



Charlee Luu

THE BUS GOES ON GREEN

From Atom
To Biosphere

The Bus Goes on Green: From Atom to Biosphere

Poetry & Photography by Chanlee Luu

TABLE OF CONTENTS

I	I ask the traffic lights if it'll be alright	1
II	Chamber Play: Virginia is 4 Lovers	3
III	Poetics: The Wheels on the Bus Go Round & Round	5
IV	Pop Quiz	7
V	Element (noun)	12
VI	Henrietta Lacks, Virginia	15
VII	Zeugma: I Digest Words & Beer in Similar Fashion	19
VIII	At L[e]ast, the Bus Should Be for All	21
IX	The Museum of Civilization	23
X	Contrapunctual Convergence	24
XI	A Tissue is a Collection:	25
XII	Good Morning, Roanoke	27
XIII	Endnotes/Acknowledgements	30

**I ASK THE TRAFFIC LIGHTS IF IT'LL BE ALRIGHT/
THEY SAY, "I DON'T KNOW"**

- Taylor Swift

In the beginning, nothing.
Then, a big bang.

A cell signals division.
Life grows in multiples.

A female ginkgo tree
drops plum-shaped seeds:

a yellow, pungent
outer coating attracts

animals, who eat, digest
and disperse the seeds.

This mechanism makes
it a living fossil, older

than any feather-covered
dinosaur. In the future,

a signal is sent to commune:
sister cities, Daisy Art Parade—

Ginkgo leaves hand-
made, sprayed on branches

and walked around on two
feet around a grass field

once Victory Stadium.
In 1961, a telegram was sent.

Rev R.R. Wilkinson asked
Black Colts & Steelers

players to protest segregated
seating. On game day,

tickets in the white section
bought, a place was claimed.



Plays & cues sent from the QB
to the center, wide receivers.

The FBI & Virginia National
Guard arrived: no confrontation.

Today, a signal wakes me
but a dysfunctional circadian

rhythm means it's already
past noon. A coffee later,

my car rolls to the traffic
lights. A honk shakes me.

Radio waves from towers
send a song to my ears.

I wave to the bus driver
at the bus stop. He signals

right to greet me. The clouds
are dark, ominous. Like Karen

from *Mean Girls*, I too,
have a fifth sense. Rain

is imminent, and so soon
will be petrichor. The fungi

will be happy, I presume.
Mycelial networks form

partnerships with plants,
enhancing their abilities

to absorb water & minerals.
The Wood Wide Web:

electrical distress signals sent
to warn of prey or disease.

*The yellow lights blink—
a bug in its eyes.*



CHAMBER PLAY: VIRGINIA IS 4 LOVERS

[Enter stage left: Hollins University]

The clover mites flash
mob on the brick.

The ant sneaks
a piece of cake

onto the garden
where the disciples

gather for a toast:
a do-si-do of praise.

In between answers, I question.
Three pillars of the humanities retire:
language, music, art.
Who determines the center?

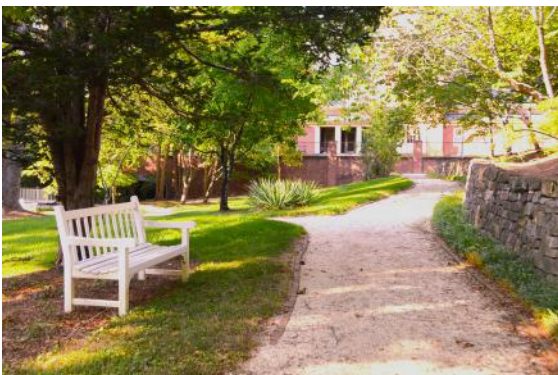
Birds of a different feather flock here.
Who is America?

I, too. *I, too am America.*
How to find a way home to ourselves?

[Set change]

In gowns, the professors
waltz to the audience.

Words of wisdom bestowed.
Diplomas issued. Do they
hear the thrums of the past?



[Elsewhere: Botetourt]

A deal is struck:
water is negotiated.

The girl winds up curves
to Carvin's Cove

where the water is abundant
and the ants armed.

Has a picnic of summer
rolls with a magic mirror.

In between bites, she spaces.
Generative AI threatens:
creativity, humanity, humility.
Who determines life?

Feathers shed here.
Who is there?

Sounds I cannot translate.
How to make a home for all?

[Intermission]

Behind closed doors,
nefarious shadows swallow.

Money is moved. Hearts are
swayed. Whose ghosts
will be trampled then?



[Elsewhere: Salem]

Heart of Championship City,
I hop onto the 91 post-Mill

Mountain coffee. Post heart
-break. Post-grief.

“If Biggie was alive, these young
cats wouldn’t be _____”

Fill in the blank for the words
I did not hear. For futures untold.

“Everybody said Pac wrote poetry
....they all told stories,” chats the
gentleman with the salt & pepper
beard to the driver from New

Orleans. High-vis vest & red-
embroidered jeans declare

“I am art too.” We pass a packed
Black Label Society concert—

heavy metal on a Tuesday night.
Auto shops, Collision Repair,

Lewis Gale Chest Pain Center—
heavy how the heart weighs

in all its hollowness.



[Enter stage right: Downtown Roanoke]

The buses hiss, their engines rumbling in
and out of Third Street Station.

The heart consists of four hollow
chambers: valves act as doors,

moving blood every single beat.
Life starts with one big lick of air.

Gainsborough* charts Roanoke’s 1st
neighborhood in 1835. Railroads

open the door to a thriving region. Urban
Renewal upends Tank Town—bustling

businesses for an empty civic center,
waiting to be filled with humming hearts.

As a kid, I sat in the now Berglund
watching a circus I have no memory of.

Down 21/22, Williamson, halal
grocery stores and taco trucks, Roanoke

dazzles too. At the Taubman, inches
away from Ramey’s pictures, shaded

colored pencils and precise pen work
bring me back to my question:

Who dictates the margins?



* Gainsboro was originally named Gainesborough after Major Kemp Gaines
([Gainsboro History Project](#)).

Proton motive force: flagellar motor: life force⁶

Endoplasmic reticulum (ER) transport Ambulance (ER) transfers

The Golgi body packages proteins & lipids

Boxes, envelopes at your door

Post-humanistic: the bullet train travels 200 mph, a Golden Eagle's
beak breaking barrier

(The bald eagle no longer poisoned by lead ammo)

To adapt, I was once a square.

Then, my pores started leaking.

What alien form will I take today?

-
- ¹ The earliest model of the atom (derived from the Greek “atomos” for indivisible) was a solid sphere; John Dalton’s atomic theory stated: atoms make up all matter, atoms of a specified element are identical, and atoms combine to form compounds
 - ² The 2nd model of the atom was the “plum pudding,” and included electrons (discovered by J.J. Thomson in 1897, for which he won the Nobel Prize) scattered in a cloud of positive charge
 - ³ Ernest Rutherford’s gold foil experiments showed that atoms were mostly empty space with a dense positively charged nucleus in the center. (However, [You Are Not Mostly Empty Space, Siegel, E. \(April 2022\) . In Forbes.](#))
 - ⁴ The Bohrs model, which is the most taught in K-12, shows the electrons moving around the nucleus in fixed orbits.
 - ⁵ Schrodinger updated the model: electrons move in waves or “clouds of probability,” called orbitals. The Heisenberg Uncertainty Principle states that is impossible to know the exact location of an electron and its momentum at the same time.
 - ⁶ [Evolution has created the flagellar motor, a combination propeller/brain that enables single-celled bacteria to move toward food sources... This amazing, self-assembling, signal-processing, direction-switching molecular machine is so powerful... that, billions of years later, it’s still used by bacteria in virtually every gut and puddle on Earth. Since [its] discovery... in the 1970s...scientists have toiled to unravel how the flagellar motor works — namely, how it rotates and switches directions... Now they finally have... what makes the cell go, what breathes life into the atomic arrangements, is the efficient removal of protons so that more protons will flow. This “proton motive force” doesn’t just turn the cogs of the flagellar motor; it’s the juice we all run on.] [What Physical ‘Life Force’ Turns Biology’s Wheels? Wolchover, N. \(April 2026\).| Quanta Magazine](#)

POP QUIZ

Part I: Multiple Choice

1. What does FBLA stand for?
 - A) Football Basketball League of America
 - B) Fralin Biomedical Leaders Association
 - C) Future Business Leaders of America
 - D) Frail Bony Little Asians

2. What does DNA stand for?
 - A) Demon Nightmare Attack
 - B) Decimal Number Age
 - C) Damaged Neurotic Anxiety
 - D) none of the above



3. What does the A represent in the compound interest formula:

$$A = P \left(1 + \frac{r}{n} \right)^{nt}$$

Where:

- P = the principal investment amount
 - r = the annual interest rate
 - n = the number of times that interest is compounded per year
 - t = time in years
- A) the future value of the investment/loan, including interest
 - B) self-actualization, the personal drive to reach one's full potential and find true self-fulfillment
 - C) Alexithymia, aka emotional blindness in which a person has difficulty processing and expressing their emotions
 - D) alienation, "the estrangement of people from aspects of their essential human nature... as a consequence of living... under the capitalist mode of production... workers are inevitably separated from the products they create... their fellow human beings, and their own creative potential."

Part II: Match the items in column A with column B

Column A	Column B
4. <u>Macromolecules</u>	<u>Examples</u>
Nucleic Acids	Fats, oils, waxes, steroids
Lipids	Collagen, insulin, antibodies, hemoglobin, enzymes
Carbohydrates	Deoxyribonucleic Acid (DNA), RNA
Proteins	Sugars, starches, fiber
5. <u>Area (City + County)</u>	<u>Population (2025 estimate)</u>
Roanoke	44,388 + 118,356
Martinsville/Henry	13,618 + 50,624
Charlottesville/Albemarle	100,086 + 97,260
6. <u>Mall</u>	<u>Year Opened</u>
Crossroads	1961
Tanglewood	1973
Valley View	1985
7. <u>Process</u>	<u>Definition</u>
Replication	The conversion of DNA instructions into mRNA
Transcription	The decoding of mRNA to synthesize proteins
Translation	The creation of an identical copy of DNA before division

Part III: Solve the problem

8. If you are so ahead of the curve that it becomes a sphere, what is the surface area of half a sphere? Hint: it is equal to the volume of a cylindrical cup half-filled/empty multiplied by its radius of precociousness.

9. Looking back to the compound interest formula in part one,

$$A = P \left(1 + \frac{r}{n} \right)^{nt}$$

where:

- P = the principal investment amount (the initial deposit or loan amount)
- r = the annual interest rate (decimal)
- n = the number of times that interest is compounded per year
- t = the number of years the money is invested or borrowed for

If one's starting potential (or principal investment) is 100, and the average annual interest rate is -0.5 (according to the state of the economy/world), n is the frequency of rest (once a month, everyday, two weeks, etc.) and t is time, how much time can pass before A = 0? How can one's future value become affected by these variables?

10. Ten people are on the bus; assuming all ten would have driven their own car, how much space would the bus save on the road, decreasing spatial congestion? Calculate the percent decrease in carbon pollution. Find and cite sources for sizes of buses/cars and carbon emissions. "Correctness" is not based on final answer, but on process, so show your work.

Part IV: Read the passage and decide which best fits the blanks.

11. She dons the “Poets Against Empire” beret as if to say “this is my Writer Cell’s _____ to _____”

a) Costume: signify a certain *je ne sais quoi* about being a writer in today’s world

b) Mask: alleviate Imposter Syndrome and shake off that smallness of not being “a real writer”

c) Uniform: signal a commitment to the ethics of being a human in communion with others (SAC – solidarity, allyship, community, like a SACrifice fly/bunt to advance your teammate up a base, knowing you will be out.)

12. In high school, she takes a field trip to Roanoke for the FBLA Regional Conference; the bright star was akin to the Hollywood sign for a girl from a small town. At Virginia Western Community College, walking the enclosed bridge brings a sense of *déjà vu*, like she is reliving this moment of stepping into the past. Nothing seems to have changed. At Tanglewood for lunch, however, the deserted mall is a portal to something once sacred. These escalators were once treated as an amusement park dare—to travel against the natural flow of order was teenage transgression in its natural state. Active transport requiring energy, the opposite of facilitated diffusion. She does not attempt this dangerous task. Her friends flirt with boys from Floyd. She feels _____

a) nothing/indifferent—it’s difficult for her to live in the present moment, always spacing out. *Will her parents be proud of her 1st place in Business Math? Will she be able to attend the state conference? Does she have HW due the next day? What’s for dinner tonight?*

b) bittersweet—she knows she is not there to talk to strangers...she is simply happy to hang out with her friends outside of school and bask in their silly joys, but there’s a slight subconscious unease... she will never have the full experience of the American teenager

c) alienated—while she has no desire to harm, a small part of her can understand the parasitic *Entamoeba histolytica*, which dons the proteins of human cells on its outer surface as a disguise to evade the host immune system

13. On her first ride on the Valley Metro, she takes the 55 at Slip I to Tanglewood at Barnes & Nobles (she's been procrastinating the task of asking the local franchises to stock her book). She walks to the mall, passing Carilion Children's Pediatric Medicine where she received her GeneSight results. Based on her genetics, the antidepressants prescribed to her in college were listed as ineffective. Trial-and-error should not be the methodology when her STS readings foresaw personalized medicine as the future of technology. She sits at Starbucks trying to write (what once was a luxurious treat is now something to boycott). She rides back on the 52, passing Roanoke Memorial Hospital (where she once waited with a friend). She eventually gets off at Slip Q. She ponders the permutations of meaning for the word "slip:" _____

- a) piece of paper, like a doctor's note (The bus pass was wearing down to a slip).
- b) fall accidentally: physically, not romantically (She slipped on the ice walking to the bus).
- c) insert discreetly (She slipped out of the bus, not making a single noise).



"Two Roads Did Not Diverge"

*Carvin's Cove overlayed with
pedestrian bridge at Virginia Western Community College*

ELEMENT (NOUN)

a : any of the four substances air, water, fire, and earth

“Be one with the wind,” Eva encouraged as she kickstarted the kite into the air like a maestro conducting the currents. How does one be with the enemy, one that whips and paper cuts faces on a chilling day? It has always been a losing battle. My mom warned me to be careful—don’t get hit by wind, *trúng gió* leads to chills and colds. In 3rd grade, my elementary school held a sleepover for accelerated readers who met their goals. The teachers transformed themselves for a play. Ms. Vipperman was the wind; she and the sun competed for bragging rights. Against the torrential blows, their victim clung tighter and tighter to his coat—hubris. The sun smiled and the layers melted. Ms. V was the first person I knew to have cancer. I learned about the “explorers” in her class: how ships crossed the oceans. Today, cars filed in line waiting to park. To see the kites fill the sky with jellyfish, Spidermen, and butterflies—flimsy plastic. How the space cars filled would open up for earth. How a bus could be one for many.

b: weather conditions [especially: violent or severe weather]

“I love when [] wears a long flowy dress in April,” a poet read—I jotted it down because I wanted to sear the image into my memory. After a necessary boost from a Pomegranate Lemon Iced Coffee, aka “The Pickleball,” we walked the eight minutes from Second Cafe to Golden Cactus, a fictionist and I discussing our histories. Later, a non-alcoholic mango hop water in hand, an essayist asked me to describe the taste of hops to someone who’s never had beer. “Bitter?” was all I could muster. She asked what those large barrels were for. My memory jogged for those lectures on fermentation reactors. *How barley (or wheat), hops (flavor flowers), yeast (fungus), and water combined to make beer. How the proliferated farming of wheat post World War II plus drought created the perfect storm for dust. In 6th grade, I made a presentation on dihydrogen monoxide’s properties. “Vote for Mr. Water!”* Despite the driest spring in ages, we got caught in the rain on the walk back. There were no elements to battle, just an unlucky situation, like the time I dropped a whole container of soup on the bus while getting off, the liquid creeping across the aisle.



“Capillary Waves”

from the Friendship Fountain in Pearl Fu Plaza



“Current Conductors”

the 25th Anniversary of the Blue Ridge Kite Festival at Green Hill Park

c: the state or sphere natural or suited to a person or thing
[ex : at school, she was in her *element*]

"fake it until you make it:" at my first big career fair in Los Angeles, I walked around clutching my folder of resumes in my Sears blazer, getting in lines to get swag and ask questions: "What does your day-to-day look like? What are the company's sustainability practices?" We Ubered from the Santa Monica sunset & Ferris wheel to Hollywood walk-of-fame and Rodeo Drive. With 0 internship offers from these trips, I never did figure out the keys to the city. *"delulu is the solulu:"* I take a walk, hoping for clarity. I tread outside, hoping for actualization. I ride the bus, hoping for poetry. I scroll my phone instead. I smile at videos of my favorite KPOP girls, hoping for my own miracle of a collective dream fulfilled. Someone once wrote, "hope is a discipline." I pluck the leaves of trees, try to learn their names, and smell the earth from which we came. The trees never ask me to climb ladders—they simply offer the fruit when ready. They never ask, "what is your biggest weakness?" They never ask me for anything but my breath: *"What is your favorite part of the job?"* The answer was almost always the people.

d: constituent part, ex: any of the fundamental substances that consist of atoms of only one kind

"Shall I compare thee to a summer's day?" Back in high school, Shakespeare was not my idol. I much preferred Descartes, Mendeleev, and Curie. I suppose they all understood that life begins at the smallest of origins. As a girl, my father picked me up from summer camp, my cheeks đỏ lòm from the sun, concentrated through bus windows. In college, I vomited at beach week, not from alcohol, but from heat exhaustion (inadequate hydration). In winter, I tell myself that my genes were not made for the cold. In summers, I am humbled by heat. My face losing its colors, xanh lè, close to a faint ghost. How humiliating to not be a strong Vietnamese heroine. I am prone to forgetting my weaknesses, like fixating onto a singular heart-beating [fleeting] connection. We all want the fire of belonging—on my bus rides, I pass churches & dance studios & synagogues & schools & temples & parks & mosques. How many allotropes do we embody in different spaces? Pure carbon can exist as diamond or graphite, depending on its structure. These days, attempts to reduce carbon footprint feel futile. What is an electric bus to life-sucking data centers? What is a molecule to a human? What is change to time?

HENRIETTA LACKS, VIRGINIA

After Fady Joudah

In the lab, cloaked in bleached
cotton & nitrile gloves, I grabbed
your cells, suspended in red.

I added trypan blue to the solution,
waited five minutes, and micropipette-d
a singular drop onto the slide:

squinted my eyes and counted
between the grid-lines,
testing for viability. The next

week, they grew to a dense congregation.
I took a sample, washed it with PBS,
added trypsin to separate the clumps–

like a frustrated baby, a gentle “burping”
was needed. Look at them floating,
nice and round. Tell me how it feels
to be immortal?

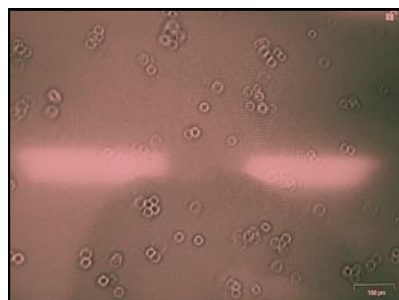
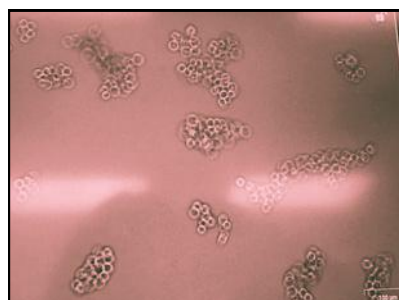
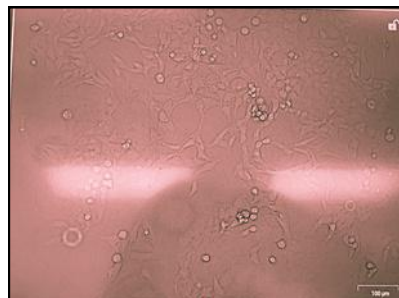
Silly me: cells don’t have emotions.
They are entirely the basic unit of life.
I learned this intricacy, hacking

a chunk off my Styrofoam sphere,
adorning it with clay to craft
organelles. These days, my mitochondria
are dysfunctional: Long Covid, some call it.

*

Dear Henrietta,
I watched the HBO version of a fraction
of your life: how you loved to dance
and cook for your neighbors.

“You” dropped the news
(the gravity of cancer)



to your friends on top
of the Ferris wheel. Oprah played
“your” daughter. Rose Byrne played
the journalist who finally got your story out.

And I am reminded of the question:
who gets afforded a romanticized story
of their lives instead of a dramatic
piecing of facts after death?

I have been trying to make
progress on this project.

Progress. These days it feels
like it’s been slipping between
backwards and forward,
simultaneously.

*

You have a cafe in Melrose Plaza,
part public health project
to address a food desert.
Part history, your vanity
was recreated next

door in the Harrison museum: white
gloves, red nail polish, a Zenith
radio. *Zenith—the time
when something is at its peak.*

I walk to your plaza at Church & 3rd,
waiting for spring’s zenith of crepe myrtles.
For now, bronze flowers encircle your statue.

An elementary school is named
in your honor, in Loudon County,
which boasts the highest concentration
of wealth and data centers. A health
& bioscience high school in Vancouver,
Washington. A statue in Bristol, United Kingdom.
And of course, a building at John Hopkins,
currently under construction.

*

If it is progress I seek
through your history,

it isn't the progress
that symbols can achieve.

Who owns a string of letters?
Who owns your cells?
Who owns our name & image?

You had cervical cancer; your cells
Were multiplying indefinitely;
Your life started in Roanoke, VA; your
Mother's life was cut short; your
First daughter was institutionalized; your
Breath called out for your children.
In 1951, they took your cells without consent.
The doctors kept it hush.
Morning winter and fall nights transpired
And your spirit passed. From polio to ethics:
"Her deeper purpose lies in what her story now teaches."
Last year, your cells were used in a study, a
Prayer to restrict viral entry
At the membrane. If successful, would it be a
Night assassin for all these coronaviruses?

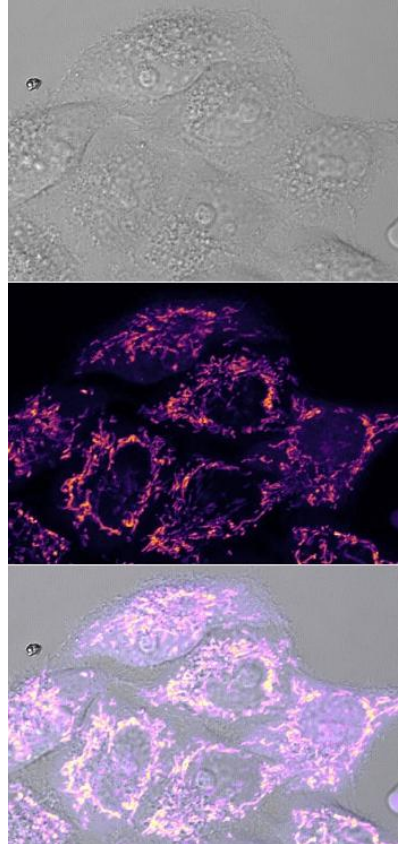
*

We have prioritized people in cells
over thriving cells. History has rendered
this math essential. Infinite division
of humans leads to infinite multiplication
of money, but only for a few. Progress?

In 1967, two Black infants died in an RSV
vaccine trial. In 2026, a lawsuit for justice.

In 1965, the Voting Rights Act was passed
during the zenith of the Civil Rights Movement.
In 2026, it was gutted by the Supreme Court.

In 1946, Margie Jumper refused to give up
her bus seat on the Raleigh Court streetcar,



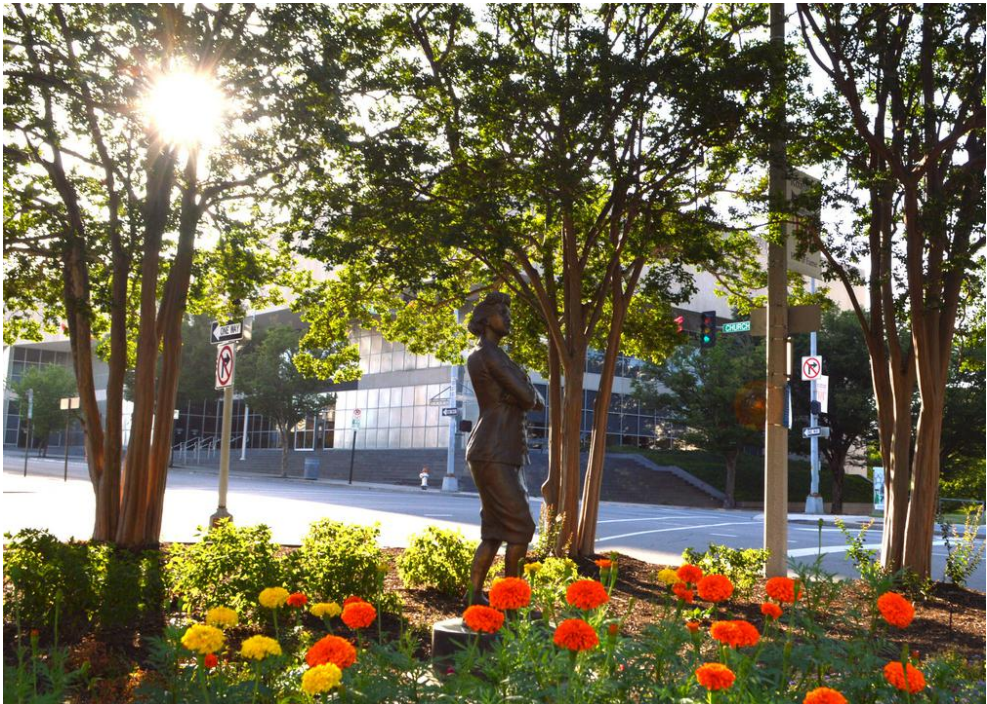
nine years before Rosa Parks. In 2026, the city of Roanoke offered free fare to all riders on Transit Equity Day.

In 2022, a study found that white folks were less likely to be concerned about COVID-19 when they learned that it affected Black and Brown communities more. In 2026, I pass by Carilion, LewisGale, Fralin– all hubs of healthcare

and research. I see a few bus drivers wearing masks, knowing they are essential.

*

Ms. Lacks, I have learned that equations and poems can be simplified to their fewest characters, but life cannot contain the sprawl of billions. On buses, hospitals, lunch counters, the streets in the dead of night, what enters and exits cannot be controlled by the mechanism of a membrane.



ZEUGMA: I DIGEST BEER & WORDS IN SIMILAR FASHION

Did you know inside every city, human,
microbiome there lies an idiosyncrasy?

I-D-I-O-S-Y-N-C-R-A-S-Y

A peculiarity, an individual characteristic
like a tummy hurting from ice cream
or a poet making spreadsheets
or the tale of two breweries, both alike
in dignity (on fair Salem Ave, where we lay
our scene). In one, I swap books
and jokes amid queer trivia. In the other,
biotech lectures & spelling bees.
But who has the better beer?

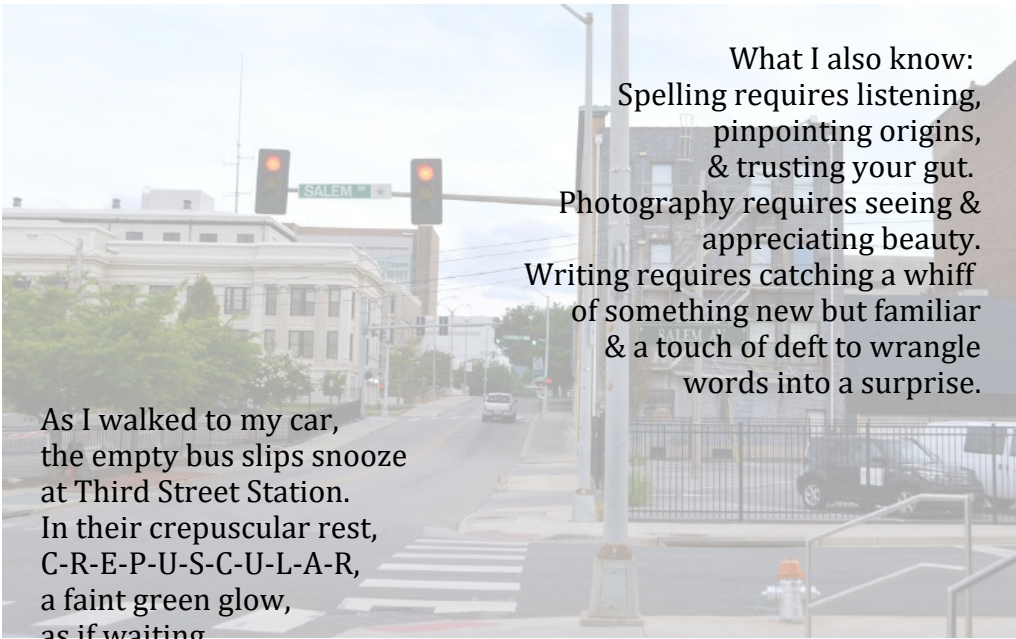
Everybody's revving up their engines.
Some start low and soft, others cranky,
frustrated by the day's early heat.

Some are ready to go, fueled
by the calories surging through their system.
See, a bus needs its food too; most chew
through ancient bog peat, not dinosaur bones.
Both processes turn hydrocarbons into energy⁷.

When/where/why/how
did the desire for aesthetic thinness
override necessity of strength?

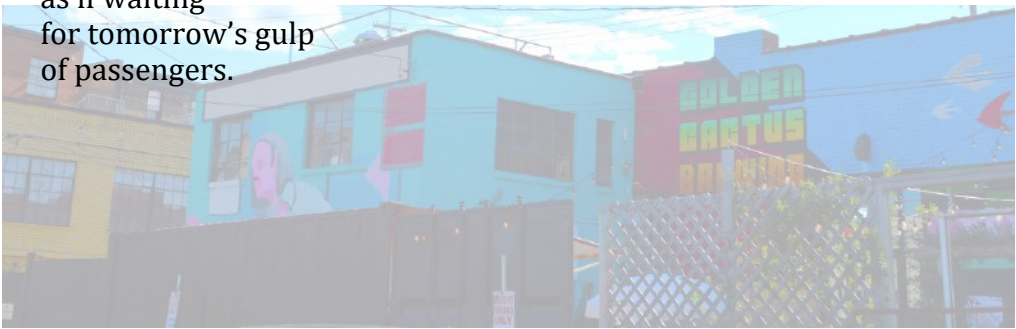
I do not have the answer
for the first and an understanding
of history and humanity will reveal
the second. What I do know:

Saccharomyces⁹ are essential
fungi in the alchemy of beer & bread.
Diacetyl⁹ occurs naturally as a byproduct
of fermentation and imparts a buttery flavor.
Isohumulone is hidden in hops
and is the bitterness
of beer.¹⁰ Gut health is linked
to brain health. Everyday
is a chance to be with the world,
cheer for one another, and learn.



What I also know:
 Spelling requires listening,
 pinpointing origins,
 & trusting your gut.
 Photography requires seeing &
 appreciating beauty.
 Writing requires catching a whiff
 of something new but familiar
 & a touch of deft to wrangle
 words into a surprise.

As I walked to my car,
 the empty bus slips snooze
 at Third Street Station.
 In their crepuscular rest,
 C-R-E-P-U-S-C-U-L-A-R,
 a faint green glow,
 as if waiting
 for tomorrow's gulp
 of passengers.



- ⁷ The formula for combustion is: $C_xH_y + O_2 \rightarrow CO_2 + H_2O + \text{heat}$ and the
 formula for cellular respiration is: $C_6H_{12}O_6 + 6O_2 \rightarrow 6CO_2 + 6H_2O + \text{Energy (ATP)}$
⁸ from Greek σάκχαρον ('sugar') and μύκης ('fungus')
⁹ butane-2, 3-dione
¹⁰ one IBU corresponds to one part-million of isohumulone

AT L[E]AST, THE BUS SHOULD BE FOR ALL: A SESTINA

At the chemical company, a catalog presented: steel-toed boots.

The Lakers fan in me wanted purple & gold, to dazzle for work,
to power walk between factories, to dispel the stench of water
treatment; for alchemy to be true. Instead I got grey & blues,
sterile spreadsheets, Pandora in the background—a cycle
of completion & compensation. Surely, bus-

iness couldn't be this drab? As a kid, I only rode the school bus
on field trips. My parents alternated shifts, their "boots"
falling off at the seams; one operated machines to cycle
nylon filaments into strong fiber. (Textile was our city's work.)
The other sewed tags & patches onto mass-market shirts; her blues
started as a young, first-born daughter, carrying water

on her back. When she talks about the warehouse & water
being deprived on a sweltering day, I think about the 31/32 bus
going past Orange Ave and up those hills cloaked in blues.
The Amazon worker: his wrapped wrist, chocolate milk, rag & boots.
All the riders in their fast food uniforms to & from work
on the 11/16: Wendy's, Zaxby's, Applebee's, an endless cycle

of apostrophes & possession. The natural cycle
of evaporation & precipitation shifts water
from earth to sky, but inside data centers, miracles don't work.

At the zoo, I capture trapped animals in a frame, my reflected bus-
t an affront to their lives. The Vietnamese pot-bellied pig & its black boots
a familiar portrait of isolation; it nhất the Asian otters had their blues

spread across two bodies. Conservation is an exercise in blues:
in the wild, death awaits; but here is a different death—a vicious cycle
like a bus system where the only riders are those who must; whose boots
tap to a rhythm of jazz and sing America, only to be water-
ed down by the drone of increasing costs; it nhất the bus
should be virtuous for the disabled, the elderly, the children, for all work-

ers who just want to come home safely. The white collars work
in favor of complication. "Tell me about yourself – *how you transformed blues
into green.*" They want loyalty; in place of love, they preach how bus-
iness is directed by surveillance. How AI will replace us in a cycle
foretold in movies; how earth's bounty of water
will be scarce; how when a child finds a pair of rainbow boots

in the rubble, they will run to share the news, creating a cycle
of story-telling. And in those tales busy with wonder, water
will be shimmering in blues, only to be disturbed with the splash of boots.



"A Kingdom of Isolation"

Ody, the Vietnamese pot-bellied pig from Mill Mountain Zoo (photoshopped on GIMP the old-fashioned way—using the eraser tool) onto Carilion Mental Health in Tanglewood Mall. The infographic stated that "they are quite social with other animals," so it made me sad to see it all alone.



"Paparazzi"

While trying to take a picture of the Burmese python at MMZ, the camera captured more of my reflection than the subject.

THE MUSEUM OF CIVILIZATION

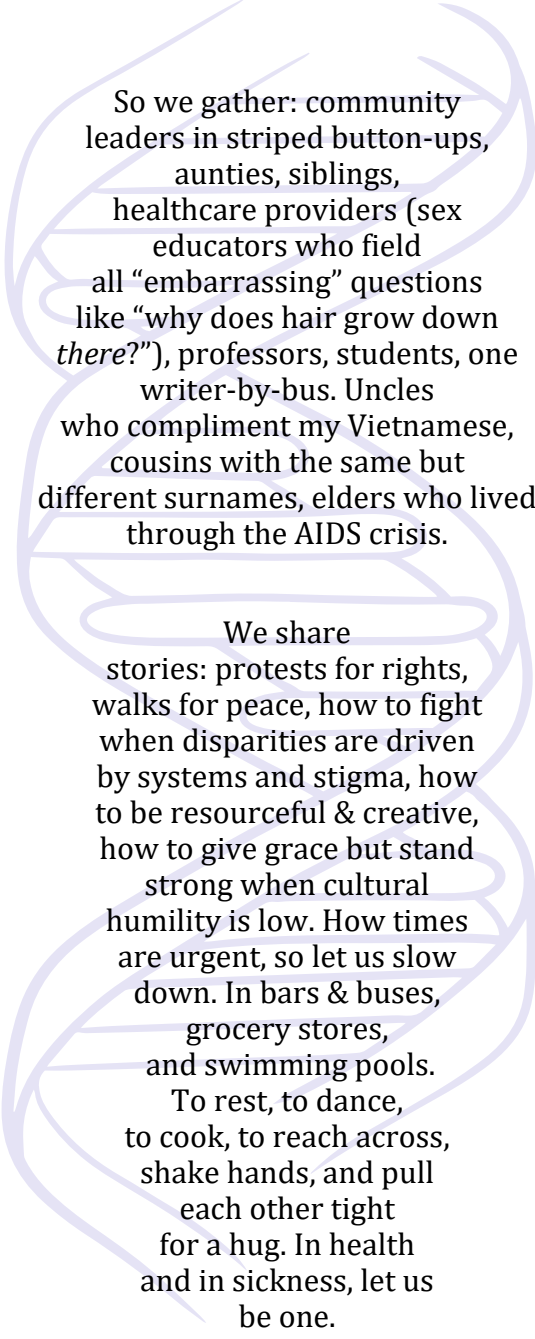
Clay covered man's best friend, certified good boy or slippery salamander, camouflaged in the basin of Appalachia—myth, ancient history or everyday work? Under, bender of hell? American folk heroes: Paul Bunyan & Babe the Blue Ox, lumberjacks working in the forests. Johnny Appleseed's efforts to propagate & conserve. John Henry's duel against the Machine to make room for railroad tunnels. He won the race but his heart gave out, hammer in hand. Who are our contemporary versions: superheroes, beloved celebrities, tech entrepreneurs? What about the myth of self-made millionaires? The Model Minority Myth? The American Dream? *Life after People*: case studies: earth ravages—will wildlife overtake concrete & steel? Will the salt licking creatures roam Roanoke again? *Station Eleven*, a pandemic decimates most of the human population. Years later, a nomadic Shakespearean troupe makes their way to the Museum of Civilization. In the future, what stories will we tell? Will we wade alongside Eastern Hellbenders or will they be a relic of the past? Will our public transit be so widespread its rarity is "common" not "mythic?" Will we be led to doom or lead to prosper?

CONTRAPUNTAL CONVERGENCE

A Population of 1 is Lonely (but you are not a Pariah)

At the Melrose Plaza, I gather
My grey t-shirt, my rainbow string bag
Surrounded by acquaintances & strangers,
I meditate, find myself
Staring at the history of Black Roanoke
Henrietta smiles at me

The temple in my sights
Refracts the sun into a prism of white light
I am a solitary figure
under the looming statue of Quán Âm
A voice calls out from the kitchen
“Come inside to eat!”



So we gather: community
leaders in striped button-ups,
aunties, siblings,
healthcare providers (sex
educators who field
all “embarrassing” questions
like “why does hair grow down
there?”), professors, students, one
writer-by-bus. Uncles
who compliment my Vietnamese,
cousins with the same but
different surnames, elders who lived
through the AIDS crisis.

We share
stories: protests for rights,
walks for peace, how to fight
when disparities are driven
by systems and stigma, how
to be resourceful & creative,
how to give grace but stand
strong when cultural
humility is low. How times
are urgent, so let us slow
down. In bars & buses,
grocery stores,
and swimming pools.
To rest, to dance,
to cook, to reach across,
shake hands, and pull
each other tight
for a hug. In health
and in sickness, let us
be one.

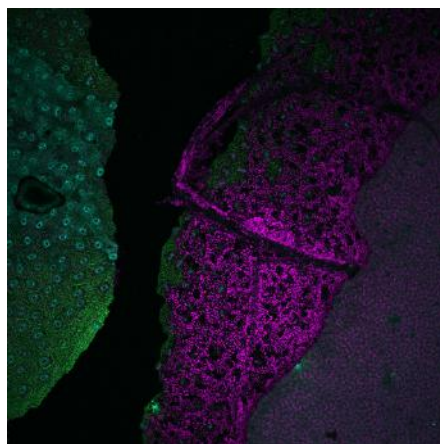
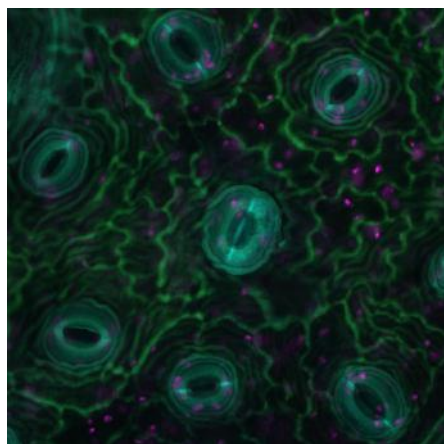
A TISSUE IS A COLLECTION:

of cells, a tool for wiping tears, a manufactured product, and a canvas for opportunity

A “rival” in plain clothes, not donning a sword or Cavalier hat, I step onto the SmartWay Express, seats equally plush and scratchy. My hands free of clutching the steering wheel and my mind free of road worries, the hour-long journey is spent with Andrea Gibson, the past haunting our narratives. Tears find their way to the edge of my eyes but never breaking the barrier to fall. The ride is bumpy, but nothing compared to being suffocated inside a Trojan Horse, dragged across sand with the bodies of drowned comrades laid in limbo.

This trip to Virginia Tech is not as a girl to see my uncle graduate, the cold worming its way past my pink fluffy coat into my bones against the backdrop of a barren drill-field. It is not as a student across time for math camps learning about tessellations or microscopy or models or glycomaterials. It is not as a friend on a spontaneous trip to a weed, stranger, and Mac Miller filled basement. It is not as a poet finding her way to poets who look like her. It is not a trip to an Oasis or a city of spice. It is a trip to see cells magnified: a search for tissues.

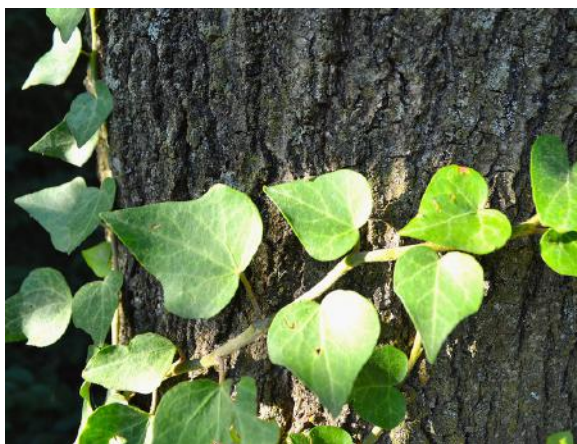
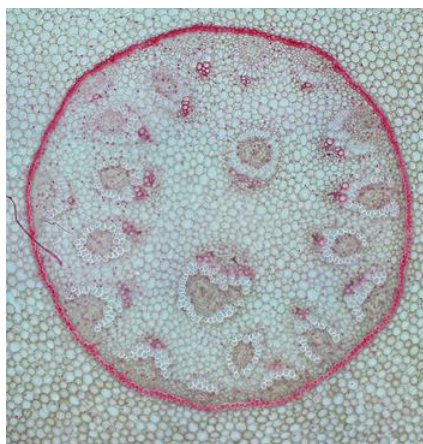
To examine the contents, magnification demanded an irreversible destruction, so I took my heart-shaped leaf and ripped it. The scientist sheared it further to separate its layers and placed the fragment onto a microscope slide. On the computer screen, we saw its geography: pavement cells, chloroplasts, stoma—zoomed in, they blinked back at me; floating eyes, some open, others closed. How could I not just sit and stare back. My speechless body useless in the face of this discovery, my brain brimming with metaphor. We spent the two hours changing colors, landscapes, my small talk trying to breach the barrier of my thoughts.



“I needed you to believe,” Odysseus reveals his lie to ghost-Sinon, the young shepherd boy forced into war. Rewind. Thinking he is sacrificing his life to end a war and save lives, Sinon tells Odysseus to “feel free to add stuff” when the news reaches his father. Not knowing of its deceit, he stands in front of the Trojan Horse, telling the Trojans that it is a gift to Athena. In Hades, Sinon finally learns why Odysseus betrayed him: knowing the truth is a burden. Nolan’s Odysseus is plagued with guilt and shame from the moment Troy is sacked. The Odysseus I met in the 9th grade was vastly different, but the story remains the same: how do we find our way home after years of being lost?

On the SmartWay Express, I think about my parents and their journey to the unknown. How my father’s boat navigated the seas with little food or water, how pirates ransacked their documents. How my family navigated America without GPS or English. What kind of belief did they carry? There was once a time of no apparent magic, when no movies or music or poetry made my heart beat with awe. There are many days when my belief in humanity wavers. There are many days where I have to force myself to go out. And almost every single time, it is worth it. Maybe I have been chasing the kind of belief my parents carried.

A week after my expedition to Virginia Tech, I go to the Bus Riders of Roanoke Advocacy Group monthly meeting. I am welcomed but sit silently and process as the volunteer members make their way through the page-long agenda, all focused on increasing accessibility to public transit for all people in the valley: Zeus’ law in action. The minutiae of contracts, unions, legislation all fly over my head. I feel inadequate as a poet. Afterwards, I go back to River’s Edge Park to identify the leaf: common ivy, invasive—the connections unraveled, the vine wrapping around my heart, freezing my hands in the middle of summer. I warm them up by chanting, “I believe in the power of the people.”



GOOD MORNING, ROANOKE

after Margaret Wise Brown

In the shining city of Roanoke,
there were criss-crossing railways

vast, blue ridges

and a picture of the white-tailed deer
jumping over the Star.

There were three undergrads
comparing Bio notes on iPads

Two hospital systems determining fates
A river traversing the state

An airplane brushing the clouds
A zoo overlooking the city's vows

And a cardinal
 & a spotted lantern fly nymph
 & a cherry blossom falling limp

And a pink-haired lady in a blue floral slip,
 adding color on a rainy blip.



"Deer in Star Light"

Good morning, all the books
across the libraries from Salem to Vinton

Guten Morgen mailman strolling the sidewalk

Buenos días woman waltzing off the bus with a bouquet

Bom dia the toddler in pastels matching her mom

좋은 아침이에요 medical students on the Star Line Trolley
Habari za asubuhi immigrant daughters translating at appointments

magandang umaga birria tacos & pho & fried chicken & ice cream
สวัสดิ์ตอนเช้า drunken noodles & falafels & all-you-can-eat
sushi dream

Κάλημέρα community pools, skate centers, parks & playgrounds
おはよう the high courts of pickleball, tennis, futsal, basketball,
& their cacophony of percussive sounds

早上好 so much greenery enveloping the valley like a warm hug
בוקר טוב Tinker Creek where Annie made her Pulitzer
development

Dzień dobry all the children laughing with wonder in their hearts

доброе утро all creature companions in various shapes & sizes

Chào buổi sáng builders of this city working for a better tomorrow

Bonjour the musicians, actors, artists, poets:
liaisons who have their eyes on the prize

सुप्रभात all the people lending a helping hand

صبح بخير bus drivers & riders—may your journeys be safe
صبح الخير air—may it be clean inside & out

Good morning signals everywhere—
may they reach you well.



“Peerless Candy Cove”

A bee? pollinating a shrub of buttonbush (Cephalanthus occidentalis) at Carvin’s Cove overlaying the old Peerless Candy Co building, downtown Roanoke



“Thank You For Riding”

An empty Third Street Station overlayed with the overlook by the Roanoke/Mill Mountain Star and by Six & Sky

ENDNOTES/ACKNOWLEDGEMENTS

I want to thank the Roanoke Arts Commission & the Ride Solutions team (Douglas Jackson, Meighan Sharp, Amya Matthews, Jessica Mahuron, & Andrea Garland) for making this project possible; everyone who welcomed me on my first day as the Writer-by-Bus: Ron Parker, Kevin Price, and Joe Lee. To Pauline Kaldas for her thorough feedback and unwavering mentorship; to Chanhong Luu, Eva Lynch-Comer, my former colleagues at Hollins, and my parents for their support. To every single teacher/professor who has inspired my love of learning. To all the bus drivers for whom this project would not be possible.

Imaging of the leaves for the cover & pgs 25-26 and of the HeLa cells (pg 17) was performed in the Facility for Advanced Imaging & Microscopy of the Fralin Life Sciences Institute at Virginia Tech; RRID: SCR_027348.

I ASK THE TRAFFIC LIGHTS IF IT'LL BE ALRIGHT (ECOSYSTEM)

The title of this poem comes from Taylor Swift's song "Death by a Thousand Cuts" from her seventh studio album *Lover*. The poem was inspired by a Lex Allen Literary Festival session titled "Biosemiotic Aesthetics & Ecopoetics: Writing Place & Possibility" led by Kas Armstrong & Joshua Ward from Virginia Tech's MFA in Creative Writing program. My interest in poetry surrounding the built & natural environments started in an STS January Term class at UVA's Anheuser-Busch Coastal Research Center taught by Prof. Hannah Rogers. I also want to send appreciation to Ramona Kirsch, who serves on the board of the Roanoke Valley Sister Cities and was the Director of Global Learning at Hollins University—when she told me the process of making the ginkgo leaves for the Daisy Art Parade, I knew I wanted to include it in the poem. When riding the 61/62, I finally looked up the origin of Towers Shopping Center ([1](#) & [2](#)) and thought it was a great connection to the theme of signals. To learn more about the game at Victory Stadium, see [Rev. Wilkinson's website](#) & [this WSLS article](#).

CHAMBER PLAY: VIRGINIA IS 4 LOVERS (ORGAN)

This poem is dedicated to Professors TJ Anderson III, Alison Ridley, and Marilyn Moriarty, as well as the Southwest Virginia Data Center Transparency Alliance and Gainsboro historians. A few of the lines in the Hollins section are inspired by Renee Godard's speech; coincidentally, those lines, "Birds of a different feather flock here./Who is America?" connect to the bus wrap chosen, "Stronger, Together" by Lucinda Rowe. The line "I, too, am America" comes from Langston Hughes' poem, "[I, Too](#)." The poem's title was partially inspired by the movie *Mother Mary*. It was described as a "chamber piece/drama," originating from Kammerspielfilm, a German film movement in the 1920s. These movies focus on psychological exploration, character relationships and development, with small sets & casts to create an intimate experience. To learn more about Tank Town/Berglund Center/Urban Renewal, see links [1](#), [2](#), [3](#).

POETICS: THE WHEELS ON THE BUS GO ROUND & ROUND (ATOM)

This was the first poem written for this project after I decided to use the biological levels of organization to structure my chapbook. As I was jotting notes, I was thinking about communication, transportation, and biomimicry on the atomic level and at larger scales. The poem also references two Katseye songs, "Pinky Up" & "Gnarly."

POP QUIZ (MACROMOLECULE)

The first bus I took for the project was the 55/52 to VWCC & Tanglewood. Since this poem represents DNA, I thought a lot about identity and alienation, particularly Marx's theory of alienation (the definition quoted in Q3 comes from Wikipedia). I came up with the pop quiz format when thinking of my Business Math test, and I want to send appreciation to my FBLA advisor Christy Sellers. For population estimates, I used the websites of [Roanoke Regional Partnership](#), [Martinsville-Henry County Economic Development](#), and [UVA's School of Law](#). Q8 references the Taylor Swift song "this is me trying" from her 8th studio album, *folklore*. For Q12, I wanted to see if there was an example of a bacteria/parasite that wore a costume, and I found this article: "[Wily Parasite Kills Human Cells and Wears Their Remains as Disguise](#)" | [UC Davis College of Biological Sciences](#). For Q13, I want to send appreciation to Prof. Rosalyn Berne who taught my first year STS class: Science, Tech, & Contemporary Issues (Considering the Future Fiction), and it was really illuminating to think about the consequences/ethics of technology. For more information about Crossroads Mall, [see this archived article from the Roanoke Times](#).

ELEMENT (NOUN) (MOLECULE)

Part a was one of the easiest parts of this chapbook to write because the experiences came from a place of deep fondness of the present/past. For b, I want to thank Qurrat ul ain Raza Abbas and Swade Best for the collaborations and conversations. I also want to send appreciation to my 6th grade science teacher, Teresa Davis (Donley), who made science fun. The data about the "driest spring" comes from the NOAA Palmer Drought Severity Index. The quote about hope as a discipline comes from Mariame Kaba. Finally, I want to thank Dr. Kyle Lampe, my chemical engineering advisor and biochemical engineering professor (I learned a lot about fermentation reactors in his class).

HENRIETTA LACKS, VIRGINIA (CELL)

(Shout-out to my 9th grade biology teacher, Courtney Vengrin). I first encountered HeLa cells during my class on Protein Applications taught by Dr. Heather Lindberg for my Biotechnology Career Studies Certificate, and this experience was featured in a Cardinal News article: "[Tech Town! Part Two: From immortal cells to 'our region's greatest strength'](#)." I had been trying to write a poem about/for Henrietta for a long time and couldn't quite figure out how to structure it until I read Fady Joudah's poem to Sandra Bland in the collection, *Tethered to Stars*. I read *The Immortal Life of Henrietta Lacks* by Rebecca Skloot as part of a summer internship and watched the HBO movie adaptation this summer to refresh my memory. The line "you were your mother's first breath in the morning and her last prayer at night" comes from the movie. Sources/ further reading:

1. [What's Up with COVID and What We Can Do About It - 2026 Zine](#)
2. [The Legacy of Henrietta Lacks | Johns Hopkins Medicine](#)
3. [About - Melrose Plaza Roanoke](#)
4. [Glycosylphosphatidylinositol biosynthesis functions as a conserved host defense pathway against coronaviruses via regulation of LY6E | PLOS](#)
5. [Suit Says Black Infants Were Subjected to Experimental Vaccine Without Consent - The New York Times \(archive link, no paywall\)](#)
6. [Bus Dedicated to Margie Jumper, Roanoke Civil Rights Hero | Mass Transit](#)
a. [Roanoke City offers free fare... honoring civil rights pioneers | WSLs](#)
7. [Highlighting COVID-19 racial disparities can reduce support for safety precautions among White U.S. residents - PMC](#)

ZEUGMA: I DIGEST BEER & WORDS IN SIMILAR FASHION (ORGAN SYSTEM)

The starting point for this poem was Roanoke Blacksburg Technology Council's monthly Beer & Biotech (which used to be held at Big Lick). For April, the featured speaker was Dr. Shannon Whiles from Lytic Biotechnologies; their goal is to turn injectable biologics into oral medicine. However, I couldn't figure out the structure for the poem until I went to the Get2KnowNoke Spelling Bee. I had so much fun following along and learning new words! Finally shout-out to Queer Joy Star City for hosting queer trivia!

AT LE[A]ST, THE BUS SHOULD BE FOR ALL: A SESTINA (COMMUNITY)

The route that impacted me most was the 31/32 bus to Blue Hills. As a college student, I interned two summers at Eastman Chemical Company, and I learned a lot from the machine operators, engineers, and quality control/assurance technicians. These internships also included a mandatory week-long safety orientation; each presenter emphasized the idea that accidents were preventable and that a culture of safety could be created through positive reinforcement and care, not tech-first surveillance. Since community includes other species, I included my experience at Mill Mountain Zoo. The two Asian Small Clawed Otters are named Judy & Porkchop. They are "more social than most species of otter... usually liv[ing] in groups of about 12." They are listed as a vulnerable species, facing threats from poaching and habitat loss. This poem also references the idea of vicious vs virtuous cycles, which I learned from Kate Wooley, a board member of the Bus Riders of Roanoke Advocacy Group (BRRAG); at the proposed fare change meeting, many community members shared their experiences and advocated for expanded hours/routes.

THE MUSEUM OF CIVILIZATION (ORGANISM)

I first heard about the Eastern Hellbender when the Salem Red Sox underwent their name rebranding to the Salem Ridge Yaks. I have since learned so much about the conservation efforts in Appalachia, including at Virginia Tech. The TV series referenced are the History Channel's *Life After People* & HBO's *Station Eleven*, after the book by Emily St. John Mandel.

CONTRAPUNTAL CONVERGENCE (POPULATION)

This poem originated from the first Rainbow Wellness Alliance First Annual Health Summit. I got there early, and I didn't know if I would know anyone; as more and more familiar faces came in, I came to realize I wasn't alone as I thought, and that in some cases, our sense of isolation is in our heads. I want to give a special shout-out to Charlie Rickard, Izzy Donahue Elliott, Malinda Britt (who quoted Báýò Akómoláfé "Times are Urgent, Let Us Slow Down") and all of the Vietnamese aunties/uncles at Chùa Phật Sơn - Buddha Mountain Center (they have a monthly fundraiser selling vegetarian food to build a new temple, so please check out their Facebook & support). Another shout-out goes to Verses Listening Lounge & Collaborative Center for hosting a beautiful Pride Poetry and Spoken Word Event at the Grandin Theatre. The *Pariah* screening affirmed the power of writing as a tool for actualization.

A TISSUE IS A COLLECTION (TISSUE)

I want to send appreciation to Dr. Emery Ng, who was a lecturer during a summer camp hosted by the Center for the Mathematics of Biosystems and is the director of the Facility for Advanced Imaging & Microscopy. I came to get some images of xylem/phloem (plant tissues) and ended up with an essay. Thank you to my 9th grade English teacher, Mrs. Utt, for introducing me to *The Odyssey*. The Andrea Gibson book mentioned is *Lord of the Butterflies*.

GOOD MORNING, ROANOKE (BIOSPHERE)

The order of languages on pg 28 are as follows: German, Spanish, Portuguese, Korean, Swahili, Filipino/Tagalog, Thai, Greek, Japanese, Chinese (Simplified), Hebrew, Polish, Russian, Vietnamese, French, Hindi, Persian Farsi/Urdu, & Arabic. I want to thank Dr. Ahoo Salem, Executive Director of Blue Ridge Literacy and all the students who helped me with fact-checking the translations. With this chapbook, I wanted to communicate that anyone can write/make art and that everything is connected, including poetry and science, as they both begin from a place of wonder, observation, & questioning and end in discovery. I had a great time riding the bus and writing the poems, and I look forward to connecting with readers!

ABOUT THE WRITER

Chanlee Luu is a Vietnamese-Chinese American writer. She received her MFA in creative writing from Hollins University, BS in chemical engineering and minor in Global Sustainability from UVA, where she competed in poetry slams. She also received a Career Studies Certificate in Biotechnology from Virginia Western Community College. She writes about identity, pop culture, science, politics, and everything in between. She is the winner of the 2024 Jean Feldman Poetry Award from the Washington Writer's Publishing House, which published her debut collection, *The Machine Autocorrects Code to I*. One of her poems was on display at "50 Years of HOPE and HA-HAs," a Vietnamese American art exhibition that celebrates the expansiveness of the diaspora, rooted in the DMV. Her work can be found in various lit magazines, all compiled at chanleeluu.weebly.com. You can find her on Instagram @chanlee_chicklit.



To access the Spotify playlist for this project; purchase her book, *The Machine Autocorrects Code to I*, on Bookshop; or support her work via PayPal or Venmo, please scan the QR code for her [Linktree](#) to the right:



ABOUT ART BY BUS

The Art by Bus program showcases how our communities and citizens are connected through public transportation.

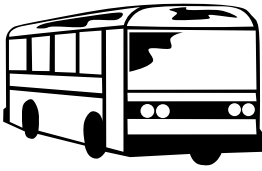
A partnership between RIDE Solutions, Valley Metro, Bus Riders of Roanoke Advocacy Group and the Roanoke Arts Commission, Art by Bus transforms our bus system into a canvas for painting, a stage for music, and a space for literature.

Art by Bus brings attention to the ways that transit improves the quality of life in the neighborhoods it serves. The program hopes to inspire residents of all walks of life to try riding the bus to get to where they need to go and see transit from a new perspective.

Learn more about Art by Bus, including our Writer by Bus residency program at **ridesolutions.org**.



Project partner representatives gather with poet Chanlee Luu for the 2026 Art by Bus kickoff event at Roanoke's 3rd St Transit Center.



Roanoke Valley Transportation Resources



Valley Metro

www.valleymetro.com

540-982-2222

Visit Valley Metro's website to plan a trip customized to your needs and review fare and bus pass options.



The Star Line Trolley

The Star Line Trolley provides free transportation to retail businesses, schools, libraries, restaurants, and lodging along Jefferson Street between Downtown Roanoke and Carilion Roanoke Memorial Hospital.



The Smart Way and Smart Way Express

The Smart Way buses provide regional transportation provided by Valley Metro, linking Roanoke Valley and the New River. Service begins at Third Street Station, with stops at the Hotel Roanoke, Roanoke Regional Airport, two park-and-ride lots along I-81 at exits 140 and 118, Laurel St (Christiansburg), Main St in downtown Blacksburg, and the Virginia Tech Transit Center. Visit Valley Metro's website for route and schedule or call (800) 388-7005.



Paratransit Services

S.T.A.R. (Specialized Transit - Arranged Rides) is a service of Valley Metro that is operated by **RADAR**, to provide transportation to individuals with disabilities who are unable to ride a Valley Metro bus.

The entire City of Roanoke, Vinton, and Salem are service areas; within 3/4 of one mile on either side of a regular Valley Metro fixed route.

CORTAN is Roanoke County's ride paratransit program. Roanoke County residents that are 65+ or have a disability can book a ride by using the CORTAN app or by calling **1-855-984-2328**.



Scan for
S.T.A.R. Info



Scan for
CORTAN Info





Cover Art by Chanlee Luu
"The City Breathes Through Its Leaves"

Bus Wrap Art by Lucinda Rowe
"Stronger, Together"

See this art in person!
Take bus 65/66 to visit *Walls that Unite* in Grandin Village
Acrylic on metal panel | 1319 Grandin Road, SW



ArtByBUS



The 2026 Art by Bus Project
was brought to you by:

