Strings of consciousness

it is the wish of my life

to know everything

failing that, to know myself

and you, my proud loves

for in us

is beauty, and truth

to know perfect beauty

is to know perfect truth

this is the highest aspiration of humanity

to know the great aspects of Fun

at the most fundamental level

we are at present

as perfect as the universe allows

and this is not good enough

amounts only to a C+

on the report card of the species

to know more, there are two techniques

reduction: the splitting of problems

into understandable sub-problems

this only works to a point:

in our world, we are greater than the sum of our problems

we are self-aware, conscious, recursive

our consciousness is the greatest mystery

and not to be trifled with

the other technique is a relation

emergence: the examining of the part

to understand the whole

again, consciousness trumps all

to understand the macrocosmos

we must understand the microcosmos

we will have to voyage through the world

of the arts to understand the science

at the levels of which we speak

there is no alternative

only art can illuminate

that which is smaller than the smallest particle of light

and that which is larger than the observable universe

we, that is, you and i

will attempt a new investigative technique

recombination

we will examine the very small

on the level of the very big

in fact, we will examine the smallest

on the level of the biggest:

the matter of mind and humanity

perhaps a quick aside:

this poem could have been an essay

in fact, it will be

however, i am a poet

and think best in poetry

since part of this poem

is to demonstrate the validity

of the crossroads of art, logic, spirit and science

then the science is best written in art

and the spiritual is best written in logic

therefore, i cut my lines judiciously

use punctuation only where important

allow the natural flow of words

let the ideas roll over you

like waves of knowledge

besides, if all this is wrong

it will still be right

that is the nature of art

and i don’t care if it’s cheating

that said, i truly believe

what you read here

this is not frivolous speculation

this is my best guess

it is as close to literal truth

as poetic truth can be

The First Paradigm

let us begin

we come from an idea

an idea that something should be

an idea in the mind of the infinite

and that idea is best summed up

as “Fun”

but we will deal with that later

first we will speak of “stuff”

we live in a house

a house whose roof is infinitely high

a house whose last sub-basement is infinitely low

in fact, we live on the ground floor

in an apartment of infinite square footage

we keep stars on the highest of our shelves

and the dirt of earth underfoot

we cannot see the most distant furniture

except with the fruits of our technology

they are billions of light-years away

and we can only see what they were like

when the universe was still an idea

we can see the floor above us

with our devices and calculations

we can see the basement below us

with our devices and calculations

but what lies below that

is only found in art

there, science and art meet

and it is only with the speculation of imagination

that we can surmise the contents of the worlds

that lie below

above us

we see through the glass ceiling of the speed of light

beyond that, two floors up

we can make out the misty soup

of a multiverse, the thing of things

we can never know this thing

it lies beyond measurement

in the world of art

and you can only see it when you close your eyes

for whatever you see behind your tightened lids

is as right as can be

in an infinite multiverse

whatever you imagine is somewhere made real

below us, our tools and maths

tells us of what stuff we can possibly be made

we are intimately acquainted with its effects

if not its sight

and we have no reason to question what makes great sense

but what lies below

on the finest markings of the scale of reality

is only information

and information

is not to be touched

except with the mind

and the mind

is the source of art

let us now be specific

in the next sub-basement of reality

there are things as small as small can be

and still be knowable

it is not that there is no smaller possible size

it is that there is no way to measure it

the human concept of smallness at that level

has nowhere left to go but up

those things are the unutterable foundation of us

if you cut one, like a worm

you end up with two of the same thing

if you add two together

you still end up with one

they are not made of stuff

they are stuff

and they are the stuff of all stuff

at that level

there is no verb or noun

there is a nerb, perhaps, or a voun

but to qualify action and being

as separate from each other

is a mistake, these things

only exist

and their existence is both movement and stuff

they are the notes

that make up the chords of us

in the music of the spheres

in the symphony of the cosmos

forgive me

it is impossible to speak of such things

without recourse to various analogies

first they are motes in a basement

then they are musical notation and sound

now they are a sea

an ocean without bottom we can perceive

an ocean without surface we can survey

an ocean without coast or island

but an ocean, nonetheless,

of incomparable complexity

and on occasion

of indescribable beauty

what we know as stuff and movement

happens on the ground floor of the building

which is the middle depth of the ocean

we are gross creatures

some of the biggest things in the universe

bigger than 99.9 percent of all we know

and we can only see with our eyes

what we suppose occupies the basement

and the furniture in the sub-basement below that

is speculation only, and indirect at that

we have evidence for the small

but only supposition for the smaller

this is all we can have

we, on the ground floor,

look down and see atoms, particles, forces

when atoms, particles and forces look down

they see music

information in the form of infinitesimal strings

that vibrate, coalesce, bounce off membranes

i’m not making this up, this is

what those who investigate nature

tell me, in words and pictures

i love this, to know what i am made of

at the most fundamental levels

i am a complex chord

a sound both pleasing and incomplete

issuing from the depths

let us return to the ocean now

look one way, look another, it doesn’t matter which way

all you see is strings and membranes

in all the points of the multi-dimensional compass

*up/down, north/south, east/west*

*inside, twist, anti-twist and hole* —

inside, twist, anti-twist and hole contain further up/downs

making ten in all, and being small as they are

we can see through all of them

when we reach a hand through *hole*

it emerges *far away*, yet we feel no pain of separation

and *far away* moves fluidly

this is what it means to swim in this ocean

some strings separate from their community of strings

they cross empty space as if with intent

and twist themselves around other strings

perhaps touching, perhaps not

the empty space between them is vast

(mostly)

when they reach each other, they are a chord

two notes sounding simultaneously

a b-flat and an almost D, for instance

many do not find harmony, and move on

others seem to take joy in their harmony

at that point, they begin to move together

and matter, the hard things

is formed in all its glory

it moves, and is force

and we have a cosmos to live in

the flow of stuff

is like currents within the ocean

strings move in streams, pool in puddles

occasionally a puddle, in its many dimensions

seems to form borders, and becomes

a thing

and while its borders are fluid

seems to contain a harmony and grace of its own

in our world, this is the coming together of quanta

which form atoms, which form us

that puddle, now a thing

shares string with its neighbours, always

exchanging information with the sea around it

there is therefore no definition of a thing

for there are no two moments when it is alike

it is a concept, not a ball of certainty

there is never certainty in the ocean, only tendency

this is its great beauty and mystery

the more we stare at it,

the less we can claim to know of it

when we measure its movement

we lose track of its thingness

when we ascertain its thingness

we lose track of its movement

those tiny things,

now big enough to exist in our basement

only

one level down

continue to share information

with the ocean and with other things

thus they are made unique

atoms share with atoms, trade electrons

absorb, emit

and we sit on earth, breathe air, drink water

occasionally, when we apply the right force

(the breaking apart and joining of strings)

we release photons from electrons

and we learn to love

in the form of fire

this is called magic, and must not be refused

for in burning is life

occasionally, back down in the ocean

a puddle, having almost become a thing

begins to flow in a logical manner

this in itself is not life, but is necessary for life

when that logical pattern achieves a certain complexity

it begins to spin off other puddles

which become beings in our world

when we observe this pattern repeated

we say, that is alive, we are alive

all around us, given the right conditions

logic patterns swirl and manufacture more logic

feed on strings, slough off strings

in our world, when earth, air, water and fire

come together in a being

controlled by logic and communication

we call it life, and see magic in it

it would be easy to limit life

to what we can embrace

but it would be shallow

a planet can be a chord, like we are chords

a planet can be a coming together

of earth, air, water and fire

of logic and communication

and therefore deserving of love

and we cannot stop there

we don’t know all that can be known

of life in the primary ocean

perhaps there are patterns of logic and communication

which need no earth, or air, or water

who is to say?

we must agree on a definition:

here it is

minimum life is the presence of a functioning logic circuit

which communicates with the ocean

you may find this definition too broad

i will admit that it has fuzzy edges

however, any other definition is exclusionary

to a point beyond reason

a tree is a complex logic circuit that communicates

a paramecium is one

i am one

i breathe strings, eat strings, move strings about

in an admittedly gross fashion

i communicate with the great ocean around me

i am a region of the ocean, a thing, a living being

in that order

i have no problem with this fact

actually, i find myself endlessly fascinating

how does a puddle

know that it is a puddle?

that, above all, is the central question of humanity’s....er...questing

to understand our consciousness

we must return to our puddley nature

first, we must know that consciousness

doesn’t come with an on/off switch

there are as many levels of awareness

as there are logic circuits in the ocean

most of them are relatively simple

by comparison to us

they are not conscious, even if aware

they have no I

they do not even have an i

they simply have a “ ”

in the sub-basement of reality, all our things are strings

matter is vibrating strings

force is strings vibrating

thought is no different

thought is the movement of

combining of

decomposing of

recombining of

strings, exactly the same as matter and force

at the fundamental level, thought is a pattern

in the flow of strings in and around

a region of ocean that contains a functioning logic circuit

how, you may ask, is that circuit said to contain consciousness?

to answer that, you may have make a leap of faith

we must assume that a string

may know another string

may know other strings whose note matches the harmony of the chord

to assume this, we must take recourse to Descartes

he of the I think therefore I am

this phrase has taken a lot of heat

from people whose thinking proves that they *are*

however, I will avoid such controversy

by assuming only “I know myself to be”

i am a collection of strings

and i know myself to be

therefore, a collection of strings may know itself to be

perhaps you hate this logic

i do not have to make a leap of faith to believe it

but you may

too bad – i wish you could know yourself

the way i know myself

when a region of ocean

called a living being in our world

twists in on itself, loops back through ocean

and touches itself

so that part of its collection of strings

can see the rest of its collection of strings

it assumes consciousness

a tree cannot assume consciousness

it’s logic is not self-referential

meaning that it cannot see itself —

it has no organs of seeing

the question is then, at what point

does that twist, that loop

become self-awareness?

a fish has no closed loop

it has an interesting twist, certainly

but it’s stringy logic does not curl back

to touch itself, to see itself

a bird has a better loop

it almost touches in many birds

in parrots it may just graze itself

they are almost smart enough to see an i

not quite, pity

a chipmunk is more vital than most birds

but it has no complete loop

and so on along the food chain

things get interesting around dogs and monkeys

they have complete and beautiful loops

elegant and moving

always in flux, turning and reshaping themselves

they have string logic to create emotion

they have loops that just touch

not always and not for long, but the merest

brush stroke of string flow on string flow

their i’s are fleeting, but they have them

some more than others

possibly not Chihuahuas and Pomeranians

for which i admit a sad contempt

finally, we come to dolphins and apes

these are creatures with true loops

these are creatures whose string flow

loops and twists back on itself

they have strong i’s

but not strong enough to know

that they have strong i’s

they are magnificent and magical for this reason

existing in a pure space

that humans sometimes imagine

would be a good place to live

(this is a sad thing – the voluntary limiting of loopiness)

now humans, we have loops

twists, turns, complex motion

our regions of the ocean seethe and bubble

and our logic, complex and fast

touches itself in a closed loop

actually, not always, and in varying degrees

but as a species of string-concatenation

we are unique on our world

we have the only fully-formed and lasting loops on the planet

(notice the *on* in the above sentence)

imagine a region of string-ocean

elongated and twisted

that loops back to touch itself

that some of its strings of awareness

may see other of its strings of awareness

and you have envisioned the nature of consciousness

the birth of the I

it doesn’t stop there

while many humans are simply aware of themselves

with a true loop structure and a functioning logic circuit

there are others

who have a more complex structure

and there are as many variations on that structure

as there are such humans

their logic may wrap itself around the base circuit

touching it in many places or just a few

different parts of itself seeing other parts of itself

this is what is meant by enlightenment

enlightenment can be recognized through art

a beautiful self-referential string structure

containing a logic circuit and communicating with the ocean

is *enlightened*

like the varying levels of consciousness

there are varying levels of enlightenment

a twisting structure, in which one part may see three important parts

is more enlightened than one which sees only two lesser ones

we say “she/he is enlightened”

when discussing a great man or woman

because we see a beautiful, elegant structure

a complex series of logic circuits

communicating smoothly and widely with the surrounding ocean

a structure that sees itself in many ways

that sees its connections with the world around

in as many ways

only a few of us are so privileged

there is an upper limit on enlightenment

for a human

a structure can always grow, or become more self-referential

when every string of a region of ocean

knows every other string of that region of ocean

it has attained perfect self-awareness

highest consciousness

and maximum enlightenment

this is not possible for mathematical reasons

but that should stop no one

a string region may know other string regions

but a string itself is only information about itself

and the act of communicating with other strings

through the music of chords

changes those strings

therefore

for humans of our era

there is a ceiling

a string may only know its neighbours in the ten-dimensions

the string regions in my foot

cannot know the string regions in my belly

even if they communicate through the central processing string region

of my brain

i am not capable of perfect self-awareness

and my senses are clumsy — i can only surmise, not know

but i know this:

a loop is beautiful

a twisting loop is more so

a fountain, cascading and recursive

is more beautiful still

strings shoot straight up

curl over at the top

cascade down, every string

in its moment of contact with every other

sooner or later

the whole seeing the whole

recycling, reflecting in the pool around it

true beauty, and fashioned as much by human art

as by the ocean from which it is born

Buddha was a fountain

Lao Tzu was a fountain

I wish to be a fountain

I wish every one of my strings

to know every one of my strings

this, i acknowledge, i will never achieve

at least, not while I am tied to my meat

yet it is within the logic of my circuitry

to wish for the highest

to be god

sue me if you don’t like that

beauty does not end with the individual

and enlightenment does not end with consciousness of self

great enlightenment calls for a smooth integration

with the greater ocean

great enlightenment requires knowledge of place

environment

and all the functions of strings

again, this is not possible

but that shouldn’t stop us from trying

all of this begs the question, then

what is death?

the answer is that death is the destruction

of the logic circuit:

when the flow of strings in the circuit is broken

the person dies —

what is a more interesting question

is “can our regions of ocean

maintain their integrity

when the body is gone?”

many logicians will dismiss this question

as the longing of the being to flow forever

these people are wrong to do so:

we know very little of how the ocean of strings flows

and what we know is known through art

perhaps the flow of strings can adjust itself

and remain self-referential

perhaps, the logic of the circuit may be absorbed

into a larger pattern

or recycled

the only truth we know

is that we don’t know the truth

anyone, on either side of the question

who claims to know the answer

is a liar or mistaken

and probably wishes your allegiance or your money

others simply do not see poetic truth as truth at all

many of these people have perverted logic circuits

that do not communicate freely with the ocean

through the medium of thought

they are weak and inelegant

we are free to dismiss them, and we owe them nothing

i can imagine

string regions of incomparable beauty

fractals, abstract sculptures, mountains

when these things contain a logic circuit

they are the highest ideals of the cosmos

we should be proud

but not too proud

we are not alone, after all

there are many regions of the ocean

which are populated with sub-regions of the ocean

which are larger and more beautiful than us

they may have had longer to grow

they may have richer physics on which to dine

they may have altered their fundamental realities

because they can manipulate strings more directly

we cannot manipulate our strings directly

at least, not in the way we wish

we cannot lift objects with our minds

or transmit thoughts without writing or speaking

or wish our ways to financial success

we use our brains and limbs

we create things which can manipulate finer things

we have learned to create things powerful enough

to investigate quantum phenomena

and we are beginning to learn

to manipulate those phenomena

but we are maladroit and large

we cannot move other regions of ocean

with simple desire

we are trying to do needlework

while wearing oven mitts

eventually, we will replace the oven mitts

with string manipulators

and we will discover then

that our thoughts

were already there

we just didn’t know how to use them

i must repeat this:

in an infinite multiverse

there is no difference between imagining something

and it being out there somewhere

if we can create an image in our minds

that is, a juxtaposition of strings

then the universe can do so as well

there is no clear border

between the great *out-there*

and the great *in-here*

they are equally valid

and equally likely

which is to say that they are precious and impossible

granted, our mind-places are often fuzzy

out of focus around the edges and lacking in detail

this means little

a puddle of strings

floating in an ocean of puddles of strings

is equally fuzzy, thank god, thank me

i manipulate the world, in my fashion, with my mind

my thoughts change things

the problem is that the effects are too subtle

i examine photons with my eyes

whole atoms with my skin

patterns of molecules with my ears

these things are vast

as big to a string

as the universe is to you

that is why analogy and art

are the tools of the learned

art has two aspects:

creation of and experience of

creation of art is, like imagination

string manipulation

it is much more effective to manipulate the world

with my hands and voice

than with wishes whose shape i cannot see

perhaps when i achieve the enlightenment of godhood

i will be able to accomplish my desires

without the use of hands

in the meantime, if i must wear oven mitts

i will create the most elegant structures i can

this poem is an example

i have manipulated the string ocean

with my thoughts

my quanta

my atoms

my hands

with my self-referential looping logic circuit

that wishes to be a fountain

in perfect communication with an ocean

and I am satisfied with that

for now.

The Second Paradigm

the way

that cannot be named

is the current in the sea of strings

existing

everywhere and everywhen;

what are we to call this current?

the sea of strings

is as much a sea of information

as a sea of stuff

there is no difference at that fine a level

and as such

it may be termed

a Computer.

the sea of strings

therefore created the universe

as a program

the universe

being a program

therefore created subroutines

in order to carry out aspects of its work

stars, galaxies and other objects

life

life

in turn

created a new layer of subroutine

this one founded on intangibles

a way of organizing, categorizing and

valuing information

and more importantly

to improve the program

through the assessment of aesthetics:

us

we

created the computer

in order to carry out subroutines

within our own subroutines

the computer, therefore

is an extension

of us

life

the universe

the sea of strings

now tell me

do you fear the future?

just as we are an extension

of all that came before us

the computer is an extension of us

and due, eventually

to be incorporated into us

as we are due to be incorporated

into the sea of strings

no string is ever lost

although the music it makes changes

our string flow

that is, our subroutines of the cosmic program

will be enhanced

the program will have processed

another step toward completion

we, as mere meat

are due to be replaced

within the millennium.

we evolve,

life evolves,

the universe evolves,

the sea of strings nears its goal

i am not saddened by this fact

war, violence, ecological destruction

these are bugs in the subroutine

that is us

and will be rectified

perhaps i didn’t hear you right

did you ask

what is the purpose of this program?

the purpose of this program

is the purpose of your life:

the way

that which cannot be named

is the current of string flow

that is organized into a program

that is organized into us

to reprogram our own string flows

to align with the great flow

is to find the way

the reason it cannot be named

is that naming it is to impose the limits

of our subroutines

on the program itself.

no matter what you call it,

you will be wrong.

therefore,

in order to grasp the ungraspable

be joyously wrong

and you will be as right as you can be.

i am wrong

as i am joyous —

the way

that cannot be named

is called Fun.