

Circular Meditations

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POETRY FOLDER



Circular Mediations

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This is a folder made up of a sequence of seventeen interconnected poems pertaining to mathematics, science, history, politics, religion, and spirituality. It can also be read as a single seventeen-part poem.

Speaking of seventeen, three haiku of mine appear in the collection “Math in Seventeen Syllables: A Folder of Mathematical Haiku” (*Journal of Humanistic Mathematics*, Volume 8 Issue 1 (January 2018), pages 441-472, doi:[10.5642/jhummath.201801.22](https://doi.org/10.5642/jhummath.201801.22), available at: <https://scholarship.claremont.edu/jhm/vol8/iss1/22>). Two of those are based on ideas also alluded to in *Circular Mediations*.

Several of the poems in this collection feature mathematical expressions in their titles. In the sixth, a non-mathematical term I was introduced to while working on that section appears. Given all that, some brief notes are as follows:

The denominator in the title of the opening poem is equivalent to the numerator in the third, the former being 4 times the Maclaurin series for inverse tangent, evaluated at 1.

Survivance is the title of a book edited by Gerald Vizenor, who coined the modern use of the term. The full title is *Survivance: Narratives of Native Presence*.

The title of the third to last poem was in Ramanujan’s original letter to Hardy (section V, equation 3).

The title of the penultimate poem is equivalent to one of seventeen such formulas for $1/\pi$ that Ramanujan found while in India, then published while in England.

The title of the final poem is commonly called Euler’s Identity. It too can be related to a Maclaurin series evaluated at a value, but in this case, an imaginary value.

-KEVIN FAREY

$$\frac{3 + \frac{1}{10} + \frac{4}{100} + \frac{1}{10^3} + \frac{5}{10^4} + \frac{9}{10^5} + \dots}{4 - \frac{4}{3} + \frac{4}{5} - \frac{4}{7} + \frac{4}{9} - \frac{4}{11} + \dots} = 1$$

Whether sensed within while whirling or performed as an act of faith
 or pressed with a palm and circled in his garden pillars were central
 to Rumi who spoke of *a hundred kinds of prayer, bowing, and prostration*,
 or as Barks rephrased this *hundreds of ways to kneel and kiss the ground*.

When numbers kneel twixt symbols
 bowing lower along a line
 many different infinite lists
 can approach a single sum.

$$\frac{\text{diameter}}{\text{radius}} = 2$$

She argued once in her youth with a man
 who kept saying spirit had prompted him
 to say to some who insisted spirit had prompted them
You're wrong.

What had lingered after lightning
 felt to her like a wordless warmth.
 Two or more were gathered.
 On that much they agreed.

$$\frac{4 \cdot \arctan(1)}{2 \cdot \arcsin(1/2)} = 3$$

At any point in time on earth
 dark and light abound
 and the line between might seem if seen
 from the moon to cleave close to an arc.

Not as clear are the countless ways
it cuts through human hearts
and washes across the faces
of dawn and evening skies.

$$\frac{2018 - 1863}{2018 - 1968} = 3.1$$

On a black and white TV in an all-white town outside Chicago
I watched as two black fists were raised near disks one bronze one gold
while an anthem rang and flags two for the Americans slowly rose
to separate and unequal heights at the ends of adjacent poles.

I'd heard by then at ten of flagrant racists far away
and of ghetto buildings burned to the ground and of King and the KKK
and of one shot fired in Memphis and several more in LA
but not of local redlines limiting eyes I would use to this day.

$$\frac{2019 - 1619}{1619 - 1491} \approx 3.12$$

And I'd seen by then the massive bob of a towering pendulum sway
where time can be told on a circle o'er which its strokes each day still rotate.
Any fact like a myth can be ignored or explored and squarely faced.
My country might thy history teem with greatness and disgrace?

When a quill pen pressed wrote all men are how many by then were enslaved?
In the century after slavery's end how many thousand lynched men swayed?
Was Jim Crow's death like the second stripping of beams and stones from the face
of an edifice casting shadows still from seas to the shining fruit of a tilted rift-ridden
blood-stained plain?

$$\frac{2020 - 1492}{24 \cdot 7} \approx 3.14$$

Resembling briefly bright bowed spokes sunlit streamers stretched
 from the maypole's top to a circle of celebrants soon transformed into two
 concentric circles cycling out and in in opposite ways
 as dancers dipped and rose as they wove those ribbons round and through.

Resembling briefly forms he forms with hoops o'er the course of a hoop dance
 ... serpent six-legged four-legged ground bird soaring eagle ... and human
 weaving his form through those hoops and forms while dancing an account of creation
 and dancing as an act of Survivance and of holding as sacred a sphere.

$$\frac{355}{113} \approx 3.14159$$

Spokes of a wheel exist within one rim and around one hub
 and this daisy's petals point toward one horizon
 yet in at the edge of a hayfield
 toward a delicate disc comprised

of closely woven spiraling lines of tiny tubular blooms
 each bloom encircling seeds of seeds encircling central strands
 of atoms holding half at most
 of a code for a flourishing life.

$$\frac{103993}{33102} \approx 3.14159265$$

As spinning blades in a jet speed up
 and the plane begins to roll
 petals fall from stems
 in a field beyond.

Earth hurtled half as far in half the time ad infinitum
 to this here and now of a pause before
 as hundreds somewhere kneel
 a vest explodes or a gunman strikes and a plane takes off with bombs.

$$\frac{C}{d} = \pi$$

Near spears of grass in a field as an east wind whispers *Almost sunrise*
 I gesture just toward one then the wind picks up and the whole field speaks
 though the rooted can't quite say what none can say in every way
 and that I now hope to help to say in some way

as I speak of points on a line in a plane where the real and the imagined meet
 and of numbers kneeling nimbly there near one transcendent sum
 though math has said of itself it can neither answer all its questions
 nor promise not to prove conflicting facts.

Suppose when humankind knew not of the number pi
 that a man in search of truth walked from his tribe
 up a seemingly desolate hill toward a bush
 ablaze with small white springtime fires.

Let him gaze at length into its sunlit blooms
 till at once they wildly sway
 and he hears as if from the midst of limbs
 the voice that speaks of all through all:

Three plus one tenth plus four one hundredths
is a truth this world repeats without repeating
plus one plus five plus nine over ten to the third fourth fifth respectively
a truth this world repeats without end.

Let the seeker then descend from the hill saying
Thus a voice has spoken
 but later *Woe to anyone*
who would dare to say it otherwise.

The next year
 let a man unknown to the first from a far-off tribe
 climb a densely wooded hill to a glade
 ablaze with its spring fires.

Let him calmly close his eyes and breathe
till but silence stirs in his mind
then a sense of something said within
by the voice that speaks of all through all:

*Four less four over three plus four over five less four over seven
and endlessly beyond plus four over nine less four elevenths
far too long to say but you are only asked to start
and to make of moving slowly toward a lifetime's work of art.*

Let this man then descend from a hill saying
Thus a voice has spoken
but later *Woe to anyone*
who would dare to say it otherwise.

The next year let those two men meet
and speak of what they've heard
then shout of what they know they've heard
then strike each other dead.

Let witnesses say *He was right.*
No, he was right not him.
Then let them shout *You are wrong!*
then strike each other dead.

And the next year let more followers flock to battlefields and die
and the next and the next and the next then let one soldier set his sword aside and cry *My*
folly it was to have fought as if Divine Thought can be reduced to the rational
and as if we d's are wholes to the holy and the C's we fight are not

and I say this somewhat deafened here and struck for the moment blind
where a thunderous voice as a flash lit the sky just now said some C's are.

In Washington DC this matters much as it does in Damascus
and wherever even one doesn't doubt their perception of a call to kill

as it did when some said God said to decimate the Canaanites
and as crusaders claiming allegiance to Christ wrought destruction
and as a newly independent India's Hindus clashed with its Muslims
and as it does when civilians die at the hands of self-proclaimed Jihadis.

Brutality's terms aren't equal in the series preceding.
But let us at least agree they reflect reality all too often
on this spinning sphere that circles a star that revolves round its galaxy's core
in a cosmos wherein every thing from nebulae to quarks

and from the furthest galactic cluster to such particle-waves of light
as have traveled there to here at colossal speed to speak of a source
is a pulsing part of an expanding whole that encircles all its parts
including those who might ask if that whole is part of something larger

or if God exists or if patterns of charge in a brain can equate with a mind
of the kind that might imagine a precocious child needing nothing but twine
to measure in terms of breadths the girths of circular forms she finds
yearning to learn firsthand about a universal value oft defined

yet symbolized by a glyph her imagining mind might see as resembling
an equal sign on its side dangling down from a dash
and maybe saying
Not quite

as I might speak of points on a line in this field near spears of grass till dusk
then gesture just toward one as a new night deepens
though neither I nor they nor any will ever say in every way
what all can hope to help to say in some way.

numberless

Cosmologists say arriving rays from stars read a bit more red
than they would within a static space ours streaming away instead
and that to picture as fixed any of the ink-white dots on a black balloon
as breath by breath that world inflates and the other dots all recede

or to watch from the point precise where something rising just exploded
into a swiftly swelling sphere of celebratory lights
or to gaze into space whether from Earth or Mars or a starship long since entered
is to look no matter the place as from but one of our universe's centers.

mere thousands to the naked eye from the ground

By night the sufficiently near and bright
seem to circle across these skies.

By day mathematicians say
where and when they will rise.

O the power to predict and the gift of being
often enough surprised
through the arduous art of seeing each lens
within or before your eyes.

precisely five for a while

The first to observe that certain stars
seem to wander among the rest
like those who named such planets
after gods knew little of lenses.

Millennia later glass was milled
for the ends of a tapering tube
then the tube was trained toward the heavens
and one sound eye was closed.

three in one yet one

Our View of God is Central
say not only men of war.
Notes are nailed repeatedly
to closed imposing doors.

Uniquely central? some might ask.
Others answer *Yes!*
Regarding what to read and how
which lens informs whose guess?

3.14159 over π is less than a millionth shy of 1

For years she strove to see at first but a pearl from every side
while infinitely far away at the deepest point inside.

Such views are nigh and approachable said the Sun in its way from afar
as she gazed again and again as if along lines through the heart of a star.

Now a seeker speaks of lightning strikes and of feeling warmed yet warned
wordlessly from within to face intensifying storms
in a world of worsening floods and fires amidst myriad blessings sent
to all who weave through circumstance maybe torn but not yet rent.

$$1 - 5 \cdot \left(\frac{1}{2}\right)^2 + 9 \cdot \left(\frac{1 \cdot 3}{2 \cdot 4}\right)^3 - \dots = \frac{2}{\pi}$$

After reading a long letter of introduction's final theorems
Godfrey H. Hardy mathematician par excellence
spoke of defeat at the hands of some then said they *must be true*
for *if not* he reasoned *no one would have the imagination to invent them.*

The devoutly Hindu author's name meant younger brother of Rama.
Godfrey was an atheist seeking truth.
The next year after a month at sea for one those men would meet
soon to speak most weeks and to broaden spheres of thought all the more as colleagues.

$$\frac{\sqrt{8}}{99^2} \sum_{n=0}^{\infty} \frac{(4n)!(1103 + 26390n)}{(4^n n!)^{499^{4n}}} = \frac{1}{\pi}$$

Having chalked much math onto the stones of a temple's floor in India's heat
and on a slate from which he wiped many mistakes ere writing new truths into notebooks
and having seen on occasion drops of blood in dreams then a scroll unrolling
to reveal how numbers next might kneel amidst symbols deep in his work

and as a future Fellow of the Royal Society and of Trinity College in Cambridge
whose culture shock would play a part in cutting short his life
Ramanujan, over tea perhaps with a colleague said after a pause
Sir, an equation has no meaning for me unless it expresses a thought of God.

$$e^{\pi i} + 1 = 0$$

Mountains notwithstanding Earth from its surface might seem flat.
At eclipse of moon her shadow argues otherwise.
Now an atom's vague peripheries are oft portrayed as clouds
and the more we learn the more we rely on metaphors.

Rumi spoke of an algebraic way in which mistakes
feed a means of zeroing in on true solutions.
Lightning lingering long in the mind in the air was here then gone.
Which ground would receive your inmost hidden kisses softly back?