

Essence Apparatus

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The short stories in Part One are fiction. Names, characters, events and incidents are the products of the author's imagination. Any resemblance to actual persons, living or dead, or actual events is purely coincidental.

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Part One

Stories

Caesium

I don't remember my sister being born, just as little as I remember being born myself. I was two years old when she came into existence. In the childhood photographs of the two of us, my hair is dark brown, almost black; hers is bright orange. I don't remember us as self-conscious beings. I can't recall our first interactions. She was just there, and so was I. In the photos, we are holding dolls we were only allowed to play gently with because their satin dresses could become stained or worn.

It was only when looking at them recently I noticed that in most of the photos she's not smiling. I'm always smiling, or at least trying. The photos are in the albums in our old house. I go through them now as I have to sell the house after my mother passed away. Mother would always dress up my sister and me in matching clothes and make father take pictures of us. In one photo I have a red sweater and a knitted strawberry woollen beanie, and my sister has an identical outfit, but in blue. In other images, we are wearing similar white angel dresses, singing Christmas carols in soft candlelight. People tended to comment on these cute and beautiful children. I was the prettiest one, everyone said that. My sister's freckles and carrot hair stood between her and general affection. When I was five and my sister three, my aunt took me for a day trip to town, while my sister had to stay home. I returned in the evening with candy that I gingerly handed down to her. She stuffed the brightly coloured pieces into her mouth without unwrapping them first.

I was six years old when the Chernobyl accident happened. A nuclear reactor in Ukraine, then part of the Soviet Union, exploded and leaked vast amounts of radioactive materials into the upper atmosphere. This turned into nuclear fall-out over significant areas of the western USSR and Europe. I woke up one morning, and our parents gravely told us not to drink or touch any rainwater. My sister and I had a little blue inflatable pool in the garden. Now the toy boats and plastic animals just floated aimlessly around on the clear water, which didn't look poisonous at all. It looked like regular water, just like it did the day before. I think it was the invisibility of it

that scared me the most. That the radiation could silently infiltrate any kind of matter, from the water falling from the sky to the grasses the animals eat, to the tissue in the human body.

My sister had problems sleeping. She would lie awake in our room until she couldn't take it anymore. She grew afraid of the dark, or it of her, and she would sneak up the creaky stairway, spending an eternity on getting to the top, as to not trigger any revealing noises from the old wooden house on her way. Then she would slowly crawl over the cold floor planks in the hallway, and sometimes curl up by the threshold, because she knew very well entrance to our parents' bedroom was forbidden. Sometimes she still snuck up into the foot end of their bed and tried to put her cold limbs in under the outskirts of their duvet. They usually woke up and sent her back to our room, where she would wake me up by inching herself closer to my back and clench my hair in her small fists. She told me whispering about her expeditions, but she didn't cry.

It's hard to try to remember these nights now. It's almost as if she didn't exist back then, it's like I'm trying to remember a ghost. But she was there, a strand of carrot hair is still taped inside of the photo album's cover, next to my brown strand. I close my eyes and try to picture her face the last time I saw her. But her features are dim and timeless as if every photo of her was ripped out of the albums and stacked on top of each other, so the sum of her frozen faces becomes one frame, one face. She can never be altered.

The albums aren't dated. The cardboard pages are pristine around the glossy surfaces of the photos. The depth of field is for the most part narrow. My father enjoyed spending time capturing good photos. He would set the aperture to the largest opening and adjust the lens manually, with his one eye squeezed shut and the other glued to the viewfinder of his old, bulky analogue camera. He nudged his head back and forth to find that exact spot where one small area of the composition is in pin-sharp focus and the rest blurred out. The millimetres were of the highest importance. Only light travelling at shallow angles was allowed to pass through the gateway, to become an image, later developed. I press a finger down on a photograph in the middle of the album. The veneer feels almost greasy. When I release it, my fingerprint has stamped deep lines in my sister's baby face.

In the mornings, the radio on the kitchen counter was on. It wasn't loud, just a murmur in the background. My sister and I played with our food, as usual, drawing faces with jam on the toast, bursting out in laughter so milk exploded out of our noses. "Hush!" My mother leaned closer to the radio and turned up the volume. I didn't think much about it, they were just voices. The only material that keeps radiation out is lead. Caesium-137 is absorbed by plants and mushrooms, which in turn is eaten by sheep, reindeer, and other grazing beasts.

My sister and I used to play this game we had invented. Our house was situated at the foot of a mountain, or a large and wide hill, as I see it now. The slopes were covered in forest. That's how we knew that downwards meant home. So we couldn't get properly lost. We would put our hands to the bark of a tree, and with sticky sap on my fingers, I pressed my palms to hers and we pretended our hands were glued together. We moved around like that until one of us had to let go to keep balance, or absent-mindedly brush away a mosquito on its way into an eye. After rainfall, the tufts of grass had a matted surface of intertwined straws, like small haystacks. We would jump between them and they were springy. I imagined they were heads of human bodies buried vertically in the forest floor. The trees had swaying twigs we lifted ourselves up onto, bending our knees over them with our heads hanging down so the blood ballooned in our craniums. Fallen trunks were green from moss, mushroom blobs bulged like hernias out of the dampness. When we stuck our fingers into the dying substance, it disentangled, resembling boiled meat.

In the sun, her red hair glowed like charged copper wire, but at night I couldn't see her at all. I was only half-conscious of her jerking about, but I could somehow tell when she wasn't in the room, when she had gone on her slow journey up the stairs to seek comfort in my parents' big bed. My authority wasn't strong enough to banish the demons of the dark, or whatever it was she was afraid of. If she were here with me today, in our old house, I would ask her. At the breakfast table, my parents told me how happy they were that at least I slept through the night, I was such a good girl. My sister stared into her cereal bowl, swirling her spoon around between the small O's floating in the milk. Afterwards, I let her climb higher than me in the trees.

We heard through the radio that a press photographer had managed to access the Chernobyl disaster area, illegally. Dressed in a suit of lead, he flew over the perimeter as a

passenger in a military helicopter. He opened a window and took photos as the aircraft flew over the reactor ruins, he was only 50 meters away from the core of the disaster. But the radioactivity was so intense that the images turned out black, all the information was wiped from the film.

The little blue plastic pool in the garden overflowed with water as the rain kept pouring down. At night, my sister would stay in her bed in our room, but restless. Our parents' voices faintly reached us from upstairs. That was unusual. But their voices were loud now and sounded angry, elevated. I eventually fell asleep, as always. I can't remember dreaming much back then.

One of the photo albums is thinner than the others, it's the last one. Only the first five pages are filled with pictures. My sister and I in front of the window, standing straight with small flower bouquets in our hands, wildflowers we had picked in the forest. Six-year-old me is taller than four-year-old her, that's the way it's supposed to be. Her chubby cheeks are pink, probably from a sunburn. Her skin was so fair that she would get burnt even in cloudy weather.

Radiation can't be seen, smelled or felt, it's like imperceptible packets of energy that hit the genetic code in the DNA molecule and break it, split it. Radiation can leave a trace in you, a change, by mutating the genes. My sister was bound to be different from me, she wasn't a copy or a mirror. But when my father told us to stay still in front of the camera, so both of us could be captured in the right focal plane, so that both our faces could be isolated from the background by the mere quality of being sharper than it, and we turned to look at each other at the exact same moment... Not smiling, but something else. I wonder why my father never pressed the shutter then. He just got irritated and lowered the camera to instruct us before preparing again for the perfect photo. And I smiled into the lens, I did as I was told.

The Soviet Union collapsed five years after the Chernobyl accident. Satellite states gained independence and got their own constitutions, my father moved out the same year, taking his camera with. My sister had already been gone for four years. I kept growing taller, but I had no one to measure it against or to document it. The zone of alienation around Chernobyl is still the most radioactively contaminated area in the world, uninhabitable by humans for at least another 20,000 years. I close the last photo album and throw it into the fireplace. The flames catch it with a little hiss.

Sensō

“...we are aware because we then have the power to change our actions.”
Johnjoe McFadden

“...it's possible that the quantum information can exist outside the body, perhaps indefinitely, as a soul.”
Hameroff and Penrose

Everything can be filled with poison, even the air itself. We stored our gas masks in the cupboard, in case of invisible gases inflicting cramps, asphyxiation, peeling of the skin. The vulnerable soft tissues of the face, exposed. We had to check the masks once a year, wipe the dust off, look at the filter's date. You put on the mask and became an insect. Your eyes were covered by the dark glass, a long trunk stretched out from your nose and mouth, connected to a round filter box at the end. With your field of vision constricted by blackish rubber, you turned your head to meet my gaze through the visor. I put my palms over the visor glass.

“Take it off. Please.”

You laughed muted through the filters.

“But nothing is dangerous here.”

*

I open the cupboard door. Maybe there's some food left on one of the shelves, something I didn't notice the last time I looked. The hinges squeak, metal on metal. The gas mask is still there, its visor cracked, a tear runs through the rubber below the glass. Next to it, a dead fly lies with its legs curled up, folded like hands. I draw the old air into my lungs, and with a short gust, I blow the insect away. Its hollow shell whirls into the shadows. My cranium still protects the brain, my spine protects the cord, my ribs protect the heart. Under my feet, the floor is hard; harder than me and under the floor, the soil is soft; softer than me. When I turn away from the cupboard, cobwebs stick to my skin, half invisible. Besides the gas mask, the cupboard is empty, as always. I close the door and lean my back on it. Light floods through the air, suspending motes of dust. Light creates the shadows and moves them. My head pivots on its atlas axis. Your soul hovers under the ceiling, shifting in and out of its old human figure form. I try to let my glance follow

your soul, your ghost, but it's more impossible than trying to separate one flame in a fire from the others.

*

At first, we didn't believe in the war. We couldn't see it or feel it. It didn't start overnight, it grew slowly, like silent stalactites, releasing a swarm of shimmering insects that spread, infecting everything clean. The cleanliness in you. When the first army poured over the horizon, with their smooth, sealed helmets and dark camouflage, I drew the curtains shut. But we slowly realised that atrophy isn't something that can be escaped. The piles of leaves softened to compost in the garden, and you stepped into your gardening boots, pulled your old woollen sweater on, and went to collect the tools in the shed. You slammed the door shut behind you, and I stood by the window, watched you cross the lawn. And then you just stood there under the apple tree, unmoving, leaning on the shaft of the rake. When one of your pupils shone in towards your nose, it meant you were tired, too tired to keep your eyes parallel and you couldn't see me behind the window, the sharp light mirrored you from the outside, and sometimes I could be a shadow, too.

A soldier walked through our open gate and approached you, stopped in front of you and leaned in. I couldn't see his mouth move, but I saw your eyes widen. The soldier swiped his gaze over the square meters of our garden before he left, his heels sank deep in the soil with each step. Your knees bent, and you tumbled to the ground, palms and forehead first. I don't know why I didn't run out to help you as you lay sprawled out on the lawn. Maybe because even from a distance I could tell that your body had found stillness and that you were changed, knowing it was no longer you who was in charge of yourself.

The mountain hovered over us, massive stone unchanged from the surface and all the way down to the glowing mantle. At that moment, I wished the planet would solidify from crust to crust, that nothing had to be fluid. I could only lean my forehead to the window, press my lips and tongue against the glass, loving the barrier.

I could hear you enter the hallway and I went to meet you there, to offer the comfort of familiarity. Your boots were heaped in the corner, clumps of mud were scattered over the floor.

You sat slumped against the wall, your jaw against your shoulder. The wooden planks behind you had tiny mite holes, spongy as bone marrow. Suddenly, a siren started wailing in the distance. Only light moves at the speed of light and pain. A fever hammered through the room. I lifted your face towards mine, your eyes were rolled up behind their own horizons.

Over time, the greenness of the garden started to feel insulting. The proud stems and juicy leaves stood perked towards the light, but the ivy had to cling to the fence, unable to carry itself. Between the attacks you sat in the garden, chewing on bitter dandelion leaves, picking bluebells for me. Their flowerheads bobbed around your hands, your hands also trembled. I filled the smallest vase with water, I forced myself to restrain my field of vision, to carefully study the clay under your nails, the crumb on your cheek, the shadow it cast, like a cathedral on a plain, letting all crumbs become cathedrals. All those rituals a human being needs, not yet aware of what kinds of pain the body is capable of producing.

There's always something that must be burned. When you chopped wood, you owned your muscles, owned the momentum of your swinging arms, the sharp edge of the axe. I watched as the logs were splintered, while the chopping block remained unvexed. I bent down to gather the logs, to help you carry. Your breath was laboured, a pale foil of sweat covered your face. When the axe fell to the earth, the earth gave in.

Plasma cells live in the sternum, the ribs, the clavicle, the spine, the pelvis, and in the long bones in the thighs and arms. Your innocent thighs and arms. Infiltrated by rogue cells, malignant clones reproduce themselves in an uncontrolled fashion, gradually replacing the healthy bone marrow. No soldier ever fights only for himself, no atom exists independently.

Everything sparks consequences. Thrombocytes gathered themselves into clumps, nightmares were transported in bundles across the oceans. Aeroplanes drew condensation trails over the sky, long clouds left to hang up there indefinitely as white intestines pulled out of the plane's body.

The war expanded, slowly conquering new territories. I saw new trenches being dug in your face, borders being crossed by heavy belt-wheeled tanks. You had a scar across your eyebrow because no one is ever allowed to be perfect. You always wanted to keep the bedroom

window open, just a slit. Wafts of smoke would seep in at night, a smell so faint it might as well only have been in my imagination. I know now it wasn't.

*

The night sky is not filled with an infinite number of stars, because the universe is not infinite. Your soul glows in its own yellow colour, an unconfined shape next to me in bed, a sigh of golden sand over the pillow. Your transparent figure is morphing, like air bubbles rising in boiling water.

I feel the most alive when I'm sleeping, no longer needing to watch over anyone. I slide my fingers through the darkness and it can't be pierced. I slide my fingers through your soul and yellow dust is left between my fingers, weightless as pollen.

*

Spinal fluid is made in the brain and recreates itself four times a day. All celestial bodies pull at each other, all particles spin. In four billion years the Milky Way will collide with the Andromeda galaxy. But all we could do was to dice the cauliflower heads, boil the water, swallow the soup. Stay calm.

It was usually you who made us supper, you enjoyed cooking. Pieces of lamb, tails of lobsters, the whitest flesh of the fish. I preferred to wash the dishes afterwards, to erase the traces. We ate the last apples from the garden, I licked the skin of the fruit, waxy and smooth, unlike the porous material underneath; a sponge to suck dry. Juice ran over your cheek, and I caught the drops with my finger. You sat still opposite me, pulling the earth closer to you with all your mass, your beautiful mass. Our eyes had the same mechanics, but the world in your eyes was different. To you, the apple wasn't red.

*

Your soul is slumped over the footstool by the rocking chair. No clocks are ticking. The metals are content with themselves. Outside there's some kind of night. For short moments the candle flame stands completely still, like a photograph. Light flows in and out of my eyes, bringing with it water. When I measure my convictions against the ocean's, they seem so small. The ocean doesn't ask if anything wants to be swallowed, I didn't ask if you wanted to be saved.

Your soul shapes into a pillar, towering over me. I rise slowly from the chair, like an old ache. I go to the window, again, I always go to the window. My elbows can rest on the dusty pane. When I close one eye and open the other, the mountain moves.

*

We were used to being alive, uncomplicated. But one day, your cells' nuclei awoke unrecognisable from their own origins. Immature blood cells stay in a state of rapid division for several days, and then either die or change into a mature, fully differentiated plasma cell. The malignant cells form masses in the bone and marrow. As if tissue itself is just too beautiful, something foreign must be marbled into it.

The war strengthened its forces, sending agents and spies, drawing lines in the sand. Protein was measured in your urine. All power was redistributed. We could hear the explosions in the distance, and we shuffled cautiously over the floors with naked, cold toes.

*

I come to my senses sitting by the kitchen table, I've forgotten I ever sat down. I look at the stains on the tabletop; years of soups, egg yolks, butter. I lean forward until my nose touches the large flat surface and I extend my tongue, licking up the invisible nutrients. I try to remember the feeling of steak between my teeth, the near sweetness of the fat, the satiety.

Sleep is black and empty, a hood over my head. I'm waiting for my limbs to be able to move again. But why should I need to move? To go to the mirror and look for the golden glint behind my eyes, that has no name? Through the window, I see a hole in the clouds and through

that hole, I see one single star, its light has travelled for 40 billion years. You saw more of my skin than I ever have, areas I can never claim with my own gaze.

*

No thought exists before it is being thought. At first, the machine was only dreamt. Then it started to dream about me too. It presented itself to me from every angle and perspective. A chamber to hold the body, the chamber must be filled with saline water and specific percentages of other minerals and trace elements. Biotronic arms positioned along the edge of the chamber, holding needles to be inserted, or other necessary tools. Cascades of cords and thin pipes leading from the core and into the particle emitter, aimed at a large sheet of single-layer carbon foil mounted on a vertical framework. When the particles of the extracted soul are diffracted through the foil, a wave function collapse occurs, and the particles are locked into this reality. The soul can manifest as its own material, outside the body, self-sufficient and substantial.

I awoke in our bed, clenching the soft shape of hope. Next to me, your breath repeated itself regularly, the purple poppies of your lungs folding and unfolding, your trachea wheezing faintly, a dry willow flute. I knew I had to construct the machine, in secrecy, as I've always done things in secrecy. I've always been some sort of thief, rationing the truths, wrapping matte paper around the light bulbs.

Civilization was only loved because it was temporary. The cities couldn't withstand the bombardments, shockwaves peeled the peat off the rock and the mountain changed its name. Imatinib. Dasatinib. Nilotinib. Your skin blackened around the needles dripping the Trojan liquids into your veins. The treatment affected healthy and malignant cells alike. Some words can never be replaced.

“What are you afraid of?”

“To die in my sleep.”

I kept myself awake to keep you alive. I rested my head on your chest, your ribcage echoing the choppy thumping of your pulse, a broken metronome. But the soul doesn't really need this motion.

The cold moonlight recognised me and stretched out like a cat along my eyelids. The stars slowly changed positions throughout the year, the satellites were revealed by their own speed. The square of the window was just a picture on the wall, my entertainment. I learned to blink less often. I saw your face turn pale when your soul made your eyeballs jitter below their lids when you looked into the dream. The schism between mind and matter is wonderful because it's not that big. But it's there.

I started to use a room in the cellar when you were sleeping. The plan sprouted in my mind. I gathered dreams and thoughts and solutions in that room. The machine's engine needed an intricate system of quantum crystals to transfer the subatomic particles. I planted grains in organic jelly, grains that would grow and solidify. One extraordinary crystal is needed in the centre, larger than the rest, its base is larger and it has smaller crystals mounted around the bottom of it, which all make but one presiding or superintendent crystal, concentrating the waves to guide, regulate, and pilot the physical body and its quivering soul.

I drove to the old Institute in darkness, I didn't even turn the headlights on. I never saw anyone else on the road, the armies were otherwise occupied. I saw the fires' orange glow reflected in the massive clouds over the city. I went to the Institute to fetch materials for the machine, to make my calculations, analyse the axioms, search through the archives. The corridors were dark and empty, like channels in an abandoned anthill. I drew my chalky equations on the blackboards, I cracked the codes with my teeth, they were sweet and dewy, ripe. The machine chose me to create it, to finish it. It was the only way for me to keep you here. I couldn't allow myself to be left alone, I had to keep your essence, a white moth in an empty jar. I slowly knitted together the devices of transparency, emission, transmission, mediums, contraction of rays, and the many applications that had to be prepared for the wondrous operation of separating your soul from your body, your defeated body.

"I woke up and you weren't there."

You sat at the kitchen table and it wobbled when you leaned your elbow on it. The table's leg was too short, or the floor uneven. Your coffee mug had left dark circles on the wood.

"I was just outside."

I sat down on the empty chair and for a moment we heard no sirens, no slow explosions. The silence was of the humming kind. In the cellar below us, my quantum crystals matured secretly, very far removed from the structures of snowflakes, diamonds, and table salt, but growing accustomed to themselves, as I grew accustomed to who I was becoming. Clear.

I looked at you and there was a mercilessness in the light, I wanted to count the seconds until the sun burns out. Then the war resumed, muffled, grey-scaled, gaining strength from your vulnerability. Mushroom clouds swelled up from the ground, uranium lit up the sky. Soot sank through the spheres, black-biased speckles darker than the inside of you. You gripped my hands from across the table, folded your hands around mine with a shiver, the opposite of hovering.

I stole hours from the nights and the nights didn't notice. The Institute was silent as a whale, I gathered what the machine would need. Glass beakers, superconductive materials, chemicals. When I got home I stepped out of my shoes and tip-toed into the bedroom, slid myself in under our duvet, almost without lifting it, and the sheets burned against my body as if my orbit had brought me closer to the sun. You slept turned away from me. My breath was crushed against your back. All I could see was a dark wall until daylight emerged and poured colours back into my eyes. Black spidery patterns of matted hair covered your pillow, the strands having stored your body's nutritional intake, poisonings, fears. I measured a hair with my fingers, to see if it reached back to a time before we existed. Emotions are not chosen, they are only discovered. So perhaps time is an accident.

*

Your soul sprinkles a strip of yellow powder in a circle in the window sill. More insects have fallen from their air-suspended drift, their hollow black shells scattered over the wooden surface. I place my thumb over one of the tiny bodies, pushing down slowly until I feel its crunch, a crisp crust under my fingertip.

*

Your knees crackled when you walked. The walls of our house were stuffed with insulation, scents were trapped behind the tree bark, crumbs were bound in loaves of bread. Your heart kept beating behind your skin, pounding in your throat with every breath. Your soul was still layered within the electromagnetic information fields of your brain, layered like the clouds in the atmosphere, heavy with amber rain. I went to bed at the same time as you, earlier and earlier.

Under your skin, the fat was dissolved and diminished, consumed by your body as a source of energy. My hands had to be gentle over your protruding coxal bone. Sometimes your tongue slipped quickly over mine, so quickly that it might as well have been an eel in my mouth, on its way through lukewarm water towards the cold sea, its true destination.

Your laughter was always loud and brief, mine was low and long. The war was a game out of control, the missiles soared tingling towards their goals, the cobalt bombs demanded to shine for only one brief moment. I tucked the duvet around your shoulders and noticed that you were asleep. In the garden I found mica speckled into the grey stone. No sand can resist being melted to glass, no rock can resist being chipped loose. There was only time between us and who we would become. You never understood the triumph in staying awake, or the violence in turning a little hedgehog over to stroke its soft tummy.

I approached the cellar door, a dark green rectangle against the white of the wall. I found pleasure in the little procedure of opening it. Without a keyhole, a key is just a thing, a purposeless little piece of metal in my pocket. My fingertips recognised the flat shape of the key, its jagged edge, and I could lift it out into the world of objects again. My fingers left greasy swirl patterns on its smooth surface. Its shape will never change, never rust. The only original feature of a copy is its secondarity. Sometimes, that holds more value than being the first. I slid the key into its passage, replacing air with steel, and the small system was set in motion. The door's hinges were oiled and mute, the darkness inside welcoming.

The machine sat in the corner, a ship at port, a metallic sarcophagus, a resting animal with laser eyes, empty tubes, silently symphonic and sleepy. My fingers caressed the battery, hairy from wires, excitement, voltage. I love the machine, it's mine. I built it with my bare hands, and my hands knew how to build it. The machine whispered in my ear and I whispered back.

“Trust me.”

I rolled gears between my fingers. Their grooves engraved new patterns in my skin. I assembled the smallest parts, steady, I fastened bolts and nuts, released electricity through the organic gels, and I felt an enormous calmness as the screws were fastened completely, firm and fixed. I have never appreciated unkempt things. Loose yarn must be cut off, buttons must be tightened. Wounds sewed shut.

Pain and its mechanisms are very complex events. A human is different from anything else in the universe, it creates itself from itself, for itself. The proteins meet by secret oases along the silk road. Nerve fibres tie bows between the brain's hemispheres. Electromagnetic radiation is recognised as light, pressure is recognised as touch. I leaned against the wall next to the machine and I felt the human latticework in me: Hope, experience, fear. Colour, pain, smell. Hunger, joy, love. Desires, needs, hopes. The hope.

We listened to the radio every evening. Encrypted messages, the latest news about the overturned government. You fell asleep to strangers' voices. Your bones were coral reefs, melting. Everything started to slip out of your grip. Spoons clanked to the floor, jars of brown jam burst open. The plums never reached your mouth.

*

The lace curtains are beige and bone dry, not able to protect against anything. The evening sinks around me, I glimpse a shadow flicker past the window and I startle, a jelly-wave surging through my face.

My torso is a stiffened cylinder, can neither expand nor contract. The breath is quiet until I remember that I need it. Do I need it? The muscles must be stretched, spelt out, pulled by force. Oxygen silt through the dry pipes, the gift from the atmosphere is handed over, my lungs can receive and whisper thanks, or something else. Silken and sinister.

*

Every human is born by blind engineers. A spinal cord never gets thicker than 14 millimetres, twisted strands, the pressure of will. The war just had stronger weapons.

Awareness is manifested as a capacity for making choices, this capacity is latent in every single electron. The human soul is stored in the names of the quarks. The machine observes, its conductors and circuits measure quantum spin and thus cause a collapse of all probabilities. The measurements must be made over time, so the substance will represent the soul's characteristics as accurately as possible, vibrations frozen in their form, as water solidifies into ice. After this the soul can't change, an awareness without learning potential, but conserved, preserved, real. I dreamed of the machine and I built stone upon stone, screws into bolts until I knew everything about it, a skinless knowledge.

*

I stand in front of the mirror, drawing the outline of my heart with my index finger. I will unleash my own soul, be a leaf that stops the wind. Having lost everything is what gives the most strength. I peel desert flakes from my lips, the thirst drinks its own spit. Swallowing is not to be taken for granted. The song doesn't exist anymore, but what should I have done with it? Your soul is also silent. I fall asleep as flesh, awaken as blood. My head hangs in a flossy thread attached between my eyes. Thick beetles glide through my veins, along with memories.

Every muscle is attached tightly, but with a desire to be released. There's always a span in the tendons, bridges from one coast to another. Animal hair in a violin bow, fatty against the fingers.

You slid the bow over the strings, creating deep vibrations. I was lying flat on the carpet, letting the tones pull long ribbons through my head, gifts from a foreign country. The human mind and the universe have some things in common, vibrations are found in both. Energy can neither be created nor destroyed, it can only change forms. In the mornings you used to stir cream into your coffee, because all liquids must be diluted to forget themselves.

*

The house trembled from the airstrike impacts. The tiny air bubbles in the glass of water on the nightstand were shaken loose from the inner surface of the container. They rose up to reunite with the rest of the atmosphere. You weren't able to sit up without support, your metabolism saw no reason to operate. The war permeated everything, increasing gravity from above. Your skin grew maps of sores, and I turned you over regularly to keep your blood in circulation also in the smallest capillaries. I tried to maintain your systems, to buy more time.

In the cellar, the machine called for you, but you couldn't recognise its tonality. In the beginning, I sometimes went down there just to sit still and admire its silhouette changing and growing as new elements were attached. Towards the end, I had no such luxury. I worked fast, directing my hands to where they were needed the most.

I connected a tube to the main water outtake, so the chamber of the machine could be filled. The water needed time to go through the necessary purification stages and get the minerals added in the correct order. I listened to the soothing sound of flowing water. Occasionally the lights flickered, the infrastructures were on the verge of collapse, and I assumed there would probably not be electricity much longer.

You were so light. Except for your eyelids, they were too heavy for you to keep open. I gathered all my strength, pulled you up and over my shoulder, a shadow over my shoulder. The total mass of us was held up by one spine; mine. And I took us to where we needed to go. When you first saw the machine you turned pale, your reflection glistening on its lustre sheen surface.

“Did you build it?”

“Yes.”

“What is it for?”

“You will see.”

Only your body had to crumble. You didn't really need it anyway, it didn't deserve you. I didn't hold your hand, I watched the machine, fine-tuned its engine, pushed the buttons, initiated the wavefunction measurements. But my breath followed yours, for a while. No room for mistakes, the machine only gave me one chance. But I didn't fail. I laid you down in the

machine's chrysalis, hooked you up to the tubes and needles. You fell back into sleep, I had decided that by the hand of the chemicals. I don't know what I could have done differently. I don't believe in free will, but I insist on pretending. The moon was just stuck up there to remind us of the distance. The sky wasn't really blue, we only saw it in a blue way.

*

The rocking chair creaks. The mountain has the same colour as a bruise, thumping behind my eyes. The world enters me, and my senses interpret it, making it real through symbiosis. I gather fragments of meaning into a totality. A face isn't just a random collection of features, but the face of someone. Your carved lips, your flickering fires.

Your soul is your extract, manifested by the machine.

“Why won't you talk to me?”

Your soul is devoid of words. I don't have anyone else to talk to.

All winters have names. This one is Atom. The days won't let anything get infested with colour. The frost scatters glitter over the nights and makes everything breakable. I walk over the grass, and I hear glass. I want to be outside to feel the largeness of the atmosphere for a minute. I'm just a lump made up of new and old materials, my limited time is silting through me, I urinate while drinking water, sitting still with my elbows pointed on my knees. My hands around the bowl, the bowl around the water, the electrons around the nuclei. I have the same hands as when I was born, but not the same skin. My eyes move in their cavities, pulled from side to side by muscles I never feel. Always searching for something.

I sift through all the piles of gears, screws, thread-thin wires, crystal fragments. I need to repair the machine so I can extract my own soul, to join you. Soon, all the motor activity will sing again. I miss the machine's whispers, its presence, its secrets, its abilities as an extension of my own abilities. The blood fetches light from the skin and transports it inwards. I like to be lodged between before and after, there's a security in what has already happened. Gravity rests gently on my face when I sleep, the body holds its own acid in place. Liquids can be

disassembled into their smallest components and reassembled again. The characteristics of the soul are found somewhere else.

Your soul sprinkles a strip of yellow powder in a circle in the window sill. More insects have fallen from their air-suspended drift, their hollow black shells scattered over the wooden surface. I put my thumb over one of the little bodies, pushing down slowly until I feel it crunch, a dry crust under my fingertip.

Something is always lost in transitions between states. I lose a hue inside of me every time I shift between sleeping and awake, thin layers inside of me are being sanded down when crossing any threshold, making me weaker. I'm familiar with the resonance of these rooms, the paths between the furniture. Even in the dark, I rarely hit my limbs against anything. I exist in a reality of translucent foam. Your soul is part of the same reality, but as the bubbles in the foam. The white sheet covering the piano is serene, furry from dust, but with a jolt, everything comes to life. The lacquer draws the light into its blackness, making the piano look like it's made from something other than wood. I put my hands on it, and I breathe on my hands an outline of steam which mattifies the glossy veneer. The wheels are locked under the instrument. When I lay my ear to the surface, I hear the hollowness, the strings unstruck. I press down a key, and the note glides through the room, through your soul, and is absorbed.

I postpone opening the bedroom door for as long as I can, that's where we were the most alive. Your soul bounces around my ankles, a homeless animal. I let it loose, and now it's running in circles. In the middle of the bedroom floor, I undress, resting my cheek on my shoulder, my body forming an S. I always liked it when you watched me. The duvet on the bed is wrinkled and limp, small blood stains are scattered like dark brown stars on a yellow cotton sky. Your soul moves the air in circular ripples, the room tilts, I can feel the speed of the Earth through the universe, and I have to lie down and fill my fists with whatever's there; bedsheets, simple fabrics.

I slide slippery out of sleep and don't remember the dream. The light hits me like a stone to my forehead. I cross my arms in front of me, pulling my knees closer to my elbows, my nose under the duvet. My own frog-like smell lingers between me and the covers. The hinges of my jaw have coalesced, rusty and damp. Your soul has curled up next to me, a ball of knotted yarn.

My thoughts are like the last animals, huddled together and fenced. Thin and trembling, they squeeze together as closely as possible. Their legs will not carry, breaking under their bodies, but they continue to push against each other, none wants to be peripheral. I squirm around in a bleeding sleep, an amputated consciousness. Deep in my head, a voice whispers.

“You must hurry.”

Your soul is a residue of the human you were. Of equal value? I still belong to the tendons, the teeth, the bloodstream.

“Do you remember your body?”

I see a map of blood vessels on the retina before I open my eyes. It feels so good to have eyelids, these butterflies of iron. I don't know what sorrow does when I'm not looking. Your soul sweeps past the window. The glass is stained matte by skin grease, from your forehead and from mine. The sunsets we saw over the mountain, the auroras. The deepest pits in the seabed have never been measured. I close my eyes, so heavy inside their caves. The demons already know everything, curled up inside the chromosomes. I ask myself every minute, every day if I'm dreaming. Occasionally the answer is yes.

I'm working on the machine every day, sticking tools into its abdomen, trying to attach new crystals. Your soul flattens out on the floor, pale and powerless as the summer grass that lay faded under the rocks we turned. I'm making the pieces fit again. The present time is a needle between the past and the future, an electronic ability in the brain. Your soul exists without antennas into other times.

My muscles fall numb, the blood disappears from my arms before the thought of motion. Skin is worn down by what it meets, textile, wood, stone. Rain. I come to my senses in the woodshed, standing still with a rough firewood log in each hand. Your soul is nowhere to be seen.

Being made from something doesn't mean being identical to it. All matter has a substrate that can't be divided. I've always liked to swallow things that couldn't be digested: marbles, thimbles. The world reveals itself to me through nerve bundles, stems anchored deep in the mud. I'm ashamed that I have nothing more to lose – a world that exists only because I see it. I'm not able to stand up and walk to the window to see if the mountain has moved, if the trees have

grown back. Drops run into the bladder, all at the same rate and intervals. I don't like to contain this water-filled crater, I don't like to have to store anything.

My awareness gradually occurs, like molten metal poured slowly into a mould and solidified into the day. But I awake to a debt. I pulled you out of your own body. Sharp strings of responsibility are tied around my wrists. Through my tendons a tremor manifests. The pain never gets spent, not this pain. How long have we been here?

“For the same amount of time.”

I can't cry until I let the water run over my head. I kneel over a bucket and wash my face, rinsing my eyelids with water. My minerals change surroundings, flushed out of the tear ducts and into the carefree freshwater. Afterwards, I see everything clearer, the mountain is a little closer, more sharply developed. The wind sucks itself through the house, moving the pressure from room to room. My grip on the doorknob slips and the door slams into its frame. The whistling reemerges, there's so much air that needs to be squeezed through this thin sliver. It's impossible to be at one with the bulk of the air, to be something other than an object. Your soul curls up tightly, in a corner, in need of no light. The metal parts on the table jingle. I push the table away from me, screws and nuts clink, asking to be put together. I turn my back to them. My chopping pulse has no rhythm or beat, a broken metronome. To walk with a limp is also to dance. This life is only a certain number of heartbeats in one world, in one body. The soul doesn't really need this movement. I reach out my hand, pleading.

“Come.”

I feel a tenderness for the cry, a tenderness for the soul, who doesn't know it's a soul. I walk to the birch tree, where the ground has a different colour, less dense, where your body is wrapped in a disintegration, in synergy with the deep soil. Soulless, your body felt strange, heavy. I had never lifted you before and it took time to drag you all the way out here. With my gaze turned away, I set the spade in the ground, like all spades have been set into the ground and the earth has been moved to make space for something else before the frost comes. I could tell that your body had been emptied quickly, your face had an expression of surprise, like when I snuck up on you from behind when you were reading, or when I replied to your jokes with an unexpected wittiness.

Deep in the well, I see death mirrored. Silence waits for the trees to grow through it, but the trees have stopped remembering, they are sick with darkness, frost, radiation. Subjective experience implies someone who is having the experience. Someone. My throat remembers the weep, the weep remembers you, as you were, in your body.

The days are black grass, slowly rolling in the wind. The house is surrounded by a pocket of silence, I don't know how deep. The silence slices up my throat, and white pus pours out, mixing with the fog outside. Your soul spins slowly around itself, a transparent spiral. I try to stretch out my fingers, they have been clenched firmly for so long that they have stiffened in that shape, a hard heart at the end of each arm.

The machine has finally gotten some kind of full shape again. A slight purring vibrates through its hood. Small lamps are beaming cat-like, I can see them glowing through the door ajar. My shadow is loyal, but can't affect anything. In the darkness, I miss it. I feel sleep blacken my mind, locking down my arms. Next time I awake, I will run the last calibrations of the machine, I will free myself, to be imprisoned with you. Through this valley pass millions of things not worth remembering, that are made to be forgotten. But someone must be left to forget them.

I open my eyes and see nothing. I remember nothing until your soul wraps around my neck, and I see how dazzling it is, bioluminescent plankton seen from a motionless rowing boat. I lift myself up on my feet, I lay my hands on the machine, and I turn the buttons, I initiate the programs. The machine responds.

“I've missed you.”

Is it the same sequence as last time? I slowly descend into the machine's chamber, filling it with all my weakened organic material, all the intestines, the cartilage, the marrow, the membranes. I let the warm saline water flush over me, its embrace softens my frozen joints, and I exhale from relief. Fluids are injected slowly into me. The machine buzzes magnetic around me, the coils rotate, it's working again. The word 'complete' actually means nothing.

Essence

The soul has the structure of a point in actuality, ... and the figure of a circle in potentiality. It pours itself forth from that punctiform abode into a circle. Whether it is obliged to perceive external things that surround it or whether it must govern the body..., the soul itself is hidden within... It goes out, then, to the exterior of the body according to the same laws by which the surrounding lights of the firmament come in towards the soul that resides in a point.
Johannes Kepler, 1619 CE

My last memory: her against my skin. What else? Surrender. I look down on my hands, they are not there. No skin, no border. No difference between me and what else? I put my hands on my cheeks, they're not there. Waves are there. I have the knowledge of the amoeba, how it will split at any given time. I see her inside her own materials. Information is encrypted in the sugar from the sun, created in the green leaves. I put my hand over my eye, it's not there. No wetness is there. The plants see colours, they see the colours change, they change the colours. I see her, collecting light, her own light, I see the atmosphere continuously adjust to her outline and mass. Giving way. I'm outside, I take part in the grass. The blades of the grass bent by her feet. Her eyes swallow nothing. I take part in the tree, its roots break loose water locked in the soil. Seen from above the house is flat. Frost is a witness, too.

Another memory: fear in the middle. I'm trapped here, I should have been somewhere else. Another memory: the desolation of pain, but not the pain itself. Dry seeds not sown, there was no time. Time is shiny spheres, filled with clear liquids, I see her see through them. I'm born again without a body, she's born once in her body, still a denser substance. Is the wood in the beam dead or alive? Is sleep necessary?

Another memory: no memory. Helium's power is to generate sunlight. I know will is equal to water. Water is equal to form. I see her kneel next to my emptied body, resting her forehead on my forehead. All the words for body don't need the body. I see her carry my body, a silent conch to her ear, but heavier, her back is rounded. I have no weight. I see my body on the floor, I see her knees on the floor. She pulls and drags. Why am I so heavy, was I always? I see her set the spade in the earth. I take part in the soil, being shuffled, removed. I have the knowledge of the seed, how it will split at any given time. There's a transposition and I'm the fog

she moves through. I should have been somewhere else, but I'm here. I know no words for gratefulness. Are names necessary?

I stretch out my hands, they are not there. I have hands only from an expectation of hands. I stretch out my expected hands to stroke her hair. I take part in the wind, moving emptiness over the Earth. Moving the flags, until the flags dissolve into fibres spread out in the atmosphere. The small fibres in her body tighten, my wind blows a strand of hair away from her face. I am her prisoner, tied to a wall that should be climbed.

I look down on my feet, they are not there. Maybe sand, maybe glass. I see her search through my possessions, what were my possessions. Now unpossessed. Could I search through her? I should have been somewhere else. I search through her. I take part in memories, in her electricity, neural. My last memory: her against my gaze. Her hair moves from a breeze or breath. No one else is here. I see her make things, she's always been an assembler. She assembled me. She remembers me. I don't know the difference between anger and admiration. There will be a day that is the last day when the planet is halted in its orbit and boiled away. Is waiting necessary? I think it is.

Guest

I came to his house, and he invited me in. I took my shoes off, stood my feet on the mat, stepped inside, and the doors were closed behind me. He stroked his hand over the table and over the wall, he said: "It's good that you're here." Through the window, I saw Mercury, Venus, and Mars luminous on the darkening sky. I followed them with my eyes, and I thought: I also need a place to rest.

Around the house, the trees gather the forest, and the sky mirrors the ocean. The house keeps sleep on the inside. He keeps the ovens heated, warmer than the both of us. The window glass carries the weight of the storm, but the wind still wakes us. Maybe we can pretend to be wheat grains in a wrinkly bag, dry in the cellar darkness, still until hands reach down and grab us, rubbing us between palms, so we drizzle out over the floor of soil.

Someone used to live here before, someone has died here, no one has been born. Insulation fills the walls, the planks are held together by nails all forged into the same shape. He sits calmly in his chair whenever he's at home. He's the shaman, stopping blood and radiation, holding lives and scalpels in his hands, opening bodies and closing bodies. The living room walls are painted in eggshell white, yellowing in the sunset light. The bedroom curtains hang tightly woven from the thinnest threads, too many to be counted. We go to bed, and before we fall asleep, we lie back to back while the alarm clock changes its red numbers. His breath moves nothing. The red planet passes low over the horizon, like a drop on its way out of the body. If I don't move, the blood eventually falls asleep in my arms.

In the mornings, after he has left for work, I throw ironed tablecloths over the tables, smoothing out the last creases with my palms. The floors are shiny from lacquer. My eyes lubricate themselves, and the vagina is self-cleansing, but the degree of disorder in a closed system will always increase. I sit still on the chair, my vertebrae stacked like the plates on the counter. The skin of the apples in the bowl is more wrinkly than yesterday. I draw moisture out of everything I swallow, I collect every grain of salt my body expels, and I drizzle them white

over his food. I make the water in the pot boil, so the steam can saturate the air. I stroke my own skin, the only land I know. So much of me is spent waiting. The pupils only let in the most necessary, and the remainder can rest. I see the snow melt outside, I hear him enter the room, and I turn to him, dressed in my wet silk will. And he stays.

I'm always hungry. Saliva rolls over my tongue, waiting for something to dissolve. I peel potatoes in spirals, the peel is so thin that I can see through it. I know what he's thinking, and I'm never wrong. He gauges the raw steaks, he wants to rip the flesh from the bone. It's not easy. He cuts tendons and cartilage, his hands are covered in blood, never completely naked. The only sound to be heard is the sound of the metal grazing the wooden chopping board. Every second is coated in Teflon, the egg whites stiffen to porcelain in the pan. I knead the yeast into the flour. While I wash the sticky dough off my hands, I feel like there's something I have forgotten.

The butter is yellow in a way only butter is. It melts to brown, and he watches over the sizzling meat, standing still in his own way, resting unaware in his body. I'm suddenly struck by his beauty again. Sodium is pumped out of the cells, potassium is pumped in, and I place my wet hand on his neck, where the spine meets the skull, two fingers into his hair.

The bark hides the plank, the ore hides the beam. The key consists of steel, the keyhole consists of air. I prefer glasses without stem, cups without hank. He holds his hands around my face as if it was a bowl filled with pink jelly. I want the air to thicken so it can help keep me standing. I close my fingers around the darkness, trapping the darkness inside my hand so it won't bleed out into the light. As if I can hold anything fast. There's nothing else here than what's inside all clenched fists.

The radio says that the wars are still far away. Nations are not sure they are nations anymore. Volcanoes awaken and fall asleep, awaken and fall asleep. Viruses awaken and spread through human blood. Letters arrive in our mailbox, they have his name printed on the crisp envelopes. I don't open them, I fold them into swords and stick them into the soil in the flower pots. I always sleep with my thumb curled inside my hand.

I have never been forced to do anything. When I'm alone in the house, I shut myself inside the wardrobe, sitting hunched between the shoes and coarse winter coats hanging empty, their shoulders held up by the metal hangers. I lean my back to the wall and put my nose to the sleeve of one of his jackets, suddenly feeling unafraid. I'm here of my own free will, I think to myself.

He turns up the volume on the TV, it's always too loud. I don't want to see rocks fall from the sky, stones grow inside the glands, marbles produced by the body as an act of revenge. The hunter mimics the animal, and the animal lowers its gaze. The millstones mill themselves to sand, and men chop down the forests. Coal must be burned, witnesses must be interrogated, somebody has the power to shut off the rivers. Ships float from coast to coast, lighthouses sweep light into the eyes of those who sink. Satellites silently watch over the fields, drawing the maps, interpreting the symbols, listening to the voices whispering to each other before the flood rises.

Silence sits like a cat on the table, slowly billowing its tail. The gravy dries to rust on our plates. He puts down his fork and says: "Someone died today. I couldn't save her." I'm unable to respond. I get up, and the chair topples over and falls with its back first to the floor. I walk through the house and into the hallway. My shoes stand neatly side by side, unlaced, and I pull them on. I tighten the laces and tie them. The door opens as soon as my hand touches the handle, and I step over the threshold, and I keep walking until I can't hear his voice anymore. Around a turn in the road, I see a house, its windows glowing warmly and inviting.

Here

For the first time, you rise. You stand up, tall and steady. You carry the weight of your own organs, your skin, intestines, and every ounce of your brain. The trees around you silently generate the atmosphere. You're merely a prisoner of oxygen, but you have been given the freedom to breathe. You lift your face towards the sky and name it blue. Your nostrils dilate to let in the wind, but there's only room for so much air inside you. Your skeleton keeps itself up, rootless, elongated. Your teeth grind against each other because hardness needs to know that something else is just as hard. Your nerves transmit waves of sound and light from the environment into your body. Rustling grasses, the contrast of the shadows. The degree of the planet's axis can't be directly felt, but it can be calculated by your innermost instruments. Balance is implemented, necessary.

Deep in the soil carbon lies under pressure, waiting to harden. Your awareness is soft, encapsulated in your skin, your skin is an even membrane between you and the world, containing all the different materials you are made from. You can open and close your hands around objects you find. You lift a chalky dry bone over your head, trying your force. You hit in blows repeatedly, and you hear dry sounds mix with wet sounds. The other entity was weaker than you. You put your knees to the ground, your tongue to the blood, your ear to the ground, where you can hear time rumbling like the hunger in your belly. Some plant stems can be crushed and swallowed, the slippery mass resembling something else, something you're not sure if you've seen yet. Some plants contain toxins, bitterness, repulsiveness you will have to learn to recognise.

Clouds gather over you. Rain falls hard, making the sand foam and the soil glisten. Rocks are eroded into roundness by running water. You find shelter in a cave, a dome where you rub softwood against hardwood until it starts glowing. When fire stings you, the flame feels no pain. Meat is dead, and the taste doesn't exist until the salt hits the tongue. The safe echo of the cave is

stored in your eardrums, but you know when you have to leave. Tectonic plates slide slowly underneath you, nothing has fully fallen to rest here yet. The magma presses volcanoes up towards the white sky and the ash falls slower than anything else.

You smell your fingertips, recognising the salt and the sweet. You chisel rocks into sharp edges, with a patience you just obtained. Any sharpness can be utilised. You are filled with water and while you sleep you still keep watch, clenching the stone axe. Most things are poisonous in large amounts, also sunlight. Water rises and sinks, the planets align for one heavy second, then they continue in their orbits, mechanically. Water rises and sinks, and you lean against the gusts of wind, lean your forehead to the wind, naming it wind, so that one day it will be able to lift you.

The galaxy puts its arms around you and pushes you to the ground. Your skin is not completely in touch with the earth, there's a layer of electricity in between. Sleep comes to you like a big animal between the trees, the air grows heavy on your eyelids. Your body is neither too warm nor too cold, has the correct distance to the planet's core. The globe transports you slowly towards morning, where daylight emerges from the bottom of the sky, again turning your eyes into what they are meant to be.

You create the path and hold it under your feet. Impulses from the brain's motor centre are sent to the leg and foot muscles. Different amounts of force are applied depending on the type of surface being walked across. The leg's muscle spindle nerve cells sense and send the position of the ground back up to the brain. Bone hits bone inside your joints when you run. Soft cushions between the vertebrae in the spine absorb the shock of each step. The cartilages are lubricated by jelly, the crossbeam of the foot is constructed to carry you over the beaches, where the grains of sand switch places at night to hide your tracks. The grass is anchored in the soil, with roots growing through the things you have buried to remember. All the small tendons, all the small nerves in your foot fall to rest between each step. In your bones the marrow slumbers darkly, containing unripe stem cells, red or yellow. Your gaze seeks movement, sparks are found between the rocks, fat is found around the bone, you must carry it home, must not lose your burden, not return empty-handed.

You can smell them out there, the skin-warmth and the fear. Your gaze scans the cliffs, you hold your breath, untrembling until you can catch the animal, harmed by the spear. Flames churn the wood into ash, heat rises upwards. You keep the animal alive so you can kill it later. You eat seeds because the soil can hold no more, and something that's not body must pass through the body. Near you lies another being, with another shape. This is how you awaken, tied together by warmth at the edge of the ember's creeping glow, your hair stiff from dust. The animal hangs skinned to dry. You drape the animal's skin over your own skin, keeping warm, heating up the chilly night air inside your lungs. No sounds are heard between the sounds. A shiver runs through the bedrock before it falls to rest, keeping still so you can move safely.

You walk through the fog, being more compact than it. You will stick your fingers into the dirt, dig through ash and stone, discover patterns, minerals, you will light fires, turn coal into force, give the force a direction, draw lines on your face, in the sand, on paper. You will snap off the twig and lift your hand to the sun in a gesture from one celestial body to another, you will shoot up the arrow and where it lands, you will live.

Mars

We have never needed to escape, why would we? We have everything we need. We are contained by pressure, we have warmth, water, humility, we have walls, roof, gentleness, each other, heritage, a land; Arcadia Planitia, Memnonia, Mars. We have rituals, songs, we gather in the largest room to tell the stories over again, and to listen every time. The stories about the escape, the ships, those who died, those who arrived, those who became us. The huge vessels injected needles of life into the red dry sand. Here we were first few, then we grew into what we are now, where we are now. The thinkers always say: *You are not human if you cannot adapt.*

Through the telescopes we see Planet Earth, glittering with ash, reflecting light. We know all the stories by heart, but we have never been there. I put my ear to the telescope and I think I sense a whisper: *I needed a reason for my sorrow, so I killed my mother.* Sometimes I hear what I want to hear because I have never known complete silence. There are mechanics everywhere. We produce enough nutrients; liquid amino acids, synthetic fats, dense and delicious. But I dream, sometimes I dream that I understand you. It takes many million years to be born, all the time it takes to become. You are covered in soot, ash, dust. They say I come from you, but I have never touched you, I have forgotten your gravity.

Another word for a ship: elegy. What did the first ones to arrive here think? They arrived to a third of a gravity, sand, and distance. What did they miss? The feeling of standing steady in their own weight? They found this home, they slowly grew lighter, slowly became we. But they turned in their sleep towards something they couldn't forget. I haven't forgotten anything, I only remember what I see.

We create life, just because we can. The pipettes chain together particles into forms that are forms that are always similar. Helixes intertwine, the embryos grow weightless, like floating plankton, hydroponic root bulbs under artificial light. There are so many, many centimetres to the Sun. Above us, outer shells of thin carbon patterns are mounted, the inner shells are not that far. We only see three dimensions, need no more. The sugar grows in the green that grows in the tubes, the hearts need space to pulsate.

I sense the dome of the room even in the dark. We lie still, like pieces of a circle. The turbines are always humming in here, distributing new air evenly. The song gradually mutes, sleep is spun thin, my head is resting on the foundation, I put my tongue tepid to the metal. Smooth, shiny pillars have stood for so long they have become matte from familiarity. We are rooted deep in the dust. There is a sky far above the domes, but no breath, only the ringed mountains, the cliffs, the craters. Our screens show measurements of radiation and invisible light. We can walk to the right or to the left, the modules are constructed in rows, connected by tubes. Air is trapped in my chest, there are always walls constraining. We see only what we are made to see: joints, corridors, and all that is constructed is constructed to last, we are constructed to live.

The light is red-shifted. The forces of the body keep the molecules in motion. Chemical scents burst open seeds of memory in the brain: berry, terracotta. Chains of repetitions are our glittering necklaces. We are here to stay. I close my hand around my little globe of blue glass, honed out to keep secrets, songs, soul. The only thing I own, everyone owns one. My nails are thin, soft, we don't need them anymore. I stroke them tenderly over my chin, hold my hand up to the light and see the blood glowing between skin and skin. I have received the message. We know almost everything, the universe is flat and can be folded tight, but the Sun has some blind spots and the youngest ones ask me: *Why must you leave us behind? We have always been here, everyone remembers the same. Let's forge bird masks from blue metals, put them over our faces, drill eyeholes, bob our heads, open our beaks and scream, scream, we can play, we can pretend that we're not yearning!*

But I am chosen and I reply to them: *We must travel back, I know we must travel back and dig, search, find what can make the old anew, everything we haven't yet seen. We must inhale the ash and dig through it. Imagine everything we will see, and you will see later.* I lean my back to the wall, lift my hands to the vacuum, I know it's up there, holding the borders in place.

Return

We built many ships in our dreams. Then we learned it, from those who learned it from the first who knew it. The engineer said: *The softest spot isn't always the weakest.* Bolts were hammered in rows through the plates, the bearing beams, the answers. The eldest picked those who were suitable, and we were proud. We counted satellites and gamma-ray bursts together before we went on board. Skin embraces us so snugly, but radiation passes unhindered, passes tissue, passes soul, and it's a betrayal that anything can enter, that anything can be remembered. Who we are when we try to hold our breath; gatherers without hands.

The ship's metal strings are woven tightly, and its walls can withstand flames and pressure, liquids flow through the pipes. We had to let ourselves be lifted, like the child allows itself to be lifted by familiar arms. In the innermost room of the ship, our bodies are strapped in place by elastic bands crossed over chest and thigh. I barely notice the trembling from the engine's forces, our momentum. The sister planet draws us to her, magnetic. Experience inhabits its own body sitting next to me, muttering: *When I die, I don't want to be home, but a place I don't know. It doesn't have to be beautiful. I want to hear words I haven't heard before. I want to know that I'm a stranger.* Clumps of matter pass through each other in larger and larger rings. Supersymmetric particles spin, the changeable waveforms transport energy through time and space. I can't change anything, only let it pass. The ship has a name, Vitae. I have a name, number. Time has digits and distance, space curls up around us. Cryosleep makes us dizzy when we awaken, and the air smells of phlegm. Bolstered walls cushion our breath, cushion our bodies. We must soar, soar without direction, learn to move like new animals. The ship is a point, an arrow, directed straight in its own course, in the emptiness between two homes. In zero gravity the calcium is flushed out with the urine. We must dissolve pale cubes of powder in saline water and inject it into our veins, to bind the molecules where they belong. We need our bones more than ever, to meet you, Earth, on your conditions. We are getting closer and closer, we are here now, now we are here. And the Earth and the ash are silent, but we want to know

more, so we land feverish and heavily, so heavily, and the surface holds us. We must wear skeletons outside our bodies to keep us upright. What would we do without the armour?

So after one cycle, we could carry our own weight. I went to the tallest crane, insect-black against the white sky, and I set my foot on step after step, as high as I could get. I saw you flat and curved, the air thickened before my eyes and forced me to kneel down. What I saw didn't resemble anything else. Stripes of colours, deserts, ruins, remnants of spirits, ash. My fingers stiffened around the cold metal rods, my lacrimal fluid froze. The horizon doubled up, dust spread grey through the light. The plains were covered in our tents, like coarse skin. Above me, I saw the place where the clouds gather. The land that was here belonged to no one. Now it's ours. You belong to us, and we can expand more.

We are the ones who must guard the collective memory, store the stories, guard all the numbers, and the holes in the fabric with our eyes open. Lenses are soft and become thicker or thinner, depending on how the light falls, how close objects are. We don't need to know the names of it all, but we need to see the particles collide, see them choose a position. We need to see the holes repaired. And sometimes, we just need to keep our arms completely still and seal our lips tight. We cannot do this over.

The armour suits stand empty in line, hollow shells of acetate and alloys. We force our muscles to contract repeatedly, to be able to stand up every day. I will become new, I will become new for you, I will become almost you. I have opened my chest to your chest, letting the sounds enter my body, and they are stored there, like rings in water, attached to song. Earth's land was divided into names. Na... Ne... Ni... I don't have a tongue for them. Su...? We will cut thin slices of time and stack them. Here we will build our towers, carve out our paths, scratch the surface, construct elevators that soundlessly will lift us up, higher than we have ever been before. Strong and standing up, as if that's to be taken for granted.

The planet's surface is enormous, much larger than ours, but we can't see far enough, we are too close to the ground. The fog comes and goes, clarity comes. For the landing, we chose a specific atlas point in proximity to new organic materials. Photosynthetic substances that had emerged from the cracks when time was ready for something other than sand, dust, dirt. I lie down on the map and wrap it around me, suck on its corners. Maybe someone stood just here, with his gaze locked to the horizon, almost naked, with his back straight against a poisonous wind he couldn't see. The desert burning, grains of sand only creating more grains of sand, not land. He stood here until he was buried by it.

We assign value to the landscape by observing it. The sky darkens so slowly, and I'm not ready for anything else than what can be seen in the sharp light, the light that doubles every colour. I think the sky is named indigo, but I'm not sure if I've ever seen indigo. Suddenly, a sound is missing when the wind dies down for the first time. Emptiness fills my ears, and I put my fingers into my ear canals, to hear my own hum. My blood feels different, more viscous, there are strange and invisible particles floating around in it. I know they are there, they can stay for a little while before being purged. The Sun is closer to me now, my bile ducts are wider, my liver is functioning as normal, only a little warmer. Old pieces of plastic whirl around in the air, their colours are unfamiliar, imitations of brightness, but the eye sees and recognises, and remembers. I catch a piece between my fingers, chew on it. Swallow. We drill our spears down through the soil, extracting artefacts of reality, things you buried and compressed. We turn the floodlights on, beams in all directions. I don't know what more we can ask for than a new circle to follow. The light is bent and broken against metal, crystal, mind. Drops of fog wet the ash every night, binding our footprints. There's something down there, beneath all we can see, and we will find it.

I have never seen cyclones, I have never seen fire. Fear has only been described to me. My breath is laboured, the inside of my mouth turns cold. There's so much oxygen here. I clasp my fingers around my own neck, tightening the grip over my larynx to see if I can stop breathing. The air here is too pure, too smooth. I want to smell the poisonous gases that swelled up when everything burned.

Blood frantically watches over the muscular fibres that tense up and then slacken. Every movement is expensive; nutrition is metabolized into motor skills. Somebody must assemble the machines that aren't able to assemble each other, so we can all become strong enough. My arms feel alien to me, I lift tools, beautiful, tinkling utensils. I know my function here, my purpose. But my flesh is too burdensome, too opaque. Glistening oils flow in thin layers over the metal that will remember me, its shaper. Between my hands it was forged, bent, handled. But what glides in me, glides slower. I don't fall into sleep properly, I hear the wind hiss your languages.

We were trained to not feel longing, to never miss. Mars isn't anymore, not the youngest, not the halls, the corridors, the walls, the blindness, the lightness, the levity. I am different now, that's the whole point of this mission. My head is hairless, I have nothing I can lose, but too much to carry. The neutron stars love their own density, so why can't I?

I put my toes first to the ground, then the heel follows. The upper arm has one bone, the lower arm has two bones, to be twisted. The hand has one upper side and one underside, the skin has an outside and an inside. We are porous as the old columns, as the spine-bent bridges. External forces break us down, we are weakened in ways we couldn't foresee. You won't allow us to penetrate you, to understand ourselves, and why we are so restless. You won't allow us to create new memories. There's an increase in the distance between my fingers, and between my atoms. Memory has no weight, but I lie here like a hostage in the sand, the heaviest entity on the planet right now. A piece of my body is missing, replaced by everything I have seen. My pupils generate a narrow, barren beacon in an even, straight line, meeting the red dot up there, where I was born, where I was light.

We can't feign innocence anymore. Nothing turned out as we expected, but we can't turn back now. Time only floats in one direction. Here, not only matter exists but also forces that affect the matter, adding weight to weight. We try to move towards each other, but we must set our hands to the Earth, our knees to the Earth, connect our gazes, and seek, seek until the light stops somewhere between us. I see that no one is unchanged, our faces are sagging more and more.

The wind, the heaviness, the heaviness holds us down. The fog is a pressure around the cranium. I can feel the blood escape my arms. Someone comes to help, with words, with song, with hands. Needles are inserted into the humility that's stored under the skin until it's needed. Our voices are eaten by the soil, the soil denser than our bodies' total mass and inertia. The planet keeps up its own speed, we are falling into impassivity. I let my cheek rest, my hands fall flat. Everything is too late.

The deepest sediments hide fragments, genetic traces from many-shaped beings. We can't be like them. The wind increases, whistling through the cranes, all our structures sway and topple. The things we never got to build, the things we never got to find, none of it is mine. You don't want us, I understand that. But I did my best, I meant it well, it's true. I only did what I was told.

Pain is a brown opal buried in the tissue. There are so many places we can't reach. Ash blows through every organ, there is nothing left to see. And you pull the lightning out of my body; it's needed elsewhere. Far away, softly, someone is singing: *Memory glimpses carried us over dark oceans. The sun-sails were stretched out like drum skins. The light-wind was soundless, and no one could hear us laugh. The golden city sank as we arrived. The gates closed so slowly that we just had time to slide our fingers in between.*

Destination

Your shirt is patterned in mauve and coral. Small jagged starfish on a striped background and the fabric is soft, I know that because I have touched it. Before we left your apartment, I tugged your sleeve and pulled you down on the bed with me and said, come here for a moment. Please let's just stay still here for one minute?

Somehow the colours of your shirt match the interior of the expensive Asian restaurant you picked for us. The deep hues remind me of the syrupy taste of plums. The table lamp glows like moisture and my fingers caress the teal velvet sofa I'm seated on, its tiny hairs resisting one direction of my strokes, smoothly encouraging the opposite. You mention that you've been here before, once, having a good time and the dumplings. My inhale is slightly staccato, I know that means you've taken someone else here before, I'm only second.

I'm still nauseous from the jet-lag, even though it's my last night here. My pearl necklace feels heavy and alien, but it makes me straighten my back when you look at me. Yesterday, when I was walking around Telegraph Hill by myself, I was suddenly called into a jewellery store by a little dark-haired lady: Come, I can see you need something to last. She clasped the sea foam-coloured irregular pearls around my neck. I had to stop around the corner to suck on them, adjusting them to my body's febrility.

You rest your arms on the edge of the table, your hands are domed as if someone lives under them. I ask you about your scar and you tell me you got drunk as a teenager, fell down some stairs. I say, you should invent some better story about that scar, it looks pretty rough. So have I ever done anything crazy while drunk?

I want you to remember me. So I say, well, I was in Berlin visiting a friend. We did mushrooms every day, my friend Gregory grew them in his living room. We just ripped them up from the soil and ate them whole, stems and all, they were blue on the inside, Royal blue and the taste was bitter, but I liked it. I enjoy things that have a bitter taste. Anyway, after a while we are pretty wasted, seeing gleaming colours everywhere. And then Gregory feels restless, he doesn't want to just go to bed, he's sleepless and lonely because his old bulldog died earlier this year. He

has this new dog now though, called Hugo, but to me, he looks pretty much like the old one. Greg proclaims we must go to this ancient monastery he knows about, a bit outside of the city. The moon is almost full, we can go there and dance naked inside and sing, the acoustics are amazing, it's completely desolate. Greg owns this really fancy car. It's metallic and glossy, and the roof can be taken off and everything. I tell Gregory yeah, let's go to this fucking monastery, can you drive safely? He's been drinking at least as much as I, and his tongue has a bluish tint, like when you look at mountains far in the distance, he sticks it out towards me, like this, eehh, and says, oh come on, let's just go, you'll love it, let's just go! Trust me.

So we get in the car, his fat dog in the backseat, Hugo loves driving, he falls asleep immediately. And then we drive really fast through the darkness, you know that video game feel, the car seems to be magnetized to the road like it's on tracks, it feels completely safe, like being a child and nothing can go wrong really, like having hot cocoa and kittens inside you. We're in this tunnel that we create with the headlights, I see the moon propped up over the landscape, I can totally tell it's a globe, all three-dimensional and huge, I can feel its pull, and I see everything from the outside, the car looking like a little toy.

Gregory starts talking about his parents, how his father would take him every weekend on a train ride to Sanssouci, the big palace on top of a terraced hill, marble stairs leading up to it. He would walk beside his father on the paths leading around in the garden, and in the end, they would climb all the stairs up to the sun-tinted palace, 132 steps, he counted them in his mind. The sandstone statues carved out between the windows of the palace always seemed to stare back at him when he looked at them, their gaze following him when he moved. One time, after such a walk, his father fell asleep in his train seat and Greg slid himself down between his father's feet, lay down and put his ear to the floor, listening to the sound of the train's motion, the heavy pounding of the wheels against the rail seams, rhythmical and comforting, like hearing heartbeats from inside a womb. Why did you leave Mom, Greg had asked while they were waiting at the station. His father had looked down on his shoes and said, I just had to get away, son. I just had to go. She claimed to have lost the will to live. As if being alive is about will at all... Greg suddenly felt a thud, something was being hit by the train, something big, an animal,

the antlers tumbling its body around underneath the wagons, the speed moving it closer and closer, until it passed under them, silent debris left behind on the rails.

Greg says, faster? I say, yeah. Faster. The car is a flat arrowhead, the night air just slides right off of it. We're in a spaceship headed for another galaxy, yet unexplored. But then our velocity changes and Greg starts to slow the car down, he pulls over to the side of the road and brakes the car to a halt. There's a police vehicle behind us. Fucking hell, Greg says, we're almost there. We're almost there!

I look up at the dusk-red paper lantern hanging from the low ceiling above you. Rows of Chinese letters, or words probably, painted on it. *Kanji*, I think, I wish I knew it. You ask, so, did you have to go to jail? I hesitate for a second, your eyebrows move a millimetre. No, I'm just the passenger. Hugo and I were left there in the middle of nowhere. I'm not good with dogs, you know. You ask, so your friend had to spend the night in jail? Did he lose his licence? I say, yeah, he went to jail, he lost his licence. He made me swear I would never tell anyone.

The dumplings in front of me are milky pale, translucent. There are two of each, they look like the eggs from some extinct sea creature. I bite them into smaller pieces, and chunks fall off from between my chopsticks and into the dipping sauce, you are already done, you eat much quicker than me. You once told me everything tastes the same to you. You lean back in your chair and I know that your armpits smell like damp moss, like the forest floor back home. None of us orders dessert, but we glance at the menu, and I say, oh, that Gunpowder Tea sorbet sounds good. I wish I could sit here forever, by this little lacquered table with incense billowing through the room, sit opposite you and let myself fall like shafts of light into your eyes.

In the taxi back to your place you ask me, how are you when it comes to serious relationships?

I say, I dunno, mutual trust and honesty are important to me, I guess. You say that you would probably make a terrible husband, just sit in your room and play computer games, that your kids would probably starve to death or something.

We fall silent, the streets all look similar in this area of town. You flip your house key between your fingers, the keychain is a brick of Lego. I ask if you're a handyman, but no, you

hate doing things with your hands. I say, you should just get yourself a handy wife then. You chuckle and ask me if I am, and I say yes, I'm handy as hell. I can fix anything.

The next morning your hands cup my face goodbye, and I leave for the airport in the backseat of another taxi, the leather seat sticky warm against my naked thighs, like I'm sitting on the lap of a furless living thing. Riding through the California pastels, the sky yellow as bile over the palm trees, everything is blurred like on one of those cheap watercolour postcards I sent to myself two days ago. I tell the driver, go faster. Come on, just drive, drive us to the fucking end of the world, just go! He meets my gaze in the rearview mirror, he's around sixty, brown and wrinkly, his eyes are calm. He says, it's only ten in the morning, little lady. I lean back, close my eyes, recalling yesterday, the thick leafy plant behind you in the restaurant, dark green like oiled seaweed, the wall's muted aquatic complexion, the inky plums, the bright orange fishes in their tank, shimmering just out of focus to my left, but still part of my field of vision, just less important than other objects. I know I will never see you again, you're already turning into a story I can retell, like a journey, and a return. The driver switches on the radio, it's some pop-country song. He taps his hand gently on the steering wheel to the tune, his golden ring makes a little tick every time it hits the plastic.

...you say I move so fast, that you can hardly see... you say I move so fast, how could you be with me? ... but my heart beats slow... my heart beats slow

Passenger

The wiper blades slide the crushed raindrops away. I imagine the water dripping off the car and pooling itself in thin layers on the old tarmac, before seeping through the cracks and into the soil below. The car seat is warm against my back, my vertebrae feel compressed from sitting still for so long. We have crossed the border between Norway and Finland. On both sides of the car, the landscape appears two-dimensional. We seem to be moving over a cardboard sheet. The ground is just flatness fading into the grey horizon. The tires and asphalt meet with a hum, the rubber and the road wearing each other down evenly.

We are going to drive far. Jon has to do all the driving, I don't know how to do that. Just one of the things I've never learned. We will follow the road through this land for a long time, where all the trees are similar and the minutes are similar, too. The enormous monochrome sky makes me feel insignificant. I prefer to be closer to mountains, to see that something is holding the sky up, that walls exist, vertical planes; something to contain me. The only thing breaking the muddy view out there is a few shimmering ponds. My eyes don't know if they should skip from moment to moment or rest slightly out of focus. I turn my face towards Jon, just to get to look at something else for a bit.

When I open the car door, I am attacked by vertigo. This place is so small, not even a village. A few houses gathered near the border on the Finnish side. Karesuando, we giggle when trying to pronounce it. A hamburger tavern, and a gas station that carries everything – at least according to the tacky plastic sign on the roof. Inside the gas station, there's a wall covered in clear boxes filled with liquorice in all variations: brown cubes, sticky cords, sugar-sprinkled, or polished black orbs. I grab a paper bag and start to fill it with the goodies from the shelves, wanting to gather things we can't get in the stores back home. I feel a sting of hunger at the sight of the soft candy pieces, and saliva foams under my tongue. Jon asks the clerk for lead shotgun ammunition. It's illegal to hunt grouse with lead in Norway, but Jon thinks it's the best. He buys several boxes; he owes his friends a few shots too.

The burger tavern has a sun-bleached sign on the door, depicting french fries sticking out of a carton probably once red. A bell dings when we open the door and the air inside is warm, saturated with frying fat. I can feel my hair and clothes attract the smell, we are new here and enter for the first time, all of our materials ready to absorb the grease molecules. I will have to wash everything when we get back home. A few people are seated at some of the white plastic tables. An obese older man with an unfinished pale meal in front of him, a mother with her two small children. None of them raises their heads to look more closely at us as people usually do in small towns. I'm happy not to be forced to meet any gazes.

In the bathroom, the toilet roll hangs illogically low, I have to bend my body and lean forward to reach it, feeling awkward even though no one can see me. The walls have a gritty turquoise colour, and on the sink, there's a bar of soap, pink with thin brown cracks, probably full of bacteria. I let my hands dry in the air, holding them stiffly out from my body, shaking them a little.

There's a handwritten cardboard sign on the counter apologising that there's no milk left for the coffee. I never drink coffee without milk; I hate the watery bitterness, it has to be thickened, chalked. Jon gets a paper cup of the black stuff, and we withdraw back into the oxygen again, through the rain and into the car. I still have a couple of cheese sandwiches left in the lunchbox I prepared before we left home. We eat them, sitting in the front seats, watching the droplets blur the windshield together with the dusk. At the far end of the parking lot, a white house stands by itself, three floors with a saddle roof, old. It's surrounded by a small garden, not for decoration, just there to walk through. There's light in one of the windows. I don't really like darkness, I never have. Darkness makes consciousness doubt itself because it has nothing to measure itself against. I see a crooked shadow in the garden, a burly figure standing there looking at us. No, it's just an old tree, I guess. I stop chewing.

“What do you think it's like to live right there, in that old house, in this godforsaken place nobody knows about, but everyone here probably knows everything about you? What if you were born as someone else, living a completely different life right now?”

Jon slowly shakes his head. “I can't even imagine.”

He always seems quite content with who he is. I'm attracted to that, but I also fear it, because I'm not sure I'm the same way. We sit in the car until we're entirely surrounded by night. It's still raining. This darkness is moist, different from dry darkness. I see Jon's outline in my peripheral vision. I lift my hand and let my fingertips touch the windshield. The snaky rain on the outside creates shadows on my skin. My voice is hoarse, and I clear my throat.

"I read that there is only a certain amount of water on Earth. The same water has been around for millions and millions of years. It just keeps moving, keeps changing state."

"That's pretty cool. So this rain once was, like, the blood of a dinosaur?"

"Maybe."

The lit window in the house goes dark. I ask Jon if he wants some liquorice, even though I know he doesn't like it. I want to spare it until we're back home but can't resist sticking a large piece into my mouth. It's viscous and glues my teeth together, I struggle to grind the waxy substance into smaller bits in my mouth. My spit is probably dark brown by now. I suck my lips shut, I don't want it to run down my chin. Jon starts the car, the headlights turn on and the light ricochets off the house wall, and I close my eyes from the glare. I can hear him scratch one of his thick eyebrows. There's always a wrinkle between them, even when he's smiling.

"So, should we find somewhere to sleep or just continue?"

I don't open my eyes when I reply. "Let's just continue."

He reverses the car, draws us in a big circle in the parking lot. We are in motion, but his father is not, paralyzed in a hospital bed, not knowing he's waiting for us. Still alive. Nobody knows what's wrong, according to the person who gave Jon the call. I didn't want to come. The thought of meeting Jon's father for the first time standing up while he's lying down makes me feel claustrophobic. I don't understand how I can add anything to that kind of situation. Intruding into his air. But the way Jon didn't meet my gaze made me go to the kitchen and start slicing bread.

"We have never been on a journey together, it will be an adventure, right?"

He knows I hate it when he shouts conversationally when we're in different rooms.

"Sure."

I said it as quietly as I could.

The rain turns to snow somewhere between the trees. There are no street lamps along the road here. Heavy snowflakes are coming straight at us at high speed, lit up by the car lights. It's like a silent machine gun continually firing white missiles, blurring the vision, making me dizzy. I turn on the radio, but it's completely silent. Not even static.

"Finland hasn't invented the radio yet."

I try to say it cheerfully. Jon snorts.

"What did you expect?"

We look at each other for a split second. I let my body slide a bit deeper into my seat, and I unfasten the seat belt so I can curl myself sideways and lean my forehead to the side window. The world seems to have been erased out there.

"What's your father like?"

"He's an asshole, you know."

I chuckle. "Yes, but all parents are assholes."

He increases the speed of the car, does something with the gear stick, inhales quickly, starts talking.

"When I was little, I found a gas mask in a cupboard. My father explained what it was for, he described the different gases, how some of them make your eyes burn, or your skin falls off. He put the mask on to demonstrate and he looked like an insect... His eyes hidden behind dark glass, his nose covered by a round filter disc – like a black rubber tuna tin – and he laughed at how terrified I was at the thought of the air itself being poisonous..."

I startle into consciousness, thrown heavily forward by my own weight. The car is being brought to a halt. Unbelted, I hit the dashboard with my left arm first. The pain is muted and stumped. Then, silence. I regain some control over my limbs. My right leg has gone numb from the skewed sleeping position. I sit up in my seat, blinking, looking around me. The light outside is pastel yellow – dawn – and we are in the parking lot in front of the hospital, Sairaala. It's so quiet here, no car engines, no voices, no birds, no wind. I don't like hearing nothing; it always makes me wonder if I am actually real. Jon grabs my hand, and the electric pain in my arm clears my mind. My voice is thin.

"Are we there?"

“Yes. You should always wear your seatbelt, you know.”

We stumble out of the car, and my feet slide around on the snow until I find some safe ground, white frost boils out of our mouths and noses.

“Damn, it’s freezing.”

A person is standing outside the hospital entrance, a dark figure against the mirror glass doors. He seems to be swaying gently from side to side, like a bulky metronome. I squint as we approach him as if that will make his outline sharper. His eyes are rolled back, all white, only a thin crescent of the irises shows below his eyelids. We stop, Jon, grips my hand firmly. The hospital building is dark; the electricity must have gone out. But don’t hospitals have emergency generators or something? I want to ask Jon, he’s a doctor, just like his father. He kind of had no choice, he once told me. But I know he wishes he could work with something else than humans, something less substantial. His father invents medicines. It always feels strange when the people who heal others get ill themselves like all their work is for nothing. But then again, I have never really seen Jon sick, not even the times when I’ve had the flu. I find some comfort in that. The man at the door has a greenish tint, enhanced by the half-emerged daylight. He doesn’t look particularly healthy. He mutters in a muted voice.

“We are. We are...”

Jon walks towards him, aiming for the door.

“Are you a patient here, or...?”

I notice a few empty syringes scattered around on the snow around the man’s feet, bluish stains have melted the snow away in some places, made small hollow craters. He suddenly lifts his arms and grabs Jon, pulls him close and bites into his cheek. I can see the fruit-red flesh glisten under the torn skin, the blood that’s never been in contact with the atmosphere before. All the warm colours we carry inside. It happens so quickly. Jon screams in pain and surprise, lifts his arms to push the man away. The blood is dark and oily around the man’s lips. Jon manages to fumble his Leatherman out of his pocket. It was a gift from me last Christmas; I wanted him to remember me every time he skins rabbits on his hunting trips when he goes away for a while every autumn with his buddies. He loves this knife, had always wanted one. He flips open a random blade with his fingers – the screwdriver – and stabs the man in his temple. They fall.

How peculiar time behaves, quick or slow, depending on the event at hand. I find I have my fists clenched hard, like a frozen heart at the end of each arm. I spread my fingers, start to breathe again. Jon moans. I want to leap over to him, but I don't think my gelatinous legs will carry me. With the help of one hand, he gets up on his knees, gets up on his feet. The other hand pressed against his neck. Glistening blood twines down his wrist, and faint steam evaporates from the liquid as if it was a bowl of hot soup. But he's seen a lot of blood, transfusions, operations. My stomach feels hollow like I've swallowed snow. I meet his gaze, and I can tell that we're both afraid, for the first time since we've known each other.

The strange man doesn't get up. He is lying on one of his arms, and no frost comes out of his mouth. I've never seen a dead body. Jon has told me how they look, smell. He told me of night shifts with children deceased just before he and the ambulance got there when he had to tell the parents: No hope. Or the suicide victims, drowned, pale with seaweed in spider web patterns over their faces. Once you are dead, you are gone. You can't start living again.

There is nobody in the reception area, and we look through the book of patient lists to find the room number of Jon's father. Mr Schei. We find an unopened roll of bandage, and Jon uses it to compress the wound. Then we walk as silently as we can down the desolate dark corridors. The air is stale and has a faint medicinal tinge, like the penicillin syrup I had to drink as a child. My senses are peeled naked. A blood orange stripped of its skin, waiting to burst. Every time we come to a swing door, Jon opens it slowly, slowly, so he can peek through the slit before opening it enough for us to slide through. Empty beds along the walls, lab coats in piles, stethoscopes. Once, when I was lying with my head resting on his hairy chest, listening to his heartbeats, Jon told me that the largest concentrations of gold in the human body occur around the heart. I smiled while his breath made my head lift and sink.

"That makes sense."

Something is making a clanking sound further ahead in the corridor. I feel my heart skip a beat. Maybe it's someone that can help us, tell us what the heck is going on here. But shuffling towards us is a woman, a nurse, dragging herself along the wall, sending the bright flowery framed pictures to the floor in the process.

"We are... We will be... Everyone..."

Her white outfit is torn. On her shoulder is a deep wound the colour of dewy plums – a piece of flesh missing. Her blonde hair is more golden than her ashen skin. One of her white thick-soled shoes is missing and her sock is ragged so her toes peek out. The nails are dark blue. I look at Jon. He looks back and then throws his gaze to a door just ahead of the woman, reading *Cleaning Supplies*.

“You open that door before she reaches that far! Quickly!”

I take the few steps to the door. It’s unlocked. Jon hurdles up to her and with all of his weight pushes her into the small room. I slam the door shut. Jon rolls a hospital bed in front of it and locks its wheels. I am trying to keep my tears back, but I’m not able to. They smudge my vision like vaseline and run stingy down my cheeks. I put my arms around him, avoiding the bandage. My eyelashes scrape against the fabric of his shirt, and its burgundy cotton soaks up my tears, making them invisible again.

“What is this place, Jon? What’s going on here? Can we please go home now?”

“I don’t know. Maybe some epidemic has hit the area or something. Let’s find my father, maybe he can explain.”

Outside room 375, I rub my eyes, my skin feels greasy, my teeth furry from sugar, and car-seat sleep. When Jon opens the door, I catch a glimpse of myself in the window reflection, the corners of my mouth still darkened from the liquorice. The first rays of the sun fill the hospital room with a swollen haze. I stay close to the wall; I need to sense that there’s something solid against my back.

Jon says his father’s name a few times, *Johannes*, and then *Daddy*. The words are blurry. He must be in terrible pain. When I look at his father, I see the similarities between them, only his father’s bushy eyebrows have a metallic sheen, his temples silvery. I know Jon doesn’t want children. I haven’t really thought about it that much. Something resembling both of us... I don’t know. His father lies on the bed, speaking with a low, mumbling voice. I try to make out the words. He says that matter and mind, they’re the same. He says that soul is matter. He keeps repeating the same things. His eyes are blank like raw eggs, and he’s slowly twisting his limbs, rotating his head. He doesn’t seem to take notice of us.

Jon is always such a restless sleeper. He squirms and throws himself around and snores like a thunderstorm. He still claims to have a high quality of sleep, and he gets up easily in the mornings to go to work. After I moved in with him, I complained, at first.

“I’m unable to sleep properly next to you; maybe we should get separate beds or something?”

“That’s just so unromantic, my father has always snored, and my mother just got used to it. She’s fine with it.”

I didn’t know how to respond to that. Sometimes I sneak out into the living room to sleep on the couch. It’s Jon’s. I only own some plates and cutlery, a tablecloth. Students have less money than doctors.

On the stand next to the hospital bed is a plastic box of syringes filled with a blue liquid. I take a step forward, picking up the box to read on the label. *TEST BATCH. The invention of Dr Johannes Schei. Inject intramuscularly into the deceased patient within 15 minutes of death.* I put the box slowly back down, wiping my sweaty hands on my thighs. The denim feels like sandpaper against my skin. I want to leave. I want to go home. I don’t care about whatever is going on here. I’ve never liked meeting parents anyway, being measured against previous girlfriends, the questions. *So, what do you do for a living, then?*

Jon has gone quiet, he’s just standing there. Why doesn’t he do something? I call for him, but he doesn’t answer. He knows it irritates me tremendously when he doesn’t respond when I talk to him. I make the few steps over to him, putting my hand on his shoulder. He turns towards me. His eyes are glazed over by a white membrane, and half his face is a dark purple. The colour is spreading out from the wound under the bandage, at the hollow of his neck, just where I usually put my lips. His eyebrows look like thick black slugs floating on the skimmed milk skin of the rest of his face. I jump backwards, toppling a big tousled plant behind me. The organic sound when it breaks against the wall is unbearable. The soil on the floor, soft under my shoe. He speaks with a voice I’ve never heard before. He says that it is found. He says that the flesh hides the soul. He says his mind is inside all matter now, in a hive, expanding. His father’s mouth moves simultaneously. It’s his words, they are coming from him, through Jon. I feel as if stepping on an icy uphill pavement, that moment when my feet slip and my body knows it will

fall over – that moment lasts forever here, now. I want to find balance, to find something believable to latch on to. But what? What is real in this pastel room, what is tangible? Jon's father is somehow infecting his consciousness, as the bite wound is infecting his body.

“Jon, your father is taking over your consciousness! We have to kill him! Listen to me! Kill your father! The shotgun is in the car, go get it! Can you hear me?”

Jon moans, shuffles towards me, lifting his arms as if for one of his quirky embraces, but more determined this time. His mouth is open, and his tongue looks grey and dry.

“We... are already dead. Your mind... must join us. We need you...”

Nausea erupts, hot lava in my stomach. I turn around and run.

Last winter, we went skiing. The snow was pristine, and it almost felt like an assault to let our skis open long dark strokes on the perfect surface. I got afraid of the speed and fell over, forward, so my upper body burrowed into the snow. I felt the coldness trail under my clothes, against my chest. I let my face melt a warm mask into the compact cold, turning the snow back into water. I lifted my face upwards with cold drops on my cheeks and a grin on my face. Jon didn't laugh.

“Come on, it's not that difficult, look.”

Standing in front of me, he started to demonstrate how to be soft and springy in the knee joints, how to shift the weight from side to side to turn in big waves downhill. I remained lying in the snow, looking up, the sun was directly behind him, his silhouette pounding reddish in my eyes.

My heart makes it impossible to hear if there are footsteps following me. I don't know how I'm able to lift my tired feet, but I am. I slam my body against the swing doors. I should probably try to move some of the beds in front of the doors to shut them, but I see a big lump under the blanket on one of them, and after that, I don't dare to slow down at all. My lungs are collecting the oxygen in heaves, my glands pumping wired adrenaline. All these automated mechanics of survival. I look back once. He's there.

Inside the car, my hands tremble so much I struggle to push down the locks on the doors. I try to remember what Jon told me that one time he let me be in charge of his car, as some kind

of a driving lesson. Just for fun. But I choked the engine so many times he became afraid I'd manage to break it somehow. His beloved red car, always clean and glossy, he would vacuum its interior every week and bring it to the car wash garage. I liked to come with, to sit in the passenger seat when he drove the car into the washing garage. Jon thought it was childish, but I loved watching those big robotic rainbow-coloured cylindrical brushes spinning softly over the car, thick soap foam over the windows on all sides, bubbly and dirty until the rinsing machinery appeared, where clean water was sprayed on by an array of pipes. The sound of the water pressure against the glass, like chubby cotton in my ears. Now I clench the driving wheel, looking for the ignition key, or something that will make this lifeless metal carcass move. Is the shotgun in the trunk? No, it's on the floor behind the driver's seat. There it is. The lead ammunition is behind the passenger seat. The flat thumping sound of hands on the outside of the car windows intensifies.

Jon spent a lot of time cooking, he always enjoyed it. My purpose was to eat it, admire it. Brown sauce in thin layers, mauve cranberry jam. Once he made fish cakes from scratch, he had pulled the fish out of the sea and gutted it himself. I sat in the living room, hearing the sounds from him in the kitchen, the white flesh of the fish being kneaded in the food processor, butter sizzling in the pan. Always a lot of butter. I knew there's no use in offering him any help. He carried the white plates into the living room, set the dining table, lit the candles, opened a bottle of wine. The fish cakes tasted bland and salty, like phlegm. His phone rang, it was his father sharing the news that he had gotten funding for his research, at a little hospital in Finland.

"He thinks he's some sort of genius," Jon scoffed afterwards.

"Well, who knows, maybe he is?"

Jon looked at me darkly. After that, I always took his side.

The sun is a bleached stain on the pale sky. I have never liked winter, my toes are always numb. The frost seems to invade my skeleton, burying itself in the marrow. Everything turns frozen and brittle. The water in my body will wait for spring together with the water bound in the ice and snow, in stillness. The old fractures in my right middle and ring fingers will ache. A reminder of the mountain hike we did three years ago, me sliding on the sodden moss, the hard rocks underneath. Jon splinted my fingers with twigs until we got down and could go to the ER.

I fumble with the shotgun, the metal is icy in my hands. My pulse is thumping under my nails. The weapon is supposed to break open so the chunky red shells can be inserted, one in each barrel. My fingers find the handle, and the gun snaps open, bending like a knee joint to reveal the two circular openings. Jon is throwing himself at the car door on my side, but his movements are syrupy. I drop the first shell on the floor between my feet, but the second one I manage to insert into the barrel, pushing it in with the pad of my thumb. And one more. I click the weapon shut, back to its completed shape, loaded.

“You... must... become... us...”

Jon’s voice is muffled through the window. His copper-coloured blood is smeared across the glass in thin layers. His hands have gone from slamming on the window to holding still. Each finger is stamped on the surface like **swirly** stencils.

Once, when we had braided our hands together, Jon told me that a person’s fingerprints are formed while still in the womb. The baby touching the lining of its organic chamber creates friction ridges on fingers and toes. These ridges later give an improved grip on wet surfaces by helping water to run off, like a car tire’s tread. Water is incompressible, dedicated to its density. It just runs, if it gets a chance, following gravity.

Sweat is itching in my eyelashes, trickling down between my shoulder blades. My grip on the gun is slippery. I look at Jon’s eyes, their usual clarity hazed by an opaque membrane. I used to stare at him and jokingly ask what’s going on in there, behind those dark blue chasms. How are you, my strange and beautiful man, I would say, with one hand on his cheek. I’m okay, he always replied. I’m okay.

I caress the barrel with a few sticky strokes. I dry my hand on my sweater before pulling it over my head. A raw bitter smell wafts around me, ripe and sour, a snakeskin smell. I eel out of my jeans, their sweat stains mapping oceans too vast to cross. I break open the gun again, letting the two shells drop between my feet, and then I twist to put the hinged weapon on the back seat. I prop my clothes on the driver’s seat, lift my head, and unlock the door.

I love Jon’s bear hugs. His cheek resting on the top of my head, like a lid. His arms wrapped tightly around me, holding me up with another force than my own. He doesn’t give

hugs like that often. Now I let my temple rest on his shoulder, my hands gripping his back, stroking the muscular board of his back. When I slide my hand in under his shirt, his skin is chilly. Usually, I'm always the coldest one. I can sense his grip, I can lean against his thorax and draw my breath deep, in a long sigh. I can drift into the notion of not knowing where I end, and he begins, just like when we're naked together. I drift into it. My head heavy, my cheek pressed against his shoulder, or his shoulder pressed against my cheek — I hardly notice his teeth sinking into my neck. I let my eyelids slide open, and the light is so bright and clear. In the distance, like black ants against the snowy hills, I see human figures standing still or walking slowly.

Cave

Lars wanted to show me his world, his favourite spots, and I felt honoured, chosen, by this invitation. That had to mean that he considered me as possibly fitting into that life. Lars loved rock climbing, and one of his favourite places to climb was the Cederberg mountains. He tried to explain how the rock never adapts to the human hand, how the hand must search patiently for the smallest crack, the slightest dent, how the fingers learn this sensitivity over time so the rock can be conquered – if it allows for it. That’s when you understand humility, he said. I looked at his broad torso and straight posture, we were sitting in his living room, I slumped on the soft couch, him wide-legged and tall on the only chair, and I just nodded. He never struck me as a humble person in any aspect, but then again, that probably just meant that the mountain got to see some sides of him that I didn’t have access to. And now I was going to be introduced to this essential element, one of the few things he visibly expressed passion about. Since I’m not a climber, Lars invited Kelly along too, to have a companion in the mountain walls. They had climbed together before. Lars, Kelly, and I packed her car with large backpacks stuffed with sleeping bags, all their heavy climbing gear, food, and empty plastic water tanks. I felt my mind tire just looking at the intricate bundles of thick ropes and large metal clasps they used for climbing. I would never be able to keep it so neat and untangled.

We were only able to leave the city later than Lars and Kelly had planned for, there was something minor that had to be fixed on the car. I walked up and down to his fourth-floor apartment in my flip-flops, fetching food bags and other stuff from the pile of things we would need. I have always liked the feeling of summer air on my feet. My sneakers for the hike were packed in my backpack. The shoes were mine, but the sleeping bag and backpack I had to borrow from him.

The drive took over three hours, me gazing out the window in the backseat and Lars and Kelly taking turns driving. The sun was just setting when we finally arrived at the parking spot under the giant oak tree by the foot of the mountain. Lars and Kelly had both been here before and talked about how long it had been since last time and how great it was to finally return. We

unloaded the car, put on shoes and backpacks and started walking into the growing darkness. We had head torches to light up the way. The jeep track we followed soon ended, and continued into a narrow path, zig-zagging up the mountainside. Our destination was a cave called Welbedacht near the mountain top, to stay there for a few days. It would take us about three hours to get there. We walked in a row, Lars leading, then Kelly, and lastly, me. After a little while, I lost track of time, only being able to see a small round patch of the winding path at the end of my narrow light cone, and the backside of Kelly's legs. After what felt like hours of inching ourselves up the steep trail, I suddenly caught a glimpse of a quick reflection. An eye. I startled, thinking now we'll get killed by some wild animal. Lars swept his light beam slowly across the rocks and shrubs. Then we saw it: A meter-tall animal, with a white and black crest of long spikes, erected and fanning out from its body, it was standing completely still, looking at us. A big porcupine.

“He's more scared of us than we are of him.”

Lars spoke in a low voice. We passed the animal slowly. A few hours later, Lars and Kelly finally found the cave after having searched between the rocks for a while, muttering between them about the specific characteristics of the opening. The cave is not easy to find. It can be entered from a plateau that's only visible from a certain angle when coming from below. You have to know what to look for. Finally, we could hunch down and enter the low-roofed cave to roll out our sleeping bags on the ground. It's the first time I've slept inside a real cave. I try not to think about all the stone resting above me.

The next morning I awake, crawl out of the rocky pocket, and see the landscape for the first time. I'm awe-struck by the greatness of it, the geometrical structures, the amounts of material that were once squeezed up by the tectonic plates gliding about. We eat bacon and eggs for breakfast, we actually brought eggs, held in the midst of one of the backpacks, wrapped into soft things. Only one egg was broken when we opened the carton. Lars and Kelly then organise their gear, lace up their special shoes, hang the pouches of chalk in their belts.

“When will you be back?”

“When we get hungry, so around dinner time, haha.”

I can follow them with my gaze for a while, but at last, they disappear between the boulders.

Everything is pure sunny heat. I have dust in my hair from sleeping with my head directly on the ground, dirt under my nails. I put the right index finger in my mouth, suck it clean. Behind me, the cave's darkness is a black, blind spot. In front of me, deep gorges and steep cliffs create other and lighter shadows. The stone is rusty red, but when I examine smaller pieces, they're marbled in shades of white, black, silver, brown. All the minerals are gathered in seemingly unchangeable shapes. The mountain vapours its lifeless odour. Over the cave more mountain arches, Lars said there's a legend about it, that it looks like it's easy to get to the top. But actually nobody's ever made it up there. Sure enough, it doesn't look too challenging, even for an untrained climber like me. I start from different places around the cave, but I must turn around and go back down after every few meters. Maybe I would feel more secure if I had safety ropes. But then again, I don't really know how to climb, that's why I stay behind here, waiting for the others. I feel restless, unsatisfied that I can't even climb a simple slope like this. It's far up to the edge, but not that steep. But maybe if I reach the top, I'll not manage to get back down again. I settle with walking around on the plateau outside the cave, looking at the geometric formations, the plains that stretch from the mountain's foot and out to the horizon, pastel pale. The air disrupts clarity, making the colours fade into a haze towards the horizon. The atmosphere is what makes the stars twinkle, in empty space their light would seem constant, like needle-holes in black paper. Scattered clouds cast dark fields of shadow on the land. I feel weak, as if my bones soften in the presence of all the stone, the gorges, the sharp jagged structures.

For how long did we walk from the car and up here? Three hours? And I don't even know how to drive. I sit still outside the cave, with my own weight resting on my thighs. I can hear my heart. I think of the washing machine's thumping power during the centrifugal spin, the sparks and fire that may occur in the wires, frictions I can't see. Fear makes me sleepy. I enter the hollow shade of the cave, the ceiling hangs low, pressing me down, I crawl to my sleeping bag. When I awake they will be here, I say out loud. I fall asleep with warm dust itching in my nose. I'm abruptly awakened, my neck is sore, the sun is lower outside, there's a complete silence out there, like a lid over the mountains. My hands rub against microscopic particles,

everything crumbles, everything's dry. I lie still for a while, then I inch out of my clothes and touch myself, to feel my own moisture.

I don't know what to do besides stare into all the stone. I sense a change in the light. The planet revolves into the night field. My thirst is spreading in my throat, I swallow my spit, but it's just foam. He didn't tell me where to fetch water, and I didn't think to ask, I wasn't thirsty at the time. They took only one headlamp with them when they left. I put mine on, a glowing beam out of my forehead, it might make it easier to find the way home. A light yellow foil is draped over the sky before everything is muddied by the lack of colour. I hear nothing but my own blood flushing, pounding in my sternum, behind my gelatinous ribs. It's been dark for a few hours when I turn my face to the slope of boulders leading up to the mountain top. I tilt my head back, letting the beam of light from my headlamp caress the wall of rock until it slips off the edge and gets lost in the vast darkness of the sky. When I look back down on the ground, the torch fades into a tiny candlelight and goes dark. The battery must be old. I throw the torch on the ground, grab the rock, and start climbing blindly.

All I see above me is a bright star, it must be Sirius surrounded by the dimmer stars and nebulas, and the black edge of the vertical slab of the mountain. My nails chip when I force my fingertips into the secret folds and cracks, but my fingers hold me up. My toes move in ways I didn't think they could, elongating and spreading, supporting my weight on one toe, or two. I creep upwards, centimetre by centimetre. My arm muscles tremble, my nerves transfer new voltage. The tumbling centrifuges are contained within their stable metallic chassis. The night sky widens as I get closer to it.

On the mountain top, a large, flat area stretches out, maybe a square kilometre. My eyes have become accustomed to the grayscale lighting, the half-moon and the stars providing enough light for me to make out the shadows and the shapes. The landscape is indeed the strangest I've seen. Twisted, organic forms, rounded surfaces, pillars, singular or in twos or threes, limbs. I put my hand on a smooth surface and feel the coarse stone, still warm from a day under the sun's rays. They are humans, human bodies, unmoveable, unchangeable. Upright rocks, all with their heads tilted back and their eyes to the sky.

I sneak around between them, letting my palms graze their curves, I feel the wind creep over my scalp, it's colder up here. I examine the faces of the statues until I find Lars, standing near the edge opposite from where I came up. He's one of the tallest figures, as he is anywhere he goes. For the first time since knowing him, I see an expression of calm on his face, not looking for anything to climb or conquer. There's nothing more to yearn for. I lift my hands to his shoulders. Even when I stand on my toes, my face can't reach his. I place my naked, dirty foot on his solid kneecap, stretching to fold my fingers around his right ear, and I pull myself up. I climb until I can throw my legs around his skull, sitting with my thighs on his shoulders and my feet resting on his broad chest. I feel the pain from the scratches and scraped-off skin on my hands, my trembling hands and arms, plucked guitar strings. In one last strain of effort, I support my hands on his head and heave myself up, so I'm standing, one foot on each of his shoulders. My body is wobbly, all my blood and bones and soft tissues quiver, but I release my balancing grip on his head, and I rise, lifting my stalky arms to the stars. Sirius is not that far away, I can see everything from up here, from the highest point on the map.

The Damage

A fifteen-minute drive away from the city, four long beaches lie in a row, separated by big boulders. The crashing waves are huge and loud, and the water is freezing cold. We run into the ocean and let it swallow our shoulders, but not our heads, it's too cold for that. Then we run back up and throw ourselves down on our brightly patterned beach towels. The sun is too low to be able to evaporate the saltwater from our skin, and I can feel my body's heat creep towards my core to try to contain itself. David's friends are gathered around us, also sitting or lying on their towels and blankets. Most of them sip from beer bottles. It's Friday, and everyone goes to the beach to watch the sunset together.

David and I go for a walk along the beach, just the two of us. He's good at making people feel special, like he spends his precious time on them because they deserve it. Now it's me he's walking with here, to nurture my feelings for him. I take my shoes off and carry them in one hand by the laces. The cold edge of the water extends along the entire African continent, it seems. I'm as far south as I've ever been. The light here is unlike anything I've seen before, it's strange to imagine how the planet actually is surrounded by total darkness.

"Look at that boy," David says suddenly. A small boy is running across the sand, his body skewed, breakable. His legs are skinny below his yellow shorts, his head is a little too big, it looks heavy. Close-cropped hair, bright eyes wide open, as if the world just now came into existence. His father is standing ahead of him with open arms, waiting to receive. We watch as the boy runs haltingly to his father and gets his hug, and then they sit down on a large rock a bit ahead of us, resting. He looked lonely running all alone among the young people sitting here in the sunset, drinking beer around their bonfires.

"He's probably not outside very often," David says.

"Did it make you sad?" I ask.

"I can't exactly be everyone's support person, either!" David responds in a sharp voice.

I think of that time we went to a photo exhibition, right after I became acquainted with him. Before he moved here, and I followed, as a visitor. One of the documentary photographs

made him weep. He quickly hid his tear behind his sleeve, pretending to brush away a hair that was out of place. What was it about that specific photograph, among all those gruesome pictures on the walls, that made him react like that? Was it that the starving boy stood with such a straight back?

I dare not take David's hand. We keep walking, we are approaching the father and child on the stone. As we pass them, David says in a friendly voice: "You're a good runner, kid!" The boy laughs with his whole face, beaming. We climb over the rocks and continue to walk across the beach, our feet sinking into the sand, the light is also sinking. We trample over thick coils of rubbery seaweed, long tentacles glistening in the sand. They look muscular and alive as if they can tighten around our ankles at any time.

Down by the water, we stop and look out over the ocean. I sense the heat of David's shoulder next to mine. I hear the sound of scattered laughter and clinking bottles behind us. Someone's singing. I turn my head to look at his face in profile, his chiselled features, the Chinese wall. I think of the satellites in orbit, seeing everything from a distance: *The damage doesn't look so bad from out here*. My feet disappear into the muddy puddles of tepid seawater the tide has left behind. The wet sand welcomes my skin. He suddenly kisses me on my cheek, turns away from me and begins to walk back across the beaches, in the direction we came from. My arms fall limp, my shoes drop to the ground, their white textile is stained from asphalt and grasses. I purchased them back home the day before my flight here. They were on sale because there it was mid-winter and snow outside. Light summer shoes, not waterproof.

I can almost feel the solar winds' movements in the atmosphere, continuously pumping electric charge onto the earth. The charge separation between the ground and the ionosphere creates lightning, flashing branches that abruptly strike down onto the black line of the horizon, leaving a negative afterimage on my retina. The salty air densifies. Rain? I look up, above me the darkening sky holds a luminous candle flame growing rapidly in size, expanding into a burning ball. Like a shooting star descending without will or wish, the falling satellite melts a hollow column through the air and its debris slams into the ocean surface where it's instantly swallowed. The hiss of evaporation is too far away to be heard, but the shockwave travels towards land at a tremendous speed, in an irreversible process of propagating matter. I've sunk knee-deep in the

moist sand, the ocean retracts all its mass into the wave, sucking the evening swimmers farthest from the beach into its movement. I don't turn around to look for him, I know David will be safe, he got away in time.

Habitat

The restaurant is located inside a heated plant nursery, a kind of enclosed winter garden full of green plants needing tropical temperatures. The humidity is opaque. One of the walls is just glass from floor to roof, facing the power plant, and the white mountains arching up behind it. In Longyearbyen, shoes are not allowed indoors. Even the museum had slippers for the guests, blue and black slippers sitting in rows on extended shelves by the reception desk. Jonas and I took soundless steps between the taxidermied Arctic animals, whispering their strange names from the small plaques in front of each. *Rødnebbterne. Vulpes Lagopus. Rangifer Platyrrhynchus.*

The moist air in the restaurant thickens in my lungs. We are seated around a table by the glass wall, three couples. My blouse is made from synthetic materials, it's clinging to my arms and chest. "You look pretty," says one of Jonas' sisters. His two sisters and their husbands are talking about things I can't say much about, they're doctors and psychologists. We look at the menu and I ask if the portions are large. "Yes," those who have been here before reply. I fancy a steak dish, but it's expensive and I know I eat so slowly that I might not have time to chew through it all before the others have finished. I order the fish. While we wait I look at the tentacled plants hanging from the ceiling. Their long sticky tubes can trap flies and consume them. The sweat on my skin mixes with the water molecules in the air, becoming part of the mist.

On the other side of the table, his two sisters seem blurry around the edges, but their skin looks dry, their hair shiny. They have long, beautiful eyelashes, as does Jonas. The food is served. I get a dome-shaped pile of rice and a small piece of white fish. Vegetables in pieces, sweet pepper and cucumber. I hate peppers. I eat the little red cubes anyway, chewing the fish faster than usual. One of the sisters is pointing at the mountain and says she was hiking there when she was pregnant with her daughter. She went without a shotgun, which isn't allowed because starving polar bears can show up at any time. The other sister, older, murmurs angrily: "Don't you ever do that again!" I guess I'm the only one who hears it. I put my fork in between the sticky grains of rice, counting them. Thinking that the sisters love each other, for real.

Jonas and I say goodbye to the others after lacing up our winter boots in the restaurant entrance hall, and we walk the hundred yards in leather-creaking snow back to the only hotel in town. His sister, the local, has negotiated a reasonable price for us. We store no food in the room, just a few flakes of potato crisps at the bottom of a wrinkly yellow Lay's bag, from the flight. We go to bed, but I can't sleep. There's a hollowness in my stomach as if I have eaten snow. I lie still next to Jonas, feeling my guts grind drily before I finally slowly fall asleep. I startle awake with a fuzzy feeling in my body, my hand trembles when I brush my teeth, the taste of the white foam is strong and nauseating. "Hurry up, we need to go and fetch your skis from my sister's place," Jonas says, sticking his head in through the half-open bathroom door. I can only manage to hark up some sort of growl. He wrinkles his eyebrows a bit, I know he thinks I'm sometimes being overly dramatic. In silence, we get dressed in our skiing outfits and go down for breakfast. In the hotel canteen I eat and eat, ham, eggs, bacon, retrieving new dishes time and again. He takes a bowl of cornflakes and stares out the window while I chew so hard I can't speak. The crunching from the crispy flakes he breaks down between his teeth is barely audible.

Everything is covered by thick layers of gleaming snow, except for the brown horizontal fields in jagged stripes across the mountains. Mud, slate, sandstone. It's May and daylight all 24 hours. The snow is white enough for the whole world. The valley cuts upward from Longyearbyen. We walk up along a gently sloping hillside, wearing our broad, short mountain skis. Sleep deprivation is a dry mask etched into my facial muscles. The pair of mountain skis I borrowed from Jonas' sister is uncomfortable to wear. The furry traps on the underside are old and slippery, the little plastic hairs that should provide resistance against the snow are worn away and the skis glide backwards with every step I take.

Jonas and his two sisters are able to walk almost straight up the hill with their newer, good skis. They are already far ahead of me. My legs are drained of power. The light turns red in my eyes. I feel my jaw lock and stiffen. My gums itch, I long for something to rub them against. I lift my mitten-covered wrist to my cheek and draw pressured circles there to lighten the tenseness. I see the others stop way up there and wait for me, three small figures between the white of the land and the white of the sky. Two sisters and one brother, he who they let me

borrow. When I reach them, they start to walk again, so I get no break. I just have to support my weight on the skiing rods and keep pushing the skis in rigid movements over the snow. Finally, the mountain flattens out and we can walk straight ahead. The sweat dries cold on my neck.

After about half an hour, one of the sisters makes us stop. At first, I think we're finally taking another break. But she's pointing at a hole in the ground before us. It's some kind of shaft that descends through the snow. She says passageways like this can occur naturally in the glacier-like snow because it never gets to melt. She's seen them before but never tried to enter. It can be dangerous. I stare down into the bluish darkness and there's a sting in my throat. I want to see what's down there. Jonas and I release our feet from the skis and stick the back end of the skis into the snow so they stand vertical, like skewed antennas. One of the sisters also wants to see the inside of the ice, the other sister stays behind, she has the shotgun. I go first, happy to get a break from the blinding sunlight. My pupils can't contract any further, the iris sphincter is tight and spasmodic, a trembling compass needle.

The snow shaft narrows and narrows, to be able to pass one must squeeze through between the cold walls, one must not be too large. I suck my stomach in and slide myself sideways through the slit, turning my head so my jaw aligns with my shoulder. The ice scrapes against my cheek. I meet his gaze for a few seconds, he's stopped in his track behind me, he can't fit further into the tapering corridor. It's easy to mistake his eye colour for brown since his hair and brows are black, but his eyes are blue when you look at them properly, like the sea surrounding the archipelago, water in every direction.

The town of Longyearbyen will not allow anyone to die here. If people fall gravely ill, they are dispatched by plane or ship to another part of Norway to end their days. There are no graveyards, as the permafrost preserves buried corpses so they can't decompose properly. The frost keeps molecules motionless, everything slows down in the cold. It's almost summer, and this is as warm as it gets. My woollen sweater is clammy between the down jacket and my skin. I slip through the passage and fall to my knees. The space here is wider, I'm inside a low-roofed, outstretched cave. I vaguely hear their voices behind me, calling my name and talking in between themselves, but I don't have to be bothered by that. I let the bluish crystal dimness calm me. In the roof of the cave, there are hollow inverted bubble-like structures, and the sunlight is

filtered through the ice, muted into a cool glow before it reaches my eyes. I can feel my pupils dilate slightly, finally able to relax. I start to move again, crawling on my hands and knees inwards through the cave.

Something feels like coarse spiderwebs between my skin and my clothes. I'm so hot, burning from the inside out. My gums tingle, a deep tickle at the roots of my teeth, making my jaws clench. I halt my pace to lie down and open the zipper of my jacket, squirming around, trapped in fabrics. Finally, the last garment lies empty on the ground, and I can get back to moving on all fours, hunched, freely elongated. I vigorously shake my head, blink my eyes, sniffle. A bouquet of scents unfolds in my nostrils, the soil under the ice, the living skin of the earth. My ears pick up faint sounds from afar, I am drawn to the magnetism of these sounds. Seals basking on ice flakes by the shore, sliding in and out of the freezing sea. And humans, voices rising and sinking, murmurs carried with the cold wind. I hear them, and I'm hungry.

What Lucky Sand

The hospital room has pastel flowers on the wallpaper, my father says he likes to look at them. My sister walks to the grocery store and comes back with two potted plants and places them in the window sill. “You must have real plants around you,” she says. “Amaryllis,” he whispers. “Anthurium.” He was a gardener when he was young. I ask him how we should care for the plants, how often they should be watered.

It’s my turn to sleep in the extra bed in his hospital room. Blood drips from a clear plastic bag hanging from a metal rod next to his bed and runs into a vein in his arm. When I was little, I would come with him to the hospital when he donated blood. “Why do you need to go there, are you ill?” I asked the first time. He explained that he was not ill, quite the opposite, he was so healthy that others could use his blood to heal. The nurses always gave me pink cordial in kitchen glasses, so scratched their surface looked matte. The glass so solid in my hand, but once viscous and soft. My father told me how glass is made from melted sand, what lucky sand, I thought, to become this crystalline container. He was lying down on a long chair while a smiling nurse injected a needle into his arm. The blood was slowly drained out of him and into a bag held in some apparatus keeping it in motion. One end flipped up and the other down, then the opposite, up and down, mechanically, like a playground seesaw. It’s not allowed to coagulate. Now I watch the drops of someone else’s blood, on their way into his dying body.

My father had to leave my mother. I understand why, and I have forgiven him for that, but not for taking my sister with. He knew my mother so well, and still, he left me alone with her. I was the one who had to stay behind in the frosty house for years. If my mother were the one dying now, she would refuse to get blood from anyone; her religion forbids blood transfusions. When my sister was ten, she asked mother: “If I was in an accident and needed a blood transfusion to survive, would you allow for the transfusion, or let me die?” Mother replied, “I would let you die.”

When I was little, I sometimes woke up with my baby sister’s hand in mine. We would lie under the same duvet, pretending to be yet unborn. I let my fingers slide through her hair,

dividing it into thick strings, braiding it together with mine. One morning the light through the curtains was different, and when we pulled them open, it had snowed. The world was glowing and white. We yearned to get out into the beauty. We wanted to see how the forest had changed, how the black soil held the whiteness and the patterns where the snow had not fallen. But we needed permission first. Waiting, breathing, pressing our hands and faces against the window, the glass so loyal to its form.

I own a gold chain with a pearl attached to a drop-shaped little plate. But it's not a pearl, it's my milk tooth that I lost out of my mouth when I was seven, playing outside in the snow. I came into the house, crying as if the world had ended, and eventually, my father made me tell what had happened. I had lost my tooth in the snow. I kept pushing my tongue against the raw wound, feeling the jaw bone just below the bare gum. Swallowed my own mucus while he wiped my tears with his sweater sleeve, olive-green wool against my cold cheek. He went out and searched in the snow until he found the tooth. He kept it. For thirty years, I had forgotten about it all until he gave me the necklace just a year ago, the tooth so small and pale, my crooked DNA.

I was born with a sorrow so strong and purposeless it must be inherited, like I have inherited the swirl in my hairline, the hunch in my spine. Cells keep dividing, they don't have any choice in the matter. I don't remember my father and sister moving out. One day they were just not there anymore. But the house kept holding itself up, by nails, by materials coerced together. Sometimes, on the rare occasion that my mother wasn't home, I would go into my sister's room, lie down on her bed on top of the covers, become heavy and sleepy. Then I would rise up again to count the steps through the hall and into my room, how few they were.

The plants stretch their leaves towards whatever little Scandinavian winter daylight there is outside the window. The artificially generated heat inside makes their leaves dry. The window can't be opened. "Are you in pain?" No, my father is never in pain. But he doesn't want the night to come. I wake up during night time; in the dimness, I see his gaze fixed to the wall clock.

"Only a few hours until morning," he says slowly when he can tell that I'm awake. "Only a few hours."

I think he likes to hear our voices. In the afternoons, my sister and I sit in his hospital room, on uncomfortable chairs, eating Swedish sticky cake and talking. It's almost twenty years

since we lived in the same house. We have jumbled around, spent our adult years on different continents. Now she tells me about her abortion, that the pregnancy had gone too far, so she had to take pills to kill the baby and then give birth to it. She was only seventeen, had slept with some random guy at a party. “I don’t really have a mother, so I couldn’t be one,” she says. We eat the whole cake, drinking milk from small, sturdy glasses, I think of the calcium in my bones, how the opaque white liquid will be absorbed and densified. I look at her. Finally, we are in the same room again. She nods towards the bed: “I couldn’t really talk to him about it.” When I lift my arms to embrace her, I knock the milk glass over and it falls to the floor. It doesn’t shatter, just rolls in under the bed and stops against the wall. Dad sighs and mumbles something. I get up and pull his blanket up and over his shoulders, over his folded hands resting on his chest.

One winter, he dragged me on a sleigh through a blizzard, I must have been five or six. The sleigh was made by him, his hands had cut out pieces of wood in his workshop and assembled them. A rope was attached to the front, I could feel the jerky pull with each step he took. I could barely see his back, my eyes forgetting how to generate colours, everything was just white. I tried to shelter myself in the hood of my jacket, but tiny sharp snowflakes needle-pricked the exposed skin on half my face. I don’t remember where we were going, I don’t remember arriving.

I sometimes dream about my sister. Us swimming in a lake, together with a brown horse. The water is dense and warm, pine needles stick to my skin. Along the lakeshore sheets of muddy algae spread out, blue dragonflies are shimmering in the air above us, so differently alive than us. My sister grows tired of swimming and starts to sink. When I turn my head to look back at her, I see my own body. It’s me who’s the brown horse. She grabs on to my mane and puts an arm around my neck, my hooves are hard against the rocks when I approach the land. Then I run, until my soft muzzle gets covered in a froth, I run so fast that in between every step all my four legs are hovering in the air at the same time, nothing on me is in touch with the ground.

A few years back, my mother called me and told me she had experienced a blood clot in the brain. She had woken up with double vision and headaches and had to go to the hospital. It was a big hospital, so she had been placed on a little four-wheeled car that drove her through the building to the stroke-care unit. On the phone, she described to me the lovely landscape paintings

hanging on the walls on the way there, how the speed of the car made the air flow through her hair, moving it gently. Everyone there had been so kind to her. They told her the blood clot had been minor and disappeared before it did any permanent damage. I don't think my mother is afraid of dying, she can't be, she believes in eternal life in paradise – in exchange for a few small sacrifices. She spent every moment I lived with her to convince me to join her, to make us believe together. “You're all I have left now, you know,” she would say, with the leather-bound Bible in her lap.

When I was little, all four of us went on a family vacation to Denmark. The sky was vast over the outstretched landscape. The dunes sloped down from where the grassy meadow ended and roots could no longer anchor the soil. When we approached the beach, and I saw the big foamy waves, I ran down the dune, the sand stuck to my feet and between my toes, being trailed with me towards the water. But running here was forbidden, the sea was slowly consuming the land.

The mother-voice would say one thing, the father-voice other things, or nothing. My father has never believed in anything bigger than himself, I think. He sometimes clenched his big hand around mine, a smell of tobacco and copper, jingling coins in his pockets. He showed me how to spin the coins on the table, how the movement made them almost invisible until they slowed down in a heavy wobbling dance towards the tabletop. Then they finally could fall to rest, aligned with the flatness. Choosing sides is always painful, especially when nobody has taught you how. Now I stand over his bed, looking down on his pale skeletal figure, his veins mapping a land of internal conflict. He's sleeping, his hands lying still on the white covers. I slide my hand under his, feeling a slight squeeze.

“Your hands have always been so warm, Daddy.”

He doesn't open his eyes. “Yes, they've had to be.”

When I was little, I watched my father make a wooden bowl. The noises from the mechanical lathe scared me when he started it, after securing a piece of uneven wood in its metallic grip. I couldn't understand how my father's hands and the small tools could force such a hard material into rounded, bodily formations. When the bowl was finished, he let me hold it. I

stroked my fingers over its silky hollowness, and the sanded timber was almost repulsively smooth, smoother than skin.

I arrived at his death bed from the other side of the planet, hours and hours in plane seats, not knowing if I would make it in time, if I would see him again, alive. My father has three days left to live, and I must leave. Time is always limited, the limits just come in different forms. He is still alive, and I leave him behind because it's my turn, I pat his hand once more, I stroke his cheek, it's gritty, stubbled, old. I say, "I have to go now." He doesn't open his eyes. "I know," he nods lightly. I close the door behind me, walk quickly through the hospital corridors, push myself out between the sliding exit doors, inhale the air of the living, the gold around my neck holds the exact same temperature as my body, I close my hand around the tooth pendant, rip it loose, fling it straight up towards the blindingly grey sky, I will be gone before gravity claims it back and pulls it into its downward trajectory, I will be gone before it hits the snow.

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Part Two

Expository Essays

Science Fiction and the Uncanny

I read my first science fiction book when I was nine or ten years old. Ever since, the genre has had a significant impact not only on my creative renditions, such as writing, but also how I think about reality. Often, fiction that falls under the category of science fiction encompasses specific literary devices, such as ‘cognitive estrangement’. Related are the concepts of the ‘uncanny’ and the tradition of ‘weird’ writing. My fascination for these subjects has, more or less consciously, bled into the process of writing the collection of stories in *Essence Apparatus*.

The first science fiction book I read was the Norwegian translation of the Swedish children’s book *Reise på en ukjent planet* (‘Journey on an unfamiliar planet’, my translation) by Sven Wernström, published in 1967 in Swedish and in 1975 in Norwegian. In the novel, two extraterrestrial kids land on Earth in an egg-shaped spaceship and befriend two human kids, Mikael and Agneta. The four children travel together to different parts of Earth, observing wars and poverty. Seen from the outside and analysed by the aliens in their quest to understand Earth, humanity reveals itself as hostile, violent and unjust. The aliens have a more logical way of thinking, and communication between the humans and the extraterrestrials is complicated by the differences in cognitive and linguistic structures. An example follows:

–What’s the name of your planet?
 –We don’t understand the question.
 –Surely it must have a name? You two must have names, too? Agneta asked. My name is Agneta. My brother’s name is Mikael. Everyone must have a name.
 –Why? asked the egg-boy.
 [...]
 –It’s because, if I call for Agneta, my sister knows that I want to talk to her. And if I speak to other people about Agneta, they will understand who I mean.
 –We see, said the egg-boy. We have another system. We don’t have names.
 Mikael fell silent. Both he and Agneta felt insecure. There was something eerie about beings that had no name. Almost like ghosts. (17, my translation).

Naming things is one of the most human things to do for us to understand the world. In the above passage, this necessity for human mechanisms of comprehension is questioned and evaluated as

redundant by an outsider. Immediately, the human kids feel insecure and start to see the others almost as ghosts – without names, they become insubstantial in the eyes of the humans.

Presenting the taken-for-granted as unfamiliar, as in the above example, is a kind of literary defamiliarisation which in science fiction is explicitly explained as ‘cognitive estrangement’, where the defamiliarisation is imaginative components that are made “plausible within the structure of the text” (5), and often “placed in a context of scientific research” (4), as Adam Roberts writes in his book *Science Fiction (The New Critical Idiom)* from 2000. Critic Darko Suvin describes ‘cognition’ as the aspect of the genre that prompts the reader to try and understand the fictional universe, and ‘estrangement’ being the element the reader recognises as different, alienating the reader from the familiar and everyday (Suvin in Roberts 8). Both features need to be present, according to Suvin, and this co-presence allows science fiction both relevance to our world and the position to challenge the ordinary and taken-for-granted (8). Adam Roberts writes that science fiction “distinguishes its fictional worlds to one degree or another from the world in which we actually live”, and that it is “a fiction of the imagination rather than observed reality” (1). I think this is descriptive for the tangent I find myself on as a writer of the stories in *Essence Apparatus* (abbreviated to E.A.) – fictional settings distinguished by various degrees from the actual world, employing elements of ‘estrangement’, the ‘uncanny’ or ‘weird’. Suvin also coined the term ‘nova’ as a characterization of the “thing or things that differentiate the world portrayed in science fiction from the world we recognise around us” (Suvin qtd. in Roberts 6). These ‘nova’ are often specific mechanisms or devices such as a time machine or other technology, as Oxford Reference states: “a device or machine that is absolutely new and whose presence compels us to imagine a different way of conceiving our world” (oxfordreference.com).

Most of the stories in E.A. fall outside of the strictest genre criteria for science fiction, but I am interested in the way the genre handles the imaginative aspects. I like how the ‘nova’ are “grounded in a discourse of possibility, which is usually science or technology, and which renders the difference a material rather than just a conceptual or imaginative one” (Roberts 7). Often the reason why the estranged elements are present in a story becomes an essential aspect of the cerebral impact the story has. My approach of consciously using the devices of science

fiction can be seen particularly in my stories “Sensō”, “Mars”, and “Return”. The soul-extracting machine, the human settlements on Mars, and the spaceships and technology used for the return to Earth are all elements that are grounded in some kind of scientific plausibility, and the incentives behind their development within the stories might add depth to their topics. In “Sensō”, the soul is not just randomly found outside the body; it is being extracted by a machine that operates by principles based on current theories of quantum mechanics and consciousness studies in the field of neuroscience.

Peter Stockwell writes in his book *The Poetics of Science Fiction* from 2000 that a pattern of the science fiction genre is “a partial recognition of our reality, but with sufficient alternativity to render the effect of defamiliarisation” (59). Stockwell also quotes author and critic Samuel R. Delany, who states that “[s]cience fiction is the only area of literature outside poetry that is symbolistic in its basic conception. Its stated aim is to represent the world without reproducing it” (Delany qtd. in Stockwell 69). I think this is of the greatest essence for my writing and summarises why I am more drawn to science fiction than naturalistic genres.

Going back to my first contact with cognitive estrangement, the book *Reise på en ukjent planet* by Sven Wernström, I realise its use of the literary devices of science fiction was highly effective. I became deeply fascinated both by the questions it proposed about the different aspects of living in a human society on Earth, and the ‘hard’ science fiction elements like the technical descriptions of the egg-shaped spaceship, including drawings of it. These descriptions made it seem more plausible and easy to imagine as potentially real. I recognise in the genre of science fiction a fundamental human curiosity, and I am drawn to the genre for its objective of external and internal exploration by asking ‘what if?’. Writing stories with some aspects of cognitive estrangement and introducing ‘nova’ into my work is for me a way of seeding the potential to paint a broader picture than by merely an emotional and realistic palette. Writer Eileen Gunn writes in *The Smithsonian* that “[s]cience fiction, at its best, engenders the sort of flexible thinking that not only inspires us, but compels us to consider the myriad potential consequences of our actions” (Gunn). What are the possible consequences of not being able to let go when your lover is terminally ill? Or of acting upon the yearning to understand your origins and returning to a home planet left behind by your ancestors?

In addition to the devices of science fiction, the stories in E.A. exhibit elements of ‘the uncanny’. The uncanny and its subcategory ‘the double’ became a critical mental reflective tool for me in the process of writing the stories in this collection. In his 1919 essay *The Uncanny* (orig. *Das Unheimliche*), psychoanalyst Sigmund Freud draws upon and extends the thoughts in the paper *On the Psychology of the Uncanny* (orig. *Zur Psychologie des Unheimlichen*) by E. Jentsch to try to investigate and define the term further. Freud writes that “the uncanny is that class of the frightening which leads back to what is known of old and long familiar” (1). The psychological effect – of discomfort – arises when the reader is confronted with elements that invert the ‘homely’ – the world that up until a certain point appeared as known and wholly recognisable. This ‘unhomely-ness’, or the ‘unheimlich’ in German, is related to the cognitive estrangement of science fiction but is more extensive in regards to a universal human reaction to what we perceive as similar to ourselves. “In telling a story, one of the most successful devices for easily creating uncanny effects is to leave the reader in uncertainty whether a particular figure in the story is a human being or an automaton [...]” (Jentsch, qtd. in Freud 5). The uncanny is only a slight divergence from the familiar and comprehensible, but with a potential for evoking reflections on what is defined as human, and investigations of our fear of becoming unfamiliar to ourselves and others. Freud writes:

Jentsch has taken as a very good instance ‘doubts whether an apparently animate being is really alive; or conversely, whether a lifeless object might not be in fact animate’; and he refers in this connection to the impression made by wax-work figures, artificial dolls and automatons. He adds to this class the uncanny effect of epileptic seizures and the manifestations of insanity because these excite in the spectator the feeling that automatic, mechanical processes are at work, concealed beneath the ordinary appearance of animation (Freud 5).

As explored in many science fiction books and movies about robots, we define being human as being something more than merely automatic and mechanical. What is this human essence? This question often lingers in my writing. The concept of the uncanny has always been somewhat present in my writing, but without standing out clearly defined. I did some in-depth research on the concept before analysing the drafts to see how it had presented itself in the fundamentals of the stories. Some of the places where I found traces of uncanny elements, I made conscious choices to try to refine and strengthen them. I found that I am often using a particular subcategory of the

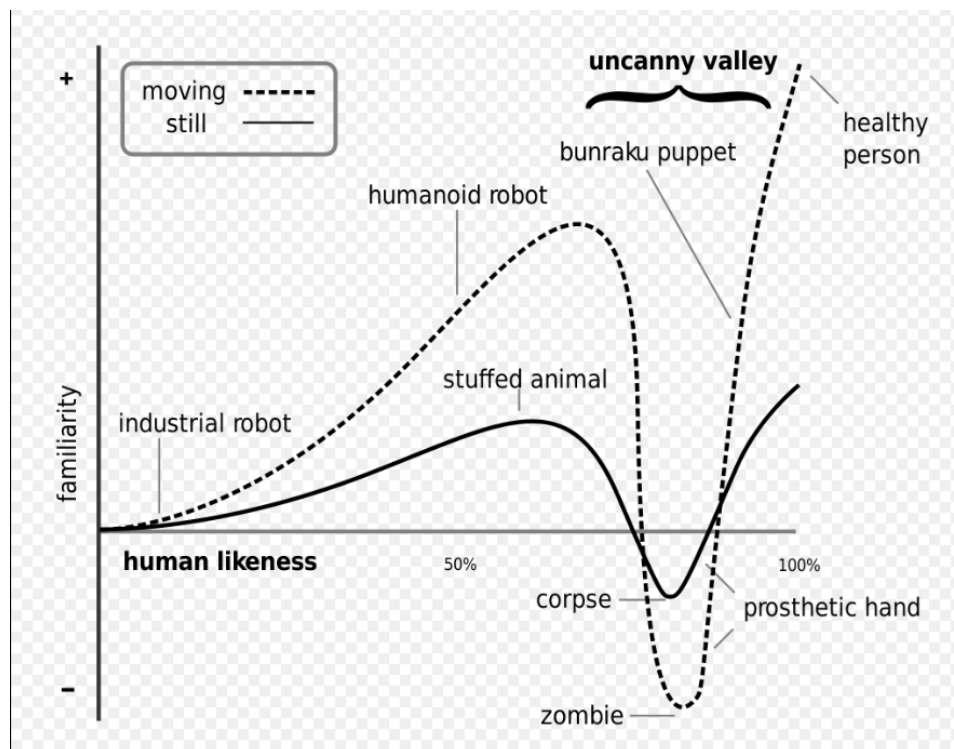
uncanny; the ‘double’. The concept originated from the psychoanalyst Otto Rank in his 1925 book *The Double: A Psychoanalytic Study* (orig. *Der Doppelgänger*) where he writes that the “use of the double-theme stems from the author’s unconscious impulse to lend imagery to a universal human problem—that of the relation of the self to the self” (Rank xiv). I am clearly interested in this universal human problem, and examples of my use of the double-theme in E.A. are the soul in “Sensō”, the zombies in “Passenger”, the sister in “Caesium”, and as Earth itself in “Mars” and “Return”. In the two latter, Earth is called the ‘sister planet’ of Mars, and the most familiar place for humans – the planet Earth – is seen from the outside and becomes estranged through this alienated lens. Earth is then re-explored by the humans coming from Mars, and simultaneously by the reader. The ‘doubles’ in these stories can serve as an exploration of the relation of the self to the self by seeing the self (at least partially) from other parts of the self. My use of the double is not necessarily as much a doppelgänger or a second manifestation or ‘clone’ of the protagonist, but more of a yearning for something that is similar to the protagonists’ sense of identity, but different. In *The Uncanny*, Freud references Otto Rank’s book:

He has gone into the connections the ‘double’ has with reflections in mirrors, with shadows, guardian spirits, with the belief in the soul and the fear of death; but he also lets in a flood of light on the astonishing evolution of this idea. For the ‘double’ was originally an insurance against destruction to the ego, an ‘energetic denial of the power of death,’ as Rank says; and probably the ‘immortal’ soul was the first ‘double’ of the body” (Freud 9).

This use of the double is quite evident in my stories “Sensō” and “Essence”, where the soul lives on outside of the body, representing the longing for immortality and imagining existence as a conscious self beyond a regular lifetime. The zombie in “Passenger” could also be said to fit into this idea, where the double is some sort of insurance against destruction to the ego. The zombies in the story are described as having a hive mind, and they present their existence as superior to the individual consciousness of a normal, mortal human being. Entirely giving up her own ego, the protagonist gains access to an existence without death in the traditional sense.

An attempt to formulate the emotional response connected to the uncanny was formulated by Masahiro Mori, a Japanese roboticist, who proposed a hypothesis in 1970 that an object’s resemblance to a human being evokes different degrees of affinity based on the degree of realistic human appearance. The ‘uncanny valley’ is a graphic visualisation of these

responses tied to the humanlike properties of the object observed – i.e. a humanoid robot. Ed Grabianowski writes in the article *How the Uncanny Valley Works* at HowStuffWorks.com: “Mori proposed that we feel greater affinity for artificial humans as they become more realistic, but when they are almost perfectly human, slight differences creep us out, and our affinity for them drops. Should they appear indistinguishable from true humans, we would again feel affinity for them”. So the theory is that the more humanlike artificial humans are, the more we like them, but we like them less when “they appear almost perfectly human with a few subtle flaws” (Grabianowski). Obviously, the concept of the uncanny valley is more applicable for visual representations of humanlike figures. Still, as I will point out later in this essay, the same feelings can be evoked through text, as in Danish author Olga Ravn’s novel *De ansatte* (‘The Employees’, my translation). Illustration of roboticist Masahiro Mori’s uncanny valley (Wikimedia Commons):



The Swedish 2018 movie *Aniara*, an adaptation of Harry Martinson’s epic poem by the same name, is an interesting example of conscious use of uncanniness. The spaceship *Aniara* leaves Earth which is rendered uninhabitable by radiation from nuclear wars, headed to Mars

where humans have set up colonies. There are no extraterrestrials or artificial humans in the movie, but a feeling of alienation and uncanniness is evoked by several humans with burned faces amongst the crew and passengers on the spaceship. The use of these characters shows, in a subtle but effective way, the deformation of reality and the recognisable brought on by no other than humankind itself. The scarring and burning are a result of humans destroying Earth, and the disfigured faces of these characters induce a repulsiveness that belongs in the uncanny valley, as we immediately recognise them as humans. Still, they will also automatically be seen as removed from looking fully human ('healthy person' on Mori's illustration). They might not be as far down in the dip as a zombie, but the emotions they trigger are below the 'human likeness' on the scale and thus within the uncanny valley. These characters can be defined as a representation of the alienation from the homely and familiar. Screenshot from the movie *Aniara* (2018):



When watching the burnt faces of these human beings on the spaceship *Aniara*, it is almost as if I become compelled to freeze the film and study their faces in detail to see that they are still human – and at the same time wanting to skip past them, to un-see them. When writing the stories in *E.A.*, I have found myself gravitating towards the overlapping areas of the slightly repulsive and the aesthetic and poetic, veering into the realm of 'weird writing' which is more

loosely defined than science fiction. As Jeff and Ann VanderMeer write in the introduction to their anthology *The Weird: A Compendium of Strange and Dark Stories*: “With unease and the temporary abolition of the rational, can also come the strangely beautiful, intertwined with terror” (location 218). It’s within this segment of interlaced unease and strange beauty I often find myself when writing because this is how I see the world. I relate to VanderMeer’s statement of weird writing stemming from “the impulse to entertain combined with the impulse to remind readers of the strangeness of the world and the limits of our understanding of it” (location 284). My interpretations and explorations of the uncanny can be recognised in many places in the stories in E.A. One case is “Passenger”, where the use of the zombie is an uncanny investigation of the thought that everything you think you know, and the people closest to you, can at any time change and become alienated from you as well as you from them. In some ways, I see this as illustrative of the ubiquitous human fear that your own cells can turn against you, your own mind can deteriorate (like HAL in the movie *2001: A Space Odyssey*), and at some point, your body – the only land you know – will cease to exist. To the farthest extent, minimising this fear is a question of trust. Trust is based on your relationship with what you perceive as familiar and recognisable. Also, whether you can at any time trust what you perceive as real – and the relation between your self and self.

Weird writing has a long tradition in the short story format, coming from great writers such as H.P. Lovecraft, Jorge Louis Borges, Franz Kafka, and Edgar Allan Poe, up to modern-day authors such as Octavia Butler, Ursula Le Guin, Micaela Morrissette, and Ken Liu. The 2012 anthology *The Weird: A Compendium of Strange and Dark Stories*, edited by Jeff and Ann VanderMeer, is devoted to such stories and contains more than 1,100 pages of ‘weird’ short stories and novellas. The editors write that weird tales “remain universal because they entertain while also expressing our own dissatisfaction with, and uncertainty about, reality” (VanderMeer, “The Weird”, location 228). I think that having a medium to express my uncertainties about reality is one of the reasons I write at all. The ‘strange and dark’ – perhaps in the form of the ghost, the ritual, or the hostile forest – urge the reader to contemplate the fabric of both mind and matter. Attempting to define the term, Michael Moorcock writes in the foreword to *The Weird* that “[t]here are no established rules for the weird tale, which is at least part of the attraction if

the story an author wants to tell can't readily be told in an established form. Although it might often contain a supernatural element, or a suggested supernatural element, it does not have to do so" (Moorcock, location 125). Most of the stories in E.A. do not necessarily fit into an established form, like for example the story "Essence", where there is no clear narrative, just the soul existing outside of the body as an entity with no nervous system and no senses, but still able to perceive the world and give a voice to this imagined what-if-scenario. It is vital for me to apply some level of metaphysical implications in my writing. Even if a story is about the relationship between a daughter and her father, or between sisters or lovers, I aim to incorporate a layer of bigger questions connected to cognitive science and philosophy of mind, like 'the mind-body problem' and 'Cartesian dualism' concerning the relationship between consciousness and the physical brain in the body; how memory and the sensory apparatus work; or 'the hard problem of consciousness' and the question of why sentient beings have 'qualia' or phenomenal experiences. The philosopher Brent Silby describes the concept of qualia in his essay *The Problem of Qualia* like this:

The word qualia refers to our subjective experience of the world and includes the properties of our experience that cannot be located in the world external to our minds. For example, the ineffable feel of a blue experience when one looks at the sky, or the pain one feels when one is stuck with a pin. These sensations are the essence of our experience and yet cannot be pointed to in the external world (1).

To me, scrutinising the properties of my experiences is partially a reason to write. Even if not directly made explicit in my stories, I want them to act as allegorical containers for such investigations. I exist as an identity across time, but still, I keep changing, affected by my environment and my relationship with other identities. Both as a reader and as a writer, I appreciate fiction that reminds us that the reality we perceive is nothing more than a result of our sensory input, that every human being has to rely on their own senses as a main source of truth. I find that incorporating elements of cognitive estrangement, the uncanny, and the weird in my writing enables me to question reality in my own way.

II

Cosmic Attitude across Continents

Having lived in Norway for most of my life, I have naturally read a lot of literature from the Scandinavian countries, and especially literature that I feel is relevant for my writing. During my three years in South Africa, I have also been able to familiarise myself more with South African literature, and I have had the privilege of meeting several inspiring South African authors in person. Influences from both geographical and cultural areas have naturally affected the writing process of *Essence Apparatus*. I have drawn a great deal of inspiration from poetry since I have a background writing mostly poetry.

In Scandinavia, there has been a narrow but profound tradition of science fiction poetry, starting with the Swedish poet Harry Martinson's 1956 epic poetry cycle *Aniara* and continuing into the present time, branching more extensively into eco-fiction dealing with the environment and climate change. On the African continent, the emergence of Afrofuturism has yielded explorations of science fiction and its potential for political commentary made universal, with movies such as South African *District 9* (Blomkamp, 2009) and Spanish-Ethiopian *Crumbs* (Llansó, 2015), and literature from authors such as Charlie Human and the Arthur C Clarke award-winning Lauren Beukes. Author David Barnett writes in his blog post *Putting South African science fiction on the map* in *The Guardian* that “a lot of South African writing is informed by the country's own recent history – how could it fail to be? [...] speculative fiction works best when it refracts real life through a fantastical lens, and magnifies, and perhaps tries to make sense of, the mundane” (Barnett). In South Africa, there seems to be a growing branch of literature with a focus on not only immediate issues like poverty, political issues, and gender and racial identity, but also an interest in magnifying these topics through elements of time travel, philosophy, and the natural sciences. Other examples are authors such as Imraan Coovadia and Keith Gottschalk. Coovadia was my teacher at the Creative Writing programme at UCT, and I've also been so privileged to meet the South African poets Michael Cope and Keith Gottschalk in person.

Michael Cope's 2005 poetry collection *Ghaap: Sonnets From the Western Cape* revolves around the archaeological sites in the region known as the Ghaap Plateau in the Northern Cape, which is often referred to as the 'cradle of humanity'. The site of the longest continuous human habitation is located here – the Wonderwerk Cave. Cope's poetry collection reflects upon the gathering and hunting lifestyles of the first humans and draws lines to the evolution of the mind and language. I had a fascinating conversation with Michael in 2014 when I visited him at his home in Muizenberg. I was interested in the thought of the first humans, and after giving me his book *Ghaap*, Michael showed me his rock collection. The stones of various sizes and shapes were displayed inside a glass cabinet. Michael opened the cabinet door and placed a stone in my hand, asking me to feel its weight. It fitted well into my hand. He told me it was a stone axe made 80,000 years ago. I have never with greater awe closed my hand around an object. Later, reading *Ghaap* between the red boulders of the Cederberg mountains, I realised that the sublime dizziness I felt when holding the artefact made by one of my early ancestors, was a premonition of the notion of being part of a collective consciousness that Cope manages to convey in his poems. He writes in the foreword to *Ghaap* that "the poems probe the traces of my own ancestors as well as those of humans everywhere. Seen with a longer view, all people are South Africans" (54). I keep revisiting the pages of *Ghaap*, where some of my favourite poems bring me back to a place I can call home. This enveloping sentiment clearly shines through in the poem "Mind Place":

The human mind was woven in this place:
Thread was spun from rain, fire, stone and wind.
On the loom of these trees, this system, these
corms, grasses, animals, it was set as twine.

They wove it with what came to hand: blood, sex,
calls, signs, traces of the feet of beasts
wound with food, stars, long or sudden death,
stitched-in spirits and explanations, facts and gods,
changes, invariants and differences.

They were slow and everyday. Their getting through
was itself the warp and weft, back and forth
as the world changed for a million years.
When it was made they took it everywhere
until there was no place where it was not.
(23)

The poem spans the timeframe of the human cognitive evolution from its beginning to now. The mind cannot imagine not being, and the mind creates the world – it is what we are. This poem contains a lot of the things I am trying to investigate in my own writing – the human consciousness in relation to itself and the Earth, examined both through concrete descriptions and from an outside perspective. Cope writes close to science in terms of archaeology and history, and he points to human existence within a cosmic scale. Cope’s gaze is turned down and into the earth, so to speak, where our collective knowledge of human evolution comes from in the form of artefacts, substances and remains. By letting the reader dig into the soil of our ancestors, he also lets us dig into our own minds and humanness. The Scandinavian poet Harry Martinson (Sweden, 1904–1978) also grappled with what makes us human, but he turned his gaze outwards to the universe instead, inspired by the scientific discoveries made at his time. He writes in the posthumously published collection of poems and prose pieces *Doriderna* (1980):

When writing poetry about the cosmos, one can’t write without attitude. One must stay as close as possible to what science has found, and the laws of nature can allow. Only from there should one be licensed to proceed into investigative speculation. Even then, however, one should owe oneself, and the concept of logic, to avoid paradoxes. It is equally important to look out for tautologies. All of this, together and in its part, perceived and applied, should be the metrics and prosody of the cosmic poem. (Martinson, *Doriderna* 61, my translation)

Martinson is renowned for his 1956 epic poetry cycle *Aniara*, where he indeed displays a bold poetic attitude. The narrative unfolds from an apocalypse on Earth in the form of a nuclear war leading to pollution and radiation – prompting humans to evacuate Earth in big spaceships headed to colonies on Mars to live there – to the story of what happens on board the spaceship *Aniara* when it gets nudged out of its course and the thousands of passengers are headed forever into the nothingness of vast space in the direction of the constellation Lyra. Martinson’s cosmic approach is certainly to be admired. He stayed close to “what science has found”, which also reflects the fact that he wrote *Aniara* in an epoch of nuclear bombs, Cold War, and broadened understanding of the universe, such as Walter Baade’s star observations leading to a recalculation of the size of the universe. Suddenly, the known universe became twice as big, and the smaller scales became even smaller and less understandable concerning the observable reality. Werner

Heisenberg introduced his uncertainty principle of quantum mechanics in 1927, and Harry Martinson debuted as a poet in 1929. Martinson's growing interest in astronomy and science gradually seeped into his writing. *Aniara* was published in 1956, and the journey of the fictional spaceship escaping a destroyed Earth could be said to "proceed into investigative speculation." Martinson sends both his spacecraft and the reader's mind out into the vastest corners of the imagination, from a starting point of scientific curiosity.

Aniara has been central to me as a source of inspiration for many years. The book *Aniara* has been adapted into an opera and a film in 1959 and 1960 respectively, and more recently into the 2018 feature movie *Aniara* (Pella Kågerman, Hugo Lilja). The title word 'aniara' is rooted in ancient Greek with the meaning of 'despair'. Martinson wrote the book at a time when the atom bomb was used on Hiroshima and Nagasaki, and its themes are still highly relevant today, in a world succumbing to human-made global warming. I admire Martinson's dedication to the natural sciences and how he is able to bridge science and fiction. I agree that one can't write without 'attitude' regarding the cosmos. Bringing the universe into the writing in one way or another comes naturally to most humans who write literature, I think, often in the shape of scattered words or sentences as small reminders of the unfathomable. But giving the universe a lead role in (poetic) fiction is a more courageous move, and both attitude and perseverance are needed in addition to limitless imagination. I am a reader who definitely can appreciate stories about interpersonal relationships, the experiences of everyday life, and what it means to be human in closeness with other humans. But I am also a reader who even more appreciates stories that explore interpersonal relationships *in addition* to the relationship between the human mind and the universe. Some of the passages in my story "Return" are more or less consciously influenced by *Aniara*, particularly regarding the escape from an Earth destroyed by humans, and the emotional reactions to being denied access to a goal – whether it is knowledge or a safe destination.

Aniara has later inspired many works by Scandinavian authors. A recent and relevant example is the 2018 novel *De ansatte* ('The employees', my translation) by the Danish author Olga Ravn. The story is set on a spaceship far away from Earth – 'The Six Thousandth Ship' (my translation). The individuals onboard are of both human origin and artificial androids;

“There are the human ones and the human-like ones. Those who are born, and those who are created” (48, my translation). The androids are indistinguishable from the real humans – a strong reflection on the double and the uncanny valley. The story is told in the form of recorded interviews with the people on board, initiated by ‘The Organization’ (my translation) that are behind the whole ship and its mission. The chapters are called ‘Witness records’ (my translation) and numbered, and they are all told through the first-person narrative. Throughout the texts, it is not always clear to the reader if the respective narrator is a human or an android. Reading the narrative voices not knowing who is human and who is artificial creates an uncanniness because it is not obvious whom to relate to, or what value should be assigned to the different individuals and their statements. Onboard are also 19 objects that have been obtained from a planet called ‘The New Discovery’ (my translation). These objects affect everyone on the ship in different ways, somehow increasing feelings of nostalgia and sadness, and the crew start to question their identities, roles on the ship, and what is real, as described by this crew member:

WITNESS RECORD 010

Don't go into that other room. It's not pleasant there. You have the possibility of not doing it. You can let us do it for you. We have already been there. You still have the possibility of saving yourselves. I don't know if I'm human anymore. Am I human? Does it say in your documents what I am?
(Ravn 18, my translation)

This individual is not sure whether it is human or not as a result of the contact with the objects. Ravn is ambitious in her introduction of three different representations of consciousness in interplay: Authentic human beings, artificial or constructed human beings, and completely uncategorizable objects far removed from human understanding – the latter being described by the two former. The objects' communication does not happen through any linguistically recognisable means, but apparently on a subconscious level:

WITNESS RECORD 021

I know you say I'm not a prisoner here, but the objects have told me the opposite.
(Ravn 20, my translation)

The crew – the employees – never questioned their purpose or position on the ship before the objects were taken onboard. The objects change them from within. Also in Ravn's book, as in Wernström's, the need to name, categorise and label the world in order to be able to understand it

is closely examined. The crew on Ravn’s ship secretly assign names to the objects, like “the half-naked bean” (my translation), or human names like Ida or Rachel (65), even if naming things is advised against by the higher authorities. One of the witnesses reports that “[i]t is my assumption that the naming will render the object harmless, lessen its foreignness, and introduce it into a reality that the individual crew member can understand and exist within” (65, my translation). The contact with the un-human entities in these novels acts as a catalyst for confrontations within the human beings as well – who are we when we see ourselves both from the inside and the outside?

The stories in *Essence Apparatus* have also indirectly been influenced by the Swedish poet Ida Börjel’s massive 2014 poetry collection *Ma*. The poems keep zooming in and out between the most trivial elements of human life, through political and current social issues, and the vastest cosmic perspective. Börjel’s gaze is panoptic, superimposing all familiar aspects of life so that it appears estranged, like in this key poem:

lived time, lived place
that memory forces into present tense
sketched in moonlight through the gate
in filmy sunlight through the gates
a mother was, a mother’s echo
the universe expands
the universe expands
testing, forcing, orating
through the gates in the Japanese character
for passively utilized surface, negative space
the conditional emptiness
is not emptied; that something, through
the hazy sunlight spells *Ma*
(Börjel)

The alphabet itself is the basis for the book’s structure, as a homage to Danish poet Inger Christensen’s 1981 famous poetry book *Alphabet*. Börjel represents a vein in Scandinavian poetry that revolves around the exploration of the human condition seen in a universal perspective; through science and an alienating view on the world as we know it by connecting the broadest parameters of human understanding with the most mundane details. This tradition can be seen as an extension of Martinson’s ‘attitude’. *Ma* appears as an elegy for Mother Earth itself, a planet conquered and defeated by humankind:

from Pangaea Laurasia
Ma all was broken into pieces
 Pangea was
 and Gondwana was broken from Pangaea
 the universe expands
 the conditional
 void, locked
 in time, twisted in
 the human measurement *earth's*
loneliness, emptiness, earth's
abandoned lonely lunacy
 time, the human era *the anthropocene*
 (Börjel)

As in Michael Cope's *Ghaap*, the time span is sublime, capturing all of human history in one sweep, from a time where the human mind was not until a time where the human mind is everywhere, and language is everything.

South African poet Keith Gottschalk operates in the same realms as Harry Martinson in regards to his 'attitude' when writing his poetry, heavily based on the fields of astronomy and space exploration. Gottschalk is well-known for his anti-Apartheid poetry and his journalism. He served as the 2005-2006 Chair of the Cape Centre of the Astronomical Society of Southern Africa (ASSA) and is also a veteran member of the British Interplanetary Society, and The Planetary Society (Pasadena). He serves on the exco of the South African Space Association and founded the UWC Space Association (Biography at spacelab.uct.ac.za). I will focus on Gottschalk's 'space poetry', as these are the poems mostly relevant for my writing. Gottschalk writes poems as odes to explorers and as a celebration of knowledge while oscillating between the emotional language and the scientific. This creates feelings of both intimacy and estrangement in the reader, and sometimes frustration over unfamiliar scientific expressions or complicated language. Often, he mixes in words from other languages as well. He is a bold writer, not afraid to challenge, but never flinging the reader so far out from the mothership that they can't be pulled back with a sudden jerk of the oxygen cord.

I have always had a preference for poetry that does not linger too much on the romantic and erotic relationships between humans, but rather immersing itself in the human mind's relationship with the universe. In the poem *Shuttle*, Gottschalk writes of the intimacy of "frailness of flesh & skin" being carried in a metal vessel to the skies, almost naked but

“wrapped in only blueprints & hope”. There is another angle on eroticism in descriptions of the human body “to plunge through furnace of plasma” and “torn molecules, pink & purple”. It is the lover rejected, the disintegration of being turned away from what you try to reach. This poem speaks to me because I find in it some of the same motivations that drive my stories “Mars” and especially “Return”, where exiled humans return to Earth to satisfy their yearning for understanding, only to find that their physiology has become too far removed from the conditions on Earth. And so Earth rejects them. Again, it boils down to the limitations of being human, confined to a particular sensory apparatus and specific elements. But also the hubris, the curiosity, the ever-present urge for exploration and proposal to the universe: Please, let us penetrate you with our minds and our puny technology. Please, let us sense you beyond our senses. We are willing to make sacrifices. Gottschalk’s full poem reads:

SHUTTLE

these are the laws of physics
immutable as those of Medes & Persians:
you, frailness of flesh & skin
wrapped in only blueprints & hope
to plunge through furnace of plasma
burning, blasted, luminous beyond mach-molten:
torn molecules, pink & purple,
cremating you as sati to the sky.
if all goes well, you shall fly
as a butterfly bolted to a bullet.
if not, your only grave shall be
Schlieren lines across a shocked sky.
to strangers,
your death shall be as beautiful as fireworks.
but to those who knew you:
grief.
they vanished
became sky:
a rain of metal tears
upon the land.
breaking,
that contrail became cenotaph:
a wreath we laid
on our voyage to worlds.
(Gottschalk)

There are quite a few scientific expressions in the poem, which at first might create a distancing effect. The poem asks to be examined and explored. Can it be seen as an elegy for every life lost

on the altar of science – or a glorification of the cause? The poem refers to the Columbia space shuttle disaster in 2003, as can be observed in a footnote on the poem’s page on astronautix.com. The space shuttle disintegrated upon re-entry into Earth’s atmosphere, and all seven crew members were killed. The poem contains references to things that are out of reach for the human sensory apparatus, like ‘mach’ – the measurement unit for comparing speed to the speed of sound, ‘schlieren’ – the name of optical inhomogeneities in transparent material not visible to the human eye, and ‘molecules’ – small building blocks made up of atoms, only observable through a powerful microscope. Gottschalk’s approach both to the language and the scientific topics appeals to me as a writer. What does it say about human nature that we keep trying to extend our limited senses utilizing technology and science? Seemingly, an integral part of human nature is the yearning to perceive the imperceptible. From Eadweard Muybridge’s photographs of a galloping horse in 1878, taken to see if all four feet ever are completely off the ground (they are) – to the Square Kilometre Array in South Africa’s Karoo, built to provide the highest resolution images in the history of astronomy and let us obtain observational data from the early stages of the universe: we build machines to help us understand ourselves. As with the works of Börjell and Martinson, Gottschalk’s poetic investigation is of tremendous magnitude. Located on opposite hemispheres, these writers tie bonds through their attitude and manage to place humanity on a cosmic scale. And perhaps literature such as theirs is the closest we can get to wrap our human minds around the incomprehensible.

I can only give my humble attempts at circling topics like these in my writing. Being located in South Africa for the past three years, discussing writing with my peers at UCT and with South African poets, visiting the Square Kilometre Array, and watching the Milky Way galaxy across the unpolluted night sky in the Cederberg mountains have made me more confident in my objectives as a writer, and reassured me that the area of literary cosmic exploration has a place in this world.

III

Nature and Metamorphosis

–It’s destroying everything.
–It’s not destroying, it’s making something new.
Annihilation (Garland)

The “it” in the above quote from the 2018 movie *Annihilation* by writer-director Alex Garland refers to the extraterrestrial presence that has infiltrated an area of wilderness, merging and transforming the DNA of whatever biological beings happen to be inside its perimeter – plants, animals, and humans. It is also capable of creating replicas, as the protagonist later learns. The movie is an adaptation of Jeff VanderMeer’s 2014 novel *Annihilation* – the first novel in his Southern Reach trilogy. VanderMeer has said about his trilogy that his “main focus with the Southern Reach is two-fold: to explore our relationship to nature and to explore how people react when facing what appears to be the utterly unknowable” (VanderMeer, *Weird Fiction Review*).

I find these explorations relevant to my writing and the stories in *Essence Apparatus* (abbreviated to E.A.) firstly because of the question whether the metamorphoses are destructive or constructive, and secondly because of the literary investigations of interactions between humans and their surroundings. In my writing, I want to look at the presence of nature as both an intimate part of human beings and as an alienating force. In E.A., the narrators’ surroundings are of importance, and often there’s an interaction between them and their environment.

Geographical placement and translocation also play a part. The stories in E.A. are set in South Africa, Finland, Svalbard, primordial Earth, and the planet Mars, to mention some. It is not always clarified in detail where the narratives take place, though, but there are details present in most of the stories that somehow locate them in reality and the familiar world – even when seen from a distance. The narrators in E.A. are often directly affected by their surroundings and even overtaken. “Habitat” hints at the narrator undergoing some sort of animalistic metamorphosis, perhaps turning into a polar bear. In “Cave”, the narrator’s lover turns into stone, and eventually, she follows suit. In “Sensō” and “Essence”, the narrator’s lover turns into a soul/ghost. In

“Here”, the human entity finds its place in nature, gradually getting to know its surroundings (the story being a poetic manifestation of a vision of the first humans of the species *Homo Sapiens*). In “Mars” and “Return”, nature is barren both on Mars and on Earth, and the environment is uninviting and inaccessible for humans. The humans themselves are also different, having adapted to the low-gravity environment on Mars, artificial nutrients, and contained living conditions. Often the world appears seemingly ordinary, but still somehow not. In some of the stories, there are no profound metamorphoses, but behind the representations of the world, there is a lingering notion that reality cannot be fully trusted. Ordinary materials and phenomena are presented as if they are disparate – be it a dying tree in the forest, the rocks that make up a mountain, seaweed on a beach, or a wooden bowl.

In *Annihilation*, the unfamiliar environment called ‘Area X’ which is being explored by humans at first closely resembles the familiar world. But the area reveals itself more and more as strange and alien the more the expedition investigates it. The narrator describes her first reactions to the inconceivability of the place and how she is not able to stay unaffected: “The beauty of it cannot be understood, either, and when you see beauty in desolation it changes something inside you. Desolation tries to colonize you” (6). The area is indeed the result of an extraterrestrial presence affecting and morphing the known building blocks of our reality. This presence expands its territory little by little, slowly pushing the borders between normal nature and alien-affected nature outwards geographically in a circle from its midpoint – a lighthouse where it’s indicated that the extraterrestrial organism landed.

Annihilation has similarities with *Solaris* (a 1961 novel by Stanisław Lem, adapted into movies by Andrej Tarkovskij in 1972 and by Steven Soderbergh in 2002) in the way the alien appearance is depicted with subtleness. The estranged elements in these narratives creep up on the protagonists and occupy their consciousness slowly. In the movie adaptation of *Annihilation*, Area X is called ‘the Shimmer’ and visually represented as a wild forest rich in vegetation with gleaming colours. In this area, we learn as the expedition moves deeper into it, human DNA is merged and mutated with the DNA of other living entities. One of the expedition members turns into a blossoming tree, and another’s voice can be heard in the roars of the bear that earlier killed her. When the mutations take place, the boundaries between what is human and what is

something else are blurred. External forces are diminishing the integrity and autonomy of the human body. If not as abysmal as in these novels, the narrators in some of the stories in *Essence Apparatus* also experience being overtaken by their surroundings and morphed by the environment. Or their relationships with nature act as metaphorical expansions of their interpersonal relationships. It can be as unspectacular as a daughter asking her father, the gardener on his deathbed, how she should care for the potted plants in his hospital room, or the more sensational event of a human being born on Mars getting slowly crushed by gravity on Earth.

In Lem's *Solaris*, the alien entity is a jelly-like ocean covering an entire planet. This ocean creates shapes and structures resembling familiar objects, and also some structures that the human scientists are not able to recognise. The planet Solaris has been studied extensively for many years, but humanity is getting no further in understanding it. Humans have tried everything to establish communication with the oceanic planet – even laser beams fired into it. But besides the impermanent shapes it creates, the ocean is silent until it duplicates the dead loved ones of the crew members on the space station orbiting the planet. One of the questions *Solaris* arises is to what degree a conscious entity must be recognisable to be considered relatable. Lem's *Solaris* also shows how it is impossible to understand others before we understand ourselves, and that the human curiosity only leads so far – not farther than the limits of our sensory apparatus and enclosed mind dictate. The neutrality of the alien strengthens the uncanniness in *Solaris*. Are the duplicates it creates of equal value as the living humans they once were? Are the copies a gift from the alien consciousness, or a threat – a weapon? Or just a way of showing its ability to respond and communicate by mimicking what it picks up from the humans' minds and memories? By not equipping the alien with any detectable motives and intentions, Lem again turns the mirror towards the reader and forces us to ponder what we see.

Jeff VanderMeer's *Annihilation* echoes this neutrality, where the literary device of the 'double' also comes into play when the protagonist meets her duplicate inside Area X and learns that her husband actually was a duplicate when he returned from a similar expedition into the same area. The copies display no clear objectives besides merely being, and it is up to the reader to conclude whether their existence is good or bad. The author himself has said:

To the biologist, the strangest of all organisms are human beings, really, and much of what a reader may find frightening about Area X, she finds fascinating or, in some cases, even calming. And at least part of the sense of unease in *Annihilation* hopefully comes not from nature, which is merrily humming along doing its thing, but the weight and perspective the human gaze puts upon it [...].
(VanderMeer, *Weird Fiction Review*)

The sense of unease VanderMeer wishes to impose stems from the implication that the world isn't something that just happens outside of you as an observer – it is your perception and emotional response to it that determine its value. In my story “Mars”, the narrator concludes that “[w]e assign value to the landscape by observing it” (37) – the human gaze is the measurement, and observing the landscape also means observing yourself in relation to it. The human gaze is also the scientific gaze, the striving for objective observation. The narrator in *Annihilation* insists on keeping a neutral view: “I am just the biologist; I don't require any of this to have a deeper meaning” (192), which is telling for her emotional distance in the relationship with her husband and ultimately with herself.

The inconclusive alien forces of *Annihilation* and *Solaris* also depict the fundamental human yearning for knowledge outside of ourselves. One of the crew members on the space station circling the planet Solaris says that “[w]e have no need of other worlds. We need mirrors. We don't know what to do with other worlds. A single world, our own, suffices us; but we can't accept it for what it is” (Lem 72, Harcourt). We keep searching for something ‘other’ to explain our existence, while in actuality, the struggle is to understand and accept ourselves. Colin N. Manlove writes in his book *Science Fiction: Ten Explorations* about fictional examinations of nature and probing of the universe that “the void of space or time is in part a metaphor for the inner void of the self: colonise that, subdue that to one's purposes and one indeed knows where one is” (220). The quest for objective truth ends up becoming the mirror for our own inadequacy. The narrator in *Annihilation* summarises the futility of trying to escape human subjectivity like this: “Nothing that lived and breathed was truly objective — even in a vacuum, even if all that possessed the brain was a self-immolating desire for the truth” (8).

Returning to Jeff and Ann VanderMeer's anthology *The Weird: A Compendium of Strange and Dark Stories*, I find an early example of a curious narrator being metamorphosed by nature in the story “The Vegetable Man” by Luigi Ugolini, written in 1917: “one day, while

admiring one of these battles of nature and, I must tell you, becoming entangled in a large bush of liana, a plant I had never seen before suddenly caught my eye, absorbing all my attention. Can you imagine? A new plant. ‘What delight, what triumph, what delirium it is for a botanist to make such a discovery’” (Ugolini, “The Weird” 98). Here, as in the novel *Annihilation*, the protagonist is a scientist – a botanist – approaching nature to examine it more closely but ends up being overtaken and transformed by it, into something else, less human: “Believe me, I felt that my body was being transformed, that I was no longer myself, that my blood was not my own, that I was going to meet a grim fate [...]” (Ugolini, “The Weird” 100). Both Ugolini’s story and VanderMeer’s *Annihilation* touch upon the human desire to understand nature, resulting in their discoveries turning against them and nature forcing them to take part in itself as a holistic organism. The potency of the theme is related to the deep fear of our own annihilation, the fear of being changed and mutilated against our will – the fear of becoming less human. Ultimately, our bodies will dissolve and our atoms separating and going back into the environment not as us, but as something else.

In *Essence Apparatus*, change and how to respond to it is a recurrent topic. The actions of the narrator in “Sensō” are rooted in her avoidance of change. She fights the change by initiating another change that she has control over by constructing the machine to extract the soul of the person she does not want to lose. The protagonists in my stories are only active to a certain extent, eventually letting their environment subjugate their will and giving in to the alterations at hand. There is a lot of movement to and from places in the stories, both physically and mentally, but there is also a sense of claustrophobia, wanting to break free from the confinement of reality as it is. My protagonists yearn to be somewhere else, or someone else, but often find themselves stuck with no other choice than to absorb the elements around them in an almost vegetal way. They also exhibit the same sort of neutrality seen in *Annihilation* and *Solaris* – they don’t conclude or take a stance regarding whether the forces acting upon them are good or bad. They might fight the metamorphosis, but in the end, they usually succumb to acceptance. Perhaps because the events in which they are stuck are indirectly initiated by themselves, by wanting to get closer to something or someone. This interconnection between the narrators and their surroundings is an extension of the thought that the self is inseparable from nature. Philosopher

Emanuele Coccia formulates this view in his book *The Life of Plants*, here summarised by Rachel Riederer in *The Nation* in her review of the book: “[a]s we act on the world and it acts on us, both are changed. Thus, the very idea of an environment that is separate from the self ‘should be rejected,’ Coccia argues, because just as the world is an environment for living beings, so ‘the living being is an environment for the world’” (Coccia; Riederer). You and the world are always entangled, and your feeling of self is not entirely separated from your environment. Being subdued by nature is a strong literary metaphor for everything you are unable to control. A nature consuming your identity is almost the opposite of Otto Rank’s double-theme, as the relation of the self to the self is dissolved rather than doubled.

Another story from the VanderMeers’ anthology demonstrates this dissolution of self when the two protagonists find themselves in an utterly strange environment that eventually completely overtakes them. The peculiar story “The Other Side of the Mountain” by Michel Bernanos was written in 1967 and describes in a matter-of-fact narrative style the journey of an 18-year-old young man and his friend Toin, the cook on the ship where the two meet. In the story’s second part, after the ship has been sucked into some sort of maelstrom, they venture through a landscape of complete unfamiliarity. They try to make it to the other side of a mountain, in hopes that the world there will again be normal. The nature they pass through in this strange world is also full of hostility: “Then the flower retook its vertical position, its petals closing up again. Nothing but bare soil remained. It had sucked up everything, grass and shrubs, just as it would have swallowed me whole, had I not retreated” (Bernanos, “The Weird” 394). This is just the beginning of their encounter with a nature continually trying to absorb them. Like the botanist in *Annihilation*, the narrator observes how his surroundings gradually change his view of them: “The extraordinary beauty of the place, a beauty that had fascinated me at first, now only inspired me with revulsion” (394). His subjectivity gives weight to the value of the world he sees, rooted in the frustration of not being able to comprehend reality, and the threat to his feeling of self. As the two protagonists are moving closer to the mountain they wish to traverse, they encounter a large number of stone statues resembling human and animal shapes. As it turns out, the two heroes of the story also slowly become mineral. The apparent neglect by both characters to acknowledge what is happening to them is notable. The narrator sees that

Toin's skin is being covered in mud, gradually developing into a "hideous crust", and he realises that the same is happening to him as well. But on several occasions, the narrator points out that they do not speak about this development: "I read in my friend's eyes that my face had undergone the same transformation. We resumed our ascent without a word" (402). Not acknowledging their alterations can be seen as an expression of surrender, and the loss of language a step away from humanness. They can not fight their transition into a new form of existence – as none of us can fight our cessation.

The same kind of reactions can be found in *Essence Apparatus*, in the narrators' responses to their surroundings interacting with them – whether it is following an animalistic instinct to withdraw into a glacier, or being swallowed by the sand and the sea when nature is affected by an impact from above. They are alone in their experience of the unspeakable and the incomprehensible, and they have no other options than to resurrect and let the world inhabit them.

When nature is given substantial precedence in a fictional universe, the story can be said to relate to the category of eco-fiction. The literary blog *Dragonfly* focuses on eco-fiction and references critic Lawrence Buell's criteria as fiction where "[t]he nonhuman environment is present not merely as a framing device but as a presence that begins to suggest that human history is implicated in natural history", and that "[s]ome sense of the environment as a process rather than as a constant or a given is at least implicit in the text" (*Dragonfly*). Seen through this lens, many of the works I have discussed are nuances of eco-fiction concerned with human existence as subordinate to nature and cosmos, or questioning the relationship between them. I certainly enjoy my own ventures into areas of nonhuman environments in my fiction, as allegorical expeditions into the inner landscapes of the human mind. As truth-seekers, we must acknowledge that nature can choose to reveal its secrets to us or reject and consume us. The human mind is everywhere, but eventually, the collection of cells that are us will dissolve and find their way back into the ecosystem of the universe.

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