzing plethora of images and ideas. But, as Collins suggests, if we are already aware of certain rules, it becomes much easier to start the process of poetic filtering and negotiation.

What is the essence of a haiku? In the same essay, Collins offers a very elegant answer:

Whether they are the counting or the non-counting type, poets are likely to agree that at the heart of the haiku lies something beyond counting, that is, its revelatory effect on the reader, that eye-opening moment of insight that occurs whenever a haiku succeeds in drawing us through the keyhole of its details into the infinite, or to put it more ineffably, into the “Void of the Whole.” No one would argue that any tercet that mentions a cloud or a frog qualifies as a real haiku; it would be like calling an eleven-line poem about courtly love a sonnet. A true haiku contains a special uncountable feature, and every serious devotee of the form aims to achieve that with every attempt.

The revelatory surprise, the “aha moment,” is what characterizes a true haiku. I have experimented with the haiku form, trying to capture scientific concepts or the process of scientific discovery. Many poets do not give titles to their haiku, but I feel that the title can be very helpful to create a poetic tension and provide a context that may be difficult to incorporate within the haiku verses. A haiku – like every good poem – should not require explanatory lines by the poet, but I think that one can make some exceptions here in the context of experimenting with haiku.

Scientific images or phrases are not always self-evident, so I include brief annotations for the haiku I have written that may be helpful for people who are not routinely exposed to the scientific research.

### ***Mitochondria***

*Grainy threads in cells,  
powerhouses of life are  
harbingers of death*

I have been studying mitochondria for a number of years, but I still marvel at the Janus-like role of mitochondria. They are active sites of biosynthesis and produce the universal energy molecule of cells (ATP), thus ensuring the growth and survival of cells. At the same time, mitochondria can initiate a cell's suicide program (apoptosis), forcing a cell to die. You can read about some of our mitochondrial research on lung cancer [here](#). (3)



### ***Pipette***

*Ceci n'est pas une  
pipette, porting microdrops  
for my macrodreams*

Many of us have spent hours, days, and months repetitively pipetting hundreds of samples for PCR reactions, ELISA assays, or other tests, and sooner or later most of us wonder about the meaning of these Sisyphean tasks.



### ***Progress***

*Most hypotheses  
in science are tested only  
to be rejected*

If I received a dollar for every wonderful scientific idea I have had that turned out to be wrong, I would not have to write any more grants to support my lab.

Haikus have become an integral part of English language poetry, but there is another poetic form that may soon be gaining popularity. The journalist and poet Eliza Griswold recently teamed up with the photographer Seamus Murphy, traveled to Afghanistan, and collected *landays* that are commonly composed by Afghani women in their native language Pushto. Landays are a form of folk poetry, couplets consisting of a verse with nine syllables followed by one with thirteen syllables. Griswold worked with native Pushto speakers to translate the landays into English. In her [brilliant essay published in the June 2013 issue of \*Poetry Magazine\* \(4\)](#), Griswold provides us with glimpses into the lives of Afghani women and the hardships that they face on a daily basis. The essay also contains translations of landays, which have become a form of lyrical resistance

for Afghani women, allowing them to voice their anger and frustration. Illiterate women compose, share, and recite these poems, often anonymously and behind closed doors, in a society that marginalizes women. The narratives about Afghani women and the translations of landays, which preserve their characteristic wit and sarcasm, are accompanied by haunting photographs that convey the beauty of war-torn Afghanistan and its people.

Here is a description of landays from [Griswold's essay \(4\)](#):

A landay has only a few formal properties. Each has twenty-two syllables: nine in the first line, thirteen in the second. The poem ends with the sound “ma” or “na.” Sometimes they rhyme, but more often not. In Pashto, they lilt internally from word to word in a kind of two-line lullaby that belies the sharpness of their content, which is distinctive not only for its beauty, bawdiness, and wit, but also for the piercing ability to articulate a common truth about war, separation, homeland, grief, or love. Within these five main tropes, the couplets express a collective fury, a lament, an earthy joke, a love of home, a longing for the end of separation, a call to arms, all of which frustrate any facile image of a Pashtun woman as nothing but a mute ghost beneath a blue burqa.

Examples of landays collected by Griswold:

*You sold me to an old man, father.  
May God destroy your home, I was your daughter.*

*I tried to kiss you in secret but you're bald!  
Your bare skull thumped against the wall.*

*I dream I am the president.  
When I awake, I am the beggar of the world.*

In April of 2014, Griswold and Murphy will also release the book [I Am the Beggar of the World: Landays from Contemporary Afghanistan](#) (4), which will contain a more comprehensive collection of landays.

Landays have not yet caught on as a poetic form in the English-language, but this landmark work by Griswold might change that. I think that landays might be a great opportunity for scientists to describe their experiences with the scientific enterprise.

My landays revolve around the work and lives of academic scientists:

### ***A-Team***

*I work alone in the lab each night,  
conducting all our experiments for your career.*

***Tenure Trek***

*Sirens of tenure captivate us,  
chained to hallowed halls of academic freedom.*

***Glamour***

*Journals can make or break our careers,  
careers can make or break us, we can make or break journals.*

These landays attempt to approximate the 9- to 13-syllable count in the couplets, but as with haiku, the nature, structure, and themes of landays written in English will likely be different from the original Pushto landays.

It does not really matter what poetic form or structure scientists choose to express themselves, but my personal experience has been that poetry is a wonderful way to share science. Writing haikus or landays about science has forced me to think about what aspects of my scientific work I really treasure. What started as a playful exercise with words has become a journey.

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