For The Love Of Gravity

Science Poetry

By Steve Cavin

Dedication

To Patrick and Mimosa, whose love of science encouraged my love of gravity.

To The Reader

In the 17th century, the Age of Enlightenment, great scientists and philosophers created the discipline of empirical science. Unfortunately, in the process, they split the conscious world into the rational and the intuitive, creating a schism that has endured to this day.

There are many ways to look at the world, but there is only one world. Let us reconcile Art and Science, and become whole once more.

Matter and Energy

Buoyancy

When I set out,
My boat was empty.
The sea was flat,
And the wind was steady.
The weight, of water displaced,
Bore me easily across the waves.

My lightness of being
Faded, as failure,
Injury, and loss,
Accumulated in the boat.
The gunnels rode low in the water,
And sadness washed over the side.

The time came,
When I could no longer bail,
Not enough, anyway.
The boat filled with tears,
And awash in sorrow,
I sank, into the depths.

The boat and I,
Denser than the water,
Came to rest on the bottom.
Looking up from the darkness below,
I saw life pass by, on the surface,
Pressing down upon me.

Only my breath,
Lifted by the surrounding sea,
Could reach those above.
Lungs filled with inspiration,
Feet planted against the bottom,
I launched myself upward again.

Free of the water, for a moment,
I emptied the boat,
Of what I'd brought with me.
High and free, now,
Buoyed by nothing but determination,
I reached the other shore.

Escape Velocity

The sky above, an endless blue.
Just a boy, I peered upward keenly,
From the ground. Trying hard to see
Beyond the clouds.

The birds flew over,
And they looked down at me.
Oh, to be like them,
And to visit the farthest reaches of Heaven!

I jumped into the air, but didn't get far.
I threw a baseball, and followed its parabolic return.
I shot an arrow into the sun, which nearly vanished,
But fell to Earth again.

As I grew older, I never forgot,
The free, open countenance of space.
I dove off a cliff, rode a motorcycle, ran downhill,
But did not outrun the confines of gravity.

Thirty-two feet, per second, per second,
Downward, always downward.
Twenty-five thousand miles per hour,
Just to break free.

One day, perhaps,
I'll board a ship for outer space,
Look down upon my earthly home,
And attain escape velocity at last.

Fire

Fire
Freeing what is already there.
The energy that binds,
Inherent in the structure.

Wood burns
And, as it does so, destroys itself.
Call it destruction, or transformation.
What's the difference?.

The stars burn also.
Though nuclear fusion,
Is different than chemical combustion,
Both fires will surely, burn out.

Before the fire,
A separate thing, an identifiable object.
After the fire,
Ashes, to scatter upon the wind.

But, during the fire,
Warmth, light, energy,
Radiating, impartially,
Spreading the possibility of change.

Stand too close, and you will get burned.
Too far away, and you may be frozen.
Life itself, requires, demands,
Just the right place.

Hiroshima

On August 6, 1945 at 8:16 in the morning,
Two plus two equals four.
A 15-kiloton atomic bomb, called "Little Boy",
A squared plus B squared equals C squared.
Exploded over the Shima Surgical Clinic in Hiroshima, Japan.
The area of a circle equals pi times the radius, squared.
Everything within a mile of the explosion was destroyed.
Velocity equals distance divided by time.

Creating a ground temperature of 7000 degrees, Fahrenheit,
Gravity equals 32 feet per second per second.
Generating surface winds of 980 miles per hour.
Current equals voltage divided by resistance.
Gamma and neutron radiation reached the people below.
Energy equals mass times the speed of light, squared.
Seventy thousand human beings died, instantly.
Think about it.

Infinite Frequency

The frequency of green light,
Is six hundred teracycles per second.
The frequency of FM radio,
Is ninety megacycles per second.
The frequency of the "A" below middle-C,
Is four hundred forty cycles per second.

The frequency of my voice,
Is one hundred cycles per second.
The frequency of my brain,
Is twenty cycles per second.
The frequency of my heart,
Is one and a quarter cycles per second.

The frequency of the tide,
Is two cycles per day.
The frequency of the moon,
Is one cycle per month.
The frequency of winter,
Is one cycle per year.

We have the notion,
That some events are singular,
One time only.
But what is the frequency,
Of a revolution,
Or the birth of a prophet?

The Milky Way galaxy,
Turns 'round every two hundred-million years.
Even the life of a star,
Has its cycle.
Perhaps, the universe itself, is breathing out,
And then breathing in again.

When considering eternity,
An infinite span of time,
The frequency no longer matters.
If time is forever,
Is it likely, or even possible,
That this has never happened before?

In The Course Of Time

What do you see?
What do you feel?
What do you think?
Are you here, now?

We think that time flows,
And that those demons,
Called the past and the future,
Actually exist.

Sit still, and be quiet.
Look around you, and within you.
Time isn't moving,
Your consciousness is.

If velocity equals distance divided by time,
Then time must be distance divided by velocity.
Each is dependent upon the other two,
And time is but an accounting of the changes.

Just as marks on a ruler,
Give length and direction to an object,
So too, the ticking of the clock,
Gives separation and sequence to experience.

Neither events, nor moments, nor things,
But only memories accumulate.
And memories cannot remain,
In the course of time.

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Light Speed

I waited anxiously,
As you drew near,
But before I really saw you,
You were no longer here.
Two hundred thousand miles a second,
Six trillion miles a year.
One and a quarter seconds from the moon,
Eight minutes from the sun, my dear.

It's much too hard,
To love at speeds like this.
To open up my heart,
Or even steal a kiss.
How can anyone
Keep up with you?
If I tried to slow you down,
You'd turn to something new.

You wave as you pass by.
Is it you, or just the wave I see?
Too fleeting to hold,
So brilliant, and so free.
Hurtling through space,
Bearing energy, and light,
Tiny, glowing packages,
Quantum pulse against the night.

I thought I saw you
In that hot red dress,
The green, grassy hills,
Or the blue sea crests.
But that was just a reflection,
Partial, at best.
How can I take your hand,
When you never come to rest?

Pendulum

Up.
The acquisition of power,
Of potential energy.
You look the same,
Only higher.
Getting ready
For the fall.

Down.
Slowly, at first,
Gaining momentum,
Losing position.
Too late now,
To hold on.
Growing heavier,
Headed for the bottom.

Up.
Testing the strength,
Of the single arm,
Anchored at the fulcrum.
Curving upward,
Against gravity.
Getting back,
Nearly all that was lost.

Down.
Thought you had it,
Only to find
It slipping away.
No malice,
Just a trade.
Motion and inertia,
Changing all the time.

Up.
Slowing to a stop,
For a moment, ah!
But you can't stay here.
Barely time to catch your breath.
The pause
Before the plunge,
Obedient to the call of gravity.

Down.
Finally, you see
Both sides of the game.
Winning, and losing,
Now and then.
To resist change,
A hopeless struggle.
That is not the way.

State Change

The train station is quiet,
As the day gains momentum.
A few strangers wander aimlessly
In the cool morning air.

The first commuter train,
Packed tightly with human particles,
In fixed rows, like a solid block,
Hurtles along an underground track.

Several trains arrive at once.
Having reached the melting point,
The cars pour out a flow of feet and faces,
Loosely held together by crowd pressure.

Emptying into the vacuum of the station
They spread out, each taking their own path,
Filling the available space.
A gaseous cluster of humanity.

Surrounded by electron clouds
Of hair and scent and personality,
Nuclei approach proximity,
And they react with each other

Neither valence, nor coulumbic forces
Can explain the attraction or repulsion.
More likely fate, or attitude,
Or beauty is to blame.

Surface Tension

I look at you
And I see the surface.
Not necessarily the one I expected,
Definitely not the one I want.
My senses feed my perception,
And my mind forms a judgment.

Instantly, or nearly so.
It may have taken you twenty years,
To become what you are.
But I've got my answer,
In less than twenty seconds,
And my answer is the one that counts.

If you drop a needle,
Into the water,
It will sink, instantly.
If you lay the needle carefully,
On the water,
It will float freely on the surface.

Whether by molecular forces,
Or social prejudice,
We form a boundary layer.
A sticky surface tension,
That must be overcome,
Before anything can penetrate.

A surface so thin,
That we hardly notice it.
A barrier so constant,
It becomes habitual.
Rendering ourselves incapable,
Of really seeing anything.

As it is with all defenses,
We are at once protected and imprisoned.
Knowing that we can't have it both ways,
We strain to allow what we can,
Only to be left wondering,
What we actually missed.

Numbers

Dissonance

Two notes, five-fourths,
Four half steps apart,
Cheerful major third.
Two notes, three-halves,
Seven half steps apart,
Strong perfect fifth.

Nine half steps, five-thirds,
Winsome major sixth,
The beginning of dissonance.
Ten half steps, nine-fifths,
Blue minor seventh,
A little rough, but tasty.

Eleven half steps, fifteen-eighths,
Soft, aspiring major seventh,
Beginning to dissolve.
Fourteen half steps, nine-fourths,
Misty major ninth,
The very outer edge.

Two half steps, nine-eighths,
Edgy major second,
Irritating, but bearable.
One half step, sixteen-fifteenths,
Anguished minor second,
As bad as it gets.

It's not distance, or closeness,
That creates dissonance,
With notes or people.
When it gets tight,
You interfere with each other,
No love, no balance.

Close enough to be together,
Room enough to be apart.
To hold, not overcome.
To share, yet remain whole.
To complement, not compete.
There, is harmony.

Fibonacci Haiku

A
Single
Word becomes
Many, and it grows,
Becoming a whole idea.

The idea brings new thoughts, encompassing the past,
Building upon the impressions,
Of those who gave their
Voice, but now
Are gone.

One,
Can only
Think for one.
But many can, at least,
Combine their experiences.

Once recorded, an idea lives, self-sustaining,
Carried upon the river Time,
Lending its power,
As needed,
To all.

So,
The young
Believe, that
Their thoughts are brand new,
Made fresh, on the spot, from nothing.

But a tree is rooted, in the soil from which it sprang.
Its branches, though many, come from
The same trunk, the seed
Planted long
Ago.

Improbable

Flip the coin, come up "heads",
Fifty percent of the time.
One coin, two faces,
Exactly fifty percent.

Roll the dice, get a seven,
Sixteen and two-thirds percent of the time.
Six ways to make seven, thirty-six combinations,
Sixteen and two-thirds percent.

I wonder what the chances are,
If I ask you to have dinner with me,
That you will say "yes".
Maybe, maybe not.

Spin the wheel, land on black,
Forty-eight point six five percent of the time.
Eighteen black, thirty-eight slots.
Forty-eight point six five percent.

Pull the trigger, and you're dead,
Sixteen and two-thirds percent of the time.
One bullet, six chambers.
Sixteen and two-thirds percent.

What were the odds,
That you would be born?
One chance, one billion sperm,
One hundred percent.

Infinite Loop

In computer science,
The loop is a basic construct.
At the beginning you put the initial state,
At the end you put the terminating condition,
And in the middle, you put something,
That you'd like to do, over and over.

This saves a lot of time and work,
As it allows one,
To repeat oneself,
As many times as needed.
To repeat oneself,
As many times as needed.

The loop can be used
To count things,
Iterate through a list,
Build a complex structure,
Or simply to wait,
Until something changes.

Ah, but that is where
The danger lies.
For, while in the loop,
The program can do nothing else.
And if the loop is tight, the process
Will consume the entire machine.

A program loop will continue
Until the terminating condition is met.
And if the condition is never met,
It will remain in the loop,
Until the process is killed,
From outside.

This infinite loop behavior,
Doing the same thing,
And nothing else,
Over and over,
Waiting for conditions to change,
Is not limited to computers.

Outliers

For those
Who were incapable of being,
Within the bell curve track.
For those
Who took the silver spoon,
And chose to give it back.

For those
Who were inexplicable, unpredictable,
Two standard deviations from the norm.
For those
Who, given the application,
Wouldn't fill out the form.

For those
Who didn't have a Z score,
And were neither median nor mean.
For those
Who, pressed for true or false,
Chose something in between.

For those
Who, born to the captain's chair,
Found they couldn't stay.
For those
Who, though statistically impossible
Still did it anyway.

For those
Who abandoned the top two percentile,
To dance in the desert, all night.
For those
Who, though deviant by random sample,
Still managed to delight.

For those
Who knew the best things,
Were the ones they made themselves.
For those
Who, knowing what was expected,
Expected something else.

Past Zero

When children count,
They count "1, 2, 3, 4."
They don't start at zero.
When starting a race,
They count "3, 2, 1, go!"
They don't end at zero.

Zero isn't a quantity,
It is only a place.
If you have zero of anything
You have nothing at all.
On the way to somewhere else,
Something that cannot exist.

Add zero to something,
Subtract zero from something,
It makes no difference!
Multiply zero times something,
Divide zero by something,
It really doesn't matter!

Zero is nowhere.
Zero is nothing.
Zero of anything,
Is just the same.
Zero has no inverse,
Is neither large, nor small.

Zero is the same,
In any direction.
Zero squared, is zero,
The square-root of zero, is zero,
And division by zero,
Well, who knows what that is?

Maybe zero is what you have,
Before you have anything.
Maybe zero is what is left,
After everything is taken away.
What a strange, mysterious thing,
To appear only where nothing is.

Precision

The square root of two
Is supposed to be,
One, point four, one,
Four, two, one, three.
The average lifetime,
Is seventy years.
Acres of fresh air,
And gallons of tears.

It is pointless to measure
To greater precision
Once you know, well enough
To make a decision.
Beyond some point
Good enough is fine
You just need to know
Where to draw the line.

A bullet that missed
By the width of a smile,
Hurt no more, than the one,
That missed by a mile.
The gift of yourself,
To someone in danger.
Or a cup of cool water,
To a thirsty stranger.

How high is the mountain?
How deep is the sea?
How grand is the canyon?
How strong is a tree?
How much do you love me?
How blue is the sky?
How long is forever?
How good is your eye?

Rarefaction 44

Rarefaction,
Chain reaction,
Blood transfusion,
Cute Venusian!

Tooth extraction,
Time contraction,
Mild contagion,
True Pelagian.

Catalytic,
Cataleptic,
Antiseptic,
Anesthetic.

Astrophysics,
Gun ballistics,
Subatomic,
Ergonomic.

Exothermic,
Epidermic,
Effervescing,
Sterile dressing.

Small incision,
Statistician,
Evolution,
Flesh contusion.

Transformation,
Sublimation,
Cerebellum,
Ancient vellum.

Strange attractor,
Clotting factor,
Cloud striation,
Perturbation.

Interference,
Slit appearance,
Quadrupedal,
Tetrahedral.

Surface tension,
Spring suspension,
Tidal motion,
Pit implosion.

Copper nitrate,
Carbohydrate,
Quantum action,
Rarefaction.

The Cost

The price, of anything,
Depends on how much someone wants it.
The cost, of anything,
Depends on how much someone gave,
To make it happen,
And to bring it within your reach.

The price can dance, wildly
Up and down, chasing
Supply and demand.
But the cost,
Is fixed on reality,
The limits of time and energy.

So when you take the labor
Of another man's hands,
But you give him back,
Less than it cost,
You cheat him of his lifetime,
And share in his demise.

People, unlike tables and chairs,
Are not manufactured.
People, despite their circumstances,
Do what they can to survive.
They are not to be bought, or sold.
They belong to themselves,

The value of something
Depends on what it's good for.
You cannot create wealth,
Any more than you can create the earth,
Upon which you stand, or the people,
Upon which your very life depends.

So when you speculate,
On the price of a commodity or service,
Remember the cost
Was born by another.
Who will pay the cost,
When they have gone?

Mind and Body

Anthropology

Someone made a sound,
And someone repeated it.
Someone made a face,
And someone understood.
Is that where language came from?

Someone swung a stick,
And broke something.
Someone threw a stone,
And broke something at a distance.
Is that where weapons came from?

Someone had some sheep,
And someone else had more.
Someone made some scratches,
And someone else counted them up.
Is that where numbers came from?

Someone told a story,
And someone drew some pictures.
Someone put the pictures with the story,
And someone copied them onto clay.
Is that where writing came from?

Someone wished for something,
And it happened.
Someone feared something.
And it happened.
Is that where religion came from?

Someone was lost,
And and someone found them.
Someone was sick.
And someone took care of them.
Is that where love came from?

DSM Forever

Because I am afraid,
You would say I am anxious
Or, even worse,
That I have a case of anxiety.
But I am afraid,
Just afraid,
Because I have no one
To talk to.

Because I am discouraged,
You would say I am depressed.
Or, even worse,
That I have a case of depression.
But I am discouraged,
Just discouraged,
Because I tried so hard,
And nobody noticed.

Because I am distracted,
You would say I am inattentive.
Or, even worse,
That I have a case of attention deficit.
But I am distracted,
Just distracted,
Because everyone is shouting for my attention,
And nobody cares about me.

Because I am different,
You would say I am disturbed.
Or, even worse,
That I have a case of mental illness.
But I am different,
Just different,
Because I see things from my point of view
And I have the courage to say so.

Fallacies

Beware the Red Herring
That doesn't apply.
One fact supports another,
'Til you look it in the eye.
Beware the Bandwagon Appeal
Join with all of us!
Everyone agrees, and if you don't,
We'll kick you off the bus!

Beware the Scare Tactic
We're in danger, no doubt.
A monster's gonna getcha,
If you don't watch out!
Beware the Ad Hominem
The personal attack.
It's not truth, or logic,
But morals they lack!

Beware the Non Sequitur
That which doesn't follow.
What good is a connection,
When the reason is hollow?
Beware the Slippery Slope
There's no stopping, once it starts.
The tendency for Evil,
In other men's hearts.

Beware the Either/Or
There are just two choices.
We can simply ignore,
The lesser voices.
Beware the Straw Man
He wants God banned from schools.
He'll give everyone an "A"
And throw out all of the rules.

Beware the False Need
We must avoid the drought.
Get with the program,
Or learn to do without.
Beware the Faulty Analogy
One thing's like another.
Shutting down the corporation,
Is like murdering your mother.

Beware Guilt By Association
Evil is contagious.
To judge her and ignore her friends,
Would simply be outrageous.
People lie, in many ways
Listen carefully
Learn to pay attention,
Because freedom isn't free.

Family Recipe

Oxygen, 65 parts per hundred.
Add her mother's smiling eyes,
And her father's strong chin.
Carbon, 18 parts per hundred.
The gift of dance,
And an ear for music.

Hydrogen, 10 parts per hundred.
Add her aunt's curly hair,
And her uncle's skillful hands.
Nitrogen, 3 parts per hundred.
The gift of patience,
And a love of animals.

Calcium, 1.5 parts per hundred.
Add her grandma's smooth skin,
And her grandpa's keen vision.
Phosphorus, 1 part per hundred.
The gift of rhyming,
And a sense of humor.

The last part in a hundred?
A bit of this
And a bit of that.
Twenty-three chromosomes,
From each side,
And a pinch of pure magic.

A little random kindness,
And something special,
That is hers alone.
Mix well, in a safe place,
And keep warm, at 98.6 degrees Fahrenheit,
For 42 weeks.

And, when she is ready,
Give her food and water,
Shelter and encouragement,
Rules and guidance,
Attention, and listening,
And all the love you have.

In The Family

It started with
Just the two of us.
Just a couple of Eukaryotes,
Out on a Friday night.
Mammalian dating behavior,
Maybe dinner and a movie.

The breeze blew lightly
Through the Sapindaceae,
I gave her a single Rosaceae at the door,
And the Poaceae, green, and freshly cut,
Smelled great as we climbed into the car,
For the ride downtown.

I was thinking perhaps a steakhouse,
A hot, juicy, hunk of Bovidae.
She preferred grilled Phasianidae,
And a nice Caesar salad.
So we went for Italian food,
With fermented Vitaceae, to drink.

We were late getting to the movie.
She stopped to feed Columbidae in the park.
A light rain, a short walk.
I held her close, in the dark.
Her perfume smelled like Oleaceae.
With a hint of spice.

On the way to the car,
We met a stray Canidae,
But left him to his alley,
And drove home, swerving to miss the Sciuridae.
The Noctuidae fluttered on the porch.
As I kissed her goodnight.

Home again, in my cave,
I flopped on the sofa,
After letting the Felidae out.
I peeled a Rutaceae,
And flipped on the television,
A happy Hominidae at last.

Made To Order

Staring at the back of my hand,
I see skin, hair, wrinkles,
The color and texture of blood vessels,
Proportioned span of thumb and finger.

Reaching deeper,
I imagine hemoglobin flowing,
Flexing layered muscle tissue,
And the articulation of bone and cartilage.

The tortuous folding,
Of peptide chains and hydrogen bonds,
The ultimate consequence,
Of well-ordered amino acids.

Cells too small to see,
Making seeing happen.
Signals too small to notice,
Making noticing possible.

Systems within systems,
Pulling what is outside in,
And pushing what is inside out.
Life at the pace of a heartbeat.

Echoes lodged in my memory.
The warm wetness of a kiss,
The strain of a heavy suitcase,
And a child's trusting grip in my hand.

Mistakes

Have you ever been wrong?
You were so sure.
Carefully considered all of the relevant data.
How could you make a mistake like that?

Have you ever blamed someone else?
They had step-by-step instructions,
It was all right there in the manual.
How could they make a mistake like that?

Have you ever come up short?
You had adequate time and training,
High school, college, graduate school.
How could anyone figure out something like that?

Mistakes are not mysterious.
Mistakes are not rare.
In fact, unless you do nothing at all,
Mistakes will happen, from time to time.

The fear of making a mistake
Is like the thorn of not knowing.
We think we can overcome it,
If we try a little harder, or think a little more.

Instead of thinking of a mistake,
As an enemy to be avoided.
Think of it as a stairway, a set of steps,
Leading to the answer you seek.

Need An Enzyme

You're in great shape,
Curves in all the right places.
There's definitely an attraction,
But we need an enzyme to get things going.

It's like we're made for each other,
Complement each other perfectly.
We've got excellent chemistry,
But we need an enzyme to get things going.

Phosphorous and NAD,
FAD and riboflavin.
Close enough, it's time to party!
But we need an enzyme to get things going.

I can see you like me, too.
Basically, the pH is just right.
No time to get hot and bent out of shape,
But we need an enzyme to get things going.

ATP and citric acid cycle,
Electron transport chain is pumpin'.
The energy is incredible.
But we need an enzyme to get things going.

Let's not be allosteric!
We've gotten beyond our inhibitions.
The product of this reaction will be outta sight!
But we need an enzyme to get things going.

Perfect Nonsense

The Earth is the center of the universe,
And everything in it,
Is composed of earth, air, fire, and water.
The atom cannot be divided,
And diseases are caused,
By demons, or unbalanced humours.

There is but one God,
And his name is Yahweh, or Allah, or Jesus.
If you do not believe this,
You will burn in Hell for all eternity.
Unless you confess, and repent your sins,
Or purchase absolution from a priest.

The earth is flat,
And the moon is made of green cheese.
You can't take the square root,
Of a negative number,
And nothing can exceed,
The speed of light.

A heavier object,
Falls faster than a lighter one.
Smoking doesn't cause cancer,
And one must eat meat to survive.
A man can't run a mile in four minutes,
And a woman can't fight in battle.

The world was created,
About six thousand years ago.
And it is not evolution,
But the hand of an unseen creator,
That shaped every living thing,
According to His divine plan.

The things you hold dear,
Will fail, one by one.
That which is certain now,
Must eventually prove false.
Today's facts and fairy tales,
Have no place, on time's distant shore.

Touch Of Fear

Fear!
Barely a spark at first,
Rises slowly up my spine.
Growing, from a tiny contraction,
To a Full Nelson lock,
On my neck and shoulders.

Basal ganglia
Nerves, brain, and temporal lobes.
Sodium and potassium,
Dancing back and forth.
In and out.
Sympathetic nervous system.

I can't move!
I can't feel!
Even my sense of touch
Is numbed by this spectre,
This ancient crippler
Of mind, body, and soul.

Amygdala, old snake brain,
Reactive calculus,
Fight or flight.
Acetylcholine, norepinephrine, adrenaline,
Quickening my heart,
Slowing my digestion.

Somewhere in my brain,
The word goes out.
The dynamic balance shifts.
The threat, dimly perceived,
Almost real,
Impinges itself upon my consciousness.

Sometimes I fail to notice,
That I am tightening up,
Pulling back, and inward.
How ironic to shrink,
From the imagined enemy without,
Toward the real enemy within.

Water and Stone

I am water and stone,
Ocean and earth,
Blood and bone,
For what it's worth.

I am crimson and green,
Violet and yellow,
Hidden and seen,
A playful fellow.

I am fuzzy and fine,
Crazy and calm,
Forest and pine,
Desert and palm.

Life and death
And flowers in Spring,
The baby's breath
And the scorpion's sting.

I am the cut
And the blade that makes it,
The muscle and gut,
And the one who takes it.

Your dearest friend
And oldest lover.
Until the end
When the play is over.

A spark and a kiss,
Unreal and true,
All of this
I am for you.

Earth and Sky

At Altitude

At sea-level.
Plenty of food, plenty of water,
Plenty of air to breathe.
Birds in the sky, and fish in the sea.
Plants and animals everywhere,
At sea-level.

At four thousand feet.
The air is drier.
The heat is hotter, the cold is colder.
The oak, maple, and poplar,
Give way to the juniper and pine.
At four thousand feet.

At eight thousand feet.
The air is thin, and dry.
Headaches and nosebleeds, now.
And difficulty running uphill.
The trees stand farther apart,
At eight thousand feet.

At twelve thousand feet.
No cattle, no pets.
The trees have all gone. The soil
Exposes the rock beneath.
The water runs clear,
At twelve thousand feet.

At sixteen thousand feet,
Stony gravel and frozen rivers,
Nothing grows here.
I can almost touch the sky.
The sunlight screams at daybreak,
At sixteen thousand feet.

At twenty thousand feet,
Some air left, but not enough.
I cannot run, uphill or downhill,
But only plod, leaving life behind,
With every breath, with every footstep.
At twenty thousand feet.

Big Bang

About fourteen billion years ago,
There was a big bang.
Something, appeared from nothing,
And the universe kicked into existence.

No one knows where it came from.
No one knows how it happened.
I don't know what it means,
Or where it's going.

A moment ago,
I had a thought.
Something appeared from nothing,
And a whole, new thought emerged in my mind.

No one knows where it came from.
No one knows how it happened.
I don't know what it means,
Or where it's going.

True creation,
The ingression of novelty,
Isn't caused, it just happens.
It happens more often than you think.

By studying energy, and motion,
Light and dark matter.
We may come to know what the universe is.
But "why?", is a more interesting question.

Black Hole

When too much matter,
Comes together in one place,
It collapses, under its own weight,
And becomes a black hole.
Everything it once was,
Becomes trapped, by gravity,
So tight that nothing
Can ever come out again.

Sometimes, when I was young,
Something hurt me so badly,
That I contracted, trapped within myself.
Things I couldn't handle,
Feelings, too painful to bear,
Thoughts, too ugly to allow,
Hovered on my event horizon,
And disappeared into the darkness.

Occasionally, I looked inward,
And saw what I wanted to see.
The black holes exerted influence,
But did not respond to light.
Some were stronger than others,
Some more disruptive.
But size doesn't matter,
When looking at a black hole.

A black hole, not only keeps its secrets,
But obscures what is behind.
Alas! The vast landscape,
Is partial, incomprehensible,
When making sense of things.
Staring into the yawning maw,
Didn't you ever wonder,
Where a black hole goes?

Dislocation

Here I am, Lord!
Near the edge of the Milky Way galaxy.
On the third planet, orbiting Sol,
A mid-sized star, approaching mid-life.
Nitrogen-Oxygen atmosphere, zero to forty centigrade,
Two-thirds liquid water on its surface.

Northern Hemisphere,
Western continental plate.
The eastern shore,
Of the largest ocean.
The inside edge of a large bay,
Rocky breakwater, at sea level.

Semi-intelligent humanoid,
Two hands, two eyes, two feet.
Just one of many,
Multi-cultural, multi-racial,
Multi-lingual madmen.
Carbon-based life form.

Sitting on a gray bench,
At the bus stop.
Next to the bag lady,
With the wild, dirty hair.
Reading a book of poetry
That I wrote myself.

Thinking about life,
Mine, and others.
Thinking of what it meant,
After all these years.
Thinking of you.
Here I am, Lord!

Falling Stone

The rock waited, balanced perfectly,
On the sloping talus.
And watched the snow, wind, and rain,
Come and go, and come again.

Ninety-two years, admiring the view
Of the canyon below.
Exerting a force of nine hundred Newtons,
Toward the center of the Earth.

Going nowhere, under the influence,
Of thirty-two feet, per second, per second.
Thwarted by a scattering of pebbles,
Perched upon the angle of repose.

Now a trickle, or perhaps a beetle,
Disturbs the status quo.
It's time for a change,
And the rock begins to tumble.

Down, down, always and ever downward,
Bouncing, bashing, crushing on every impact.
Accelerating, in jerks and spins,
With sprays of dust and grit.

Abruptly, coming to a stop.
Piled against the uphill side,
Of a mediocre boulder,
It awaits the next adventure.

For The Love of Gravity

Amidst dust and stars,
Spinning, swirling in the dark,
A nuclear flame is kindled,
And a light sparks the heavens.

Light years from here,
Far away from me.
Yet the universe and I,
Are here, and now, and one.

An explosion so powerful,
That space-time came into being,
Uncounted discreet masses,
Pulling on each other's tail.

Planets orbiting stars.
Stars orbiting galaxies.
Clusters of galaxies, dancing across
The vast, empty floor of space.

Each molecule of my body,
A galaxy of elemental atoms.
Each atom, a solar system,
Of sub-atomic particles.

All together, falling endlessly,
Falling freely toward each other.
The unseen hand of gravity,
Ties the laces of the cosmos.

Moaning Wind

Just outside, at the roof's edge
The spring wind pushes and shoves,
Over or around, finding its way.
Moaning, sighing, weary perhaps,
Of the exchange of pressure
And the constant comings and goings.

The moaning comforts me today,
Though I remember, still
A frightened little boy,
His head buried beneath the covers,
Ready for the whole house to come down,
Or the wailing of a banshee, at least.

The moaning wind, a play repeated.
What I hear is no different than,
Another heard a thousand years ago.
And now, here, his blood,
Stands and bears witness to
The same play, the same sound.

Wind seems wilder in the dark.
I can no more stop the wind,
Than halt the passage of time.
But sheltered here, snug and dry
I can pause, for a moment,
And take notice of its passing.

Ninety-three million miles away,
Yet close enough,
To drive the wind here and there.
Nearly limitless power.
Invisible, only to be seen
When it brushes against something.

Some think the wind is just air.
They've missed the point entirely.
To cross the vast emptiness of space,
And give the atmosphere life and force,
Is like the unseen hand of a kindly elder,
Giving our swing a push.

Northern Star

Brightly you shine, Polaris,
Still and ever present.
You rise above me,
As I rise above the equator.
Seasons and constellations circle 'round you,
Yet you never move at all.

I lost you once, Polaris.
Over the sea, on the way to Australia.
As I sailed farther and farther south,
You dipped closer to the murky horizon,
Until you disappeared, your Dipper,
Pointing below the edge of the sea.

Great and beautiful, Polaris,
What curious scheme or playful whim,
Brought the living, spinning Earth
To anchor its axis upon you?
Leaning toward you, you and only you,
Never to stray.

There is a South Pole, Polaris.
But its zenith, your nadir,
Contains no single star, no chosen one,
Upon which to shower glory and praise.
The Southern Cross is meager compensation,
For the loss of such a reliable friend.

Ursa Major and Ursa Minor, Polaris.
Your Dipper points the way.
Follow its edge, straight and true.
To the one bright star, that never moves.
Part white, part blue, stark and alone,
Against the cold blackness of space.

Every hour turns your Dipper, Polaris.
Fifteen degrees, no more, no less.
This celestial clock, this nightly parade.
A sure guide, a beacon, a friend,
Ever willing to show the true way,
To the land of ice and snow.

Out Of Order

The tree stood very tall,
Above the forest floor.
Lungs of the earth, home to the birds
Living wood, reduced to lumber.

The river rolled steadily along,
Between the shoulders of the hills.
Veins of the earth, home to the fish.
Flowing water, reduced to irrigation.

The grass swayed lightly,
Beneath the passing breeze.
Skin of the earth, home to the insects.
Fertile soil, reduced to landscaping.

The canyon cast a cooling shadow,
In the afternoon sun.
Sanctuary of the earth, home to eagles and rattlesnakes.
Holy monument, reduced to a playground.

The ocean swelled and tossed,
Riding the great tidal forces.
Sweat of the earth, home to the whale.
Cleansing tears, reduced to garbage dump.

The atmosphere itself,
Wrapping us in a life-giving embrace.
Heaven on earth, home to all life.
Sustaining bubble, reduced to a flight path.

Rising Sea

Barefoot, by the rising sea,
I breathed in the air, fresh with salt and mist.
The surface gathered, rose, curled,
Then fell, collapsing upon itself.
White, foamy froth, riding upon the water,
Swept in close, and pulled away again.

The grey-green waves, churning sand,
Grew clear as they spread upon the shore.
Tiny birds ran quickly, their long thin beaks,
Fishing after things to small for me to see.
The beach gave a little, beneath my heels,
And my footprints dissolved behind me.

I thought about the waves and tides,
And the moon, hanging full, away out there,
The currents of the wind, and the earth turning.
Gravity into matter, heat into movement.
What held it this way, so long ago?
What holds me now, standing at its edge?

The small and large forces, subatomic particles,
Speeding along unseen courses. Electromagnetic antics,
Expanding universe, quantum foam, the boundaries of scale,
Worlds within worlds, infinite, but not random.
Returning to my mind, my eyes, my skin,
The cool breeze from the rising sea.

Rock Ridge

I saw the ridge,
And said to myself,
"I'll climb to the top."
I couldn't see the top.
Instead I saw the rocks before me,
And the next ridge, just ahead.

Lost now, the smooth grade,
Of the mountain's feet.
Instead, the rocks and crevices.
I had to deal with each and every one.
Foot hold, hand hold,
Loose rocks, and cactus thorns.

I couldn't see the top,
Just a hill of obstacles.
Cliff, boulder, and scrub oak.
Approaching the top of a hill,
My heart jumped at the thought,
I'd reached the top at last.

It wasn't the top,
Just a better view,
Of the mountain still ahead.
Sometimes, to go up,
I had to go down,
To find a break in the cliffs.

In loose sandstone and shale,
I slid down with each step,
Almost as much as I'd gained.
There was nothing to do,
But take another step,
And another, and another.

I beat my way,
Through the brush,
Until I learned.
The deer had passed this way before,
And left a trail,
For me to follow.

And at the top,
The unencumbered view,
Of everything I'd been through.
Things look different on the way up,
Then they do,
On the way back down.

About The Author

Steve Cavin grew up in a small town in southeast Michigan, about an hour north of Detroit. At the age of 17, he began camping out in the backyard, testing out his tent, sleeping bag, and stove. At 18, he left home with fifty-seven dollars, and began hitchhiking west around the world. Four years and 30,000 miles later he returned, with eleven dollars and a Chinese fiancée.

Mr. Cavin has worked many different jobs, crewing sailboats in California, picking fruit in Australia, teaching English in Hong Kong, fishing in the Israeli desert, and packing coffee in England. He now works as a software engineer in Silicon Valley, where he lives with his wife and three sons. He practices archery, runs meditation retreats in the mountains, and hosts an open microphone in the local coffee shop, where he tells stories and reads his poetry.