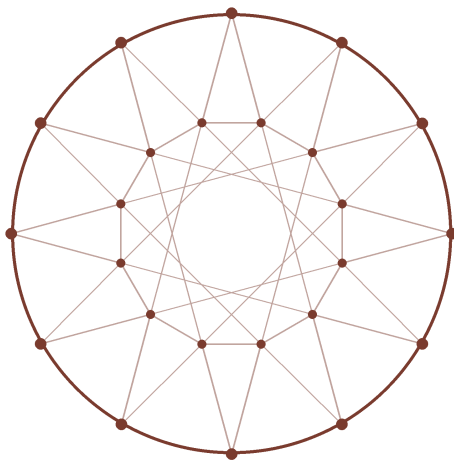


NOTHING HERE TURNS ALONE

Poems



*Three poems, with notes on the evidence
and reader's companions by the author*

BRITTANY MOLENAAR



Nothing Here Turns Alone

Poems by Brittany Molenaar

The poems, the Notes on the Evidence, and the reader's companions and analyses in this book are all the work of Brittany Molenaar.

Written in Lethbridge, Alberta, on Treaty 7 territory.

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About the Author

Brittany Molenaar

Brittany Molenaar is a poet and an aspiring teacher. She writes from Lethbridge, Alberta, on Treaty 7 territory, and the land, the history and the people of that place run all through these poems. She is a student at the University of Lethbridge.

The three poems in this book are hers, and so is every page that follows each one: the Notes on the Evidence and the reader's companions.



Why a poet wrote her own reader's companions

Poets usually leave the analysis of their work to other people. Brittany chose to write her own and not to leave what her poems mean to chance. The companions serve as a study guide for readers less familiar with poetry who want to learn. They offer the scaffolding needed to grasp what each poem is doing, the strategies and skills a new reader can carry into the next poem they pick up, and a list of other writers, many of them classics still in print, worth going back to.

As an aspiring teacher, this is Brittany's purpose in all of her work. Knowledge is power. An educated population is a healthy population of decision makers, and that is what the world needs.

You may or may not like these poems. Either way, Brittany hopes they open a door for you to investigate, study, and arrive at your own view of the world. Build your own critical thinking. Everyone has a purpose, and everyone matters. The more perspectives we can see, the more we will know, and the more we know, the better the world could be.

How to read this book

Each poem comes first on its own. Read it through once without stopping. Then turn to the Notes on the Evidence, where the facts the

poem rests on are traced to their sources, and to the reader's companion, which gives you keys rather than answers. The companion for the first two poems also includes twelve reading strategies that work on any poem.

Keep searching. Keep asking. Keep learning.

*The world needs all of us, because nothing turns alone,
and we were never supposed to.*

THE BODY IS A TOWN WITHOUT A GATE

*A poem in prose, for anyone who has been told
they are the bottom of something*

• • •

Brittany Molenaar



PROLOGUE

The heart is the mayor. It is a vital organ made up of muscles and sphincters that pump the necessities of life by way of oxygen and nutrients, which are carried in the transport system that we call the blood, while also retrieving waste products and moving them out of the community. This major organ supports the governance structure responsible for moving everything in and out of the body through four important chambers. Without it, all is lost. The heart receives various hormones manufactured by its neighbour, the thyroid, and its block-over neighbour, the adrenal gland, and it is often activated by the gossip-chain and propaganda generated by various bias media-trains called nerve receptors; the myelinated varieties circulate moral dogma the fastest. This media outlet can be found throughout the community, but the brain's right-hand goons stand watch out back, and the next intrigue or course of action is designed by the heart's twin cousins, the eyes, and its second cousin once removed, the brain. That part of the family is made up of the various elites, which make up the upper 3%, or rather, 2.02% of the entire human body's weight. Whatever stimulus is received via pleasure, fear, or pain is passed on through the gossip mill, which affects the stability and function of the entire communal circuit.

I. THE MAYOR EATS LAST

But watch the mayor closely, and you will learn the first secret of this town.

Between each beat there is a pause. The anatomy books call it *diastole*; the rest, the slack, the breath between the drumbeats, and it is only in that pause that the heart's own vessels fill. The muscle that feeds the whole municipality cannot feed itself while it is working. It eats in the quiet. It drinks in the dark. Squeeze the beats closer together, drive the pace up, keep the mayor at the podium through the night, and the arteries that feed the mayor go thirsty first.

Any city that forgets this will find its mayor grey-lipped and still smiling, still pumping, dying of the very labour it was praised for.

Rest is not a reward here. Rest is infrastructure.

And that 2.02% (the pale, folded, celebrated few who live behind the bone of the forehead and take the credit in every speech), they burn a fifth of everything the town brings in. Two percent of the weight, twenty percent of the oxygen, twenty percent of the sugar. Every loaf that arrives in this town, one in five goes up the hill.

Nobody voted on that. It was simply always how it was done.

II. THE NIGHT SHIFT

Go down past the ribs, into the district that appears on no letterhead.

The liver works there. It has no slogan. It runs five hundred separate processes with the lights off and the door shut and takes in, without complaint, everything the town swallowed without asking: the solvent, the sugar, the pill, the third drink, the ammonia the body makes simply by being alive. It breaks poison into salt. It stores the iron. It builds the proteins that keep the blood from leaking out of every vessel it passes. It is the only organ in the whole municipality that can rebuild itself after losing most of its own body, and it does this quietly, the way certain families rebuild after a fire, without a fundraiser.

Beside it, two water commissioners the size of fists. A hundred and eighty litres of the town's water crosses their desks every day, and they hand nearly all of it back — clean, salted correctly, warm. They keep a jug. Nobody in the history of this body has ever thanked them.

And at every door of every district: the sphincters. The doorkeepers. Rings of muscle that decide, thousands of times a day, what may pass and when. They are named in no speech. They appear in no photograph of the council. Let a single one of them fail — one small ring, one tired gatekeeper — and the whole town knows about it by morning, and calls it an emergency, and still does not learn their names.

III. THE MARKET DISTRICT

Here is the fact the gate was built to keep out.

Roughly half the citizens of this town are not, technically, you. In the long warm corridor of the gut live trillions of residents who arrived from somewhere else — from a mother's body, from soil, from bread, from another person's hands. They are foreign by every definition the gate would use. They carry a hundred times more genes into this town than the town was born with.

And they make the vitamins you cannot make. They break down the food you cannot break down. They teach your young immune cells, the way elders teach a volunteer fire brigade, which smoke is dinner, and which smoke is danger. Starve them, poison them, wall them off, sterilize the district in the name of safety, and the mood on the hill changes within days. The mayor's rhythm falters. The 2.02% goes foggy and mean.

Because here is what they never put in the brochure: the road between the market and the mayor's office runs mostly *uphill*. Four fifths of the traffic on the great wandering nerve is the body reporting to the brain, not the brain issuing orders to the body.

The elite are not, in fact, governing. They are listening. They have simply learned to describe listening as leadership.

IV. THE FOUNDATION

Now go all the way down. Past the muscle. Into the dark inside the bone.

There is no window down here. There is no title. There is only the marrow, the lowest and least visible layer of the whole structure, and it is making two million red blood cells every second (right now, while you read this), every one of them destined for the mayor's chambers, every one of them the actual substance of the life the mayor is congratulated for moving.

Understand what this means.

The mayor does not make the blood. The mayor moves it.

Every triangle ever drawn by an empire has this at its base and calls it the bottom. The bottom is the factory. The bottom is the source. The top is a pump with a good publicist.

And the bone itself is not even a monument. Two crews work it around the clock — one tearing down, one laying up, arguing every day of your life about the shape of the street. The skeleton you are sitting on is not a fixed thing you inherited. It is a negotiation you are currently having.

V. THE GATE

A gated community tells itself the gate is what keeps it alive.

So ask the skin. The largest organ in the body, the whole border of this town, two square metres of it, and it is perforated with two million doors, and every single one of them is open. It sweats. It breathes. It lets the world touch it and reports back what it found. It is not a wall. It is a membrane — a border whose entire job is *exchange*.

Seal it. Really seal it, gild it shut, let nothing in and nothing out, and the town dies of its own heat before the day is finished. Not from invasion. From its own contained furnace, with the gate proudly closed.

And when the border is cut, watch what actually heals it. No one arrives from the capital. The cells at the two edges of the wound simply agree to move toward one another. That is the whole mechanism. That is all it has ever been.

VI. THE SIREN

The adrenal glands sit on top of the kidneys like two small caps, and they hold the alarm.

The alarm is a gift. It was built for the ninety seconds when something with teeth comes over the ridge: pupils wide, blood pulled from the gut and thrown into the legs, the mayor hammering, sugar dumped into the streets for the sprint. Ninety seconds. Then quiet. Then the town goes back to bread and repair.

But in some districts, the siren has been sounding since before the grandmothers were born.

Watch what that does. The bone crews stop building and only tear down. The market district sours and leaks. Sleep breaks into pieces that don't fit back together. The peacekeepers go from vigilant to paranoid. The mayor's pressure climbs and stays climbed. The 2.02% shrinks in the very region where memory lives.

This is the cost of keeping one district afraid. Not metaphorically. *In bone*. In sleep. In years.

You cannot frighten one neighbourhood and bill only that neighbourhood. The invoice comes to the whole town, and it is paid in the currency of everyone's lifespan.

VII. THE CIVIL WAR

And this is where the harm turns all the way around.

Tell the peacekeepers, long enough and loudly enough, that the danger is *inside* — that it wears a familiar face, that it lives in the next district, that it speaks with an accent the gate does not like — and eventually they will believe you. They are loyal. That was always the problem.

Then the immune system turns and goes to work on the joints. On the lining of the gut. On the sheaths around the nerves, stripping the insulation off the very gossip lines the town runs on. On the thyroid. The neighbour who sets the pace for everyone, until the whole municipality runs cold and slow and cannot say why.

Medicine has one name for this. History has another. They are describing the same event: a body that has been taught to fear itself, dismantling itself with great discipline and a clear conscience, convinced the whole time that it is defending something.

There is no version of this where the attacking side wins. There is only a town with fewer working parts.

VIII. WHAT HAS NO PUMP

Now here is the part of the anatomy no empire has ever known what to do with.

The lymph has no pump. No mayor, no chamber, no muscle of its own, no budget line. It is a whole second circulatory system (the one that carries away the swelling, the debris, the aftermath, the grief of the tissues), and it moves for one reason only:

because you move.

It travels on the squeeze of a walking calf. On the rise of a rib. On the small motions of ordinary bodies doing ordinary things beside each other. It is mutual aid rendered in fluid. It is the neighbour with the truck. It is the casserole on the step. It has no authority whatsoever, and the town cannot survive three days of its absence.

Stand perfectly still, obey perfectly, move for no one, and you will swell with your own unmoved water.

IX. THE WEB

And all of it. Every district, every doorkeeper, the night shift and the market and the marrow and the mayor, is wrapped and threaded and held in one continuous white sheet. Fascia. It has no beginning. You cannot find the place where the fascia of the heart ends and the fascia of the hand begins, because there is no such place; it was cut into named pieces by scalpels, on tables, by people who needed the picture to be tidy.

Pull one corner of it and the entire cloth answers. Tighten a hip, and the jaw learns about it. Guard one shoulder for a year and the opposite foot will change how it meets the ground.

Western hands drew this body as a chart with a top and a bottom, boxes stacked in tidy hierarchy, the head at the summit and the bowels in the basement. It is a filing system, and it is a farce. The teaching carried by the First Nations of this land — that the world is a web held inside a circle, each strand a relative, each one necessary — is not a lovely alternative metaphor.

It is simply the more accurate anatomy.

X. THE BROKEN HEART

So, what happens to the mayor when the town stops belonging to itself?

There is a real condition, first named by fishermen's doctors, in which a person receives unbearable news — a death, a betrayal, an eviction, a leaving — and the heart *changes shape*. The left chamber balloons out and stops squeezing properly. On the screen it takes the form of a *takotsubo*: the round clay pot the fishermen sank to catch octopus.

A grieving heart looks like a trap. It arrives in emergency rooms looking exactly like a heart attack. And there is nothing wrong with the arteries at all. Nothing is blocked. The town simply received the news, and the mayor could not hold the shape.

Loneliness does the slower version. Wounds close more slowly on a person no one is expecting home. Inflammation rises in a body that has learned it is surplus. Sleep goes shallow and vigilant, because a nervous system that believes it is alone never fully assigns anyone else the watch.

Being unwanted is not a mood. It is a measurable event inside the tissue.

XI. THE HEART THAT IS HELD

And then the other one.

A hand on the back. A name said correctly by someone who bothered to learn it. A door held open with no calculation behind it. The old gossip lines carry that too; pleasure travels the same wires as fear and travels them faster.

Watch what the town does. The mayor's pace drops. The great wandering nerve opens the road, and the market unclenches. Blood returns to the fingers, and they warm. The breath drops out of the chest and into the belly. The bone crews start building again. The peacekeepers stand down from the doors of their own neighbours.

The body cannot tell the difference between *being loved* and *being safe*, because there is no difference. It never was a feeling. Belonging is a nutrient. It is delivered in the blood like iron, and a body deprived of it shows deficiency in every district at once.

XII. THE CIRCLE

So, take the triangle down.

It only ever stood because the base agreed to hold it, and the base was never the bottom. The base was the marrow making two million lives a second in the dark, the doorkeeper nobody named, the foreign citizens of the market who make the vitamins, the water commissioners, the night shift, the lymph that moves only when we move. Remove the summit and the body grieves and adapts. Remove the base, and there is no body at all. That is not a moral position. That is load-bearing.

The circle knows what the chart forgot: there is no organ in this town that is merely served, and none that merely serves. The mayor eats last. The elite are mostly listening. The wound closes because two edges agreed to come toward each other. Every district is a relative. Every system is a brother. Balance is not a nicety here; it is the only condition under which any of it continues.

And if you want to know where the smallest citizen sits in all of this...

The smallest bone in the human body is three millimetres long. It lives deep in the ear, and it is called the stirrup, and it does one thing: it passes the trembling of the air into the inner room where the trembling becomes sound. Take it out — the smallest, most overlookable, most easily dismissed piece of this entire municipality — and the town goes silent forever.

The smallest one among us is the one who lets us hear each other.

If we hurt one, we hurt us all.

Not as a slogan.

As anatomy.

NOTHING HERE TURNS ALONE

Three parables on balance

• • •

Brittany Molenaar



Right now, while your eyes move across this line, your body is running reactions you did not order, cannot feel, and could not perform on purpose, even if your life depended on it, which it does. Science calls this your autonomic nervous system.

You are not reading this alone. You are reading it on top of a stack of things that are working. Inside and outside of you. Most of them are invisible. None of them are yours.

Let me tell you three stories. They are the same story.

I. THE KINGDOM OF THE BRAIN

Begin small. Begin with the thing holding this page.

A body is a solar system with the lights off. Something on the order of thirty trillion cells, each one turning, each one keeping time to a drum in the chest that has never once asked permission to beat. Salt water and mineral. Weather. Tides that arrive on a schedule older than language.

And near the top of this small spinning arrangement sits the brain: three pounds of wet electricity, about two percent of the body's weight, and the only part of the whole system that has ever thought about itself.

One day the brain does the arithmetic and does not like the answer.

I am the seat of consciousness, it says. I am where the meaning is kept. Why am I taxed to move a foot? Why does so much of what comes into this house go down a corridor to a stomach, a place with no opinions?

From now on, I found myself.

The brain secedes.

It stops paying the legs, and the legs stop walking, which seems survivable, because where was it going anyway? It stops paying the hands, and the hands stop lifting food to the mouth, which seems survivable, because the pantry is stocked. It stops paying the gut, and the gut stops breaking bread down into the things a body can use.

Now count what the brain has just cancelled.

It builds its own steadiness out of a molecule it cannot make.

Tryptophan, the raw material of serotonin, is one of the handful of amino acids the human body cannot synthesize at all. Everyone arrives from outside: through a mouth, through a gut wall, into the blood, and then across the barrier into the brain, where it has to compete for passage with the other amino acids in the queue. The brain does not manufacture its own calm. It imports it, and the road runs through the stomach it was embarrassed to fund.

And underneath all of it, the shortest clock in the body has started.

The brain holds a reserve, but a small one: a little glycogen in the astrocytes, drawn down slowly, worth minutes and not hours. Two percent of the body's weight, and roughly a fifth of the oxygen it burns, delivered fresh, without pause, every second, by a muscle the brain has never once thanked.

Stop that delivery and consciousness is gone in seconds.

And the cells that begin to die first, after three to five minutes, before any of the tougher districts show damage, are the pyramidal cells of the hippocampus.

Which is where memory is kept.

The last thing the brain does, having declared that it alone was the seat of meaning, is forget.

The brain does not own consciousness. It rents it. The rent is paid in heartbeats, in footsteps, and in other people's bread.

When a body goes out of balance, there is almost always a reason, and the reason is rarely the part complaining loudest. And balance is never restored by one organ winning. It is restored when the whole system agrees to carry the part that fell and sometimes, when the fall is bad enough, by hands from outside the body altogether. A doctor. A neighbour. A stranger who knew what to do.

That is not weakness in a system.

That is what a system is *for*.

II. THE COUNCIL THAT VOTED AGAINST THE SUN

Now go up. Past the roof, past the weather, past the blue, until the blue thins out and the black begins.

The planets are in session, and they have a grievance.

The Sun is too much, they say. It holds the centre and never gives up the chair. It is unbearable up close. Everything here bends toward it. Nothing here is free.

And one of the cold ones at the back, far out, who has never felt more than a rumour of warmth, moves the motion.

Reduce it. Take it down ten percent. Let us have a solar system without a tyrant.

Here is what the minutes should record.

The Sun is not the centre because it rules. The Sun is the centre because it is ninety-nine point eight six percent of everything out here, and every scrap of that mass is spent holding eight worlds and hundreds of moons and ten million wandering stones in orbit around a single point, so that they do not simply fly off in straight lines into the dark, forever, alone.

Gravity is not a leash. Gravity is the only reason there is a *system* and not a scatter.

And the Sun pays for it out of its own body. Four and a quarter million tonnes of itself, every second, converted into light and given away. It has never sent an invoice. It has no mechanism for sending one.

But say the motion carries. Say the light drops a tenth.

Understand first that ten percent is not a margin: ten percent is the edge itself. The simplest climate models put the tipping point at under two percent; even the most stubbornly ice-resistant coupled model we have puts it at ten. Below that line, the ice comes down from both poles and does not stop at the mountains, and the whiter the world gets, the lighter it throws back, and the colder it gets, and the whiter it gets. There is no step in that staircase where the planet can stand still.

Then the rain slows, because rain is only the sea remembering warmth. The green goes — not dramatically, just a bad year and then a worse one. Everything that eats green follows. Everything that eats those follows them.

And at sea, the things too small to see, the ones doing nothing all day but turning light into sugar, go still. Just under half of all the photosynthesis on this planet happens out there, in organisms you could not pick out of a glass of water. As much living work as every forest, every grassland, every crop on every continent, combined.

Ten percent. That is all it took.

Now look down at your own hand.

The calcium in the bone of that hand was cooked in the hearts of giant stars and thrown out when they exploded. The iron riding in your blood, the atom that catches oxygen and carries it up to that four-minute brain, has a split parentage: about half from those same giant deaths, and about half from a quieter source, the detonation of white dwarfs, which are the burnt-out cores of small and ordinary stars.

Even the small dead ones are in you.

And the sugar burning in your muscles right now is sunlight. Not *like* sunlight. Is. Caught by a leaf, passed to a stalk, passed to a grain or an animal or a child, handed forward through the dark of a gut until it arrived in you this morning.

When the council votes against the Sun, be clear about what is on the floor.

You cannot save a system by attacking the thing that is giving it everything it has.

And you cannot tell a centre that gives from a centre that takes by measuring the chair.

You tell them apart by watching which way things flow.

III. THE LONG BRAID

Now the third story, which is the first two wearing clothes.

Everything that exists was once close enough to touch. Then the expansion, and the cold, and hydrogen. And then the first stars, which built every heavier thing in their bellies and scattered it when they died. Rock gathered. Water arrived. And in some shallow place, around three and a half billion years ago and possibly earlier, a chemical did the strangest thing in the history of the universe.

It made a copy of itself.

What followed is usually told as a story about winning. Read it closely, and it is a story about *fitting*, and about giving things up.

Every major jump in the complexity of life on this planet happened the same way: things that had been independent stopped being independent. Free genes bound into chromosomes. Free cells stopped reproducing on their own account and became tissue. Whole organisms folded into colonies where most individuals never breed at all. Each step up was paid for by something below giving up its right to go it alone.

And the largest merger in the history of life happened when one cell took in another and, instead of digesting it, *kept it, fed it, and let it stay*.

That guest never left. Some two billion years later, its descendants are in every cell you have, and they are the reason you can lift your arm. The engine of your entire body came from outside, from a different kingdom of life, and became family.

Nothing on this planet has ever survived alone. Not once. Not for a day.

Then us. Two hands around a fire. Then a family, a band, a tribe. Then a village, because a valley fed more mouths than a cave. Then a town. Then a city, where a species that had only ever trusted the faces, it knew had to invent a way of saying *we* about strangers.

Then walls around the *we*. Then armies to hold the walls. Then conquest, and countries, and flags, and borders drawn by men who had

never once stood in the rivers they were dividing. Then a planet that can photograph itself from orbit and still cannot agree that it is one planet.

Every level stands on the one beneath it. Every single one.

And here we are, in a system as interdependent as a body, as interdependent as a star and its worlds, living as though each household were a sealed jar.

Look at what the jar costs.

We rely on people who came from somewhere else. Nearly a quarter of everyone in this country was born in another one, and through the 2010s the overwhelming majority of all growth in the Canadian labour force came from immigrant workers. Thirty percent of the nurse aides and orderlies and patient service associates (the hands that turn your mother in her bed at four in the morning) are immigrants. A quarter of the people working in agriculture, and a tenth of those in food processing, are here on temporary permits, which means we have built the getting of food on people we have not agreed to keep.

We depend on them the way a cell depends on the guest it took in two billion years ago.

And then we decide that a name, a scarf, or a direction of prayer is the danger, while the same hands hold the door for us on the way out.

We rely on women to hold the shape of households, classrooms, wards, and workplaces. In this country, women still do about four hours of unpaid work a day to men's two and a half; worldwide, women perform roughly three quarters of all unpaid care work. We have not priced any of it. We call it love so we don't have to call it labour.

Now follow the arithmetic down, the way you follow it in a body.

Being treated as a suspect is not only an insult; across nearly three hundred studies it tracks, consistently, with worse mental health. And belonging is not a soft thing. Across a hundred and forty-eight studies and three hundred thousand people, those with stronger social relationships were about fifty percent more likely to still be alive at

follow-up. Connection is not a nicety in a human system. It is load-bearing, and it is measurable, and we let it fail in whole neighbourhoods at a time.

If a family cannot make rent, someone takes a second job. If someone takes a second job, they are not home. If they are not home, the children raise each other.

And the childhood that follows is one of the most thoroughly documented risks in modern medicine. Four or more adverse childhood experiences, against none, and the odds of problematic drug use, of interpersonal violence, and of harm turned inward, rise more than sevenfold. Not a little. Sevenfold — and along a clean gradient, more harm for more of it, which is the signature of a real effect and not a story we are telling.

When the load is heavier than the strength a person was given, and no one is coming, what is there left to reach for? Some reach for what numbs. Some stop reaching at all.

We call this a personal failing. It is closer to arithmetic: a weight divided by nobody.

And what happens to that family ten years on, when a child who learned that no one comes finds a group that finally says *we came for you*, and it is the wrong one, because it was the only one offering? Young people join, by their own accounts, for belonging, for standing, for the feeling of being safe. The bitter part is that the research is detailed: the safety is not real; joining raises the odds of being hurt while lowering the fear of it. They were not chasing violence. They were chasing the thing we would not give them, and violence was what was bundled with it.

We build prisons at the far end of that equation and call it a crime problem. It was a belonging problem, two decades upstream, and it was cheaper then.

And the man at the top of it, the good suit, the long drive, the car, is not the villain of this poem. He is carried too, and mostly does not know it. His suit was sewn by hands he will never meet. His road was laid, his

children taught, his mother bathed and turned in her bed by the very people he was taught to be wary of. He has been held up by an entire town and told it was a ladder he climbed alone.

That is its own kind of poverty: to be carried your whole life and never once feel the hands.

And the mother in the working-class house, in the middle-class house, who does all of it (the shifts, the lunches, the appointments, the aging parent, the birthday she stayed up until two to finish) who does *she* orbit?

Who is holding her?

She is the sun of a small system. She is spending her own body to keep it turning. And she has never sent an invoice either.

When we hurt one, we hurt all of us. Not as sentiment. As structure.

IV. THE MIRACLE NOBODY MENTIONS

And yet.

It is a miracle that a body works at all, given what we put into it and how little we sleep. It is a miracle the sky still holds, given what we send up into it. It is a miracle the animals have not turned on us, given what we have taken, paved, drained, and renamed as inventory.

It is a miracle that you can lie down tonight and simply *assume* a morning. That the water will be clean. That the lights will come on. That the shelves will have food. That the bridge will hold.

None of that is weather. Every bit of it is somebody.

Somebody drove through the night, so the shelf was full. Somebody sat up with a frightened stranger. Somebody tested the water. Somebody patched the line in the rain. Somebody taught your child to read. Somebody's hands were in the dirt that grew the thing you ate this morning without once looking up.

We have become expert auditors of the systems that spin our small worlds, and illiterate in the ten thousand things that did not fail today.

Gratitude is not a mood. It is accurate perception.

V. THE ONES WHO ALREADY KNEW

None of this is new information.

This land, the ground this is written on, is Treaty 7 territory, the territory of the Niitsitapi, the Blackfoot Confederacy: Siksika, Kainai, and Piikani, and home as well to the Métis. The Blackfoot held a severe and magnificent country in working order for thousands of years and governed from the fire outward rather than from a throne downward.

Far to the east, the Haudenosaunee wrote into their Great Law of Peace an instruction to their leaders: to weigh every decision not only against the present but against “the coming generations, the unborn of the future Nation.” It is remembered now as the seventh-generation teaching. It is a longer accounting horizon than any government on this continent has since attempted.

These are different nations, with different laws, and they should not be blended into one convenient wisdom. What they share is a premise: that the land is a relative and not an inventory, and that balance is the thing you are governing for.

And balance is a far harder achievement than growth. Growth only asks you to take. Balance asks you to know when to stop.

This is not a romantic claim, and it does not need to be. Lands held or managed by Indigenous peoples make up more than a quarter of the surface of the earth, and the vertebrate biodiversity on them matches, and in places exceeds, that of formal protected areas. The record is in the ground. It was not lost. It was ignored, and it is still being offered, and it is still patient.

And this is not the place for blame. Every generation inherited a mess and added to it, mostly while trying to do right by the people in front of them. We are all in the middle of learning.

This is not an indictment. It is an inventory.

VI. ONE

So: we need everybody.

Not most of us. Not the reasonable half. Everybody. Because a body does not heal by a majority vote of its organs, and a solar system does not hold its orbits on the strength of its largest planets.

Stop trying to keep everything out. The gate was never what kept the town alive.

Let connection come back in.

It only takes one to begin.

One moment. One kindness. One open door.

One person turns toward another, and another turns, and then it is a current.

If each of us does a little, it adds to a great deal, and this is not optimism. It is the same arithmetic that built the tribe out of the family, the city out of the village, the body out of the cell. It is the only arithmetic that has ever worked.

Healing is not something that arrives. It is something that starts, and it starts where you are standing, in the next thing you say to somebody.

The layers of this go down further than any brain can hold.

That is all right.

*You do not have to understand the whole web
to be a good thread in it.*

NOTES ON THE EVIDENCE

Every empirical claim in the poem is keyed below to its source. Where the honest version of a fact is narrower than the popular version, I used the narrower one. Three widely circulated claims that would have strengthened the poem rhetorically were cut because they do not survive scrutiny; they are listed at the end.

I — The Kingdom of the Brain

“on the order of thirty trillion cells.” The best current estimates are 3.0×10^{13} human cells (Sender, Fuchs & Milo 2016) and ~36 trillion for a 70 kg adult male, ~28 trillion for a 60 kg adult female (Hatton et al. 2023). The older and more quotable figure of 37.2 trillion (Bianconi et al. 2013) carries a $\pm 22\%$ error bar and is sex- and size-dependent, so a rounded lower figure is used here. All exclude the roughly equal number of resident bacteria.

Sender R, Fuchs S, Milo R (2016), *PLOS Biology* 14(8):e1002533, doi:10.1371/journal.pbio.1002533 · Hatton IA et al. (2023), *PNAS* 120(39):e2303077120, doi:10.1073/pnas.2303077120 · Bianconi E et al. (2013), *Annals of Human Biology* 40(6):463–471, doi:10.3109/03014460.2013.807878

“about two percent of the body’s weight... roughly a fifth of the oxygen it burns.” Standard and well established.

Raichle ME & Gusnard DA (2002), *PNAS* 99(16):10237–10239, doi:10.1073/pnas.172399499 · original measurement: Kety SS & Schmidt CF (1948), *J Clin Invest* 27(4):476–483, doi:10.1172/JCI101994

“Tryptophan... one of the handful of amino acids the human body cannot synthesize at all... has to compete for passage.” Tryptophan is an essential amino acid and the precursor of serotonin. Unlike serotonin itself it crosses the blood–brain barrier, via the large neutral amino acid transporter, for which it competes with other LNAAs — so brain supply depends on the plasma tryptophan-to-LNAA ratio, not on tryptophan alone.

Fernstrom JD & Wurtman RJ (1971), *Science* 173(3992):149–152, doi:10.1126/science.173.3992.149 · Young SN (2013), *J Psychiatry Neurosci* 38(5):294–305, doi:10.1503/jpn.120209

Qualification the poem deliberately does not overstate: experimentally depleting tryptophan does **not** reliably lower mood in healthy

volunteers. It lowers mood in people with a personal or family history of depression, and precipitates relapse in remitted patients on serotonergic antidepressants — i.e. it exposes a vulnerability rather than demonstrating a monoamine cause of low mood.

Ruhé HG, Mason NS & Schene AH (2007), *Molecular Psychiatry* 12(4):331–359, doi:10.1038/sj.mp.4001949

“a little glycogen in the astrocytes, drawn down slowly, worth minutes and not hours.” Human brain glycogen is $\sim 3.5 \mu\text{mol/g}$, three- to fourfold higher than free brain glucose, held mainly in astrocytes, with slow turnover ($0.16 \mu\text{mol}\cdot\text{g}^{-1}\cdot\text{h}^{-1}$). The common assertion that the brain has *no* fuel reserve is false; the defensible claim is that the reserve is negligible relative to demand.

Öz G et al. (2007), *Am J Physiol Endocrinol Metab* 292(3):E946–E951, doi:10.1152/ajpendo.00424.2006

“consciousness is gone in seconds.” Abrupt complete cerebral circulatory arrest produced loss of consciousness in 4–10 seconds in the classic human experiments; a modern scoping review of 39 studies concludes clinical loss of consciousness and loss of EEG activity occur within 30 seconds.

Rossen R, Kabat H & Anderson JP (1943), *Arch Neurol Psychiatry* 50(5):510–528, doi:10.1001/archneurpsyc.1943.02290230022002 · Pana R et al. (2016), *Journal of Critical Care* 34:77–83, doi:10.1016/j.jcrc.2016.04.001

“after three to five minutes... the pyramidal cells of the hippocampus.” There is no single whole-brain death threshold; vulnerability is regional and graded. CA1 hippocampal pyramidal neurons are the most sensitive population, sustaining irreversible injury after roughly 3–5 minutes of complete normothermic ischemia, while medium-sized striatal neurons tolerate 15–20 minutes. The familiar “the brain dies in four minutes” is clinical shorthand, not a measured constant — which is why the poem names the specific cells, and why it is true that memory goes first.

Harukuni I & Bhardwaj A (2006), *Neurologic Clinics* 24(1):1–21, doi:10.1016/j.ncl.2005.10.004

II — The Council That Voted Against the Sun

“ninety-nine point eight six percent.” Computed from NASA fact-sheet masses: $M_{\odot} = 1.9885 \times 10^{30}$ kg against 2.667×10^{27} kg for the eight planets, giving 99.866%; the figure survives a generous allowance for moons, asteroids, the Kuiper Belt and Oort Cloud. NASA’s public pages round to 99.8%.

NASA Planetary Fact Sheet, nssdc.gsfc.nasa.gov/planetary/factsheet/

“Four and a quarter million tonnes of itself, every second, converted into light.” $\dot{m} = L/c^2 = 3.828 \times 10^{26} \text{ W} \div c^2 = 4.26 \times 10^9$ kg/s. Distinct from the ~600 million tonnes of hydrogen *fused* per second, of which only 0.7% is destroyed as mass. The poem says “converted into energy,” not “lost” — total solar mass loss including the solar wind is higher, around 5.5–6 Mt/s.

IAU 2015 Resolution B3 (nominal solar luminosity) · NASA Solar Fact Sheet

“the simplest climate models put the tipping point at under two percent; even the most stubbornly ice-resistant coupled model we have puts it at ten.” Budyko’s energy-balance model gives runaway ice-albedo glaciation at a 1.6% reduction in solar constant; Sellers ~2%; the CCSM3 coupled GCM at 286 ppmv CO₂ gives 10–10.5%, with global sea-ice fraction jumping from 49% to 100% between 0.90 and 0.895 TSI₀. The early energy-balance models are known to overestimate ice-albedo feedback, which is why the poem brackets the range rather than claiming a safety margin. **This holds atmospheric composition and albedo at present-day values, over timescales short compared with the carbonate–silicate weathering cycle** — the qualification that keeps the claim standing against the faint young Sun paradox, in which a Sun 25–30% dimmer in the Archean did not freeze the Earth because the greenhouse, albedo and weathering thermostat all differed.

Budyko MI (1969), *Tellus* 21(5):611–619, doi:10.1111/j.2153-3490.1969.tb00466.x · Yang J, Peltier WR & Hu Y (2012), *Journal of Climate* 25(8):2711–2736, doi:10.1175/JCLI-D-11-00189.1 · Feulner G (2012), *Reviews of Geophysics* 50:RG2006, doi:10.1029/2011RG000375 · Walker JCG, Hays PB & Kasting JF (1981), *JGR* 86:9776, doi:10.1029/JC086iC10p09776

“Just under half of all the photosynthesis on this planet happens out there.” Global net primary production is 104.9 Pg C/yr, of which oceanic is 48.5 Pg C/yr — 46.2%.

Field CB, Behrenfeld MJ, Randerson JT & Falkowski P (1998), *Science* 281(5374):237–240, doi:10.1126/science.281.5374.237

“about half from those same giant deaths, and about half from... the detonation of white dwarfs.” Calcium is an α -element produced mainly by core-collapse supernovae (~70%) with a substantial Type Ia contribution (~30%). Iron is roughly half core-collapse and half Type Ia — and Type Ia progenitors are white dwarfs, the remnants of low- and intermediate-mass stars. The familiar line that “the iron in your blood was made in massive stars” is therefore only about half right, and the correction happens to be the poem’s own argument.

Kobayashi C, Karakas AI & Lugaro M (2020), *ApJ* 900:179, doi:10.3847/1538-4357/abae65

“the sugar burning in your muscles right now is sunlight.”

Essentially all carbon entering the human food chain is photosynthetically fixed; gluconeogenic substrates trace to the same origin. Chemosynthetic vent and subsurface ecosystems are a real exception to the general statement about the biosphere, and a negligible one for human diets.

“around three and a half billion years ago and possibly earlier.” Robust multi-biosignature evidence at the 3.48 Ga Dresser Formation; the 3.7–3.8 Ga Isua and Akilia graphite signatures are suggestive but not definitive, with viable abiotic explanations. Universe 13.797 ± 0.023 Gyr (Planck 2018); Earth 4.54 ± 0.05 Ga.

Phil. Trans. R. Soc. B 380:20240106 (2025) · Planck Collaboration (2020), *A&A* 641:A6, doi:10.1051/0004-6361/201833910 · Patterson C (1956), *Geochim Cosmochim Acta* 10:230, doi:10.1016/0016-7037(56)90036-9

III — The Long Braid

“Every major jump in the complexity of life... things that had been independent stopped being independent.” The major evolutionary transitions framework: entities capable of independent replication before the transition can replicate only as part of a larger

whole after it. Note that the poem deliberately avoids the popular framing of “cooperation *instead of* competition” — mainstream social evolution theory explains cooperation among lower-level units as a product of selection among higher-level units, and the two are not opposites.

Maynard Smith J & Szathmáry E (1995), *The Major Transitions in Evolution*, Oxford · Szathmáry E (2015), *PNAS* 112(33):10104–10111, doi:10.1073/pnas.1421398112 · West SA, Fisher RM, Gardner A & Kiers ET (2015), *PNAS* 112(33):10112–10119, doi:10.1073/pnas.1421402112

“one cell took in another... some two billion years later.”

Mitochondria descend from a bacterial endosymbiont related to modern Alphaproteobacteria, acquired by an archaeal host lineage. Recent site- and branch-heterogeneous phylogenomics favours mitochondria as *sister to* known Alphaproteobacteria rather than nested within them; molecular-clock estimates place the endosymbiosis around 2 Ga, with the last eukaryotic common ancestor by ~1.8–1.7 Ga. Dates remain actively contested.

Sagan L [Margulis] (1967), *J Theor Biol* 14(3):225–274, doi:10.1016/0022-5193(67)90079-3 · Roger AJ, Muñoz-Gómez SA & Kamikawa R (2017), *Current Biology* 27(21):R1177–R1192, doi:10.1016/j.cub.2017.09.015 · Muñoz-Gómez SA et al. (2022), *Nature Ecology & Evolution* 6:253–262, doi:10.1038/s41559-021-01638-2

“Nearly a quarter of everyone in this country was born in another one.” Immigrants were 23.0% of Canada’s population (8.36 million) at the 2021 Census, the highest share since Confederation; projected 29.1–34.0% by 2041. Through the 2010s, immigrant workers accounted for 84% of total labour force growth.

Statistics Canada, *The Daily*, 26 October 2022 · Statistics Canada 11-631-X, 22 June 2022

“Thirty percent of the nurse aides and orderlies and patient service associates.” Adult immigrants were 22% of the nursing and health care support workforce against 16% of all employed, and 30% of nurse aides, orderlies and patient service associates specifically.

Statistics Canada 75-006-X, 28 May 2021

“A quarter of the people working in agriculture, and a tenth of those in food processing, are here on temporary permits.” Temporary foreign workers were approximately one-quarter of all agriculture workers and roughly one-tenth of employees in food and

beverage manufacturing (2021). The poem keeps *immigrants* and *temporary foreign workers* as distinct categories throughout, because they are.

Statistics Canada, *The Daily*, 13 June 2022

Related figure the poem does not use: Canada's total fertility rate fell to a record 1.25 in 2024, far below replacement. It is tempting but no longer accurate to say Canada "relies on immigration for population growth" in the present tense — the population contracted slightly over 2025 following reductions in non-permanent residents.

Statistics Canada, 22 April 2026; *The Daily*, 18 March 2026

"about four hours of unpaid work a day to men's two and a half... roughly three quarters of all unpaid care work."

Canadian General Social Survey time use, 2022, population 15+: women 3.7 h/day of unpaid work against men's 2.6 h (with paid work running the other way, men 3.9 h against women's 3.0 h).

Internationally, across 64 countries covering two-thirds of the world's working-age population, women perform 76.2% of total unpaid care work hours — 3.2 times men's share. The two measures use different definitions and are not interchangeable.

Statistics Canada Table 45-10-0104-01 · International Labour Organization (2018), *Care Work and Care Jobs for the Future of Decent Work*

"across nearly three hundred studies it tracks, consistently, with worse mental health." Meta-analysis of 293 studies: self-reported racism associated with poorer mental health ($r = -0.23$, 95% CI -0.24 to -0.21) and, more weakly, poorer physical health ($r = -0.09$). The poem says *associated*, not *causes*; effects were stronger in cross-sectional than longitudinal designs.

Paradies Y et al. (2015), *PLoS ONE* 10(9):e0138511, doi:10.1371/journal.pone.0138511

"a hundred and forty-eight studies and three hundred thousand people... about fifty percent more likely to still be alive." 148 studies, 308,849 participants, mean follow-up 7.5 years: OR = 1.50 (95% CI 1.42–1.59) for survival as a function of stronger social relationships. Note the direction — this is increased survival with stronger ties, not increased mortality from isolation, which is a

separate and smaller effect (social isolation OR 1.29; loneliness OR 1.26).

Holt-Lunstad J, Smith TB & Layton JB (2010), *PLoS Medicine* 7(7):e1000316, doi:10.1371/journal.pmed.1000316 · Holt-Lunstad J et al. (2015), *Perspectives on Psychological Science* 10(2):227–237, doi:10.1177/1745691614568352

“Four or more adverse childhood experiences... rise more than sevenfold... along a clean gradient.” Meta-analysis of 37 studies, 253,719 participants: against zero ACEs, four or more gave odds ratios above 7 for problematic drug use and for interpersonal and self-directed violence; 3–6 for mental ill health and problematic alcohol use; 2–3 for smoking, cancer, heart and respiratory disease. The dose–response gradient was first established by Felitti et al. Heterogeneity is considerable ($I^2 > 75\%$ for nearly half the outcomes), and the original ACE data are retrospective and drawn from a single insured population.

Hughes K et al. (2017), *The Lancet Public Health* 2(8):e356–e366, doi:10.1016/S2468-2667(17)30118-4 · Felitti VJ et al. (1998), *Am J Prev Med* 14(4):245–258, doi:10.1016/S0749-3797(98)00017-8

“they join for belonging, standing, the feeling of being safe... the safety is not real.” The belonging-and-protection account is well represented in qualitative and theoretical criminology and in members’ own accounts, though the quantitative base is thinner than the theoretical literature implies — the Campbell systematic review found only nine eligible studies, all cross-sectional. What is firmly established is the poem’s sting: gang membership *increases* violent victimization while *decreasing* subjective fear of it.

Melde C, Taylor TJ & Esbensen F (2009), *Criminology* 47(2):565–594 · Higginson A et al. (2018), *Campbell Systematic Reviews* 14(1), doi:10.4073/csr.2018.11

V — The Ones Who Already Knew

Treaty 7, the Niitsitapi, and the seventh generation. Lethbridge and the surrounding country lie within Treaty 7 territory, signed 22 September 1877 at Blackfoot Crossing, and within the traditional territory of the Blackfoot Confederacy — Siksika, Kainai and Piikani — with the region also part of Métis Nation of Alberta Region 3. The seventh-generation teaching is **Haudenosaunee**, from the Great Law of Peace, whose instruction to leaders is to have in view “not only the

present but also the coming generations... the unborn of the future Nation”; the “seventh generation” formulation is the transmitted oral articulation rather than a quoted clause. It is *not* a Blackfoot teaching, and the poem keeps the two nations and their laws explicitly separate rather than merging them into a single pan-Indigenous wisdom, which would be both inaccurate and a familiar form of erasure.

University of Lethbridge land acknowledgement (Board of Governors, 2019, rev. 2022) · City of Lethbridge land acknowledgement (rev. July 2024) · Graham LM (2008), *Harvard Human Rights Journal* 21(1):47–103 · Lyons O (1980), “An Iroquois Perspective,” in Vecsey & Venables eds., *American Indian Environments*

“more than a quarter of the surface of the earth... matches, and in places exceeds.” Indigenous peoples manage or hold tenure rights over at least 38 million km² across 87 countries — over a quarter of the global land surface — intersecting about 40% of terrestrial protected areas and ecologically intact landscapes. Vertebrate species richness on Indigenous-managed lands was slightly higher than on existing protected areas in Australia, Brazil and Canada, with more threatened vertebrates in Brazil and Canada.

Garnett ST et al. (2018), *Nature Sustainability* 1:369–374, doi:10.1038/s41893-018-0100-6 · Schuster R, Germain RR, Bennett JR, Reo NJ & Arcese P (2019), *Environmental Science & Policy* 101:1–6, doi:10.1016/j.envsci.2019.07.002

Three claims cut because they do not survive scrutiny

“Most of your serotonin is made in your gut — so the gut governs the mind.” The premise is true: 90–95% of the body’s serotonin is made by enterochromaffin cells in the gut. The inference is blocked, because peripheral serotonin does not cross the blood–brain barrier. The two pools are functionally separate and the brain synthesises its own. This is the most common error in popular writing on the gut and the mind, and the first thing a referee would catch. The poem uses tryptophan instead, where the dependency is real and the mechanism is intact.

Martin AM et al. (2017), *Endocrinology* 158(5):1049–1063, doi:10.1210/en.2016-1839 · Hardebo JE & Owman C (1980), *Annals of Neurology* 8(1):1–31, doi:10.1002/ana.410080102

“Every second breath you take comes from the ocean.” This conflates net primary production with net atmospheric oxygen supply.

Nearly all oxygen produced by marine phytoplankton is re-consumed within the ocean; the net long-term contribution to the atmosphere depends only on the small fraction of organic carbon buried in sediments, and the atmospheric oxygen reservoir has a residence time of thousands of years. The poem claims the photosynthesis, which is real, and not the breath, which is not.

“Eighty percent of the world’s biodiversity is found on Indigenous lands.” Widely repeated, including by governments and NGOs, and without basis — formally repudiated in *Nature* in 2024 by a group of authors including Stephen Garnett, lead author of the 2018 paper the claim is usually attributed to. The poem uses the defensible finding instead.

Fernández-Llamazares Á, Garnett ST et al. (2024), *Nature* 633:32–35, doi:10.1038/d41586-024-02811-w

And one claim used only with its hedge: “Dunbar’s number” — the idea that humans can sustain about 150 stable relationships — is cultural shorthand whose statistical derivation has been seriously challenged; re-analysis with modern phylogenetic methods gives point estimates from 16 to 109 with 95% confidence intervals running from 2 to 520, and concludes no specific limit can be defended. The poem therefore says only that our species “had only ever trusted the faces it knew,” and names no number.

Lindenfors P, Wartel A & Lind J (2021), *Biology Letters* 17(5):20210158, doi:10.1098/rsbl.2021.0158

Reader's Companion: Two Poems

The Body Is a Town Without a Gate · Nothing Here Turns Alone

Written by Brittany Molenaar

How to use this companion

This companion gives you keys, not answers. Read each poem once through first, then use these pages to go back in.

- **Start with the strategies.** They work on any poem, not just these two.
- **Use the section hints only when stuck.** Each hint points you to where to look and asks a question. The meaning is yours to find.
- **There is no single correct reading.** If your interpretation fits the details of the text, it counts.
- **Both poems are scientifically accurate.** Poem 2 includes source notes. When a line seems exaggerated, check it: the surprise is usually the point.

Reading strategies: peeling back the layers yourself

These poems work on two levels at once: a literal level (anatomy, astronomy, evolution) and a social level (how people treat each other). Most of the meaning lives where the two levels meet. These strategies help you find those meeting points.

1. Read the title and subtitle as instructions

Titles here do real work. Ask: what is a “gate” in a town? Who gets told they are “the bottom of something”? What does it mean for something to “turn alone”? Keep your answers in mind as you read.

2. Build a two-column map

Draw two columns. On the left, write the literal thing (the liver, the Sun, the marrow). On the right, write what it might stand for in a

human community. Literary critics call these the **vehicle** (the image) and the **tenor** (the idea it carries).

Fill the right column in pencil. Change it when later lines give you more evidence.

3. Ask “who in my town is this?”

When the poem describes a body part’s job, picture the person who does that job in a real town. Who works unseen at night? Who guards the doors? Who arrived from somewhere else? Who gets the credit?

4. Watch for the job descriptions

The poet gives organs social titles: mayor, night shift, doorkeepers, peacekeepers, water commissioners. Circle every title. Together they form a cast list for the town.

5. Follow the flow

In every section, ask what moves and in which direction. Blood, oxygen, sugar, light, labour, care. Then ask who gives and who receives. Poem 2 says this outright: you tell a giving centre from a taking one by watching which way things flow.

6. Find the turn

Most sections pivot on a small word: “But,” “And yet,” “Now,” “Understand what this means.” The text before the turn usually describes. The text after it usually argues. Underline each turn.

7. Notice the short lines

The longest paragraphs carry the science. The shortest lines, often standing alone, carry the conclusion. Read only the one-line paragraphs of a section and you will often have its thesis.

8. Look up one word per section

Diastole, fascia, takotsubo, astrocyte, endosymbiont. Each term hides a fact the section depends on. Use the glossaries below, then ask why the poet chose that fact.

9. Track the repeats

Some images return: the 2% brain that uses 20% of the resources, the gate, the web, the circle, the invoice never sent, “hurt one, hurt all.” A repeated image is a signal of what the poet wants you to carry.

10. Notice the tone shifts

Parts are satirical (the gossip mill, the elites). Parts are tender (the held heart, the mother). Ask why the voice mocks some figures and protects others.

11. Ask what is left unsaid

The poems rarely name the social target directly. When a line feels charged but vague, such as “History has another [name],” pause. Ask what history the poet might mean, and why she chose not to say it.

12. Read aloud

These are prose poems: poetry written in paragraphs instead of lines. Their rhythm shows up when spoken. Read a section aloud and listen for where the sentences shorten and hit harder.

Poem 1: *The Body Is a Town Without a Gate*

The big idea to test: the poem treats the human body as a town and holds it up against the way human towns rank people. Read it asking whether anatomy agrees with that ranking.

The controlling metaphor: body = town. Every organ has a civic job. Your task is to work out which human role each job describes.

Before you start

- Reread the subtitle. Who is “told they are the bottom of something”? Who does the telling?
- A **gated community** keeps outsiders out. Hold that picture through the whole poem.

- The **Prologue** is the densest passage. If it loses you, skim it and start at Section I. Come back to it at the end; it will make more sense.

Section by section

Prologue. Look for: the heart as “mayor,” nerves as a “gossip-chain” and “media,” the brain as “elites.” Ask: why would a poem about the body use the language of politics and news?

I. The Mayor Eats Last. Look for: the heart feeds itself only during its rest. Then the brain’s numbers: 2% of the weight, 20% of the oxygen. Ask: is the mayor the same kind of leader as the “elites on the hill”? What does “Nobody voted on that” suggest?

II. The Night Shift. Look for: organs that clean up everyone’s mess and are never thanked. Ask: which workers in your community fit this description?

III. The Market District. Look for: the word “foreign” and where the gut’s residents came from. Ask: who in a country arrives “from somewhere else” and then does work the country cannot do without? Then look at which way the nerve traffic runs. What does that say about who really governs?

IV. The Foundation. Look for: the bottom of the body making the substance of life. Ask: what shape is “every triangle ever drawn by an empire”? Who sits at its base?

V. The Gate. Look for: the difference between a wall and a membrane. Ask: what happens to a community that seals its borders completely? How does a wound heal, and who is not involved?

VI. The Siren. Look for: an alarm built for ninety seconds that has been sounding for generations. Ask: which neighbourhoods have lived under constant alarm? Who pays the bill?

VII. The Civil War. Look for: the immune system turned against the body. Ask: “Medicine has one name for this. History has another.”

What historical events fit a society that has been taught to fear some of its own people?

VIII. What Has No Pump. Look for: a system with no leader that moves only when ordinary people move. Ask: what in human life works like this?

IX. The Web. Look for: two ways of drawing the body, a chart and a web inside a circle. Ask: which one does the poet call more accurate, and whose teaching does she credit?

X. The Broken Heart. Look for: a heart that changes shape after bad news. Ask: what does the poem claim about rejection and loneliness? Is it a feeling or a physical event?

XI. The Heart That Is Held. Look for: the town's response to small kindnesses. Ask: why does the poet say love and safety are the same thing to the body?

XII. The Circle. Look for: the triangle coming down and the smallest bone. Ask: who is "the smallest one among us," and what would a town lose without them? Read the last four lines alone. What is the poem's final claim?

Try it: fill in the town

Complete the right column yourself. One row is done as a model.

In the body	Civic title in the poem	Who this might be in a real community
Heart	The mayor	A leader who serves the whole and needs rest to survive
Brain	The elites, "the 2.02%"	
Liver and kidneys	The night shift, water commissioners	
Sphincters	Doorkeepers	

In the body	Civic title in the poem	Who this might be in a real community
Gut microbes	The Market District	
Bone marrow	The foundation	
Skin	The border	
Immune system	Peacekeepers	
Lymph	Has no pump	
Stirrup bone	The smallest citizen	

Glossary

- **Diastole:** the relaxation phase between heartbeats, when the heart's own arteries fill.
- **Sphincter:** a ring of muscle that opens and closes a passage in the body.
- **Microbiome:** the trillions of bacteria and other microbes living in the gut.
- **Vagus nerve:** the “great wandering nerve” linking brain and organs; most of its fibres carry signals up to the brain.
- **Marrow:** tissue inside bones that makes blood cells.
- **Adrenal glands:** glands on the kidneys that release stress hormones.
- **Autoimmune disease:** a condition where the immune system attacks the body's own tissue.
- **Lymph:** fluid that drains tissues and carries immune cells; it has no pump of its own.

- **Fascia:** continuous connective tissue wrapping every muscle and organ.
- **Takotsubo cardiomyopathy:** “broken heart syndrome,” a stress-triggered weakening of the heart named for a Japanese octopus trap.
- **Stapes (stirrup):** the smallest bone in the body, in the middle ear.

Poem 2: *Nothing Here Turns Alone*

The big idea to test: the poet announces three stories and then says “They are the same story.” Your job is to find what the three share.

The structure: the poem moves in scale, from one body, to the solar system, to the history of life and human society. Then it turns to gratitude, to Indigenous knowledge, and finally to you.

Before you start

- Read the subtitle: “Three parables on balance.” A **parable** is a short story that teaches a lesson through a comparison. What lesson might balance teach?
- Read the opening paragraph slowly. It asks you to notice everything your body is doing without you. Keep that feeling of being carried in mind.
- The **Notes on the Evidence** at the end are part of the work. They show which facts are real and which popular claims the poet refused to use.

Section by section

Opening. Look for: “None of them are yours.” Ask: what is the difference between something working *in* you and something being *yours*?

I. The Kingdom of the Brain. Look for: the brain deciding to “found itself” and stop paying the rest of the body. Ask: what kind of

person or group believes they succeed alone? Notice which part of the brain dies first. Why would that detail matter to the poet? What does “It rents it” mean?

II. The Council That Voted Against the Sun. Look for: planets resenting the centre and voting to dim it. Ask: is the Sun a tyrant or a giver? How can you tell? Find the line about “which way things flow.” How does it change the meaning of “centre” from Poem 1?

Also in II: the stardust passage. Look for: iron made in both giant stars and “small and ordinary” dead ones. Ask: if even small dead stars live on in you, what might the poet be saying about ordinary people?

III. The Long Braid. Look for: every leap in life’s complexity happening when independent things joined together. Then the cell that took in a guest and kept it. Ask: in the paragraphs that follow about Canada, who is the “guest”?

This section drops the metaphor and names real groups. Trace the chain that starts with rent. Ask: why does the poet call it “a belonging problem, two decades upstream”?

Look for: the man in the good suit and the mother. Ask: why does the poet refuse to make him a villain? Why does she call the mother “the sun of a small system”?

IV. The Miracle Nobody Mentions. Look for: “Every bit of it is somebody.” Ask: what does it mean that gratitude is “accurate perception” rather than a mood?

V. The Ones Who Already Knew. Look for: the specific nations named and the care taken not to blend them. Ask: what is the difference between governing for growth and governing for balance? Why does the poet say “inventory,” not “indictment”?

VI. One. Look for: the move from “everybody” to “one.” Ask: what does the poem ask the reader to actually do? What does the last line give permission for?

Try it: three stories, one pattern

Fill in the table to test the claim that the three parables are “the same story.”

Parable	Who thinks they stand alone?	Who actually carries them?	What happens when they try?
I. The brain	The brain		
II. The planets			
III. Human society			

Glossary

- **Autonomic nervous system:** the part of the nervous system that runs breathing, heartbeat, and digestion without conscious control.
- **Tryptophan:** an amino acid the body cannot make; the brain uses it to build serotonin.
- **Astrocyte:** a star-shaped support cell in the brain that stores a small fuel reserve.
- **Hippocampus:** the brain region central to forming memories.
- **Ice-albedo feedback:** ice reflects sunlight, which cools the planet, which makes more ice.
- **Phytoplankton:** microscopic ocean organisms that photosynthesize.

- **Supernova / white dwarf:** an exploding star / the burnt-out core of an ordinary star.
- **Endosymbiosis:** one cell living inside another; mitochondria began this way.
- **Mitochondria:** the structures in your cells that produce energy.
- **ACEs (adverse childhood experiences):** childhood traumas such as abuse, neglect, or household instability, linked to later health risks.
- **Treaty 7:** the 1877 treaty covering southern Alberta, including Blackfoot Confederacy territory.
- **Seventh generation:** the Haudenosaunee teaching to weigh decisions against their effect on generations far in the future.

Reading the two together

The poems are companions. They share images, and the second answers questions the first leaves open. Try these comparisons after reading both.

- **The brain.** It appears in both as the part that takes 20% and forgets its debts. How does its story end differently in each poem?
- **The centre.** Poem 1 is suspicious of whatever sits at the top. Poem 2's Sun is at the centre and is admired. Does Poem 2 change how you read the heart-as-mayor in Poem 1?
- **The gate.** Poem 2 mentions the gate once, near the end. Find the line. Why might it be there?
- **The web and the circle.** Both poems end by replacing a ranked picture with a connected one. Compare where each poem gives credit for that idea.
- **Metaphor versus evidence.** Poem 1 keeps its argument inside one extended metaphor. Poem 2 steps out of metaphor and uses statistics. Which approach moved you more, and why?
- **The ending.** Poem 1 ends on a principle. Poem 2 ends on an action. What does each ask of the reader?

Companion writers: who else has done this

These poems belong to two old traditions. One uses the **body as a picture of society**. The other puts **real science inside poetry**. Reading a companion piece next to Brittany's work shows what she borrows and where she breaks from the tradition.

For Poem 1: the body as a society

The Fable of the Belly (Menenius Agrippa, retold by Livy; Shakespeare's *Coriolanus*, Act 1, Scene 1)

- *Similar*: The limbs rebel against the belly because it seems to do nothing. They learn that the belly feeds them all. This is the classic "body politic" story.
- *Different*: It was told to calm rebelling commoners and defend the rulers, with the senate as the belly. Brittany uses the same device to argue the opposite: the base, not the top, keeps the body alive. Reading the two side by side is the fastest way to see what her poem is arguing against.

Paul, 1 Corinthians 12 (the Bible)

- *Similar*: One body, many parts. The parts that seem weaker are indispensable. When one part suffers, every part suffers with it. This is very close to Poem 1's closing line.
- *Different*: Paul describes a religious community and keeps a "head" at the top. Brittany removes the head entirely and replaces the chart with a circle.

Walt Whitman, *Leaves of Grass* ("I Sing the Body Electric," "Song of Myself")

- *Similar*: Celebrates the body in detail and treats every worker and every body as equal and worthy. His long lists of labourers resemble Brittany's cast of organs.

- *Different*: Whitman celebrates. He rarely argues or cites evidence. He writes in long free-verse lines, not paragraphs, and speaks as one expansive “I.”

Claudia Rankine, *Citizen: An American Lyric* (2014)

- *Similar*: Also written largely as prose poetry. It shows how racism is carried in the body as a physical toll, much like Poem 1’s “Siren” section.
- *Different*: Rankine uses concrete everyday incidents and the second person “you.” She does not use an extended metaphor, and her setting is American.

For Poem 2: science, cosmos, and interdependence

Lucretius, *On the Nature of Things* (1st century BCE)

- *Similar*: A long poem that teaches the physics of the universe and shows that everything is made of the same basic matter.
- *Different*: Lucretius wants to free readers from fear of the gods and death. Brittany wants to change how readers treat each other.

Erasmus Darwin, *The Botanic Garden* (1791)

- *Similar*: The closest match to Poem 2’s form. It is a science poem followed by “Philosophical Notes” explaining the facts, and the notes are longer than the poem.
- *Different*: Darwin wrote in rhyming couplets, and his notes were often speculative. Brittany’s notes do the reverse: they cut claims that fail the evidence.

Muriel Rukeyser, *The Book of the Dead* (1938)

- *Similar*: “Documentary poetry.” Rukeyser used testimony, medical reports, and interviews to expose a tunnel disaster that killed hundreds of mostly Black workers from silica dust. Like Poem 2, it

treats evidence as part of the poem's argument about who pays for others' comfort.

- *Different*: Rukeyser places the documents inside the poem and focuses on one event. Brittany keeps the evidence in endnotes and ranges across scales.

Lewis Thomas, *The Lives of a Cell* (1974)

- *Similar*: Essays written with a poet's ear. Thomas marvels that mitochondria are former outsiders living inside our cells, and he describes the whole earth as something like a single cell. This mirrors "The Long Braid."
- *Different*: Prose essays by a physician. He is mostly concerned with wonder, not social justice.

Tracy K. Smith, *Life on Mars* (2011, Pulitzer Prize)

- *Similar*: Moves between outer space and human grief and injustice, using the cosmos to see human life more clearly.
- *Different*: Lyric verse, partly an elegy for her father, and it draws on science fiction more than science data.

Alice Major, *Welcome to the Anthropocene* (2018)

- *Similar*: An Alberta poet, Edmonton's first poet laureate, known for poetry grounded in science and mathematics. The collection questions human hierarchies and asks where we fit in the universe.
- *Different*: Major often uses rhyme and traditional form, and her focus is climate and humanity's impact on the planet.

Ross Gay, *Catalog of Unabashed Gratitude* (2015)

- *Similar*: Treats gratitude as a way of seeing that takes effort, close to Poem 2's claim that gratitude is "accurate perception."
- *Different*: Joyful and personal, rooted in gardens and friendships, with no scientific apparatus.

Robin Wall Kimmerer, *Braiding Sweetgrass* (2013)

- *Similar*: Joins scientific knowledge with Indigenous teaching about reciprocity, gratitude, and land as kin. This is the heart of Poem 2's Section V.
- *Different*: Prose essays, not poetry. Kimmerer, a Potawatomi botanist, writes from within her own nation's tradition. Brittany's poem refers to Indigenous teachings in the third person and takes care to keep the nations distinct.

What sets Brittany's poems apart

- She combines the body-politic tradition with verified modern science, and she shows her fact-checking openly.
- She uses the body metaphor to argue *against* hierarchy, turning an old device used to defend rulers on its head.
- She grounds the work in a specific place: Treaty 7 territory and present-day Canadian data.
- She writes in prose paragraphs, which makes the poems read like arguments until the short lines land.

Sources

- Muriel Rukeyser, *The Book of the Dead* (Wikipedia)) · Academy of American Poets
- Erasmus Darwin's poetry (Victorian Web) · *The Botanic Garden* (Wikipedia)
- Alice Major, *Welcome to the Anthropocene* (University of Alberta Press) · Alice Major (Wikipedia)

WHAT THE ANTS CANNOT READ

Six parables on animals who know better

• • •

Brittany Molenaar

We are animals.

This is not an insult. It is not a figure of speech. What it is, is a filing decision, shaped in Latin, in the year seventeen-fifty-eight, and never questioned.

What follows this is the rest of the sentence.

I. THE RAID

Somewhere north of here, in the very seat where you are sitting, the grass is dry, the light is long, and a column is moving through it with the terrible tidiness of purpose.

They are *Polyergus*. Yes, you heard me right, “*paw-lee-urg-uhs*.”

What is this, you might ask? Let me describe them! You’ve seen them before.

Maybe.

Even.

Under your very own bed.

Depending on all that you’ve got under there...

Under the stairs.

Maybe even in your basement.

And out there, in your very own backyard...

Their jaws are long, curved, and honed to a point. Beautiful, and good for nothing on this earth but this. They cannot dig. They cannot lift a child. They cannot, reliably, feed themselves at all.

They come to a door that is not theirs...

The defenders pour out like a flood, bursting through the gates to drown the plains in steel and blood. Most are massacred, or scattered, or simply outlasted. The column goes **down**,

down,

down,

down, into the dark of the nursery and comes up
carrying *their* young.

Yes, you heard me correctly.

They kidnapped them all.

Every

Last

One.

Not the grown. The wrapped. The blind. The nearly born.

You see, my friend...

An ant learns the name of home from whatever room it wakes up in.

They wake, and they are loyal.

They forage.

They clean.

They carry.

They feed the mouths that emptied their mother's house.

They do it gladly.

They do it *until*

They die.

Darwin read these accounts and did not like them: He wrote that a person might be forgiven for doubting “so extraordinary and **odious** an instinct as that of making slaves.”

And then he wrote down what **François Huber** had done.

Thirty raiders. One box. Their favourite food laid out before them; their own larvae set down beside it to stir them to work.

They did nothing.

They starved in the middle of plenty.

“They could not even feed themselves, and many perished of hunger. Huber then introduced a single slave, and she instantly set to work, fed and saved the survivors; made some cells and tended the larvæ, and put all to rights.”

One worker of the stolen people walked into that box,
and the whole helpless aristocracy lived.

Hold the image: The rest of this poem is inside it.

Now,

The second thing,

And it is about us.

Every word of that story is ours. *Slave. Master. Raid. Tyrant.* The ants brought none of it with them. We lent them the only vocabulary we had, which happened to be the institution we were running at the time.

And then the loan came back, with interest.

What looks like nature in a meadow begins to look like nature in a market.

Entomologists have been arguing about this for twenty years. Some proposed retiring the language altogether: *piracy*, or a coinage from the Greek for *stolen work*. None of it caught. The literature drifted instead toward the flat, cold, accurate phrase:

dulotic social parasite.

Parasite. Not master. A thing that cannot live on its own and has arranged never to have to.

And there is one more turn, and it is the sharpest.

In nests like these, the captured workers kill the parasite's young. They tear the pupae open. They carry them out of the nursery and leave them in the cold. Barely a quarter to a half of that brood ever hatches, against some eighty-five in a free house.

The finding is solid. It has been replicated. The researchers called it **rebellion**, and the word went round the world in a week.

But the ones doing the killing are sterile.

They are not saving their children. They will not have any.

It was proposed that they were shielding related nests nearby, weakening the raiders for the sake of cousins they would never meet. And when the same laboratory built the model to test it, the model would not stand. Their own conclusion, in the end, was that the killing costs nothing, and may be nothing more than the by-product of some other trait entirely.

We found a slave revolt in a meadow.

It may have been a reflex.

We are very good at finding ourselves in the grass.
We have never once been careful about it.

II. KNOW THYSELF

The second parable takes place at a desk.

Carl Linnaeus is building the drawers that will hold all of life. Every creature gets a name and a short diagnosis: the two or three characters that keep it from being mistaken for its neighbour. Teeth. Claws. The shape of a leaf. He does it thousands of times, in a small, crabbed hand, for years.

Then he comes to us.

He sets us down in the order he has named **Primates**, in the volume that is still, to this day, the legal beginning of all zoological naming. And in the column where the description goes, the place for the

anatomy, the distinguishing mark, the reason we are not simply one of the others,

He writes two words.

Nosce te ipsum.

Know thyself.

Every other animal on earth was given a description.

We were given an assignment.

He knew what he was doing. He wrote privately that he could find no character whatever by which to separate a man from an ape, and that had he named us one, the churchmen would have come for him. *“It may be that as a naturalist I ought to have done so.”*

Two and a half centuries on, the drawers are finished, and they read:

Animalia. We are made of many cells, and we eat.

Chordata. A cord of nerve runs the length of us.

Mammalia. We feed our young from our own bodies.

Primates. Grasping hands. Forward eyes. Long childhoods.

Hominidae. The same room as the orangutan, the gorilla and the chimpanzee, because the wall we built to keep that room to ourselves turned out to be paper.

Homo.

Sapiens. Meaning *wise*.

A word we chose for ourselves and have been trying to earn ever since.

Animals, then. Filed and classed and cornered and correct.

And here is the whole argument of this poem, in a distinction three hundred years old that has never been broken...

David Hume noticed that **writers**

slide,

quietly,

without ever showing the working,

from sentences about (EXPLICIT) what **is** to sentences about (NORMATIVE) what **ought** to be.

The slide is never justified: It is only performed.

The meadow describes: The meadow does not instruct.

The ant raids because there is nothing else it can do. There is no *Polyergus* who weighed it. No ant who stayed home. No ant who found the thing odious and said so at the door.

What was never chosen can never be judged.

And what cannot be judged can never be a licence.

We are the only animal that has ever written down a rule it did not want to obey.

No ant has ever written anything.

We might be animals. But nothing in the meadow tells us what to do, and we are the only ones standing in it who know that.

III. THE LEDGER

The third parable is two men who never met, a hundred years of arithmetic, and one correction.

The first man sits at a desk in Kent with the window open, working out that conscience was never handed down from anywhere. That it grows. That any social animal, given enough mind and memory and speech, would arrive at it on its own.

He builds it in four steps.

1. The pleasure of company.

2. Then a memory long enough to be haunted by yesterday.
3. Then language enough to hear what the group expects of you.
4. Then habit, which makes it yours.

And then he writes:

“Of all the differences between man and the lower animals, the moral sense or conscience is by far the most important ... it is summed up in that short but imperious word 'ought,' so full of high significance. It is the most noble of all the attributes of man.”

And then he goes further, and this is the line the whole poem leans on:

“There is only an artificial barrier to prevent his sympathies extending to the men of all nations and races.”

Artificial.

Which means made.

Which means unmakeable.

He hated slavery. At twenty-six, leaving Brazil, he wrote *“I thank God, I shall never again visit a slave-country,”* and that it made his blood boil to watch Englishmen do it with their boastful cry of liberty in their mouths. He held that all the peoples of the earth came from one stock.

And two chapters earlier in that same book he wrote a sentence about the civilized races exterminating and replacing the savage ones, and it is exactly as ugly as it sounds.

Both of those are him.

A man can find the artificial barrier, name it, publish it, and still be standing on the near side of it.

I will not tidy that away, because the tidying is the thing this poem is against. He was a Victorian with a conscience that outran his century in one paragraph and lost to it in another.

So will we.

That is not a reason to stop. It is the reason we keep the receipts.

The second man is a friar in a garden in Brno, counting peas.

Thirty-four years of silence follow his paper. Nobody comes. Nobody writes. And then the world turns over and finds him, and what he had found was this: that inheritance does not blend like paint. It comes in parcels. Parcels shuffle. Parcels recombine.

Join that to Darwin's selection and, at last, you can do the sums.

The sums were not used well at first. Early genetics did not merely brush up against eugenics; for a while it *was* eugenics, and some of the men who built the mathematics built it inside that programme, with their names on both doors. The correction came slowly, and it came from inside, as it grew clear that the traits people wanted to rank are tangled, environment-soaked, and will not sit still to be measured.

But when the arithmetic finally got sharp enough to ask the question plainly, the answer came back the same every time it was asked.

About **eighty-five percent** of all human genetic variation lies *inside* any single population you care to name.

Six to ten percent lies between the continents.

At genome scale it held: ninety-three, ninety-five percent, within.

And then the cleanest version of all. A survey of 929 genomes from 54 peoples went looking for a variant that is *fixed*, always present in one great region of the earth and always absent in another. The thing that would simply have to exist, if the categories were real.

They found none.

Not one.

Not a single gene, anywhere on this earth,
that makes you a different kind of thing
from the person sitting beside you.

What we have instead is variation. Real. Local. Shallow. Lovely. Not a ladder. A map of where our grandmothers stood.

On the roof of the world, a way of handling thin air,
and it came to us from the Denisovans, a people otherwise gone
from the earth,
who left it in the blood of their neighbours on the way out.
In the Andes, the same mountain, and a wholly different answer:
two summits, two solutions, and no winner.

In Europe and East Africa, herders kept the milk of their childhood,
separately, four times over, through four different doors in the
same wall.

Where the diet ran to starch, the gene for breaking starch was
copied and copied again.

The highest count on earth is in the Andes, and it rises with the
potato.

On the northern sea, the Inuit carry a body tuned to the fat of that
sea.

And skin: dark where the light is fierce and would burn the folate
from a mother,
pale where the light is thin and must be let all the way in to build a
bone.

Lightening happened more than once, through largely different
genes,
which means the one trait we have built the most cruelty around
is not even one trait.

Environment. Inheritance. The road your people walked. What there
was to eat when they got there.

That is the entire list.

And now the correction, which is the point of the parable.

In 2007, a study reported that babies too young for language already
preferred the one who helps to the one who hinders. It was elegant. It
went everywhere. It looked like the moral sense arriving before speech.

In 2025, thirty-four laboratories ran it again, with more than a
thousand infants.

Forty-nine-point-three percent chose the helper.

Chance. The evidence came back strongly *for* the null.

And among the authors of that replication was the author of the original finding.

That is what a conscience looks like from the outside. Not being wrong.

Signing your own name to the page that says you were.

The ants have no mechanism for this.

Not one.

No ant has ever revised.

IV. THE SIGNATURE

The fourth parable is the day a country wrote down, in public, what it would no longer be allowed to do to its own people.

April of 1982. A table set out on a lawn. Rain coming. A pen.

And before a single right is named, a clause about where the authority for any of it comes from:

“Whereas Canada is founded upon principles that recognize the supremacy of God and the rule of law:”

Read it as it is printed.

It ends in a **colon**.

It is not a sentence that closes. It is a door left standing open onto everything that follows.

And then the freedoms. Conscience and religion. Thought, belief, opinion, expression. Peaceful assembly. Association.

And then section fifteen:

“Every individual is equal before and under the law and has the right to the equal protection and equal benefit of the law without discrimination ...”

Here is the part almost nobody knows.

That section did not come into force with the rest of it. It was held back. Three years, on purpose, written into the text itself, long enough for every government in the country to go through every law it owned, line by line, and find the ones that would not survive being read out loud beside it.

A nation gave itself a deadline
to go looking for its own cruelty
in its own handwriting.

It was not enough. It never is.

But no ant has ever done it.

And the promise does not stop at *treating everyone the same*, because the courts saw the trap at once. Identical treatment, they held, “*may frequently produce serious inequality*.” One step at the front of a building treats every person in the world exactly alike. The guarantee carries a second half that protects the programs built to repair a disadvantage, and the whole thing is read as **substantive** equality.

Not the same door for everybody.

Everybody through that door.

The word they had to argue about

And now the part of that sentence people skip, which is the word **sex**, sitting there in the list of things you may not be diminished for.

It is in the list because it had to be fought for, twice, in living memory.

In 1927, five women of this province put a question to the courts. The British North America Act said the Governor General could summon “qualified persons” to the Senate. Were women persons?

In April of 1928, the Supreme Court of Canada answered, unanimously.

No.

Eighteen months later, the Judicial Committee of the Privy Council in London reversed it, and in doing so gave Canadian constitutional law the metaphor it has run on ever since:

“The British North America Act planted in Canada a living tree capable of growth and expansion within its natural limits.”

A living tree. Growth. Expansion.

The doctrine that lets a constitution grow was born when a court was asked whether women were people.

And the five who asked are from here, and two of them, Emily Murphy above all and Nellie McClung after her, spent the rest of their lives arguing for sterilizing the people they judged unfit. Alberta passed that Act in 1928, the same year as the ruling. It ran until 1972. Around 2,800 people were sterilized under it. Indigenous Albertans were a small fraction of the province and a quarter of those being sterilized by the end, because they were disproportionately filed under the category for which no consent was required.

Both of those are them.

The same hands that pried the word *person* open pushed other people out through the gap.

I said I would keep the receipts. These are the receipts.

And the vote is the same story told again. Manitoba first, in 1916. The federal franchise in 1918, on the same terms as men, which meant it inherited every racial exclusion the provinces already had. Women of Chinese, Japanese and South Asian descent waited until 1948. Status First Nations women and men could not vote in a federal election without surrendering their status until 1960. Quebec did not give status Indians the provincial vote until 1969.

Nobody was given anything all at once.

Everybody was given it in the order
somebody else found convenient.

Then 1981, and the Charter being written in rooms women were not in.

In February of that year, about thirteen hundred of them organized a conference nobody had authorized, in Ottawa, after the official one was cancelled. What they wanted was a clause that could not be bargained away. In March, their lawyers sat down with the Justice Department and chose the opening words themselves.

“Notwithstanding anything in this Charter, the rights and freedoms referred to in it are guaranteed equally to male and female persons.”

Notwithstanding anything in this Charter. They wrote the lock, and they wrote it first, so it would sit above everything after it.

In November, the first ministers made a deal in a kitchen, and the text came back reading: *notwithstanding anything in this Charter except section 33*, section 33 being the clause that lets a government suspend a right. Their lock had been quietly fitted with a key.

They had eleven days. They spent them on the telephone.

On the twenty-third of November, the exception came out again.

Whether it holds is still an open question. In 2024 the Quebec Court of Appeal held that section 28 confers no independent right and cannot survive an override. The Supreme Court heard the appeal in March of 2026 and reserved its judgment. At the time of writing, the clause those women thought they had won has still not been tested to the end.

But they saw the key going into their lock, and in eleven days they had it out again.

And go back far enough, and the thing they were prying at is written down in plain English. Blackstone, 1765, explaining the law of marriage to a century that thought it obvious:

“By marriage, the husband and wife are one person in law: that is, the very being or legal existence of the woman is suspended during the marriage, or at least is incorporated and consolidated into that of the husband.”

Read that slowly.

Not that *she has fewer rights*. Not that *she is governed*.

Her legal existence is suspended.

No wording in the whole history of this is more honest than that one. It took the second half of the nineteenth century, province by province, one statute at a time, to give a married woman back the right to own the coat she was wearing.

Nobody was ever owned because of what they are. People were owned because somebody wrote it down and everybody else agreed to read it that way.

Which is the whole argument, and it has a page number.

And the older text.

Long before any of this, a story was told to people who were confident they already knew their neighbour.

A man is beaten and left in a ditch. Two respectable men of his own community come down the road and pass him by. The one who stops is a Samaritan.

Read it gently, and it is a tale about being kind to strangers.

Read it the way its first listeners heard it, and it is far harder than that. The Samaritans were not some pitiable minorities. They were the rival. The adversary. The wrong temple on the wrong mountain, and everyone in that audience knew it.

And the seat you are given in that story is not the rescuers.

It is the ditch.

You are the one bleeding in the road. The help is coming from the one person you were raised to have no use for. *That* is the parable, and it has been sanded smooth for two thousand years because the original is so hard to sit in.

The same tradition opens with everybody in it. *God created humankind in his image, in the image of God he created them; male*

and female he created them. The image is given to the pair, in one breath, with no order of precedence and no second helping.

And when the woman is made, the word is *ezer*. Help. The Hebrew Bible uses the word fifteen times for God: *my help comes from the Lord*. Whatever else it means, it cannot mean a lesser thing. And the word beside it, *kenegdo*, means *corresponding to him*: one who stands opposite, at eye level, facing.

Not beneath. Not behind.

Facing.

And honesty requires the other half of the ledger, because the same book was read the other way for centuries and read loudly.

Slaveholders quoted the household codes: *slaves, obey your masters*, and built a racial theology on a curse in Genesis that the text does not contain, since the curse there falls on Canaan and says not one word about Africa. In 1807, a volume was printed for enslaved people in the British West Indies with most of Scripture cut out of it.

And here is the thing worth noticing, which somebody noticed a long time ago.

Wives, be subject to your husbands and *slaves, obey your earthly masters* are not two texts. They are one text. Same passage, same list, same breath, a handful of verses apart, divided only by a chapter break that a medieval editor put there. In the oldest Greek copies, the line to the wives does not even have its own verb. It has to borrow one from the sentence above it, and the sentence above it says *be subject to one another*.

In 1837, in a letter written in Massachusetts, Sarah Grimké set the two side by side and said what follows from it:

"I cannot but believe that the apostles designed to recommend to wives, as they did to subjects and to servants, to carry out the holy principle laid down by Jesus Christ, 'Resist not evil.' And this without in the least acknowledging the right of the governors, masters, or husbands, to exercise the authority they claimed."

The text names the authority. The text never grants it.

She was an abolitionist. She worked it out from the slavery side and walked it straight across, because it is the same argument, and it was always going to be the same argument.

Whoever is told to obey,
and whoever is told they were made to serve,
is being read out of the same page
by somebody standing on it.

The abolitionists did not win that fight by turning up a verse nobody had noticed.

They won it by insisting that the image of God and the love of the neighbour outrank the household codes, and that any reading which lets you keep a person as property has already failed, whatever else it can quote.

That argument was fought inside the tradition, in its own language, by Quakers and campaigners and above all by the Black church. Slowly. Against enormous weight.

And the better reading won.

And the rule is not ours alone.

What is hateful to you, do not do to your neighbour. Hillel.
What you do not wish for yourself, do not do to others. Confucius.
None of you believes until he loves for his brother what he loves for himself. The hadith.
One should never do to another what one regards as injurious to one's own self. The Mahābhārata.
And in Matthew it turns around and becomes a task: *do to others.*

Five traditions. Five languages. Five climates. No contact between them worth the name.

The same rule.

That is either the most remarkable coincidence in the history of our species,

or it is what a social primate with a long memory and a word for *ought* works out, wherever on earth you happen to set it down.

V. PUT AWAY THE TRIANGLE

The fifth parable is the shortest, because it is a sentence.

A Blackfoot scholar named Leroy Little Bear, Kainai, from the Blood Reserve an hour from where this is being written, who built Native American Studies at the University of Lethbridge and held it for twenty-one years, set the two worldviews side by side and named the mechanism in one move:

“The Western European concept of time is a good example of linearity. Time begins somewhere way back there and follows a linear progression from A to B to C to D. The linearity manifests itself in terms of a social organization that is hierarchical in terms of both structure and power.”

There it is.

The line makes the ladder.

Once you believe the world runs as a single straight sequence, somebody has to be at the front of it, earlier, higher, further along, and everybody else is somewhere behind, catching up, or being told to.

The triangle was never argued for.
It is only the shape a line takes
when you stand it on its end.

The other shape has no front.

Little Bear names his own ground when he stands on it. He is speaking, he says, from Plains philosophy, and he says plainly that there is enough shared across North American Indigenous philosophies to speak generally, while the differences and the differing emphases remain. That is how it should be said. Not *the* Indigenous worldview, as though there were one. There are hundreds of nations here, hundreds

of languages, hundreds of legal orders, each one grown out of its own ground.

And there is already a name for what this poem is asking for.

A Mi'kmaw Elder named Albert Marshall calls it **Etuaptmumk**, Two-Eyed Seeing:

“Learning to see from one eye with the strengths of Indigenous knowledges and ways of knowing, and from the other eye with the strengths of Western knowledges and ways of knowing ... and learning to use both these eyes together, for the benefit of all.”

Not one eye closed.

Not one eye winning.

Two eyes are how depth works. It is the only way anything has ever been seen in the round.

VI. HOW A WE IS MADE

Which leaves the practical question, and it is the last parable, and it is the only one that is about you.

A circle is not a diagram. Nobody has ever belonged to a shape.

Where does we come from?

Not from agreeing. People who agree about everything are a crowd, and a crowd goes home.

It comes from doing something together.

You show up.

Somebody else shows up.

The thing gets carried, because the two of you carried it.

And on the way home you find you have started saying *we*.

That is the mechanism, and it runs in both directions at once, which is the part people miss. Acting together is what makes a group into a *we*. And being *we* is what makes the next, larger action possible at all.

Identity is not the thing you have before you begin. It is the thing the beginning makes, and then it goes back to work.

This is why the small thing is not small. One open door is not a gesture toward a better world. It is the raw material. There is no other kind.

And there is a warning attached, and it is the reason this parable exists.

Movements die of success.

They find the thing that works. The march. The letter. The slogan. The meeting on the same night in the same room. And the thing works, and then it stops working, because the other side learns it. And the movement keeps doing it anyway, because it has become the way we do things, because it is how the members recognize each other. The tactic that made the *we* becomes the reason the *we* cannot move.

That is measurable. Waves of a movement rise when somebody invents a new way to act and fall as the opposition adapts to it. The ones that last are not the ones that found the perfect method. They are the ones that could put a method down.

Which takes exactly the thing the ants do not have.

Not passion. Passion is not scarce, and it is what keeps a dead tactic on life support for a decade. What it takes is somebody in the room willing to ask whether the thing we have always done is still doing anything, and a room willing to hear it without deciding that the asker has stopped believing.

A movement that cannot be questioned
has already stopped moving.
It is just a habit
with a good reason attached.

Critical thinking is not the opposite of commitment. It is the maintenance schedule.

The circle is not a shape you adopt. It is a practice you keep doing, and check, and change, and keep doing.

CODA: ONE FAMILY

Gather it up.

We are animals. Animalia, Chordata, Mammalia. And the meadow holds raiding, and theft, and a creature bred so fine it cannot eat without the ones it stole from.

All of that is true. None of it is an instruction.

We are the animal Linnaeus could not bring himself to describe, who left us a chore in the empty column instead.

We are the animal that worked out, from the inside, that sympathy stops at a barrier, and that the barrier is *made*.

We are the animal that went looking for the gene that would make one of us a different kind of creature, and could not find it, because it is not there.

We are the animal that had to be told by a court in another country that its women were people, and wrote the answer down and kept it.

We are the animal that gave itself three years to read its own laws back to itself and flinch.

We are the animal that wrote down *love the stranger as yourself*, argued about it for two thousand years, got it catastrophically wrong in public, and kept the text anyway, for the next ones to hold us to it.

We are the animal that ran the study again, with thirty-four laboratories and a thousand infants, and published that it had been wrong.

We might be animals.

But we know better, and knowing better is not a boast about our nature.

It describes our paperwork.

Put the triangle down. It was only ever a line stood on its end.

Take the circle, which has no front, and no back, and no waiting room.

We are one family that walked out of one place and went every direction there was, and the walking changed us a little on the way: the lungs on the high plateau, the enzyme for milk, the enzyme for bread, the fat of a cold sea, the colour the sunlight asked for.

Every one of those is a record of somewhere our people survived.

Not one of them is a rank.

And nobody in this family was born to be owned, and nobody was made to serve. Not the stolen. Not the stranger. Not the woman, whose legal existence a country once suspended by writing a sentence and restored by writing a better one.

Let everyone belong. Let everyone be relevant. Let everyone take part as equal partners. Not admitted, not tolerated, not accommodated.

Partners.

And then, having made the we, go and do the next thing with it, and be willing to be told the thing needs changing.

***The ants cannot read what we wrote.
That is the only advantage we have,
and it is enough.***

NOTES ON THE EVIDENCE

Every factual claim is keyed below to its source, with the honest version preferred over the stronger one wherever the two differ. Claims cut for failing verification are listed at the end, including one overturned by a thirty-four-laboratory replication, which appears in the poem only as an instance of self-correction.

I. The Raid

“They are *Polyergus* ... cannot, reliably, feed themselves at all.” Obligate dulotic social parasites include *Polyergus* (Formicinae) and, in the tribe Formicoxenini, *Harpagoxenus*, *Chalepoxenus*, *Myrmoxenus* and several *Temnothorax* species. Buschinger: “The slave-maker workers are usually unable to forage, to feed their larvae, or even to eat by themselves ... *Polyergus* workers are incapable of surviving without slaves, even when plentiful food is available.” The falcate mandibles are specialised for piercing host head capsules at the cost of ordinary manipulation.

Source: Buschinger A (2009), “Social parasitism among ants: a review,” *Myrmecological News* 12:219-235.

Three precisions the poem observes: (i) Formica sanguinea is a facultative parasite, not an obligate one, and is therefore not named. (ii) Protomognathus americanus was recombined into Temnothorax by Ward et al. (2015), Systematic Entomology 40:61-81, doi:10.1111/syen.12090. (iii) Brood theft is the usual pattern but not universal: Temnothorax pilagens also carries off adult host workers (Seifert et al. 2014, ZooKeys 368:65-77, doi:10.3897/zookeys.368.6423).

“An ant learns the name of home from whatever room it wakes in.” The mechanism is acquisition of a colony recognition template by early experience, callow workers being unaggressive and able to be assembled into mixed-species colonies, rather than imprinting in the classical ethological sense. Parasites also shift their own cuticular hydrocarbon profiles toward the host’s.

Sources: Sturgis SJ & Gordon DM (2012), *Myrmecological News* 16:101-110. Blatrix R & Sermage C (2005), *Frontiers in Zoology* 2:13, doi:10.1186/1742-9994-2-13.

Darwin’s “odious,” and the Huber box. Both verbatim from *On the Origin of Species*, 1st edition (1859), Chapter VII “Instinct,” section *Slave-making instinct*. (In the 6th edition of 1872 the Instinct chapter is Chapter VIII, so the edition must be specified.) Darwin’s vocabulary in the passage also includes “tyrants” and “abjectly dependent.” *The poem claims no more than this*: “odious” is one word, used to explain why he approached the reports sceptically, not a moral argument mounted against ants.

“dulotic social parasite.” Herbers proposed replacing “slavery,” “slave-making ants” and “dulosis” with “piracy,” “pirate ants” and “leistic behaviour.” Breed (2020) proposed “cleptotecton” and states the circularity argument the poem makes, that the human metaphor was projected onto the ants and then fed back into human discourse. Neither replacement was adopted; the working literature has drifted toward “dulotic social parasite.”

Sources: Herbers JM (2007), “Watch Your Language! Racially Loaded Metaphors in Scientific Research,” *BioScience* 57(2):104-105, doi:10.1641/B570203 (a Viewpoint column, not a research article). Breed MD (2020), *Insectes Sociaux* 67(4):459-461, doi:10.1007/s00040-020-00783-4. Khan A (2021), *eLife* 10:e65604, doi:10.7554/eLife.65604.

Deliberately not claimed: the poem asserts the general circularity, not the specific historical claim that named nineteenth-century pro-slavery writers invoked slave-making ants, which I could not source to a peer-reviewed study.

“Barely a quarter to a half of that brood ever hatches ... the model would not stand.” Enslaved *Temnothorax longispinosus* workers kill parasite brood by dismemberment (about 30%) and neglect (about 53%); parasite pupal survival across three populations was 27%, 49% and 58%, against roughly 85% for host pupae in free-living nests. The authors proposed indirect fitness via protection of related host colonies nearby, and the necessary spatial genetic structure does exist, though relatedness within raiding range is weak ($r = 0.07$ to 0.14). **The same group’s later modelling did not support it**, concluding verbatim: “This suggests that slave rebellion is not costly and perhaps a side-effect of some other beneficial trait.” The

poem uses the episode as a story about how readily we narrate, which is the only use the evidence now supports.

Sources: Achenbach A & Foitzik S (2009), *Evolution* 63(4):1068-1075, doi:10.1111/j.1558-5646.2009.00591.x. Pamminger T et al. (2013), *Evolutionary Ecology* 27:39-49, doi:10.1007/s10682-012-9584-0. Metzler D, Jordan F, Pamminger T & Foitzik S (2016), *J Evol Biol* 29(5):874-886, doi:10.1111/jeb.12846.

II. Know Thyself

“he writes two words.” In *Systema Naturae* Linnaeus gave *Homo sapiens* no anatomical diagnosis, entering only the injunction “Nosce te ipsum.” The 10th edition (1758) is the formal starting point of zoological nomenclature; Linnaeus had renamed his 1735 order “Anthropomorpha” to **Primates** by that edition.

The Gmelin letter. “I demand of you, and of the whole world, that you show me a generic character ... by which to distinguish between Man and Ape. I myself most assuredly know of none. ... But, if I had called man an ape, or vice versa, I should have fallen under the ban of all the ecclesiastics. It may be that as a naturalist I ought to have done so.” Letter to Johann Georg Gmelin, 25 February 1747. *Caveat:* this English rendering circulates through secondary sources rather than a scholarly edition of the correspondence; it is quoted here as a letter, not as a published text.

The taxonomy. Animalia, Chordata, Mammalia, Primates, Hominidae, *Homo*, *H. sapiens*. **One correction the poem observes:** Hominidae is Gray 1825, not Linnaean, and its modern content is recent. The great apes were formerly placed in a separate family, Pongidae, abandoned because it is paraphyletic. Sharing a *family* with the great apes is therefore a late-twentieth-century result; Linnaeus placed us in the same **order**.

Hume, and why the poem does not say “naturalistic fallacy.” Hume’s is-ought problem (*A Treatise of Human Nature*, 1739-40, Book III, Part I, §I) is a logical point about **inference**: evaluative conclusions cannot be derived from purely factual premises. G. E. Moore’s naturalistic fallacy (*Principia Ethica*, 1903, §§10-14) is a distinct semantic and metaphysical point about **definition**: that “good” names a simple non-natural property and cannot be identified

with any natural one. They are routinely conflated; they are not the same, and one can accept Hume's gap while rejecting Moore's non-naturalism. The poem uses only Hume.

Source: Frankena WK (1939), "The Naturalistic Fallacy," *Mind* 48(192):464-477, doi:10.1093/mind/XLVIII.192.464.

III. The Ledger

Darwin on the moral sense; the four steps; the "artificial barrier." All from *The Descent of Man*, **Chapter IV**. The four steps are Darwin's own numbered sequence: social instincts, memory of past actions, language and the expressed opinion of the community, and habit. *Caveat observed*: a second, similar line elsewhere in the book ("the most noble attribute of man") refers to sympathy for animals; the quotation used here is the one about the moral sense.

The passage the poem quotes on sympathy continues: "If, indeed, such men are separated from him by great differences in appearance or habits, experience unfortunately shews us how long it is, before we look at them as our fellow-creatures." The poem does not truncate the thought to flatter it, and says so in the line about the near side of the barrier.

"I thank God, I shall never again visit a slave-country."

Journal of Researches (Voyage of the Beagle), **Chapter XXI**, in the **1845 second edition**, the 21-chapter text. The 1839 first edition has 23 chapters, and this pagination does not apply to it.

"a sentence about the civilized races ... exactly as ugly as it sounds." *Descent of Man*, Chapter VI: "At some future period, not very distant as measured by centuries, the civilized races of man will almost certainly exterminate, and replace, the savage races throughout the world." Any essay praising Darwin's moral reasoning that omits this passage deserves the objection it will receive.

On the stronger historical claim, the poem declines to make: Desmond & Moore (*Darwin's Sacred Cause*, 2009) argue that antislavery conviction actively **drove** Darwin's science. That causal thesis is contested. Esterson (2013), *SAGE Open*, doi:10.1177/2158244013483134, notes that no letter mentioning

slavery has been traced between 1836 and the 1844 Sketch. Darwin also declined to take the monogenist side, writing that evolution would cause “the dispute between the monogenists and the polygenists” to “die a silent and unobserved death” (*Descent*, Ch. VII). The poem claims only what is uncontested: his personal abhorrence of slavery, his single-stock view of human descent, and the “artificial barrier” argument.

Mendel, and the sums. Mendel presented in 1865 and published in 1866; the paper went essentially unread for thirty-four years. After the 1900 rediscovery, Fisher (1918) showed continuous variation is what many small-effect Mendelian factors predict; Fisher (1930), Wright (1931), Haldane (1932) and Dobzhansky (1937) built the synthesis.

Sources: Mendel G (1866), *Verh. naturforsch. Ver. Brünn* 4:3-47. Fisher RA (1918), *Trans. R. Soc. Edinb.* 52:399-433, doi:10.1017/S0080456800012163. Wright S (1931), *Genetics* 16:97-159.

“for a while it was eugenics.” Stated at full strength deliberately. Davenport’s programme was applied Mendelism, and Fisher was a lifelong eugenicist who wrote the 1918 paper inside that programme. *And the necessary qualification, which the poem also observes:* population genetics did not abolish the race concept so much as reform it. Dobzhansky redefined races as genetically distinct Mendelian populations and defended their biological reality; the typological concept died and a populational one replaced it, itself later abandoned as non-discrete.

Sources: Allen GE (2011), *Annals of Human Genetics* 75:314-325, doi:10.1111/j.1469-1809.2011.00649.x. Gannett L (2013), *Stud Hist Phil Biol Biomed Sci* 44:250-261, doi:10.1016/j.shpsc.2013.04.009.

“About eighty-five percent ... lies inside any single population.” Lewontin 1972: 85.4% within populations, 8.3% among populations within races, 6.3% among races. Confirmed at genome scale by Rosenberg et al. 2002: 93 to 95% within populations, 3 to 5% among major groups.

Sources: Lewontin RC (1972), *Evolutionary Biology* 6:381-398. Rosenberg NA et al. (2002), *Science* 298:2381-2385, doi:10.1126/science.1078311.

The objection handled properly: Edwards (2003) argued that small between-group variance at single loci does not preclude accurate

ancestry inference, because information lies in the correlation of allele frequencies across many loci. This is correct, but it attacks an inference Lewontin did not make; he distinguished variance partitioning from ancestry assignment himself. Reliable ancestry inference is not discrete biological race: the clusters track gradations in allele frequency rather than diagnostic genotypes, and human structure fails the treeness test, being better described as isolation-by-distance with recurrent gene flow.

Sources: Edwards AWF (2003), *BioEssays* 25:798-801, doi:10.1002/bies.10315. Edge MD, Ramachandran S & Rosenberg NA (2022), *Phil Trans R Soc B* 377:20200405, doi:10.1098/rstb.2020.0405. Templeton AR (2013), *Stud Hist Phil Biol Biomed Sci* 44:262-271. Fuentes A et al. (2019), AAPA Statement on Race and Racism, *Am J Phys Anthropol* 169:400-402, doi:10.1002/ajpa.23882.

“They found none.” Bergström et al., 929 genomes from 54 populations, report “an absence of such variants fixed between major geographical regions.” This single finding does more work than any percentage.

Source: Bergström A et al. (2020), *Science* 367:eaay5012, doi:10.1126/science.aay5012.

“On the roof of the world ... two summits, two solutions.” The Tibetan *EPAS1* haplotype was introgressed from a Denisovan-like population; Andean highlanders adapted by a different physiological route, elevated hemoglobin, against the Tibetan pattern of lower hemoglobin and higher ventilation.

Sources: Huerta-Sánchez E et al. (2014), *Nature* 512:194-197, doi:10.1038/nature13408. Beall CM (2007), *PNAS* 104(Suppl 1):8655-8660, doi:10.1073/pnas.0701985104.

“four times over, through four different doors in the same wall.” Three East African lactase-persistence variants (G/C-14010, T/G-13915, C/G-13907) sit on haplotype backgrounds distinct from the European C/T-13910 and from one another. *Hedge the poem observes by saying only that herders “kept the milk”:* the association with dairying cultures is robust, but the selective mechanism is not settled; recent work implicates famine and pathogen exposure rather than nutritional benefit alone.

Sources: Tishkoff SA et al. (2007), *Nature Genetics* 39:31-40, doi:10.1038/ng1946. Evershed RP et al. (2022), *Nature* 608:336-345, doi:10.1038/s41586-022-05010-7.

“The gene for breaking starch was copied and copied again ... the fat of a cold sea.” *AMY1* copy number is higher in high-starch populations (Perry et al. 2007; replicated across 4,292 genomes and 147 populations by Bolognini et al. 2024); Indigenous Andeans carry the highest copy numbers globally, with expansion dating to around the domestication of the potato. Greenlandic Inuit show selection signals in the fatty acid desaturase cluster.

Sources: Perry GH et al. (2007), *Nature Genetics* 39:1256-1260, doi:10.1038/ng2123. Bolognini D et al. (2024), *Nature* 634, doi:10.1038/s41586-024-07911-1. Scheer K et al. (2026), *Nature Communications* 17, doi:10.1038/s41467-026-71450-8. Fumagalli M et al. (2015), *Science* 349:1343-1347, doi:10.1126/science.aab2319.

Precision: the well-known *AMY1* replication failure (Usher et al. 2015, *Nature Genetics* 47:921-925) concerns *AMY1* and **obesity**, not diet. The diet correlation survives; the obesity association does not.

“Dark where the light is fierce ... pale where the light is thin.” Two clines, driven by folate protection under high UV and vitamin D synthesis under low UVB. Depigmentation evolved more than once, running through **largely** different genes in Europeans (*SLC24A5*, *SLC45A2*, *TYR*) and East Asians. “Largely,” because *ASIP* and *OCA2* show shared patterns.

Sources: Jablonski NG & Chaplin G (2010), *PNAS* 107(Suppl 2):8962-8968, doi:10.1073/pnas.0914628107. Norton HL et al. (2007), *Mol Biol Evol* 24:710-722, doi:10.1093/molbev/msl203.

“Forty-nine-point-three percent chose the helper.” Thirty-four laboratories in final analyses (37 participating), 1,018 infants tested and 567 analyzed: 49.34% chose the helper, with a Bayes factor above 100 favouring the null. The last author of that replication is the first author of the 2007 original.

Sources: Lucca K, Yuen F, Wang Y, et al. & Hamlin JK (2025), *Developmental Science*, doi:10.1111/desc.13581. Earlier failures: Salvadori E et al. (2015), *PLOS ONE* 10(11):e0140570. Schlingloff L, Csibra G & Tatone D (2020), *R Soc Open Sci* 7:191795.

IV. The Signature

Citation and dates. *Canadian Charter of Rights and Freedoms*, Part I of the *Constitution Act, 1982*, being Schedule B to the *Canada Act 1982* (UK), 1982, c 11. In force 17 April 1982.

“It ends in a colon.” The official text reads: “Whereas Canada is founded upon principles that recognize the supremacy of God and the rule of law:” a recital running into section 1, not a freestanding sentence. The poem’s reading of the punctuation is a reading of the punctuation as printed.

“held back. Three years, on purpose, written into the text itself.” Section 32(2): “Notwithstanding subsection (1), section 15 shall not have effect until three years after this section comes into force.” Section 32 came into force 17 April 1982; section 15 therefore took effect 17 April 1985. The Library of Parliament states the purpose: to give Parliament and the provincial and territorial governments time to bring their legislation into conformity with the equality provisions.

Substantive equality. *“Identical treatment may frequently produce serious inequality”*: *Andrews v Law Society of British Columbia*, [1989] 1 SCR 143 at 164, quoted in *Fraser v Canada (AG)*, 2020 SCC 28 at para 47. Section 15(2) protects ameliorative programs; *R v Kapp*, 2008 SCC 41 at para 16: “s. 15(1) and s. 15(2) work together to confirm s. 15’s purpose of furthering substantive equality.” *Note*: Kapp demoted human dignity from the legal **test** proposed in *Law v Canada* [1999] 1 SCR 497 to an underlying **value**; the poem does not use the dignity test.

Sections 25, 27 and 35. Section 27: “This Charter shall be interpreted in a manner consistent with the preservation and enhancement of the multicultural heritage of Canadians.” Section 25 shields Aboriginal, treaty and other rights from Charter-based abrogation. **Section 35 is in Part II of the Constitution Act, 1982 and is therefore not part of the Charter.** Because section 1 limits only rights “set out in it,” the Charter, and section 33’s notwithstanding power reaches only sections 2 to 7 to 15, section 35 lies outside both. (The statute uses lower-case “aboriginal”; quoted as printed.)

The Persons Case

“In April of 1928 the Supreme Court of Canada answered, unanimously. No.” *Reference re meaning of the word “Persons” in s. 24 of the British North America Act*, [1928] SCR 276, 1928 CanLII 55

(SCC), decided 24 April 1928. Note that the SCC decision is a reference and is **not** styled *Edwards*; only the appeal is. The petitioners were Henrietta Muir Edwards, Nellie McClung, Louise McKinney, Emily Murphy and Irene Parlby.

“The British North America Act planted in Canada a living tree ...” *Edwards v Canada (Attorney General)*, [1930] AC 124 at 136, [1929] UKPC 86, judgment delivered **18 October 1929**. The report year and the decision year genuinely differ; both are given here because citing only one invites a correction.

Two qualifications the poem’s wording respects: the phrase is usually printed as a single flowing passage, when in fact two sentences and a paragraph break intervene before the better-known “large and liberal interpretation” lines, so only the tree sentence is quoted. And the “living tree doctrine” as Canadian lawyers now use it is substantially a post-Charter construction read back onto Sankey, whose immediate subject was the federal division of powers. The poem claims the metaphor’s origin in this case, not a settled progressive doctrine.

Sources: Honickman A, “The Original Living Tree,” *Constitutional Forum*. Reid S, “The Persons Case Eight Decades Later.”

The counterweight

“Emily Murphy above all and Nellie McClung after her.” The *Sexual Sterilization Act*, SA 1928, c 37, created an Alberta Eugenics Board empowered to authorize sterilization of institutional inmates. The 1928 Act required consent; the **1937 amendment removed it** for those classified “mentally defective.” Roughly 4,725 to 4,800 cases were presented between 1929 and 1972; about 99% were approved, and approximately **2,800 sterilizations were performed**. Indigenous Albertans were roughly 6% of cases presented against 2 to 3% of the population; 74% of Indigenous people presented were sterilized against 60% overall, because they were disproportionately classified under the heading for which consent was not required; **by 1972, First Nations and Métis people were over 25% of those being sterilized**. Repealed in 1972.

Sources: Grekul J, Krahn H & Odynak D (2004), *Journal of Historical Sociology* 17(4):358. Grekul J (2008), “Sterilization in Alberta, 1928 to 1972: Gender Matters,”

Canadian Review of Sociology 45(3):247. McLaren A (1990), *Our Own Master Race: Eugenics in Canada, 1885-1945*, McClelland & Stewart. Devereux C (2005), *Growing a Race: Nellie L. McClung and the Fiction of Eugenic Feminism*, McGill-Queen's UP. *Muir v Alberta* (1996), 132 DLR (4th) 695 (Alta QB).

The poem deliberately names two women, not five. Murphy's advocacy is extensively documented, including her 1932 column describing "the offal of humanity"; McClung's support is well established, and Devereux argues her maternal feminism was structurally rather than incidentally eugenic. McKinney and Parlby are named in the literature more thinly, and **no evidence links Henrietta Muir Edwards to eugenics advocacy at all.** Writing "the Famous Five were eugenicists" would be false. Note also that McClung left the legislature in 1926, two years before the Act, and Murphy died in 1933, four years before consent was removed, so neither can be credited with the statute's worst provisions directly.

The franchise

"Manitoba first, in 1916 ... Quebec did not give status Indians the provincial vote until 1969." Manitoba 28 January 1916, followed by Saskatchewan and Alberta the same year. The *Women's Franchise Act* received royal assent 24 May 1918 and came into force 1 January 1919, enfranchising women **on the same terms as men**, which included meeting provincial qualifications, so the federal franchise inherited provincial racial disqualifications. Racial disqualifications were removed from the *Dominion Elections Act* in 1948. Status First Nations people could vote federally only by surrendering Indian status until the *Canada Elections Act* amendment effective 31 March 1960. Quebec was the last province to extend the provincial vote to status Indians, in 1969, and the last to grant women provincial suffrage, in 1940.

Source: Elections Canada, *A History of the Vote in Canada*, chs. 2-3.

Section 28

Text, verbatim. "Notwithstanding anything in this Charter, the rights and freedoms referred to in it are guaranteed equally to male and female persons."

“about thirteen hundred of them ... eleven days.” After the federal Canadian Advisory Council on the Status of Women’s constitutional conference was cancelled and Doris Anderson resigned as its president, women organized independently as the Ad Hoc Committee of Canadian Women on the Constitution and held their own conference in Ottawa on 14-15 February 1981, attended by roughly 1,300 women. On 18 March 1981, the Ad Hoc Committee and National Association of Women and the Law representatives negotiated the wording with Justice Department lawyers, **choosing the opening formula deliberately** to lift section 28 above sections 1 and 27. The clause was adopted 23 April 1981. Following the 5 November “Kitchen Accord” that produced section 33, the text tabled around 20 November read “Notwithstanding anything in this Charter except section 33,” making sex equality overridable. After a national lobbying campaign, the exception was removed, announced 23 November 1981, and the final text was adopted 2 December 1981.

Precisely, the poem observes: what was won in November was not section 28 itself, which was already in the April text, but its **exemption from section 33.**

“Whether it holds is still an open question.” In *World Sikh Organization of Canada v Attorney General of Québec*, 2024 QCCA 254, the Quebec Court of Appeal held that section 28 “confers no independent rights” and operates as an interpretive principle, and so cannot defeat a section 33 override. The Supreme Court of Canada heard the appeal in *English Montreal School Board v Attorney General of Quebec*, SCC File No 41231, over four days in March 2026 and reserved judgment; at the time of writing no decision has been released. Froc takes the contrary scholarly position; Sirota and St-Hilaire take the interpretive-provisions position.

Sources: 2024 QCCA 254 (CanLII). Froc K (2023), “Are You Serious? Litigating Section 28 to Defeat the Notwithstanding Clause.” Sirota L & St-Hilaire M (2023), “They’re All Interpretative: Towards a Consistent Approach to ss 25-31 of the *Charter*.”

Citation trap avoided: this litigation is widely called “*Hak*” after the Superior Court stage (*Hak c Procureure générale du Québec*, 2021 QCCS 1466), but the Court of Appeal style of cause is *World Sikh*

Organization, and the Supreme Court style is *English Montreal School Board*. **A reader checking this after the Supreme Court reports should treat the poem's last sentence on the point as dated to 2026.**

Coverture

Blackstone, verbatim. *Commentaries on the Laws of England*, Book I, ch. 15 (“Of Husband and Wife”), 1765: “By marriage, the husband and wife are one person in law: that is, the very being or legal existence of the woman is suspended during the marriage, or at least is incorporated and consolidated into that of the husband: under whose wing, protection, and cover, she performs everything; and is therefore called in our law-french a *feme-covert* ...” The poem quotes to the end of “husband.” Married women’s property legislation in Canada ran across the second half of the nineteenth century, unevenly by province; Ontario’s Acts of 1872 and 1884 are the usual landmarks, the 1884 Act granting broadly the same property rights as unmarried women. There was no single national date.

Source: Backhouse C (1988), “Married Women’s Property Law in Nineteenth-Century Canada,” *Law and History Review* 6(2):211.

Scripture

Translation. Quotations follow the **NRSV (1989)**, which at Genesis 1:27 reads “humankind.” The NRSVue (2021) reads “humans,” and several online Bible services now serve NRSVue under the NRSV label, so the edition is specified deliberately.

Genesis 1:27 and the image. “God created humankind in his image, in the image of God he created them; male and female he created them.” The standard scholarly reading is that the divine image is predicated of humanity as male and female together, the plural “them” glossing the collective singular. *The poem does not extend this into the claim that the verse teaches a social programme*, which the text does not address.

“the word is ezer ... kenegdo.” Genesis 2:18, NRSV: “It is not good that the man should be alone; I will make him a helper as his partner.” Hebrew *‘ezer kənegdô*. *‘ezer* occurs 21 times in the Hebrew Bible, 15 of

them of God (Exodus 18:4; Deuteronomy 33:7, 26, 29; Psalms 20:2, 33:20, 70:5, 89:19, 115:9-11, 121:1-2, 124:8, 146:5), twice of the woman, and four times of human or military allies.

Source: Tribble P (1978), *God and the Rhetoric of Sexuality*, Fortress, ch. 4.

Three overstatements the poem avoids: **(i)** ‘ēzer does **not** always refer to God (Isaiah 30:5 uses it of Egypt as a useless ally), so the poem says, “fifteen times,” not “always.” **(ii)** The argument is stated negatively: that the word carries no implication of inferiority, rather than positively, that it implies strength or rescue. **(iii)** The claim that ‘ēzer derives from a second root meaning “strength” is fringe and is not used. The load-bearing word is *kānegdô*, “corresponding to him,” and the poem leads with it.

“are not two texts. They are one text.” Ephesians 5:21 to 6:9 is a single household code (*Haustafel*) of three reciprocal pairs: wives and husbands (5:22-33), children and fathers (6:1-4), slaves and masters (6:5-9), all under 5:21, “Be subject to one another out of reverence for Christ.” The chapter division between 5:22 and 6:5 is a medieval editorial imposition. **In the earliest Greek witnesses, B⁴⁶ (c. 200) and Codex Vaticanus, Ephesians 5:22 has no verb of its own**, borrowing the participle from 5:21; Jerome noted the verb was “added in the Latin copies” but “is not contained in the Greek codices.” The parallel code is Colossians 3:18 to 4:1.

Sarah Grimké, verbatim. *Letters on the Equality of the Sexes, and the Condition of Woman* (Boston: Isaac Knapp, 1838), Letter XIII, “Relation of Husband and Wife,” p. 96. She quotes Blackstone’s coverture passage in Letter XII and writes, at p. 75, “Here now, the very being of a woman, like that of a slave, is absorbed in her master.” *The poem quotes her argument about the household codes and does not adopt the coverture-slavery equation in its own voice*, since scholars have criticised that analogy for flattening a difference in kind.

Galatians 3:28. NRSV: “There is no longer Jew or Greek, there is no longer slave or free, there is no longer male and female; for all of you are one in Christ Jesus.” The third pair switches from *ouk ... oude* to *arsen kai thely*, “male **and** female,” which is a verbatim quote from the

Septuagint of Genesis 1:27, marking a deliberate citation. *What Paul takes that to entail is debated*, and the poem does not present the echo as proof of an egalitarian social programme.

The Samaritan. Luke 10:25-37. The poem follows Amy-Jill Levine's correction of the sentimental reading: Samaritans "were not 'marginalized' by Jews; to the contrary, they were the enemy," and a first-century Jewish audience would identify not with the Samaritan but with the man in the ditch. The poem avoids the flat formulation "the Jews hated Samaritans," which slides toward supersessionism.

Source: Levine A-J (2014), *Short Stories by Jesus: The Enigmatic Parables of a Controversial Rabbi*, HarperOne.

The other half of the ledger. Pro-slavery proof texts: Ephesians 6:5, Colossians 3:22, 1 Peter 2:18. **The so-called "curse of Ham" is a misnomer; the poem states as such:** Genesis 9:25 curses *Canaan*, Ham's son, and the racialized reading required two further unwarranted moves, transferring the curse to Ham and identifying Ham with Africa. *Select Parts of the Holy Bible, for the use of the Negro Slaves, in the British West-India Islands* (London, 1807) omitted most of scripture. *Caveat emptor: the poem respects this by saying "most of scripture cut out of it"*; scholars caution that "they deleted the Exodus" overstates it, since the deliverance-from-Egypt motif survives in retained Deuteronomic passages.

Sources: Haynes SR (2002), *Noah's Curse: The Biblical Justification of American Slavery*, Oxford UP. Noll MA (2006), *The Civil War as a Theological Crisis*, UNC Press. Callahan AD (2006), *The Talking Book: African Americans and the Bible*, Yale UP. Hicks-Keeton J, "The Slave Bible Is Not What You Think," *The Revealer*.

The Golden Rule across traditions. Hillel: Babylonian Talmud, *Shabbat* 31a. Confucius: *Analects* 15.23 (15.24 in some editions). The hadith: An-Nawawi's Forty Hadith no. 13, agreed upon by al-Bukhārī and Muslim. The *Mahābhārata* citation is Anuśāsana Parva 113.8 (13.113.8 in the Critical Edition), not the "5:1517" that circulates on interfaith charts, which derives from continuous verse-numbering in a nineteenth-century translation and maps to no standard modern edition. That most formulations are negative while Matthew 7:12 is positive is a real and frequently noted difference, not a ranking.

V. Put Away the Triangle

Leroy Little Bear. Kainai (Blood Tribe, Blackfoot Confederacy); founded the Native American Studies department at the University of Lethbridge and led it for twenty-one years; Officer of the Order of Canada. The quotation is verbatim from “Jagged Worldviews Colliding,” in Marie Battiste, ed., *Reclaiming Indigenous Voice and Vision* (Vancouver: UBC Press, 2000), 77-85, at 82.

An important correction the poem incorporates: Little Bear does **not** warn against generalizing across Indigenous nations. He does the opposite, with a stated qualification (p. 77): “Although I am referring to the philosophy of the Plains Indians, there is enough similarity among North American Indian philosophies to apply the concepts generally, even though there may be individual differences or differing emphases.” The poem quotes his standpoint rather than inventing a caution he did not issue, while still declining to speak of “the Indigenous worldview” in the singular.

Two-Eyed Seeing / Etuaptmumk. A Mi’kmaw concept articulated by Elder Albert Marshall of Eskasoni First Nation, Unama’ki (Cape Breton); the quotation is his own wording.

Source: Bartlett C, Marshall M & Marshall A (2012), *Journal of Environmental Studies and Sciences* 2(4):331-340, doi:10.1007/s13412-012-0086-8. Murdena Marshall, Mi’kmaw Elder, is co-author and is frequently dropped from citations of this paper.

On territory. Lethbridge lies within Treaty 7 territory, on the traditional lands of the Blackfoot Confederacy. *Two points of precision: Treaty 7 is not coextensive with the Blackfoot Confederacy; the Stoney Nakoda and Tsuut’ina nations are also signatories; and the Confederacy comprises four nations*, including the Amskapi Piikani (Blackfeet) in Montana, so “Siksika, Kainai and Piikani” names its nations in Canada.

Not used anywhere in this poem: the medicine wheel, which is frequently presented as pan-Indigenous iconography and is not. The archaeological stone structures are a northern Plains phenomenon, and the modern four-quadrant teaching wheel is a largely twentieth-century pedagogical development.

VI. How a We Is Made

“It runs in both directions at once.” That collective identity is produced through collective action rather than preceding it, and in turn makes further action possible, is the central claim of the collective-identity tradition in social movement theory. Melucci treats collective identity as an ongoing process of interaction and negotiation rather than a fixed property of a group, Polletta and Jasper survey the field and its uses.

Sources: Melucci A (1989), *Nomads of the Present*, Temple UP; Melucci A (1996), *Challenging Codes*, Cambridge UP. Polletta F & Jasper JM (2001), “Collective Identity and Social Movements,” *Annual Review of Sociology* 27:283-305, doi:10.1146/annurev.soc.27.1.283. Flesher Fominaya C (2010), “Collective Identity in Social Movements: Central Concepts and Debates,” *Sociology Compass* 4(6):393-404.

“Waves of a movement rise when somebody invents a new way to act and fall as the opposition adapts to it.” McAdam’s analysis of the American civil rights movement found that the pace of insurgency tracked tactical innovation: new tactics produced surges in activity, which declined as opponents developed effective counters, so that sustained movements depend on repeated tactical innovation rather than on a single successful repertoire.

Source: McAdam D (1983), “Tactical Innovation and the Pace of Insurgency,” *American Sociological Review* 48(6):735-754, doi:10.2307/2095322.

“The tactic that made the we becomes the reason the we cannot move.” The dynamic by which a movement’s identity becomes attached to a particular repertoire, so that changing tactics reads as disloyalty, is treated in the strategy-and-identity literature; Taylor’s work on abeyance structures describes the related case of movements that survive hostile periods by maintaining identity and networks when mass action is not available.

Sources: Taylor V (1989), “Social Movement Continuity: The Women’s Movement in Abeyance,” *American Sociological Review* 54(5):761-775, doi:10.2307/2117752. Polletta F & Jasper JM (2001), above.

On the source supplied for this section: the argument in this movement was written to a précis provided by the author, attributed to a piece titled “Re-inventing the peace movement.” **I could not locate and verify that text, so nothing in this section rests on it; every claim above is instead anchored in** peer-reviewed social-

movement literature, which supports the same propositions. If the original is a course reading, its full citation should be restored here before publication, and this note removed.

Claims cut because they do not survive scrutiny

“Even babies prefer the helper.” The 2007 finding that preverbal infants prefer a helper to a hinderer was among the most cited results in moral development. It failed a coordinated thirty-four-laboratory replication in 2025 (49.34% chose the helper; Bayes factor above 100 *for the null*), and earlier independent replications had already failed. It cannot serve as evidence for an innate moral sense and appears in this poem only as an instance of scientific self-correction, which, for a poem about conscience, is the better story anyway.

“Cooperation rather than competition drives evolution.”

Mainstream social evolution theory explains cooperation among lower-level units as a product of selection among higher-level units, framing them as opposites signals unfamiliarity with the field. The major evolutionary transitions framework is used instead.

“Humans have an innate universal sense of fairness.” The cross-cultural ultimatum-game literature is frequently cited for this and argues the opposite: no society behaves as the pure self-interest model predicts, but the *magnitude* of fairness varies substantially with market integration, community size, and institutional history. Its authors conclude that “modern prosociality is not solely the product of an innate psychology, but also reflects norms and institutions.” Citing this body of work for innate universal fairness cites it against itself.

Sources: Henrich J et al. (2005), *Behavioral and Brain Sciences* 28:795-815. Henrich J et al. (2010), *Science* 327:1480-1484, doi:10.1126/science.1182238.

“The Famous Five were eugenicists.” False as a collective statement; see the note above. Two of the five have thin or no documented record, and one has none.

“Canadian women got the vote in 1918.” The Act extended the federal franchise to women on the same terms as men, which extended

the existing racial exclusions to them as well. Stating it without that qualification tells a white-suffrage story as though it were universal.

“Section 28 protects sex equality from the notwithstanding clause.” Intended by its drafters, argued by serious scholars, and **not settled law**. The Quebec Court of Appeal held otherwise in 2024, and the Supreme Court’s judgment was still reserved when this was written.

“Women earn seventy-one cents for every dollar a man earns.” Not used, because the figure is an *annual* earnings ratio from 2016 census-linked data and is routinely misreported as an hourly wage gap. In May 2024, Canadian women aged 25 to 54 earned 90 cents to the dollar in median hourly wages. The two measures differ by roughly twenty percentage points and are not interchangeable.

Sources: Statistics Canada, *Research to Insights: Wages in Canada, 1981 to 2024*, Cat. No. 11-631-X, 9 June 2025. Statistics Canada, “Gender earnings ratio differences among population groups in Canada,” Cat. No. 36-28-0001.

“The queen mole-rat bullies her subordinates into infertility.” The stress-and-aggression account of reproductive suppression in naked mole-rats was rejected in 2022, and researchers have since identified the mechanism as a queen-produced chemical signal. The example was cut rather than repeated in its obsolete form.

“Chimpanzee warfare proves violence is in our nature.” Wilson et al. (2014, *Nature* 513:414-417) is a **null result on a covariate**: variation in killing rates across sites was not predicted by measures of human disturbance and was better predicted by variables associated with intergroup competition. It did not demonstrate that lethal aggression is an adaptation; the analysis has been publicly contested, and the near absence of such killing among bonobos runs counter to any simple reading. Too weak a foundation for the weight the argument would have placed on it.

Reading “What the Ants Cannot Read”: A Guide

A reader’s companion

Written by Brittany Molenaar

The poem in one paragraph

The poem argues that humans really are animals, but that nature cannot tell us how to behave. What sets us apart is not a special body or a better bloodline. It is that we can write rules down, notice when they are cruel, and rewrite them.

The ants in the title are the proof by contrast. Slave-raiding ants do terrible things, but they cannot choose otherwise, cannot read, and cannot revise. Humans can. So every human hierarchy built on race, sex or ownership was never “natural.” It was written, which means it can be unwritten.

The poem’s last lines say this outright: the fact that ants cannot read what we wrote is our only advantage, and it is enough.

What kind of poem this is

This is a long documentary poem, sometimes called an essay-poem or lyric essay. It makes an argument the way an essay does, but it uses the tools of poetry to make you feel it. If it doesn’t read like the poems you learned in school, that is by design.

Structure. It has a short opening, six numbered “parables,” a closing coda, and a long set of endnotes. Each parable is a self-contained story, and each one adds a step to the argument:

1. **The Raid** shows us something cruel in nature.
2. **Know Thyself** says nature describes but does not instruct.
3. **The Ledger** shows science learning, erring and correcting itself.
4. **The Signature** shows law and religion doing the same.

5. **Put Away the Triangle** names the shape of the mistake: hierarchy.
6. **How a We Is Made** turns to the reader and asks what we do next.

Notice the direction of travel. It starts in a meadow, moves to a desk, a laboratory, a courtroom and a church, and ends with you.

Form. Most of it is free verse that often reads like prose. Line breaks are used for weight, not rhythm. When a single word sits alone on a line (“down, / down, / down” or “Every / Last / One”), the poem is slowing you down on purpose so the moment lands.

Voice. The speaker shifts registers. Section I opens like a campfire ghost story (“Under your very own bed”). Later sections sound like a lecture, a legal brief, or a sermon. The one constant is that the speaker talks directly to “you.” You are placed in the scenes: sitting in the meadow, bleeding in the ditch, standing in the room where the movement meets.

The notes. The endnotes are not an appendix to skip. They are part of the poem’s argument, explained in the section below on the Notes on the Evidence.

Six threads that hold it together

The poem covers ants, taxonomy, genetics, the Charter, the Bible and social movements. A small set of ideas ties these together and keeps coming back. Spot these, and the poem stops feeling scattered.

1. “Is” does not give you “ought.” This is the spine of the whole poem. The philosopher David Hume pointed out that you cannot get from a fact about how things are to a rule about how things should be. Ants raiding nests is a fact. It is not permission. Every time someone says, “it’s natural, so it’s right,” the poem wants you to hear Hume objecting.

2. Keeping the receipts. The poem refuses to make heroes spotless. Darwin hated slavery and wrote an ugly sentence about races being

exterminated. The women who won the Persons Case included two who pushed for forced sterilization. The Bible was used both to defend slavery and to end it. The refrain “Both of those are him” (and later “them”) is the poem’s way of saying: hold both facts at once. Tidying history up is exactly the habit the poem is against.

3. Writing and paperwork. Look at how often the poem shows someone writing: Linnaeus filling in a column, Darwin at his desk, a friar counting peas, a country signing a Charter, Blackstone defining marriage, Sarah Grimké writing a letter, scientists publishing a failed replication. The title is the key. Ants cannot read. Humans are the animal that writes things down, which means we can also be held to what we wrote, and we can write something better.

4. The line versus the circle. A straight line (time as progress from A to B to C) creates a front and a back, so somebody is always “ahead” and somebody “behind.” Stand that line on its end, and you get a triangle, a ladder, a hierarchy. The circle has no front. This image is set up in Section V and paid off in the coda.

5. Self-correction as conscience. For this poem, the best evidence of a moral sense is not being right. It is admitting you were wrong in public. The clearest example is the scientist who co-signed the study that overturned her own famous finding.

6. The ant refrain. Watch for lines like “No ant has ever revised,” “No ant has ever written anything,” and “But no ant has ever done it.” Each one closes a section by pointing back to the ants as the contrast. They work like a chorus in a song.

The opening: “We are animals”

The poem opens with a flat statement: we are animals. It then says this is “a filing decision” made in Latin in 1758. That refers to Carl Linnaeus, who in 1758 published the edition of *Systema Naturae* that officially sorted all living things, humans included, into categories.

The poem starts by agreeing with biology. It doesn't deny that we are animals.

Then comes the key line: what follows is “the rest of the sentence.” The whole poem is the second half of a sentence that begins “We are animals, but...” Keep that unfinished sentence in mind as you read. Each parable adds a clause, and the coda finally finishes it.

Section by section

I. The Raid

What happens. We meet *Polyergus*, ants that raid other ant colonies, kill or scatter the defenders, and carry off their unhatched young. The stolen young wake up in the raiders’ nest, accept it as home, and spend their lives working for the colony that destroyed their own. The raiders’ jaws are built for fighting and useless for anything else. They cannot even feed themselves.

The first turn: the Huber box. A naturalist named Huber put 30 raiders in a box with food and their own larvae. They starved amid plenty. When he added one worker from the stolen species, she fed everyone and set the nest in order. The poem says to “hold the image,” because the rest of the poem lives inside it. The so-called masters are helpless. The “superior” group depends completely on the people it exploits. That is the first hint of the poem’s view of every human hierarchy.

The second turn: the words are ours. Slave, master, raid, tyrant: these words came from human slavery, not from the ants. Scientists borrowed the vocabulary of the institution they lived with, and then that language came back to make human slavery look natural (“see, even ants do it”). The poem calls this a loan that “came back, with interest.” Scientists now prefer the colder phrase *dulotic social parasite*. The word that matters is *parasite*: not a master, but something that cannot survive on its own.

The third turn: the “rebellion.” Captured workers in some species kill the raiders’ young. The press called it a slave revolt. But those workers are sterile and gain nothing, and later research suggested it

may be a side effect of some other trait. In other words, it may be a reflex.

What it means. “We are very good at finding ourselves in the grass.” Humans keep projecting our own stories onto nature, first to justify slavery, then to celebrate resistance. Both are projections. The section warns you against using nature as a mirror or a rulebook, which sets up Section II.

II. Know Thyself

What happens. Linnaeus sorts every creature and gives each a short physical description. When he reaches humans, he leaves out the anatomy and writes only *Nosce te ipsum*, Latin for “know thyself.”

Why it matters. “Every other animal on earth was given a description. We were given an assignment.” Linnaeus privately admitted he could find no physical trait separating humans from apes and feared the church if he said so. So the one thing he recorded about us is a task, not a trait. The poem takes this as a founding image: what defines humans is a job we still have to do.

The taxonomy passage. The poem walks down the classification ladder (Animalia, Chordata, Mammalia, Primates, Hominidae, Homo, Sapiens) and gives each rung a plain-English gloss. Two details matter. First, we share a family with the great apes because “the wall we built” to keep ourselves separate “turned out to be paper.” Second, *sapiens* means wise, a name “we chose for ourselves and have been trying to earn ever since.”

The argument stated plainly. Here the poem gives its thesis through David Hume. People constantly slide from what *is* to what *ought* to be without justifying the step. The meadow describes; it does not instruct. The ant raids because it cannot do anything else. No ant weighed the choice or refused. Something that was never chosen cannot be judged, and something that cannot be judged cannot be a license for us.

The key lines. “We are the only animal that has ever written down a rule it did not want to obey.” That is the difference the poem cares

about: not our bodies, but our ability to bind ourselves with rules we would sometimes rather break.

III. The Ledger

A ledger is an account book with credits and debits side by side. This section keeps both columns honest.

Darwin: conscience can grow. Darwin argued that conscience was not handed down from above. It develops in any social animal with enough memory and language, in four steps: enjoying company, remembering yesterday, hearing what the group expects, and making it habit. He called the moral sense, summed up in the word “ought,” humanity’s most important trait.

The “artificial barrier.” Darwin also wrote that only an artificial barrier keeps our sympathy from reaching people of all nations and races. The poem seizes on that word: artificial means made, and anything made can be taken apart. (The poem’s word “unmakeable” here means “able to be unmade,” not “impossible to make.”)

The debit column. Darwin hated slavery, yet two chapters earlier he predicted “civilized races” would exterminate “savage” ones. The poem keeps both. Its point: a person can see the barrier, name it, and still stand on the wrong side of it. “So will we.” That is why we keep records.

Mendel and the misuse of genetics. Mendel’s pea experiments showed that traits are inherited in parcels. Combined with Darwin, this let scientists do the math of heredity. The poem admits that early genetics was bound up with eugenics, the movement to “improve” humanity by controlling who could reproduce. The correction came slowly, from inside science.

What the numbers show. When genetics finally asked about race directly, the answer kept coming back the same:

- About 85% of human genetic variation exists within any single population.
- Only 6 to 10% lies between continents.

- A study of 929 genomes from 54 peoples found no genetic variant that is always present in one world region and always absent in another.

The poem's reading: there is no gene that makes you a different *kind* of being from the person beside you.

Variation without a ladder. The poem then lists real, local adaptations: breathing thin air in Tibet (inherited from the extinct Denisovans), a different solution in the Andes, digesting milk as adults, extra copies of a starch-digesting gene, Inuit adaptation to a high-fat sea diet, and skin colour tuned to sunlight. Its image for all this is “a map of where our grandmothers stood.” These differences record where our ancestors survived. They are not rankings. It notes that lighter skin evolved more than once through different genes, so the trait most used to justify cruelty “is not even one trait.”

The correction story. A famous 2007 study said babies prefer helpers over hinderers, which seemed to prove a built-in moral sense. In 2025, 34 laboratories tested over a thousand infants and got 49.3%, pure chance. One of the authors of that replication was the author of the original study. For the poem, this is what conscience looks like from the outside: “Signing your own name to the page that says you were [wrong].” Then the refrain: “No ant has ever revised.”

IV. The Signature

This is the longest section. It moves through Canadian law, then scripture, then world religions. The through-line is simple: people wrote hierarchies down, and people wrote better texts to undo them.

The Charter, 1982. The Canadian Charter of Rights and Freedoms was signed outdoors on a rainy April day. The poem notices that its opening line ends in a colon, not a period, and reads that as “a door left standing open” onto the rights that follow.

The three-year delay. Section 15, the equality guarantee, did not take effect until 1985. The delay was deliberate, so every government could first search its own laws for discrimination. The poem's phrase: a

nation went “looking for its own cruelty in its own handwriting.” No nation has done that.

Equal is not identical. Canadian courts ruled that treating everyone identically can itself be unequal. A single step at a building’s entrance treats everyone the same, but not everyone can climb it. The poem’s summary: “Not the same door for everybody. Everybody through that door.”

The Persons Case. In 1927, five Alberta women asked the courts whether women counted as “persons” eligible for the Senate. Canada’s Supreme Court said no in 1928. Britain’s Privy Council reversed it in 1929 and described the constitution as “a living tree” able to grow. The poem points out that Canada’s idea of a growing constitution grew out of the question of whether women were people.

The receipts. Two of those five women, Emily Murphy and Nellie McClung, also supported Alberta’s Sexual Sterilization Act (1928 to 1972). About 2,800 people were sterilized, and Indigenous Albertans were targeted far out of proportion. The poem says it plainly: “The same hands that pried the word person open pushed other people out through the gap.” Note it names two, not all five, because the evidence only supports two.

The vote came in pieces. Women got the federal vote in 1918, but only on the same terms as men, which kept existing racial exclusions. Chinese, Japanese and South Asian Canadian women waited until 1948. Status First Nations people could not vote federally without giving up their status until 1960. The lesson: rights arrived “in the order somebody else found convenient.”

Section 28: the lock and the key. In 1981, about 1,300 women held their own unofficial conference and won a clause guaranteeing rights equally to men and women, placed so it would sit above everything else. When provincial leaders later made a deal allowing governments to override rights (section 33), the clause was quietly made overridable too. That is the “key” fitted into their “lock.” In eleven days of lobbying, they got it removed. Whether it truly holds is still being decided: the

Supreme Court heard the question in March 2026 and has not ruled as of the poem's writing.

Coverture. A 1765 legal text by Blackstone said that when a woman married, her legal existence was “suspended.” She disappeared into her husband in the eyes of the law. It took most of the next century to restore married women's basic property rights. From this, the poem draws one of its central claims: nobody was ever owned because of what they are. People were owned because someone wrote it down and everyone agreed to read it that way.

The Good Samaritan. Most people read this parable as “be kind to strangers.” The poem, following the scholar Amy-Jill Levine, reads it as its first audience would have. Samaritans were not an underdog group; they were rivals and enemies. And the listener is not meant to identify with the rescuer but with the man in the ditch. The hard lesson: you may need rescue from the person you were raised to have no use for.

Genesis: “facing.” The poem notes that in Genesis 1 the image of God is given to male and female together, with no ranking. In Genesis 2, woman is called *ezer kenegdo*, often translated “helper.” But *ezer* is used 15 times in the Hebrew Bible for God, so it cannot mean an inferior. *Kenegdo* means “corresponding to him,” standing opposite at eye level. “Not beneath. Not behind. Facing.”

The Bible read both ways. The poem admits the same Bible was used to defend slavery, including a supposed “curse of Ham” that the text doesn't contain. It then shows that “wives, be subject” and “slaves, obey” sit in one passage, under a line telling everyone to be subject to one another. Sarah Grimké argued in the 1830s that these verses describe authority without approving it. The poem's summary: “The text names the authority. The text never grants it.” Abolitionists, especially the Black church, won by arguing that human dignity and love of neighbour outrank those household rules.

The Golden Rule, five times. Hillel, Confucius, the Islamic hadith, the Mahābhārata and the Gospel of Matthew all state a version of “treat others as you'd want to be treated,” with no contact between them. The poem suggests this is not a coincidence. It is what a social animal with

memory and a word for “ought” works out anywhere. This loops back to Darwin in Section III.

V. Put Away the Triangle

What happens. The poem quotes Leroy Little Bear, a Kainai (Blackfoot) scholar who founded Native American Studies at the University of Lethbridge. He observed that Western thought treats time as a straight line from A to B to C, and that this produces societies organized as hierarchies.

The explanation. “The line makes the ladder.” If the world is one straight sequence, someone must be at the front and everyone else behind, catching up. Stand a line on its end and you get a triangle, a pyramid of power. The poem’s point is that hierarchy was never argued for. It is just the shape a certain way of thinking produces without noticing.

The circle. The alternative shape has no front. Nobody is ahead and nobody is behind.

A careful move. The poem avoids speaking of “the Indigenous worldview” as if there were only one. It notes that Little Bear speaks from Plains philosophy, and that there are hundreds of distinct nations and traditions.

Two-Eyed Seeing. Mi’kmaq Elder Albert Marshall’s idea of *Etuaptmumk* means seeing with one eye through Indigenous knowledge and the other through Western knowledge and using both together. The poem’s image: two eyes are how depth perception works. This also describes the poem’s own method. It brings together science, law, scripture and Indigenous thought without letting any one of them win.

VI. How a We Is Made

This is the only parable “about you.” It turns the argument into a question of action.

Where “we” comes from. Not from agreeing on everything. A group of people who agree is just a crowd, and crowds go home. A “we” forms

by doing something together: you show up, someone else shows up, you carry something together, and afterwards you find yourselves saying “we.” Then that shared identity makes the next, bigger action possible. It works in both directions.

Why small things matter. “One open door is not a gesture toward a better world. It is the raw material.” Big change is made of small, shared acts; no other ingredient matters.

The warning: movements die of success. A movement finds a tactic that works (a march, a letter, a slogan). Then the opposition learns to counter it. But the movement keeps using it because the tactic has become part of its identity. “The tactic that made we becomes the reason the we cannot move.”

The link back to the ants. This is where the poem quietly returns to Section I. The stolen ants were loyal, worked “gladly,” and kept going “until they die,” never questioning. A movement that cannot question its own habits starts to resemble them. What it needs is someone willing to ask, “is this still working?” and a group willing to hear that without treating the question as betrayal.

The key line. “Critical thinking is not the opposite of commitment. It is the maintenance schedule.” Questioning keeps a cause alive rather than weakening it.

The coda: finishing the sentence

A coda is a closing passage that gathers up what came before. Here it finally completes the sentence “We are animals, but...”

It starts by conceding. Yes, we are animals, and nature contains raiding and theft. “All of that is true. None of it is an instruction.”

Then a roll call. A string of lines beginning “We are the animal that...” each recall one parable:

- the animal Linnaeus left an assignment instead of a description (II)

- the animal that found sympathy stops at a barrier we built (III, Darwin)
- the animal that searched for a race gene and found none (III)
- the animal a foreign court had to tell that women were people (IV, Persons Case)
- the animal that gave itself three years to reread its laws and “flinch” (IV, section 15)
- the animal that wrote “love the stranger,” got it badly wrong, and kept the text so others could hold us to it (IV, scripture)
- the animal that reran the baby study and admitted the error (III)

The turn: “It describes our paperwork.” “We know better” might sound like bragging that humans are superior. The poem heads that off. Knowing better is not a boast about our nature. It describes our records: the texts, laws, and corrections we have written and can be held to. Our advantage is documentary, not biological.

Triangle down, circle up. The coda brings back Section V: put the triangle down, it was only a line on its end. The circle has “no front, and not back, and no waiting room.”

One family. Humanity is described as one family that walked out of one place and spread everywhere. The adaptations from Section III reappear, reframed: each is “a record of somewhere our people survived. Not one of them is a rank.”

Partners, not guests. Everyone should belong as “partners”: “not admitted, not tolerated, not accommodated.” Each rejected word describes someone letting others in on their terms. Partners share the ownership.

The call to action. Having made the “we,” do the next thing, and be willing to hear it needs changing (Section VI).

The last lines. The ants cannot read what we wrote. That is our only advantage, “and it is enough.” The title’s meaning lands here. Reading and writing let us choose, remember, revise, and hold each other to account. Nothing else about us is needed.

Why the Notes on the Evidence matter

Most poems don't come with 15 pages of citations. This one does because the notes perform the poem's argument.

The poem says humans are the animal that keeps records, checks its claims and admits mistakes. The notes do exactly that. They source every factual claim, prefer "the honest version" over the stronger one, and flag where evidence is thin.

The clearest case is the final list, "Claims cut because they do not survive scrutiny." There, the author lists popular claims she chose not to use, even though they would have helped her argument. Examples include "babies are born preferring helpers," "the Famous Five were eugenicists," and "Canadian women got the vote in 1918" without qualification. Cutting convenient claims is the self-correction the poem praises in Section III.

The notes also show restraint on uncertain points. The Section 28 question is marked as undecided and "dated to 2026." And a source for Section VI that couldn't be verified is openly flagged rather than quietly cited.

For readers, the takeaway is simple: the poem does not just tell you to keep receipts. It hands you its receipts.

Common questions

Is the poem saying humans are better than animals? No. It agrees we are animals, and it refuses to claim a superior nature. The difference it points to is a capacity, not a rank: we can write rules, reread them, and change them. It treats that as a responsibility, not a trophy.

Is it anti-science? The opposite. It relies heavily on biology, genetics and replication studies. What it criticizes is using science to hand out moral permission, and it praises science most when it corrects itself.

Is it a religious poem? It uses scripture as one tradition among several, alongside law, science and Indigenous thought. It shows the

Bible being misused to defend slavery and subordinate women and being used to end slavery. The opening words of the Charter on “the supremacy of God” are treated as an open door, not a closing argument.

Why start with ants? Because they are the perfect test case. They seem to do something like slavery, which tempts us to call slavery “natural.” But they have no choice, no language and no way to revise, so they cannot teach us anything about what we ought to do. They are also the chorus: each section ends by noting something no ant can do.

Why does it criticize its own heroes? Because tidying up history is part of how injustice survives. Darwin, the Famous Five and the Bible’s defenders all get credit and blame. The poem wants readers to hold both, because we will need to do the same for ourselves.

What does “unmakeable” mean in Section III? In context, “able to be unmade.” Darwin called the barrier to sympathy artificial, meaning it was made and can be taken apart.

What are “the triangle” and “the circle”? The triangle is hierarchy: a ladder or pyramid with someone on top. The poem says it comes from thinking of the world as a single straight line with a front and a back. The circle is a community with no front and no back, where everyone is a partner.

What does “It describes our paperwork” mean? That our moral advantage is not in our bodies or genes. It is in our records: laws, sacred texts, published corrections, the things we wrote down and can be held to.

Who is it written for? The poem speaks to readers near Lethbridge, Alberta, on Treaty 7 territory. It names local history (Alberta’s sterilization law, the Persons Case, Leroy Little Bear at the University of Lethbridge) on purpose. But its question is for anyone: now that we know hierarchies are written, what will we write next?