

Asymptote

When the town starts to fall into the pit, Astrid assumes it's an earthquake. She wakes to the floor tilting, their bed shuddering across the floor, the house's frame creaking. Somewhere downstairs, books drop from the shelves like rotten fruit. She digs her nails into Jack's shoulder and her husband sits up in bed.

'Not tonight,' Jack says, still half asleep.

An unearthly roar descends on them, the sounds of a rockslide. The telephone poles on their street disappear one by one, and the neighbour's house falls backward into empty space. Then Astrid and Jack's own house slides into the chasm that's opened below them, and they begin to fall.

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◆ Astrid slams into the ceiling, knotted in the sheets, and Jack tumbles across the room with his mouth open in a scream but no sound coming out. Their house does a full cartwheel. A grey subterranean darkness swamps the room.

'Jack,' Astrid says, and she reaches out her hands for him.

'Oh, Christ,' he says.

A half-minute later, they're still falling. The wind snaps as they tear through it. Astrid and Jack and their furniture drift weightless, unmoored. They bang around the room like panicked birds, scraping knees and palms against the walls, the floating nightstands, the corners of the bed frame. Jack kicks off the ceiling and swims through the air toward Astrid. They collide and spin off holding each other, kissing each other, crying. Their teeth click together. They wait for the impact to crumple them any second now. Except the seconds keep coming. These beautiful seconds go on forever, Astrid's heart-beat hammering each one.

'Are we gonna hit bottom?'

'I don't know,' Jack says.

'I never blamed you,' Astrid lies. 'I hope you didn't blame me, either.'

'Of course not. I guess it wouldn't have mattered in the end, anyway. The baby thing?'

Glass and metal and stone crash outside, and Astrid's lungs jump inside her.

Outside the window, tractors and swaths of pasture and huge chunks of asphalt float in the air. Shattered buildings hang in freefall. Astrid can hear their neighbours screaming as they plunge into the abyss. A car spins past, its driver pressed against the windshield, his eyes wide. Way up above, the mouth of the pit that's swallowed them is just a blue slash of sky, shrinking rapidly as they fall farther and farther into the earth.

'Shit,' Jack says. He clings to the window frame. 'The entire god-damn town.'

A few feet away, one of the Meyers's horses has fallen in as well. She windmills her hooves and chokes out frantic whinnies, her tail flapping straight up behind her.

Hours pass. The fragments of the town keep falling. Boulders collide with blown-out buildings, grinding windows into clouds of glass shards. Stoplights get tangled in barbed wire, bags of garbage spill their contents in spiralling nebulas. The citizens of Arborville howl into the darkness. People make prayer circles, curl in on themselves like spine-snapped animals, drink themselves drooling in their dizzy pantries. Some of Astrid's and Jack's neighbours commit quiet suicide by kicking out from their front lawns and floating into the void, their bodies growing smaller and smaller in the distance. Some people gather their bedsheets into knots in their fists, turn them into homemade parachutes that fling them hundreds of feet above the town, never to return.

'Parachutes won't save them,' Jack says. He and Astrid stare up at the blue eye of the sky. It's far above them now, growing smaller by the second. 'What we need's a hot air balloon. What we need's a rocket.'

In the midst of this, Astrid and Jack lock themselves in their bedroom. Having death close by, Astrid discovers, gives living more flavour. Words mean something all of a sudden. When Jack tells her how beautiful she looks, she can feel the words in her stomach like sun-warmed stones. He spends hours running his fingertips through the curled tips of her hair. When they make love, they are Olympians, flying through the cold air, high above their bed.

'It makes no sense,' Jack tells her. 'The earth's crust isn't this deep. We should've hit molten rock by now.'

'Maybe we'll go straight through and out the other side,' Astrid says. She wipes the lubricant from her thigh with a corner of the sheet, then bites down on Jack's earlobe, harder than she means to. She imagines

the gaping hole in the earth's surface up above, lined with police tape and flocks of scientists aiming their telescopes into the void, a miles-wide gash in the bedrock where Arborville used to be.

The town keeps falling. On the second day, the grocery store gets raided. Ranchers tie their cows to floating pieces of pasture and other people steal them, untying the animals and drifting them off. Neighbours snarl at each other, all teeth. Jack and Astrid hoard cans of food, bottled water, jelly beans, liquor.

The river has fallen in with them—they have that much at least. Astrid pictures the river, up on the surface, flowing right into the huge hole in the earth, a waterfall into the dark. Down in the pit, the river's a mess of sheets and lobes of water suspended in air at the far end of town. A haze of spray glitters around the falls. The citizens of Arborville tie ropes around their waists, secure themselves to the wreckage, and drift out to the falls each night. They carry bottles and buckets and torches and they scoop their bath water right out of the air.

By the end of the third day, Astrid and Jack have grown accustomed to weightlessness and hunger, to strapping themselves down so they don't float away. The smear of sunlight up at the surface retreats as they fall farther, shrinking so small that Astrid can close one eye and cover it with her thumb. That night, Astrid shines her flashlight out the window, lighting up crushed cars, sprawls of broken fencing, a corpse spinning through space with blood threading from its mouth. A squirrel scuttles around on a scrap of corrugated tin. Farther out, a torch burns.

'Someone's out,' Astrid says.

The torch-holding figure has a rope tied around his waist. He pushes off a concrete slab, hurtles through empty air, then clings to the next piece of wreckage. His rope unspools behind him.

'Food's locked up?' Jack asks.

'In the pantry.'

The man reaches Jack and Astrid's front yard and crawls up their walk on his hands and knees. His torch paints everything with a quivering orange light. Jack's waiting for him at the front door, a kitchen knife hidden behind his back.

'Evenin',' the man says.

'It's Patrick,' Jack tells Astrid. She glides up to the front door next to him.

'This is something, isn't it?' Patrick says. He grips the porch railing with one hand. 'Falling through space like some kinda astronaut.'

Astrid barely recognizes him. His eyes have sunk into the flesh of his face and his teeth look too large for his mouth.

'I've been talking up the neighbourhood. I figure we're all about to splat, so it's time to share the Word.'

'Jesus,' Jack says.

'That's right.'

Patrick's rope trails away into the emptiness behind him. It ebbs slowly, a snake undulating out to infinity.

'So,' Jack says, 'what's it say about this situation in the Good Book?'

'I couldn't find "bottomless pit" in the concordance.' Patrick laughs and wheezes. 'You folks believers?'

'Not since I was 12,' Jack says.

Patrick licks his lips. 'Say, you wouldn't happen to have a little bite to eat?'

Jack's grip on the doorframe tightens. His mouth grows a sour twist in one corner.

'My wife's at home. Laid up. Our larder's a bit...well, it's not full.'

'Wish we could help.'

Patrick's eyes move from Jack to Astrid. His cheeks glow, like his blood vessels are too close to the skin.

'Let me tell you what Jesus would say about this.'

Jack takes a step back, closes the front door, then rests his forehead against it. Patrick still hangs onto the porch outside. The flames from his torch send shadows cascading over the eaves.

'Sorry, Patrick,' Jack says. He keeps his head against the door for a long while.

Astrid reaches her hand up under his shirt and strokes the small of his back. 'We're not bad people,' she says.

Astrid decides the problem is Jack's sperm. After sex, she pictures clouds of them drifting aimlessly inside her, cracking their heads against one another. Ten months so far, and all of them have ended in blood. Jack's little swimmers always give up. Their tails flash and then go still.

Months ago, back on the surface, they'd gone to a specialist. He put them through all manner of tests, taking samples, drawing blood. Everything came up normal. Progesterone, motility, all their mechanics, all their chemicals. The doctor shrugged and told them to keep at it.

They used to make jokes about it: 'You're just un-knock-up-able,' Jack had said. 'My body rejects your genes,' Astrid told him. Now there are no jokes. At night, Astrid and Jack have to strap themselves into bed with a nylon cargo-net. When they move in the sheets, their bodies rise on their own and push against the webbing. Astrid prays she's not the final generation, that her chromosomes don't turn into

a dead-end road. Her DNA burns to replicate. It's an ache that chews at her body.

'Fuck,' she says.

'What?' Jack shifts in the blankets next to her.

'Cramps are coming,' she says. 'It's not happening this time, either.'

Jack starts to say something, then stops. He runs the pad of his thumb over the birthmark on Astrid's shoulder. It looks like an eagle in flight, stained brown against her pale skin.

'Don't worry,' she says. 'I'll let you keep trying.'

Jack stiffens. 'Me? You'll let *me* try?'

Astrid can see, suddenly, the wrong turn her joke's taken. The scent of woodsmoke reaches her nose, the burning animal and sewage smells that settle way in the back of her throat. The whole town's a burst septic tank. 'I meant *us*. One of these days, it'll happen.'

'Honey,' he says, 'it'd be a no-chance child. Plunging straight down.'

'How's that different from life on the surface?'

'We're falling through a hole in space. We're rationing our food.'

He lifts himself up onto one elbow. There's a mist of dust in the room, flotsam and vertiginous ruins out the window.

'We can't bring a child into this place. It's the apocalypse.'

'It's always the apocalypse,' Astrid says. 'Now let's make a god-damn baby.'

He turns his back to her. She traces her fingernails over the notches in his spine but he doesn't respond.

On the ninth day, Mayor Albert calls a town meeting. Arborville's bruised citizens secure themselves with rope and float their way into City Hall. They cling to the walls and ceiling, make small talk. Kerosene lanterns smoke in the corners. Crates of styrofoam cups and coffee filters lurch around the edges of the room. There's a lingering smell of damp, turned earth that Jack can't figure out if he's imagining.

Mayor Albert holds up a drawing he's made and everyone squints to see it. It's a scrawled map of the town—chunks of floating debris and broken buildings—all roped together by spidery bridges. His vision, he tells them, is of the town as a web, a network, each building tied to the next by thick cable.

'We need these connections,' Mayor Albert says. 'Velocities may change. Neighbourhoods might drift away. We need to tie ourselves together if we're to survive.'

'Survival?' Jack whispers to Astrid. 'For what?'

They should be plotting escape, Jack thinks, not bridges. The earth's miles above them, impossibility below. An interminable gaping mouth, an emptiness they can never fill.

Jack used to work at a warehouse just out of town, engineering winches for trucks—spools of heavy cable meant for towing things, for pulling vehicles out of the mud. Jack imagines that somewhere way up above, his coworkers are constructing a giant pulley. A winch big enough to pull Arborville back up out of the ground, a cable long enough to plumb this abyss.

In City Hall, Jack spots their neighbour Patrick, cross-legged on the other side of the room. Patrick strokes his beard and nods. His wife floats next to him—a shrivelled woman with a scrawl of hair. She seems to be built mostly of knees and elbows. When Mayor Albert talks about brotherhood and compassion, Jack tries hard not to look over at the couple.

‘Because we are strong,’ Mayor Albert is saying. ‘Because we can fight through these dark days.’

A larger plan unfolds, one Mayor Albert’s been working on since they started falling. The plan divides the town up into work crews, notes which hunks of pasture could still be plowed, enumerates the types of fungus and vegetables that might grow in near-darkness. The plan describes the way cows can be bred, how milking, feeding and slaughter might work in freefall, in zero gravity.

‘This is it,’ Jack tells Astrid. ‘We’re in Hell. Trapped with a bunch of redneck Montanans arguing how to rope cattle in space.’

Jack asks himself what might happen if they can find the walls of the pit they’ve fallen into. If they travel out far enough, they might find the rock walls hurtling past, big as God, striped with layers of bedrock and slashes of iron ore. They might be able to drive anchors into the earth, to stab grappling hooks into stone. They could use friction to slow themselves down, and if they built mechanisms that could stomach the torque, they might eventually stop falling. One day they might climb out, hand over hand, back into the sunlight.

The weeks pass. In the middle of a month that would have been October, were they still on the surface, Jack and his team finish their work on an aqueduct. It’s a wild skeleton of pipes that starts at the waterfall and leads into town. They’ve spent the better part of a month stripping plumbing from half the town, melting down flatware to build the joists. It’s a violent-looking monstrosity. Jack flips through the sketches he’s made and tries to line them up with the structure being pieced together in the torchlight.

When they work the pump handle at the end of the day, the water huddles in the pipes. It coagulates, squishes out unknown cracks in the seams. Jack clutches a bead of water and it oozes around his fingers. He pushes two globs of water toward each other. They join and flounder off together, lopsided, into empty air.

‘The water don’t run,’ one of the men says to Jack. The workers lean against slabs of granite and cling to lengths of pipe and they shine flashlights into the holding tank at the end of the aqueduct. No water comes through. Jack can feel the clawing emptiness below reaching up for him.

‘I’m not an engineer,’ he says to Astrid later.

‘Of course you are. The DX-100. The Revolution 20.’ Astrid’s half asleep, drifting around on the couch cushions, but the names of the winches Jack has designed are as easy to remember as the names they’ve picked out for their children.

‘Those things are shit,’ he says. ‘Hack work. I can’t really fit together anything.’ Jack has poured himself a Scotch and soda—the last of their stockpile of alcohol—and the drink keeps trying to climb out of its tumbler. Jack cups a hand over the mouth of the glass. The liquor sloshes against his palm.

‘Nobody blames you for the aqueduct. Physics just aren’t the same down here.’

Jack spreads his fingers slightly above the glass, creating a gap, and moves the tumbler toward his mouth. Bubbles of Scotch and soda billow out. He licks them out of the air.

‘We’ll just scoop our water from the falls, same as usual,’ Astrid says.

‘What happens when we use up all the water that’s floating down here? We’ll have to start going up the falls to collect more. In 10 years it’s going to take weeks of travelling to get a day’s worth of water.’

‘You’ve been thinking about this a lot.’

‘And what happens when we run out of firewood? Trees won’t grow down here. How will we cook our food? How the hell will we boil our water for drinking?’

‘Someone will come down after us,’ Astrid tells Jack. ‘NASA, the Air Force. They’ll send helicopters or something.’

‘We’re down too deep for a return trip. They might have fuel to get down, but not enough to get back.’

Jack drinks more of his Scotch. Some of it sloshes out of the glass and burbles through the air toward Astrid.

‘Damn it,’ Jack says. He swipes the liquor out of the air with his sleeve. ‘Do we have any straws?’

Hunger becomes another occupant of their house. Astrid rattles around the empty rooms, hunger following her around like a shadow. She propels herself down the staircase, pushing off the walls, and into the basement, where Jack’s been holed up all morning. He sits at his desk and fills his notebooks with equations and scrawls and long looping spirals. In the wake of the aqueduct disaster, Jack has

convinced Mayor Albert to commission a secret project: a rocket—an engine to propel them out of this mess. Jack's spent days drafting blueprints and breaking pencils. Lemniscates climb the sides of his papers, infinity after infinity.

'It's time,' Astrid tells him.

'Are you sure?' He looks down at the formula he's been working on. 'I thought the problem was what I used for mass.'

'Forget physics for a second. Think biology.'

She floats over to him and flips herself upside down, weightless. She wraps her leg around his neck and presses her thigh into his face. She clings to the pleats of his pants.

'Honey,' he says, 'we talked about this.'

She unbuttons his belt. 'Listen. Do you want me or not?'

In the bedroom, they unbutton methodically and float toward the bed. Jack chuffs around on top of her for a while, then sucks in a breath and comes. Astrid imagines her body as a crystal chalice being filled. She wiggles her toes and tries to focus her energy into the core of her being. Her womb is a steaming jungle, ripe for life. Jack hovers over her, his face an ocean. Astrid pulls away, then lifts her knees to her chest.

'What're you doing?'

'Tilting my hips up.'

Jack snorts. 'Come on. Which way's up?'

Astrid pictures Jack's sperm nosing their way to her egg. Imagines them clustering, probing, then one of them breaking through—a finger through a soap bubble. She imagines their chromosomes knitting together.

'I don't think that helps,' Jack says.

'Jack. If we're not going to *try*, why are we wasting our time?'

Jack slides out of bed. His penis dangles from him, somnambulant, the hairy drippings of his abdomen. 'Oh, is that what this was? A waste of time?'

The prototype rocket nears completion. While Jack works, Mayor Albert hovers about the barn, tapping his fingers on the metal sheeting and struts that will make up the body of their escape vessel. Jack hunches over his desk, mouthing figures to himself. His hair's singed from the forge and it comes off in brittle twists when he touches it. His bloodied fingernails leave smears on the paper.

'This engine,' Mayor Albert says, 'has infected my dreams.'

'Tell me about it,' Jack says. He wipes his forehead. The barn stinks of soured, rotting hay. Strips of metal lie strewn about the horse stalls in a drifting mess.

Across the room, Mayor Albert flicks the rocket's nose cone and it pings beautifully, resonant and deep. 'Seaworthy?' he asks.

'Theoretically.'

'Fuel?'

'It's steam-driven, so it needs wood, coal, whatever combustibles we've got.'

Mayor Albert nods. 'Paper dolls, clothing, it all burns.'

Jack ignores him, focuses on the set of Fourier transforms he's working on, calculating the propagation of heat and stress across the surface of the machine. These are dire equations.

Mayor Albert peels a hard-boiled egg and the white coils of shell hang in the air. Jack watches him move among the equipment. Mayor Albert's soured somehow within his skin. He wears a suit, but something about the arrangement of his eyebrows, his mouth, feels unsteady. His beard is a wayward cloud attached to his face.

'It can work,' Mayor Albert says. 'It will. Investor confidence is high.'

'Doesn't mean we should get carried away.'

'Carried away. That's the idea.' Mayor Albert picks up a socket wrench and spins it in the air in front of him. He gives it a flick, and the wrench goes and goes and goes. 'We pray for a hell built of fire,' Mayor Albert says. 'Instead we get one made of air.'

Jack thinks of Patrick and his concordance, of all the helpless citizens fluttering their limbs, trying to stay aloft. In his head, Jack calculates the number of additional pounds of thrust, the number of extra BTUs, the amount of additional coal that his rocket would require if a newborn baby were added to the load. The figures are staggering.

That night, Jack and Astrid eat cat meat roasted over a burning pile of shingles. Threads of tendon cling between Jack's teeth. Blood pools down at the bone. The meat tastes charred, dusky with chemicals from the scraps of wood they'd cooked it over.

'The Meyers' cows had calves this weekend,' Astrid tells him.

'Great. More shit in the air.'

'No, but it's exciting. We're raising cows again.' He looks at her. Astrid can tell he's about to say something unpleasant. 'Zero-gee cow breeding,' she says.

'You know how much grass cows go through?'

'We've got plenty of pasture. We've got grass seed.'

Jack rolls his eyes at her. He licks grease from his fingers, and Astrid can see the scabs on the back of his hands, the scratches and blisters from his long nights working in the barn.

‘It doesn’t matter what we do down here,’ Jack says. ‘Make sculptures, paint murals—it’ll all turn to dust by the time we get to wherever we’re falling.’

The weeks of rationing have sculpted Jack. His belly has melted away, his fleshy neck has thinned. His eyes have yellowed at their corners and his gums have turned a raw infected shade. Astrid knows her own body has changed as well. Her damaged skin flakes off in flurries, her hips look squared-off. When she moves, her breasts dangle unripe. White splotches and grooves have begun appearing in her fingernails.

In the evening, after they strap themselves into bed, Astrid runs her hands over the stubble on Jack’s cheeks and down his neck to his collarbone. ‘Feeling snuggly,’ she tells him. Jack pretends to sleep, keeps his breathing slow and even.

Astrid kisses him, then drags her tongue down his neck. She tangles her legs in his. ‘I want you,’ she says.

Jack opens his eyes. Astrid can feel his skin heating up, his pulse in his groin. He kisses her and his beard scrapes her lips. She looses the cargo net and they begin to drift toward the ceiling, sliding together, swimming into hungry, insistent sex. Astrid imagines what it will be like—their child a freshly minted coin in her belly, a tiny seed ready to grow into some new intelligence, a new recombinant thing.

‘Baby, baby,’ she says. Jack pulls away from her. A thread of saliva stretches between their lips.

‘Are you talking to me?’

‘Who else?’

Astrid can feel Jack beginning to go soft inside her. She moves against him, grinding her pelvic bones into his stomach. ‘Come on,’ she says.

There’s something they’ve done wrong. They’ve recited the wrong incantations and prayed to the wrong gods, she’s sure of it. Jack’s sperm have spoiled and they flail like dying goldfish. Or maybe her ovaries have withered to empty balloons.

‘You never wanted it, did you?’ she asks.

‘What?’

‘You never wanted a fucking baby.’

‘Don’t be stupid,’ Jack says.

She pushes away from him and glides backward across the room. Maybe his genes are a crush of mutations, her womb a salty poison. All this time, she thinks, they’d built the town over a bottomless pit. Just think. All this time, wrenching freefall waited beneath, waited to swallow them, and still they built on top of it. She sobs, and it feels like something catching fire inside her.



The whole town's gathered, roped to the scree and wreckage outside City Hall, craning their necks, cheering. Some hold hand-painted banners. The bedraggled remnants of the city's brass band blow congratulatory notes. Mayor Albert claps Jack on the back, his eyes damp.

Jack's prototype rocket coughs into the air, clawing for height. Exhaust churns from the engine and the rocket's fins glint in the torchlight.

'About now it's pulling free,' Jack says, but he can tell Astrid's not listening. 'Second-stage engine's about to kick in.'

They watch the contrail knife upward. The rocket becomes a comet traversing the impossible depth.

Then a sideways puff of smoke slugs out of the engine's belly. Rivets skitter, the tin sheath unravels. The dull 'clap' of the explosion reaches them, and then the wings tear free. The whole rocket blooms far above them. Jack lowers his head and presses his knuckles to his mouth. Errors in calculation. The struts had been all wrong, the solder too weak.

The citizens of Arborville watch the debris dance away, and the opening above them, just a blue star now, winks deliriously in the black. Patrick and his wife bow their heads in silent prayer. Mayor Albert mashes his hands together and squints up at the pieces of the rocket, all that lost metal. Astrid vomits. The strands of bile drift lazily from her mouth like flags on the breeze.

Morning sickness, Jack wonders, or vertigo?

Later that night, Jack scribbles in the margins of his blueprints, searching for new values of X to satisfy all the revised equations. The new engine will have to be bigger. Faster. They will need more piping. They will need more fuel. They will have to tear their houses apart, board by board, to feed the furnaces.

The paper is a mess of frozen theorems. The equations all lean away from God.

