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The Veilmakers

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THE VEILMAKERS

Senior Project Submitted to
The Division of Languages and Literature
and
The Division of Social Studies
of Bard College

by
Emily Giangulio

Annandale-on-Hudson, New York

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For Jean McHugh...

TABLE OF CONTENTS

NOVELLA

Part I: Mortar

Chapter 1	2
Chapter 2	15
Chapter 3	32

Part II: Stone

Chapter 4	46
Chapter 5	58
Chapter 6	77
Chapter 7	90

Part III: Terra

Chapter 8	101
Chapter 9	113

CONCEPTUAL FRAMEWORK

Introduction	127
The Technocratic Paradigm.....	133
Patterns of Modernity	144
Concealment and Accountability.....	149
Technological Capacity	155
Alternative Frameworks	163
Redesigning Green Rhetoric	170
Scale-Making and Science Fiction.....	184
Conclusion	191
Bibliography	195

PART I: MORTAR

CHAPTER ONE

Their “technofantasy” never belonged to me, but I pulled a stitch in my side trying to squeeze into it.

The costume I thought apt: a plaid calf-length skirt and peasant blouse folded underneath a corset that I had found in the body-sculpting section of the lingerie aisle. The collegiate jacket with the pleather elbow pads had been bought on a secondhand site the night before. My ribs were crushed and the patterns were not altogether authentic to the Victorian aesthetic, but I felt Mary Shelley-esque. I had even braided my hair in dreary loops pinned to the sides of my head vis-à-vis her portrait. Before I left the apartment, I draped Ivan’s plastic lab goggles around my neck. If I had learned anything from the forums, futurism was as an important of an accessory as nostalgia.

Would Mary Shelley have been a steampunker? I wondered as I waited for my pod. My breath sprouted in cauliflower clumps from my mouth. The city in the hard heart of May was a bitter landscape of shriveled passersby and unsmiling building-faces, made matte and gray in the late afternoon light. From the corner of my apartment complex to the far-end of West Avenue, I could see nothing but the neck of the guideway rail carrying pods. They skirted from the murky shadow of the business district into the main intersection before splitting off in every which direction, like beetles scattering from the heel of a boot. The tinted windows hid each occupant, and I imagined couples hunched in their cramped interiors, donned in nineteenth century garments.

Horsehair petticoats and collapsed sleeves and poke bonnets for her; frock coats and wide cravats and top hats for him. They gazed out the window, noses low, eyes downcast, as their carriage spirited them to the next opera, the next ball. Their breath fogged the glass; they looked away as they careened through the housing projects.

I tucked my hands into my armpits. As the pods zipped past, gleaming darkly with their occupants from another century, I felt even more reassured in my choice of character.

The pod I had ordered shuddered to a halt off the curb, headlights blinking a crisp *hello*. I stepped over a puddle between the pavement and the guideway and folded myself through the open door.

“8-4-8 Carroll Street, Mokrina,” I said.

The door sealed shut just as the rain began, and I felt the world move beneath me.

I watched the droplets dash against the front window into satiny ribbons. Shelley’s gothic burden pulled my shoulders inward as the city passed in streaks of tepid yellow, heavy slate. We shared the bleak summers, the dry winters, the bloody sunsets of *The Scream*; over two hundred years caved between us, yet we could not be closer in meteorological conditions. But the damp and the dark had been a generative environment for Shelley, for out of that year without a summer in 1816 came the first true story of science fiction. I strained my neck to squint at the sky out the window. No such inspiration transferred to me, it would seem. Every year since the mosquito with the belly

full of infected blood feasted on my mother's ankle had been a year without a summer, and I still did not know what I was doing with my failed academic career. Here I was, seven years into a half-abandoned PhD, attending a party I had discovered in the late hours of the night while stalking the 'Shindigs & Soirees' section of *GrindingGears.com*.

The pod shot headlong over the river. Through sheets of rain, I could barely make out the ruins of the two suspension towers of the old Mokrina Bridge. The neo-Gothic limestone arches soared out of the frothing waters, solitary turrets that, though weathered away by storm and wind, remained standing, shepherding ghosts of trucks and trains that no longer had a bridge to carry them. The cables were cut, my mother had told me, when the water got too high.

As I hurtled into the shadow of Mokrina on the other side of the river, I could see the first electric tongues of sunset before being swallowed up by the buildings again.

#

I stumbled into the smoky interior of a nineteenth century London pub. Only, I wasn't entering from the cobblestoned, piss-soaked streets of the Victorian slums, but from the hallway outside an apartment on the thirty-second floor of a high-rise, uptown Mokrina. Twenty-first century air ventilation sucked the pipe smoke out of the room before the door closed behind me. What was that smell? It was rich and earthy, almost sickly sweet

and animal. But there was also a note of burning metal, slightly fishy, somewhat tinny.

The hostess raised an eyebrow at me.

I wiped my hands, greasy from the rain, on my skirt and reached to shake her hand. “Oh, I’m Margot. You must be Elvira. We exchanged messages on the forum.”

“Yes, you’re that researcher! That people scientist!”

I forced a grin. “Not quite. I’m a PhD candidate in anthropology at the university. Thank you—honestly, thanks—for inviting me into your home.”

“Not sure what you want to study our little club for,” she said, arms crossed over her corset. “But all are welcome here! Oh, and look...you tried to dress up.”

I glanced down at my ‘costume.’ It was, admittedly, a sad attempt at the retro-futuristic, hyper-vintage collision of centuries that wallpapered the room and filled its occupants’ lungs. I had convinced myself that dressing as the young authoress was the ultimate reference to the aesthetic, as *Frankenstein* had embodied the treasured blending of the arcane, the electric, and the engineered with pure nightmare.

“I’m Mary Shelley,” I said.

Her blank expression told me I had assumed too much in the allusion.

“*Very* antique,” she said with a pink smile.

Elvira, who had answered my last-minute request to attend the party, was a tall, confusing weave of old-world textiles and futuristic imagery. Her

midriff was stuffed into a front-plated corset that cinched her waist at a painful-looking proportion to the volume of her skirts. Knee-length faux-hide boots, laced up with brass, gear-shaped clasps, poked out front under the layer of brown ruffles in her petticoat. From her high-collared peplum to the teensy bowler hat outfitted with intentionally rusted goggles on her head, hers was the exact look one would come across if searching the Internet for images of the steampunk aesthetic.

And I, not quite a wolf in sheep's clothing, felt decidedly under-dressed.

The fishy-metallic scent walloped me in the face as a man holding a smoking pipe passed by.

"What's that smell?" I asked.

"Leather and motor oil!" Elvira said. "Rare flavors these days! You got that right—standard e-pipes, but I found these retro-flavored cartridges for a *great* price." She breathed in through her nostrils and sighed. "Smells like yesteryear, as we say."

I made a mental note of the scent. *Yesteryear*. Motor oil was not a rare commodity, but an unnecessary one, as all vehicles were electric. And the only leather one could get their hands on nowadays was from thrift store boots and jackets crafted twenty, thirty years ago.

It was not altogether a *pleasant* aroma.

But still, I was not the target demographic; I was not the one who longed for the bygone, and I felt even more acutely of that when a man with a well-

oiled *mustachio* and a monocle glued over his left eye socket offered me a tray with tiny, orange drinks. “Sherry cobbler?” he offered.

I took a drink, feeling the condensation cool between my fingers. I drifted away from Elvira, who was now deep in conversation with the mustachioed man, and infiltrated the main living area. I slumped into a modern couch, and took a look around at the décor. Lamps equipped with tasseled shades. A plastic boat in a bottle seated on the mantle. A record player spinning a blank disk from its perch on the coffee table. None of it was authentic; the music, jagged with fake radio interference to give it a more antique sound, came from above, likely from hidden speakers about the room. Elvira’s guests’ eyes were bright with sherry and their conversations overlapped around me.

I dipped my nose into my cocktail and drank. Every time I did this, I felt more like an impostor.

Not because I wasn’t a member of the steampunk community—I was, definitively, *not*. But because I couldn’t even justify my being here. I had never been able to consider what I did fieldwork. *This* didn’t feel like the field, or how I was told the field was supposed to feel like. This was a middle-aged woman’s sitting room, a middle-aged woman with a hobby, an *unusual* pastime that attracted an eclectic group—but a hobby, quite simply. What had compelled me to come? Before this, it was the doomsday-preppers luncheon in Metoac. Before even that, the LARPer rave uptown. I had written in my thesis proposal that I was interested in the urban subcultures that had survived the test of time. I did what all aspiring researchers should not do and I, one, described said

subcultures with vague, blanketing rhetoric, and, two, had implanted in my mind a beatific answer to my question before even stepping out from behind my desk. When considering the longevity of early twenty-first century doomsday-preppers and LARPerS and steampunkers, I had decided that the only conclusion could be that they persisted out of necessity, as a reaction to the tide turning into the Anthropocene, as a means to mirror their own humanity in the face of technocratic disjunction.

“*Byul-sheet,*” my adviser, Vanya, had said, Bulgarian accent intensifying with emotion. “You know this is coming from your ass.”

“I just think—”

“The sky is thick with sulfates, and you think, before even meeting these people, that they do what they do because they are concerned about their *humanity?*”

“Perhaps not wittingly, but—”

“Come back to me with a point once you have lived it.”

That was seven months ago, and I had little to show for it. I was not an anthropologist; I was a student with a failed dissertation who had been hacking away at the archives for far too long, too reluctant to step foot in any true cultural setting. Hash it up to anxiety, to not knowing where to put my eyes when I asked interlocutors questions. That’s how Ivan would diagnose the situation. But there was a corner of my mind that knew, darkly, that the questions I had were simply not good enough. That instead of beating the dead

horse, I pursued its ghost relentlessly, naively, knowing there was nothing to ride any further.

A young man with suspenders sat down beside me and the cushions sank.

He gave me a sideways look. “You’re new to the community, huh?”

“What gave me away?”

“We tend to favor the mid-nineteenth century aesthetic.” He reached across the couch and gave the shoulder pad of my jacket a grope. “This coat is later twentieth.”

I shrunk away from his hand. “Is the costume really so important to being a part of your club?”

“Costume?” He looked offended. Great interviewing, Mar. Really doing a stand-up job of ‘going native.’ “These are real clothes, that real people once wore,” he said.

I thought about pulling out my phone and recording the conversation, but I didn’t want to make the situation any more awkward or to scare him off. “Do you wear all this—” I gestured to his pinstriped shirt, his pocket watch chain, the walking cane leaning against the couch. “—to remind you of them?”

“Not them, per say,” he said. “The poor hygiene, the sexist, racist, classist biases? The lack of internet, of modern conveniences, pre-packaged snack food? Not a fan, I’ve got to say. But those Victorians, they were living on the verge of human potential. They dreamed of utopia.”

I puzzled over this as the staticky music turned to a kind of accordion jig. Dance broke out in the kitchen, skirt hoops swaying, gears clattering.

“And that appeals to you?”

He gestured out the window at the black sky and murky cityscape. “We like to think we are post-ecological catastrophe, after all. If Greenfinger hadn’t launched the Trouts, who knows what would have become of us. Likely living underground in iced-up bunkers, surviving on dehydrated fungi and those seeds they store in that Norwegian repository. Some might say we dream of that same utopia now.”

“But we’re not living it?”

He laughed. “God, no. But the paranoia brewed with the ambition—*that* we share with the Victorians. Name another age besides now and then that has seen the race to hoard profits and resources shape our state of living, not quite the slums of nineteenth-century London, but not inconceivably off. The utopia we dream of, the *antidote*, one might say, is de-growth.”

He was startlingly sober. I switched my eyes about the room, and the relationship between temporality and material culture leapt out at me in the over-the-top costuming and lace doilies and electric candles. It was key to their understanding of current political economies, environmental conditions, utopian alternatives. I knew that, extrinsically. But as always, I saw it on a film, a reel unwinding slowly, no reversal. My chin was always above the surface.

“De-growth,” I echoed before the thought escaped my mind. “The antidote to what, exactly?”

He splayed his palms and said passively, “To apocalypse.”

#

Two sherris into the evening, I thought to ask the suspended man who he was. Vanya would have had an aneurysm had she been there to witness my conduct.

I sipped my drink. “Sorry, then, what’s your deal?”

He raised his eyebrows. “What’s *my* deal? Not apropos dialogue for an anthropologist and her informant, is it?”

“Not an anthropologist,” I said quickly. “What I mean is, I doubt all your friends here had the same intentions as you when entering the Mokrina steampunk scene.”

“My intentions? I overheard you and Elvira. What of *your* intentions, anthropologist?”

I wrung my neck back. The plaster in the ceiling appeared to glitter and swirl, drawing me deeper into the couch cushions. I realized then that I had already utterly failed at fieldwork. “I see. You’re just saying what you think I’ll want to hear.”

He laughed and reached for his drink on the coffee table. “It’s killing you not knowing, isn’t it?” He swallowed the contents of the glass. “I’m August. I work as an engineer with GF Tech.” He extended his hand.

“Engineer.” I stared at his outstretched fingers. “So all that about de-growth, that’s a load of crap to you, huh?”

He shook his head. “Not necessarily. The world ought to return to a more primordial state. If I didn’t do my job, if the veils didn’t lock carbon in the soil where it belongs, well, then we’d all be hurtling headfirst into hellfire.”

“What exactly is it that you do, then?”

“I don’t have my hands on the Trouts, if that’s what you’re getting at. I’m in surveillance. Tracking and monitoring, measuring the veil, scouting regions that need *thickening*.”

I glanced over my shoulder as a squeal erupted from the kitchen. A large group of them were gathered around the table, playing a drunken round of charades. Elvira was on her knees, wiggling her bustle in the air and making snorting sounds out of her nose.

“For the last time, you can’t make any sound, El!” someone shouted at her.

I turned back to August. “Then the future of Gaia Earth isn’t exactly in your hands, is it?”

His smile was like a crack in rugged stone. Not handsome, but not uninteresting. I stared down at my empty glass. I would need more if I was going to break the routine for once in my life.

“All of it’s important work,” he said.

“Sure, sure. And so you steampunk in your spare time?”

“Gets me out from behind the screens.”

“Gets you closer to utopia.”

He tilted his head. “Can I get you another drink?”

#

I got all the way back to August’s apartment, into his bedroom even, before I realized that I was once again stalling. I had squandered a night of research with three too many shots of sherry and a wild drive to disrupt my patterns of being. I looked around August’s grayscale room, at the bowler hat on his dresser, the empty brass candlestick on the floor. I looked at him as he leaned precariously against his bedframe, his chin dipping low as he struggled with his bow-tie.

“Stop,” I said. “I can’t do this.”

He looked up. “Toying with your ethics, is it?”

“I—”

“It’s cool. It’s cool.” He let his hands fall in a way that made it seem decidedly *not* cool. “You know, you’ve got that look about you.”

I hovered by the door, my head pounding. “Look?”

“That the city is swallowing you whole.”

I scoffed. “You don’t know what you’re talking about.”

“The grim lips. Sunken eyes. You only ask questions. Haven’t spoken a word about yourself. When the party was ending, *you* asked to come over here.”

He pointed a finger. “*You* need a vacation.”

I gathered my skirts up and turned. “Sorry for wasting your time.”

“De-growth!” he called after me, mocking. “It’s the only antidote!”

As I slipped through his apartment, past a roommate baking on the balcony, and into gray early morning, I felt something start to fissure in my chest.

CHAPTER TWO

The pot smashed against the wall beside the mounted television screen, killing the moon cactus on impact.

It was in that moment—as ceramic shattered and soil streaked the wall—that I noticed the first split. The Margot who had returned home heavy in period-incorrect clothing, who stood by the door as Ivan shook, was left behind as I stepped out of her shadow. I divorced myself, and I saw Ivan do the same. A phantom of himself shrugged off his gnarled fists and he was left a quivering shell until his rage was fading, fading, gone.

“Mar,” he was saying. “I’m sorry. That was—that was out of line.”

I flexed my new fingers. Not myself, not nearly. My skin snapped back against my knuckles, elastic and bright. I turned my gaze to the mangled cactus on the carpet. Clear goop leaked out of its open wound. The South American transplant, a mutant in its own right, had been gifted to me by an undergrad professor three years ago. Its skin, sharp red, lacked chlorophyll, and I wondered as it bled out against the crown molding how such a thing could survive without that life-giving fluid. It didn’t—that was the answer—not without the cozy glow of the artificial lamp it had lived most of its life underneath.

“It’s just...you clearly don’t respect me. I’m not an idiot. I waited up all night for you.”

I looked at the confines of the apartment, at the faux leather couch that had been mauled by a previous owner's cat, at the fake ferns in the corner, by the breakfast nook with the view. The square window with yellow crêpe curtains promised a world surging beyond, where everything was happening. The view was another wall, mortar and brick, and the beyond was bare and steep.

How could such a thing survive.

"Of course I respect you," I was saying, but it was from the mouth of the other Margot.

"Then tell me why." His voice cracked.

New Margot snapped into action, turning into the bedroom. I began to strip off layers of clothing. Quick, automatic. The skirt, in a pile on the floor. I stepped into jeans, began to pull a t-shirt over my head.

Ivan followed me to the doorway. I watched him as I yanked socks over my ankles. His shoulders were slumped. Top four buttons undone, awkwardly exposing the shallow of his concave chest (he had refused the thoracic surgery to correct his sunken sternum years ago, but still avoided exposing himself too much). His unshaven chin wobbled as he rolled his lips in and out, considering the mess outside the door, the dented wall, considering me.

"Mar, I deserve an answer."

I looked him dead in the eyes before whisking past him into the living room. I was not that Mar anymore, the one who was the interviewer, never the interviewee. Who flattened under look after disappointed look. "There isn't a

good reason, Ivan. Is that what you want to hear? Maybe I'd remember to come home if you weren't always brooding in your nest here, with nothing better to do than question my ethics!"

"You're projecting, again," he said.

"Oh, go stick that therapist shit back up your ass," I snapped. "That has no place here, when you've *projected* a cactus at the wall!"

"It's the only thing I could think of to *wake you up!*" His voice quavered. "You're too numb! You're dead to everyone, Mar! To your work, to your life, to *me!*"

I looked away, suddenly feeling stitched up in my old skin again. I thought of the papers to grade, the failed fieldwork, and I snatched my scattered notes from the table. I stuffed them into my bag, spinning on the spot for a moment, mind filmy. The moon cactus bled; the world beyond wept. I reached for my jacket on the coat rack, the dark denim one with the pins on the lapel, of tiny owls and shiny acronyms from the university.

"No, wait. Please, Mar."

But I was not that Mar. I stepped into my house slippers, the only footwear I could find, and the air folded around my shoulders, lifting my hair. The door swung open, suddenly, but not by me. These new legs were fast. The hallway moved not panel by panel beneath my feet but in streaks of gray-blue, in columns of linoleum. The elderly woman in the elevator clutched her stunted dog to her chest as it sneezed, and she led me out the sliding door onto the ground floor. I only knew I was outside when the chemically-saturated air

conditioning dropped off into the muggy heat of early morning. I felt underground; I breathed recycled air, molecules that had circulated in the cavities of a million lungs. The citizens of the subterranean city trudged by under harsh street lights, their destination flat in their forward-facing eyes.

I couldn't remember what I left behind in that apartment. Time caved for a while, in the space between our building and the memorial library. Ivan's rage was a red swatch in my memory, as was the crimson cactus choking on its own bile. I blinked my eyes until they were raw, and when I opened them I was on the third floor of the library, where the archives slept. I was coated in dust. I needed a shower.

My keycard unlocked the office I shared with three other graduate students and their mountains of reserved books. The door clicked shut behind me, and I could smell the out-of-print volumes, the mold, the dead researchers' misery. Sprawled before me: my desk, my squeaky rolling chair, my stacks of hand-scratched notes. I sat, and the Margot from the apartment filled my bones again. I watched as the shadow-self slipped under the crack in the door behind me. Good-bye, for now. She would be back.

I slumped forward into my work, my cheek sticky on the desktop, and fell asleep.

#

I dreamt I was drowning in the downtown park's pond, a recurring condition of my late-young adult agony. It was always a tired, quiet struggle, where I accepted my fate, and focused intently on the water spilling into my

nasal canals, pooling into my throat, making wash of my lungs. Only this time, a figure loomed overhead, rippling from the dock.

A conscious strand tugged me towards waking as the LED office lights were switched on by some unseen hand in the land of the living. I choked on the water. The shadow above the surface shifted, and I thought wildly that I heard the drenched voice of Margaret Mead, or Vanya, saying that all fieldwork was drowning, never to come up for air until it was over. A hand pushed my head down, down, down, *I was not finished, I would never taste the air...*

I sputtered awake.

“Margot?”

Kumail hovered in the door frame, his finger frozen over the light sensor. He averted his eyes as I met his gaze.

“Oh, god, sorry, I didn’t mean to wake you...”

I rubbed my palm against the cheek that had been planted on the desk. Kumail was a fellow grad student, the darling of the department, making, in Vanya’s words, “prolific” strides in his studies of what remained of the Athabaskan people who had relocated from the Arctic Circle to South Vancouver. This past semester he was one of the lucky few to secure funding for his research, and he was slated to fly out in just two weeks’ time.

“No,” I croaked. I sat up fully and attempted to look alive. “I shouldn’t have...uh...lost track of the time.”

He edged deeper into the room, and the head-splitting light accentuated the thin layer of grime on his face. It must have been a bad day for smog.

“I just need to grab a book...”

I scrambled to set myself right and stood up to give him access to the shelves. “Just so you know, I’ve never done this before. Slept over in the office.”

“I get it.” He strode over to the wall. “Late night hitting the archives. We’ve all been there.”

“*Hmm.*” I watched as he ran his finger along the spines, from the worn leather to the peeling plastic.

“So, did you get the invoice from Dr. V?”

“I haven’t checked my mail since last week.”

He slid a book off the shelf and flipped through the pages before tucking it under his arm. “Department luncheon’s later today. They’re giving away the Douglass Prize to that Gregorsky woman, the one who wrote the AA essay about her work in, uh...”

“The Falklands?” I offered. The name was familiar.

“Not even close. Felsenmeer, a compound north of the city. V wants me to introduce her, like I haven’t only just read the one essay and know anything of value about her career.”

“What an honor,” I said. I could hear the bitter twang in my voice, though I hadn’t meant for it to be there. It was just that everything always seemed to come so easily to Kumail. He came to the university from his alma matter with a string of awards and early publications, and he powered steadily through his research, vision unclouded, objectives unchanged.

“You should come,” he said. “I’ve heard about your, uh, *blockage.*”

Whatever happened to adviser confidentiality? I sighed.

“And I really think that what with your interests in Anthropocene and post-modernity—that is what you’re looking at, right?—I think her talk might be generative.”

I had been inundated with ‘generative’ suggestions over the past few months from colleagues and faculty—all well-meaning, I was sure—but it was a trodden mill. An exciting voice came to give a lecture, receive an award, someone in the fields of political ecology or anticipatory anthropology, and I would prematurely invigorate myself. I leap-frogged from mind to mind, all from behind the barrier of the podium, but for all the exertion I could make up no mind of my own. I grew disenchanted. Ideas that once held firm slid off my shoulders like cooked meat from the bone. Why did nothing ever stick? My mother used to call it my wandering spirit: the eyes that darted from book to book without reaching the ‘*the end*’ in the last one. My father called it apathy, a strain of laziness he claimed I had not inherited from him. Ivan would call it ADHD. Screw his precision, his itch to diagnose.

My phone buzzed in my jacket pocket. I blinked down at the screen. There was a forum of missed messages, all from him.

“Well, see you or don’t see you.” Kumail nodded, and backed out of the office.

#

“What is undeniable is that this group, having dubbed themselves Terra-Firmans, after the Latin phrase *terra-firma*, or ‘*solid earth*,’ have redefined what

cosmology and social living meant for themselves in the modern age. The disparity between their name, their connection to the *underlying*, what is solid beneath their feet, and the god-spirit they have identified in the hawk, is key to our understanding of them as liminal beings, between earth and air. And they are quite happy to remain in the flux. As the founder said to me, on a particularly dry day overlooking the river of stones, *'we do not stagnate.'*”

There was a rumble of approval at the profundity of this statement from the crowd gathered in the auditorium. I sat near the back, shoulders sunken, in the hopes that Vanya or any of my other professors, or God forbid, undergrads, would see me, baggy-eyed and hair unwashed. Salma Gregorsky extended a slender arm to point out the photograph of a field of man-sized boulders in the center of a dark forest.

“I wondered if she had founded Terra Firma on this seemingly abstract value. She had lived on the land her entire life, and began the settlement ten years in advance of the veil-lifting, so nearly thirty years ago. But it all began, in fact, as a means of—”

My phone began to buzz. I hunched over and fit the bud into one of my ears before it could ring.

“What?” I hissed, cupping my palm over my mouth to keep my voice from carrying.

“I’m wrecked, Mar.” Ivan’s voice blared into my ear drum.

I slid the volume down. “I can’t talk. Don’t call me again.”

“Look, I acknowledge that I said something that made you feel attacked and vulnerable—”

“Jesus,” I muttered. The person in front of me craned their neck and glared.

“—and I know you don’t mean to hurt me, but I can’t keep going on without open communication. I want you to come home. But if you’re not prepared to talk, I don’t know if I can see—”

I ended the call.

Gregorsky was flipping through a series of photographs, and I tuned back in midway through her descriptions. But I was only half-listening as my eyes absorbed the images. Projected above the stage were scenes from an alien world. A waterfall gliding over a column of steep stone, crashing into a pond. A canopy of naked, interlocking branches, filtering the gray sunlight into patches. A mountain ridge in the background, the bulging ceiling of clouds pressing up against its peak. And most striking, the land’s namesake. The *felsenmeer*.

She had described the geological phenomenon at the center of her research at the beginning of the talk. Felsenmeer was a relict of the geriatric glaciers that coveted the land in the last strands of Pleistocene, before the Ice Age’s great melt. In the original German: sea of rock. Thawing ice extracted the boulders from beneath the permafrost, freezing and liquefying and refreezing between the synapses of sandstone. When the glaciers retracted into their northern redoubts, they left behind them trails of rock: barren fields of

boulders, empty patches in the coniferous wood where no trees could grow. In the valley of Barrow Mountain, Felsenmeer was the lowest point.

I would have believed it another planet, if not for the people who populated each photograph. The woman washing her white hair in an offshoot of waterfall. The boy, limbs wrapped around a tree trunk, extending a wrist towards the hawk in the shadow of the canopy. The gritted-teeth smile of the young couple in front of their cabin. The lines of people, young and old, toeing up against the boulder field, eyes closed.

They lived in the lands that composed the romantic landscapes of my mother's favorite landscape paintings, the places I had imagined impossible to visit. She, a former student of art history, liked the sublime cliff-faces of the romantic era, the impressionist vistas that dropped her heart into her stomach, the apocalyptic sunsets and acidic hues that deafened expressionist canvases. They were all alien worlds to me. She once promised that when my father retired, they would take me to see the tranquil stretch of river known as the Oxbow, from her favorite painting at the museum. I couldn't fathom that such clear skies existed. How could she take me to a place on another planet? Surely the air would be thinner, the water polluted, something in the chemical composition of the soil would repel human skin. Inhospitable: the only answer as to why we had not yet visited. But here was this community...enduring.

Gregorsky spoke compassionately of her interlocutors, and drew the world of Felsenmeer in strokes of solitude, stone, and simplicity. Place-names and a reverent connection to the land spun the impossible community in the

trees into something utopic. *De-growth*, I thought as she lectured on. *De-growth is the antidote.*

“The hawk is their god,” Gregorsky was saying, “but god is not so much the omniscient creator of theological rank. God is the root between the realm of earth and air. In my two weeks on the compound—”

I inadvertently leaned forward. Did she say only two weeks? If she had so connected with her work there, why would she leave so soon? How had she derived these observations, if only within such a limited time frame? It seemed wildly unfair, and I felt the crack deepening in myself. The old Margot was angry for having wasted her academic trials; the new Margot begged for retreat.

Antidote. To what? Was it a sickness I had?

Suddenly, my hand was in the air. I clambered to my feet as Gregorsky was beginning to make her closing remarks. Her sentence dangled, unfinished, as she stared at me.

“You’re eager, aren’t you?” She emitted a nervous chuckle. “Goodness, it’s not even the Q&A portion yet.”

It was the other Margot, speaking. “It can’t wait.”

I felt every eye smelt into my skin. Vanya had turned her entire torso around and was scowling at me from the front row.

“Oh, um—”

“What compels them?”

“Compels?”

“Their founding, their being out there all this time. What are they a response to?”

She tilted her head. “Do they have to be in response to something to justify their existence?”

I thought of my own pre-pondered thesis, the conclusion that had never been concluded. Those groups that persisted on the sidelines of society from an age before veils—those anterior cultures I believed to be a reaction to the slow choke-hold of the Anthropocene. They survived by way of reflecting their humanity back onto themselves; they created divinity in the things they could hold, the fabric between their fingers, the materials of their own design, be they doomsday-preppers or LARPers or steampunkers. But a piece had always been missing to my provisioning. A piece of which I could never quite sense the shape. *Shallow theory*, Vanya would say. *Depth*, I needed; the *depth* that all self-designated academics craved.

Instead of saying all of that, I asked, “Why would you leave the compound so quickly?”

The director of the department, a balding armchair-anthropologist who rarely left his office these days, stood from his front seat and motioned towards Vanya.

Gregorsky raised her eyebrows at my question. “I don’t think you know what you’re—”

“Two weeks,” I said. There was grumbling from the row in front of me. “Hardly a significant amount of time, would you say, to make the claims that you have?”

Her full lips made a firm line, and she planted her knuckles on the podium before responding. “We are not conducting research in the same world as our predecessors,” she said. “I know it is easy to have grand visions of your own fieldwork from the cushion of the classroom. Hell, I used to think in much the same way. But outside of your city, where regulations are thin and people have to live more resilient lives to make ends meet, there is give and there is take. I supplemented my work with as much preliminary research as I could, because in the end it was impossible for me to give more than I took. You—”

As her tone heightened and she leaned more passionately into her rebuff, I saw Vanya whispering in Kumail’s ear. His wide, white eyes snapped to mine, and he nodded before getting up from his seat and ducking up the aisle towards me.

“—no *conception* of how quickly the conditions can degrade out there!” Her voice warbled somewhere between a hiss and a shout now, and the crowd hung onto a tense breath. “I am sick of these ignorant wannabes thinking they know *anything* about the border lands! You privileged motherfu—” She swallowed, caught herself. “—*you* wouldn’t last one day out there before shriveling under the pressure! I bet you’ve never even left the city? I’m right, aren’t I? And what are you, a student? A grad student? Who the *fuck* do you think you are?”

The director was up at Gregorsky's side, passing gentle words over the podium. Kumail's fingers tendered my wrist from his crouch in the aisle.

"Margot..."

I blinked at him as the rest of the audience blinked at me.

"You can't be doing this. It's time to go."

My brain was buzzing. Maggots, nesting in my cerebrum, burrowing deep into warmth, nickering to each other, so loud, so fast, I could not hear my own voice, that was always so thick inside of me...gone, my voice was gone.

Kumail led me out of the row of seats, and I could hear everyone but myself now.

Nervous breakdown.

Embarrassed for her.

The disrespect.

As I glided out the back door, I heard the mic screech under the director's harsh voice. "Apologies for the disruption..."

I searched for the voice in my head. The split left me mute.

#

I never used to be this self-seeking.

When I was twenty-two, I moved into the midtown apartment at Ivan's first moan of post-graduate loneliness. I carried with me a diploma, the ink not yet dry, a plastic bin of warm-weather clothing that my father had threatened to throw out, and a manila envelope containing doodles of vines and fruit trees

that my mother had sketched on the back of napkins in the hospital while waiting for the malarial necrosis to run its course.

At the same time as I applied for fellowships and grants and spots in elite programs that I would never hear anything back from other than a crisp, *Thanks, but we received an unprecedented number of talented applicants this period*, I made myself available to Ivan. I bought him essential oil diffusers and made him matcha and sat up with him on the ragged couch while he agonized over his own prospects. I wrote his application for that masters in family and marriage therapy; I dressed him for his interviews, walked with him to the MagLev stations. I never told him, throughout that period of seven months, that my freshly-retired father had begun slipping into the mental deep end, hoarding containers of freeze-dried foods in my childhood brownstone, sending me unhinged voice memos about how I had wasted away his money on a career I didn't even have. My father was at once apocalyptic and resistant; I eventually blocked his contact numbers. And Ivan never knew.

I recuperated by myself late at night, watching television programs and reading ticker lines about worlds beyond. The three-hundredth-and-sixty-third planet hospitable for human life had been located in the Kuiper Belt. The Amazon was experiencing a re-birth with the introduction of aerostat Trouts. Mumbai saw its first snowfall since the Ice Age. Droughts in the Heartland were becoming less of a concern to the agricultural industry now that seventy percent of the meat industry was lab-grown, fifty percent of it plant-based. The words out of every meteorologist's mouth and every politician's ass were: *Look,*

we've bought ourselves indefinite time. We are free now, to grow, to advance, to live with no bounds. Look, we've found the antidote.

I spent so much time seeking others' fulfillment. When I finally got into the university, I thought it was my time to be the endless citizen that the late-night programs promised I could be.

But there was nothing indefinite about this.

Ivan was crying in his most recent missed call. "This change—it's scaring me—Mar, what's happened to you? I don't recognize you, *us*, anymore—"

I deleted the message before I could hear his sobs turn into whistles through his nostrils. The change he mourned had happened long before I lost track of my academic prospects. The first crack incised the moment I told myself the lie: that this was enough. Not that Ivan deserved to be ignored, I realized as I wafted on the street corner, brushing into the shoulders of passersby. He had only ever been Ivan, only ever what I asked him to be. I could not fault him for meeting expectations, but it was his psychologizing I would not bear, not now.

I brought my fingertips to my cheeks and felt intensely that I was covered in a layer of tacky grime, and I wanted to peel the muck off my body. A pod blared its alarm before shuddering to a stop two feet in front of me. I had somehow drifted out onto the tracks, and though the windows were tinted I could see the woman inside scowling. I stepped back onto the pavement and watched as she shot by.

You can't be doing this.

You need a vacation.

Why was it only ever their voices? Where had mine gone?

I checked the wallet programmed into my phone. My last stipend had been two months ago, and with the next installment not guaranteed until I had completed the semester, funds were dwindling. Still, it was enough to hail a pod, enough to get to the MagLev station, enough for passage out of the city.

Enough to abandon it all.

CHAPTER THREE

The convex screen at the MagLev station glowed with blue light. An ad for a pollutant defending masque popped up in the right-hand corner. I quickly clicked out of it and began to search through the train map and schedule on the home screen.

The MagLevs were dinosaurs from a decades-old government initiative to connect the coasts of the country—that is, in the years long before the lifting of the veils was even a theory on Greenfinger’s desk. They jetted urbanites on protracted caravans from city to city by way of magnetic levitation. One could be from the City to the West Coast in a matter of hours. Now, the MagLevs that were maintained were the only way to access the world.

I must have been poking around the search page aimlessly, having never been at one of these stations before, because within a few minutes of clicking, a voice splintered out of the speakers.

“Welcome to M-A-G, your heart for cross-continental transport, reaching speeds of eight-hundred kilometers per hour. Comfort and convenience are our guarantee.” The voice was cool and female, bored, even, but decidedly not robotic. “How can I be of service tonight?”

“Yeah, hi. Where’s the—” I leaned in to the speaker so that my voice could be picked up clearly. “What’s the most direct track to Felsenmeer?”

A span of silence stretched with me just staring at the plastic receiver.

Then: “To *what?*”

I cleared my throat. “Or, you know, to whatever is closest by?” I realized that she might not even know where Felsenmeer was. “It’s a rather small region, I think, in central—no, in south—”

“Found it.” There was an intake of breath. “*Oof*, honey, there’s nothing that gets anywhere near that. You’ve got the P-I-T drop-off to the north or the P-H-L to the south. All within one-hundred-and-sixty kilometers of your destination.”

The transit lines illuminated on the on-screen map. The MagLev hurtled through the region, some twenty kilometers to the north of the mark I desired, but didn’t stop until it split off to either of the two cities. By then I would still be two, three hours away from the compound. I swallowed.

It used to be easier to leave the City, in the days before the Scream, as the so-called, politically-enlightened called it. The onslaught of shifting coastlines as a result of flooding saw the City’s subway systems floating on the tracks and familiar street-ways bloat with excess water. Businesses and homes and apartment complexes too near to the tide sunk into the sea, or, in reality, suffocated with damp mold until they were too decrepit to stand on their own. Where there were not hurricanes and overcast skies there was wind and heat, and wildfires galloped across vast stretches of country so rampantly that there was only enough technological power to keep the major cities confined from the blaze.

All of this was set in motion well before I was born, but I still remembered when the veils went up because it was around that time that my

mother told me it was only a matter of months until the roadways opened again, until the world would become ours to explore. She promised me that we were only waiting out the Scream and its side-effects; she thought we would be safe here, from everything, from flood and fire and insect-borne disease.

None of us—not her, nor my father, nor myself—knew she was riddled with malaria until the day I smelled rotting flesh in her bed, and she pulled back the covers to reveal shins mottled with black tissue. The adventures she had promised decayed with her mobility, and I came to doubt if the twisting rivers and serene waterfalls she had spoken of visiting even existed. It mattered little, because when she finally died, my father had no interest in anything beyond. He filed himself away into his work, stuffing investment firm know-how between his teeth and chewing endlessly on his stock market anxieties. I heard little from him over the next ten years aside from panicked grunts when the graphs on his devices dipped, and, when they peaked, long, scoring rants on the renewed value of fossil fuels post-veil-lifting, that had gone largely unappreciated by generations prior. The financial lectures continued, even into his retirement, when he claimed premonitions of an economic collapse and proceeded to hoard cannisters of water and baking soda and cable ties in his brownstone.

In lieu of adventures into the upstate, I escaped my father's begrudging tongue by slipping into my studies. I made myself busy with excuses not to go. But really, leaving without *her* never felt right. The alien worlds she spoke into

my dreams each night were hers to manifest; without her, I had no direction, no desire to go.

And now, even with a desire—rather, an *impulse*—I had no way of getting there. The MagLevs were the most direct route out of the station, but they only went to the major cities.

What the *hell* was I going to do?

“And you’re sure there aren’t any other loops?” I asked into the receiver.

A few seconds of silence stretched. “There’s not a MagLev on this gray-green Earth that takes pit-stops in the dead center of the woods. You got P-H-L, and you got P-I-T, but that’s all I can do for you.”

I dug my fingernails into my palms and leaned in closer. “Would you happen to know of any other ways I could get there? You know what, why don’t you just connect me with your manager? That would be easiest. I’m a researcher and *need* to be in the area, I just need to be.” I cringed at myself; I had never wanted to be *that* person, who inconvenienced service workers just trying to get through their shift.

I heard her expel an annoyed sigh. A star whirred onto the map, only a block away from where I was now. “You can always take a pod. Here’s the nearest rental place. But look, you’ll need to have all your identification in check because security will stop you at the north gates. And you might fly by with some automatic navigation, but if you really want to get to Felsen-whatsit, manual’s the only way.”

The original Margot would have clammed up at that note: a manual pod. Alone. In the border lands. I was no navigator; the most complex piece of tech I had ever steered was a spaceship in a VR game—an activity Ivan had always considered our ‘first date.’ The Mar pre-split would have reconsidered the whole frenzied elopement from her work, from her studies, from her life.

But I tapped the screen to upload the coordinates to my phone. “Thank you, really,” I said. “Have a good—”

The screen went dark.

#

The worker at the pod rental yawned as he dropped a key card into my hand. The thin slab of metal was scratched and sticky with some sort of beverage. At least it matched the vehicle in question: an early model that most people would have assumed out of commission since it didn’t sync with the more modern tracks that etched the City. This pod was dented in the bumper and was missing a few seat cushions from what I could see through the cracked window. I glanced around the underground lot. Shaky fluorescents spit unflattering light onto the row of dingy pods. I wondered how a place like this could keep in business.

“How long will you be?” the worker asked.

I flipped the key card over in my palm. “Uh...I’m not sure.”

“Insurance will expire after thirty days,” he said. “After that, damages come out of your pocket. You’ll be automatically billed at the end of every week until you return the vehicle to *this* station.” He gave me a leery look. “You hear

all that? *This* station. Don't want none of this dropping off at a sister station in God knows what corner of the world you drag it to. We don't do that shit here." He gave the hood a not-so-gentle whack. "Also, when you go to charge don't keep her plugged in for longer than it takes to get to ninety-five percent. Any longer and it wears the battery down."

"Understood," I said, sliding open the door. I slipped in and wrinkled my nose at the smell of human sweat and spoiled fast food. The worker hovered over the pod as I inserted the key card and felt the engine gargle to life. The smell only intensified as air conditioning strained through the vents.

I gave the worker an awkward smile and thanked him, but even as I closed the door he stood, watching me, in the pod. I suddenly felt not unlike a cockroach in a jar, with my captor deciding whether or not to squish me. I looked away and programmed the coordinates to the city gates in the GPS. The pod lurched into automatic mode and began to withdraw from the station slowly. I didn't look back.

I sunk into the worn seat as the pod did the rest, pulling out onto the road adjacent the main tracks before latching on and melding with traffic. The sky was doing its pre-dusk warp, where the daytime gray was beginning to bend into vibrant threads of orange and red. I tried not to think about how I would have to take the wheel once past the gates. I doubted the roads out there were the same as they had been programmed on this Dark Ages GPS.

The "gates" weren't really wrought iron barriers, locked to the world beyond, but rather a metonym for the quasi-customs services that screened all

non-MagLev comers and goers from the City. An urban planning professor had once explained it to me as originally being put in place to prevent the spread of disease. The malaria outbreak was not the only epidemic born out of the still water during the initial flooding of the old downtown. As the landscape of the City shifted inland, crowded quarters bred mutant strains of Zika and West Nile and even a potent cell of Swine Flu. The gates ensured that the spread was contained.

But privately, I had never bought into that theory. Perhaps disease control was the reason why the screening centers were founded, but it did not explain why they persisted to this day, when the bulk of cases had been non-contagious and infected individuals were not being tracked anymore. The gates, I always thought, were to discourage people from leaving the city to sightsee the Trouts. Our television programs and news feeds were populated with advertisements for the enormous silver spectacles: aerostat blimps, bellies low over the barren hills, nozzles dragging behind them like fleshy, chrome tails. They were vast enough so that when standing under one, I recalled a news reporter saying, one couldn't see an inch of sky, no matter how far into the horizon they looked. The gates were to keep the masses from tracking the sensitive instruments down, reporting on their coordinates, and causing blockages on the roadways.

Only a shallow theory. I would have to see a Trout for myself, to live under its shadow, to know for sure.

The pod reached the uptown edge of the City in thirty minutes as the traffic was thick from the rush hour. When I came upon the actual gates, I wasn't even aware that I had reached them until the pod shuddered to a halt. I blinked out the window at the now psychedelic sunset and saw that I was parked under the arch of what looked like an obsolete toll. I heard a *click-click*, and felt the tracks latch on to the pod, trapping me in place.

A droopy-jowled woman hopped out of the station and gave my catatonic pod a suspicious look. She tapped on the window for me to open.

Her uniform wasn't military, but the grit in her voice was. I scrambled to produce my state ID and my university card. She coughed under her breath as she was inspecting them and jerked her head towards the sign hanging over the arch: *All non-registered vehicles must pay registration fee. \$359.99.*

A valve in my heart quivered. I only had four hundred dollars left in my account. This was going to bleed me dry.

"Are you sure this pod isn't registered?" I asked.

She snorted and handed my cards through the window. "Oh, I can assure you. *This* thing isn't registered anywhere."

My hand itched for my phone, for the money I barely had, but my mind went cold with doubt. What was I doing, blowing all my money on registering a vehicle I had already paid to rent? What was I thinking, cutting out everything and everyone to drive an unmonitored road at night?

I stared at my hands for what felt like an eon of buzzing, writhing, worming uncertainty. Only when the woman barked, "Ma'am?" did I split off

from that withdrawn Margot so violently that I could feel my blood swelling in my veins. I transferred the money to the open gate account and sent out a godless prayer that it was the last expense.

She screwed up her eyes as she looked at me and wagged a finger at her upper lip. “You’ve got...blood, ma’am...”

I quickly rubbed my lip with my sleeve—stupid move—and my gray shirt came away the same color as the sunset.

“Are you on any drugs, ma’am?”

“God, no! I just...this happens a lot...with the weather...” It was a lie; the last time my nose had bled was fifteen years ago, when an over-excited dog leapt up and smashed me in the face. My father reset the cartilage with his meaty thumb and forefinger, right there and then.

“I’ll be needing references.”

Without much thought, I blurted out Kumail’s university username and August’s, the engineer-by-day, Victorian-gentleman-by-night, SM code. I wasn’t sure why I had their contact info trapped in my mind, where all other passwords and numbers turned to amorphous goo. I wasn’t sure why they needed references to begin with. I wasn’t sure why I didn’t say Ivan, who by all accounts knew me and my personal information the best.

“And your business, ma’am? Destination?”

I puzzled over what to say. “It’s not like I’m leaving the country.”

She frowned. “A safety concern, is all. We need to keep our records straight because when people go missing and their families come asking after them, we gotta know what route they were taking.”

“Do people go missing often out there?” I hazarded a laugh while looking past her at the road and buildings just past the gates. The outskirts didn’t look too different or any more dangerous than the parts we were in now. It was poorly lit, sure, but I could see a glow coming from the top floor of an office building two blocks north.

She ignored the question. “Your purpose?”

“I’m doing research. In Felsenmeer.” It wasn’t a total lie; I knew so little of what true research sounded or felt like that perhaps I was doing research just sitting here, sweating in this pod. *Practical* experience. *Immersive* fieldwork of the disenchanting academic, fleeing the world that stifled her in the dead night. “I’m with the university.”

“*The* university? Like, the inner city one? All those billboards for cancer treatment centers with those little, bald babies? *That* one?”

I nodded. Again, not a total lie. Lots of university medical schools financed cancer hospitals.

I waited as the information she gathered automatically uploaded onto the thin pad she held in one hand. She patted the hood of the pod with the other one.

“You’re golden. Keep your windows down until you’re out of the suburbs.”

With that ominous note, she retreated into the hub. I swallowed and looked ahead at the road. The sunset was howling.

#

The outskirts weren't all that different from the dodgy parts of the City, where people lived in dilapidated housing projects and street corners were mottled with the down-and-out. I assumed that a majority of the souls I saw floating on doorsteps were squatters, because most of the buildings outside the gates had long been foreclosed. I kept the windows rolled up, and told myself I would just have to get used to the pod's used stench.

As the sunset steeped into heavy night, the headlights flickered on and illuminated the deep cracks in the road ahead. The blacktop was like a hardened field of lava, with islands of charcoal-like rock separated by small canyons. It looked like the road hadn't been touched by wheels in decades. Before I had time to react, the front wheels careened into one of these canyons, and the entire pod jolted forward. My chin bobbed against my neck and I felt my molars grind together. Quickly, I grabbed hold of the wheel and shifted the vehicle into manual mode. There was another painful crunch as the back wheels spun in the mouth of the pothole. I slammed my foot onto the accelerator pedal. The vehicle lurched forward and I suddenly felt airborne. Nothing could stop me; I was hurtling ahead at five, ten, twenty times the speed as before. I panicked when I saw another pair of headlights, like mournful eyes, winking in the distance. *Shit*, I was in the middle of the road!

I yanked the steering wheel to the right and veered out of the way as the sixteen-wheeler freight truck rumbled by. Heart walloping in my throat, I eased my foot off the pedal. My first time driving manually...and I had almost gotten myself flattened.

I didn't uncurl my fingers from the wheel, after that.

An hour or so passed with little more than the two columns of orange headlight to illuminate the new world around me. The light flooded the faces of open-mawed houses, suburban wrecks overgrown with a yellow thistle-like plant. They looked like talons, clutching possessively to those drywalled structures of modernity, not letting anyone in nor any ghosts out. The tank of the housing market had seen the mass exodus from the upper middle-class playgrounds, and the zoonotic plagues had done a number on those who refused vaccination. I wondered how many families were interred in these houses. These tombs.

Manual driving was not as elusive as I had built it up to be in my head; the pin I had dropped on the electronic map was my guiding star. It helped to think of it as my personal stellar conductor, like the northmost beacon that tugged medieval ships of trade across the Mediterranean. I drove generally in its direction so long as the road continued winding north. My main focus was avoiding obstructions in the way: decaying logs, melting tires, rusting scrap metal.

Only a few other pods passed, most of them hulking cargo trucks with no drivers. All of them were on route for the City; I was the only one leaving.

The quiet of the road had, in some part, cured the buzzing in my mind. The winching sensation of bifurcation, two halves at odds, was lulling with the rote groan of wheel on blacktop, and I felt the selves slowly fuse back together. I was still seeing double, still blinking with two sets of eyes—one recreant, one reckless. But a quiet voice emerged in the cabin of the pod, just for me.

I wasn't panicked, wasn't wondering why the hell I had essentially abandoned career, relationship, reasoning. My plan once arrived at Felsenmeer was nonexistent, but what else was new? If I didn't already know that Vanya would be pissed at me for dropping everything, I imagine she would have been proud; I would finally be forced to live, and not playact. I would drown myself until I grew gills.

PART II: STONE

CHAPTER FOUR

Sun-up brought a more violent dusk than any I had ever seen in the city. Raw fire touched down upon the crest of the earth, and the light caught just so that through the pod's window it bent into thin flames on the open fields. It pierced into the left corners of my eye as I drove north, ever north.

Body and shape were given to the landscape as shadows cut deeper and harsh, citrine light wrapped around tree trunks and enveloped hills. I realized, quickly, that the world beyond wasn't quite the Promised Land that my mother had composed with long strokes, but neither was it the wasteland my father had decried. In the days following my mother's death, I had begged my father to take me to the Oxbow, the notched river from her favorite seminal painting, so that I could scatter her ashes at that place where storm and shattered wood met light and tranquil water—the place where Cole himself, a tiny self-insert in the foreground, sat painting.

We had been sitting in the lawyer's office, finalizing the details of her will, when I asked. A memorial service had finished in a cold buffet hall earlier that afternoon. My father snorted, and lifted his thumb to the rim of his glasses as if to get a better look at his credulous daughter. The border lands, he said, were never going to be the places from our paintings, and my mother, he coughed, should have never filled my head with such fantasies to begin with.

“You don't even have a clue what's waiting for you out there, darling. *Human filth*. Total atrophy of society. We ruined it, we did, at least—my parents' generation did. And they never owned up to it, the bastards. But now we're forced to live with

the consequences. No reason to leave the City; it's the safest place in the world. Because we're better off now, where you have everything you could ever need." He shared a chuckle with the lawyer, whose face was a streak in my memory. "Kids these days, they'll never know how good they have it! One day you'll learn, Margot, that there's nothing left for people like us out there, nothing but toxic water, scorched lands, neighborhoods stripped by the degenerates of society. Nothing we can do about it now, but live with it and be grateful we've got what we've got."

He would go on, each description slapping another red handprint on my mother's canvas. If I ever pushed the subject, he would get defensive: "Don't I give you a good home? Don't you have clean water, good doctors, plenty of food? Don't you go to school? You want to leave? Then you leave that all behind, darling."

We ended up storing her ashes in a chrome urn. I recoiled now, to think that my mother was packed away with all of my father's canisters of dried food and jugs of tepid water, just another straw in the hoarder's nest.

Now, I saw, neither of them had been right. The trees weren't heavy with foliage, but neither were they stripped and flaking with ash. The leaves that clung to their branches were a drab olive tone, the grass an unbleached yellow. Altogether, somber hills, weary, bending wood. A tired world. What remained of the woods was punctuated with old roads and boarded-up houses. The moon was a blurry coin opposite to the rising dawn. And when the voltaic strands of sunrise finally filtered out, the sky was not blue, as I had hoped it would be, but the same gray dome as in the city. The veil blocked color out here, too.

I fought a yawn and checked the battery charge on the pod's dash. Twenty-four percent left. The marker on the GPS had me thirty kilometers out. For the first time in hours, I felt my tail bone ache from sitting, my wrists cramp, my bladder tighten. The side-effects of being human crashed back into me after being suspended for so long, and I opened my mouth to initiate a search for rest stops nearby.

My phone buzzed on the passenger seat. I let it shake until a voice-mail notification sprung on the screen.

I tapped on to listen.

"That's it, then," came Ivan's voice. "I won't bother you anymore. You always did want to treat yourself like a subject to study, something you had to figure out. You always saw yourself as your own fieldwork, and that's why your relationships never pan out. I'll never convince you otherwise."

The recording dropped.

So, that's it, then.

#

I trusted the patch on the map that advertised something of society: a town called Minisink, one of the few pre-Scream sites to light up on the GPS. I took that to mean that it was an active place, perhaps with even some semblance of economy. Somewhere I could charge the pod, stretch my legs, use a toilet, and maybe even get something in my stomach. But for all I knew it would be another ghost town.

I didn't want my father to be right; the world beyond couldn't be empty. There had to be more than just agriculturists and government facility workers.

There had to be some order to living, some who still maintained the little villages and wooden docks of the light-drawn past, who were ignorant to the bonds of brick and metal siding that blocked out the mountains. If there were those who remembered a blue sky, surely there were those who had stayed behind and kept up their lives. Without them, three-quarters of those in my profession would be out of work.

I took a gravelly exit off the main road that was not on the outdated map, and immediately plunged into corn fields. I had never been in anything like it; all around me, there were only desiccated husks, towering like yellow reapers, and cracked road. A purgatorial path less-traveled-by.

All was corn and early morning haze until it wasn't, and I drove into the heart of a vast shadow.

I slammed on the brakes as the light sapped from the world, but the wheels could not find purchase on the loose stone of the road. I veered, in near darkness, to the right, and crunched into a shallow ditch at the edge of the field. My body folded.

There was a ringing in my ears when the dust settled.

Knuckles shaking, I looked up at the sky.

It was hanging low over the corn field, silver belly just visible below the layer of fog that curtained the sky. The rest of the massive blimp was obscured by the very veil it fed. I couldn't look away. The marvels from the newsreels, the monsters from the children's tales...they were here. *It* was here. A Trout.

It was probably a thousand meters up, and not nearly as impossibly wide as the reporters made it out to be. But the shadow it cast cloaked the fields in darkness, and the only light I could see was in the distance, against the cold gaze of the mountain ridge. It was odd; as I stared up at it, a behemoth out of place, metal against gaseous murk, I couldn't summon any coherent thoughts to the front of mind. It was like watching the dragon from *Saint George* flick its tale under the cloud-layer, making a world otherwise untouched by magic suddenly strange and uncharted. I stared as the blimp passed over me, its shadow slowly sliding over the landscape, until it hovered over the river to the west.

It made me think of the Victorians and their zeppelins, those aluminum and copper plated airships buoyed by intestine-lined gasbags. They were hallmarks of industry, sky-borne cylinders of technological progress...how had August described their makers? Living on the verge of human potential. Dreaming of utopia. And so we were now, he would have said. But the Victorians' dream went up in smoke with the Hindenburg disaster decades later, and that was enough to scare their descendants out of melding more frames and sending more high society up into the sky in mounted gondolas.

The current generation either had no memory of the failure or was made of more desperate stuff than the Victorians. Desperate enough to send monsters back into our skies after they had set them on fire once before. But when I got past the size and the shadow, this Trout was altogether peaceful. It was low—so low, that I questioned how high up the stratosphere could be—and

it emitted a rumble that couldn't be detected unless you honed in on the tiny vibrations singing against your drum. A distant, groaning god, rusted battens slicing through the veil, by all appearances a silvery fish. I could see how it got its name.

The fog leaked around it, and the keel dipped in and out of obscurity. There were no hosepipes dragging from its tail, no funnels from which the government supposedly pumped sulfate aerosols into the stratosphere. Just smooth, alloy siding and air valves and oblong hull. I wondered how the veilmaking miasma was being transported to the Trouts. Was it stored as ballast in its cavernous hold? Did officials have to frequently moor the blimp to refill the stores with thousands upon thousands of metric tons of aerosols? What fed such a beast?

Soon the Trout was far enough over the river that it was only a crescent cupping the veil. I blinked for a few seconds until my eyes felt like mine again. Then I remembered the ditch I had driven myself into.

I slammed my heel into the ignition and felt the pod wheeze underneath me. *She lives!* a hopeful voice chirped. But the high-pitched sound was only the wheels whirring in place, grinding against bent metal and soil. My heart sank when the pod didn't even budge an inch. After what felt like an eon of ramming my foot onto the pedal, I began to smell burning rubber, and I knew that was all I was going to get out of my poor, defeated rental.

I slid out of the pod and faced the corn field, the river, the far-off mountain. Well, I was fucked. One glance at the state of the pod confirmed that

fact. The hood had crumpled like a used tissue paper, puncturing one of the wheels, which must have blown out upon impact.

Fuck, I thought. Aloud, under my breath: “I’m going to be making payments for the rest of my life.”

My father had always told me that the bears and mountain cats that once prowled the upstate had been driven north, ever north, by hunting and human development. But the rough-limbed trees to the east seemed like they could harbor any number of beasts, and I wasn’t about to risk death-by-mauling. I hitched my toe into the pod-door handle and climbed up onto the roof.

The split spirited my Margot-panic away, somewhere into the nether-space that the aerostat blimp patrolled. I sat up there, calmly, watching the Trout dip in and out of the clouds. I wondered if this was what liminality felt like. Here at the middle stage of my self-inflicted rite-of-passage, I had entered some kind of ambiguous state, some threshold I could not yet press my hands through or make shape of. I could not tell how much time passed as I disassociated on the roof of that pod. I stared and I stared and I stared until the sound of an approaching vehicle broke up the white noise.

A moped rattled up the road from the way I had come. At first, it whisked past, and I thought I had missed my chance to flail my arms and hail down help. But the driver screeched to a halt a ways ahead of my wreck, and slowly turned around.

She hopped off the bike, helmet obscuring her face, and gestured for me to come down from the roof. I froze. This was the first person I had seen who wasn't drugged up on the side of the road since leaving the City.

"I'm not going to carjack you and sell you for parts if that's what you're worried about." Her voice was muffled through the mouthpiece of her helmet.

I curled my arms around my knees. "Thanks. Very reassuring."

She looked back and forth. "How in the hell did you get yourself in this situation? On a road this empty?"

I cleared my throat, not yet used to the sound of my voice. "I was distracted by—" I pointed out at the skyline, but the Trout was gone, the shadow quickly fading. Had it retreated above, into the stratosphere?

"Distracted driving." She tutted her tongue. "So few actually know what they're doing behind a wheel, nowadays." She paused for a moment, and then asked, "Where are you heading? I'll give you a ride."

The hairs prickled on the back of my neck. People didn't do that, offer to drive strangers around. People in the border lands especially didn't.

I hesitated. "Civilization."

She laughed. "You're a city girl, that's for sure."

I didn't like not being able to see her face. "Look, I just need to find a rest stop. Somewhere to get a tow—it's a rental, I can't leave it."

"You're better off forgetting about that junker." She turned to swing her leg back over her bike. "You coming or not?"

I became acutely aware of the pang in my bladder, the ache in my stomach. The woman revved her engine.

“Wait.”

I slid off the roof with only my phone in hand.

“I don’t have any money. I can’t pay you.”

“Don’t make me take back my offer.”

I left the pod behind.

#

People on the inside always spoke of those on the outside like they were relics from a world thirty, forty years expired. They had refused to move when the seawater flooded their coastal towns, when the fires took root in the underbrush near their homes, when scores of aging grandparents suffered facial palsy and wizened joints from untreated Lyme. Whatever became of them, they got coming to them because of their stubbornness to leave. In the early days of my knowing Ivan—twenty years old, having just met in an acting workshop of all classes—we went to see a survivalist movie at the local cinema. It took place during the height of the climate crisis, and featured a male lead with dramatic eyebrows who was venturing into some no-man’s land (then-Iowa? no, once-Idaho?) to rescue the wife and kid who had been separated from him. I didn’t really remember the details of the recycled action/adventure plot, but it was the hero’s journey that seared in my memory. As he roughed it out in the world-gone-to-warm-weather-hell, he encountered bands of anarchist gangs, leather-strapped motorists who captured him and enslaved him to the

drug kingpin that controlled the flow of money in the surrounding small cities. The world beyond was part pre-Scream bucolic, part guerrilla dystopia.

I knew from various lectures at the university that the feature films perpetuated harmful stereotypes about people just trying to live their lives in a world that was drastically changed from the one their dead family members made home. But I was hesitant to admit that when I first saw the woman on her bike, I cast her as one of the highwaywomen from the movies.

She couldn't be, though. Rusted electric bike, jeans and a patchwork, linen shirt. Didn't exactly scream 'badass.' She let me perch behind her on the seat, and I had no choice but to wrap my arms around her waist when she took off.

"I'm Loess," she half-shouted over her shoulder, stretching out the long vowel.

We veered down the road at an incredible speed. I squeezed my eyes shut as she dodged potholes and over-sized gravel in the road.

"Margot," I said.

"What brings you up here?"

The wind and the whine of the engine gobbled up her voice, but I could put together the meaning.

I thought seriously about telling her the truth—that I was on a renegade research mission, unsanctioned by any institution, with little preliminary knowledge or plan for what to do if I ever even got to Felsenmeer. I decided against it. I had never worked in a 'field' before, not a legitimate one, and did

not know how she would react to being faced with an interrogator of her way of being. Not that she was my subject, but still.

Instead, I answered the closest thing to the truth. “I suppose I’m looking for what I can’t find back home.”

The corn fields chugged past us like a living organism, appearing to undulate from the sidelines. Loess sped up until we were out of the burnt, yellow sea, and heading uphill through a rocky scrap of woods.

“Not surprising,” she said. “Anyone who leaves the City would have to be desperate.”

“You could say that.” I couldn’t hide that fact; I wore it sagging on my face, on the slope of my shoulders. But why I told her, I couldn’t say. Maybe it just felt good to admit it aloud, to anyone.

She took a sharp turn and I clenched my fists tighter over her stomach. The moped came to a rattling halt. She twisted her torso around to look back at me. I couldn’t see her eyes through the helmet, but I had an intense feeling in the center of my forehead, a warm pressure I only got when I was being analyzed and couldn’t do anything about it.

“How desperate?” she asked.

I found the question odd, and I looked past her at the fork in the road. The right route went further into the woods, and I could see black brambles growing into the pavement. The left way deteriorated from gravel to packed dirt, and went up.

“I could just leave you here.”

“Desperate enough to abandon my family,” I found myself saying. “To sabotage my own career. To spend every last cent I owned on a pod I didn’t know how to drive.” *Desperate enough to hitch a ride with a border stranger like you*, I thought.

There were a few seconds where she continued to stare, as if expecting me to say more. But I was too tired. I was done. Wherever we ended up, I just wanted to sleep.

Then, without another word, the moped sang to life, and Loess took the left-most path. We rode the rest of the way in silence, steadily climbing up, up, up the mountain. The humidity dropped and I felt the first dry breeze on my bare skin in months.

Somewhere along the way, a screech echoed in the hollow of the valley. I squinted up at the sky and saw that it was the call of a circling hawk. Its shadow darted low over the treetops and followed us up the mountain.

CHAPTER FIVE

I did not realize that Loess was taking me to Felsenmeer until I saw the first cabin that looked somewhat lived in. It was made of the same white balsa wood as the cabins in the pictures that the Gregorsky woman had used in her presentation. There was no sign to announce the commune, but as we ascended onto the stony outcrop of the mountain—Barrow Mountain, I recalled—I sensed some barrier had been punctured, and now all the outside air was leaking into this place, or vice versa. Maybe the lecture had gotten to me too much. Maybe I should have left all she said—about liminal spaces and flux and god-spirits—behind. I pressed my fingers to side of my head as we rolled into the village, as if I could somehow dislodge the redolent theories from the labyrinth of my cochlea.

Something rustled in the canopy, but when I looked up the branches were empty.

Loess drove past a thin strip of trees revealing the drop-off of a precipice. I saw how far up we really were, and the world below seemed so small and mechanically constructed by comparison: a grid of old houses broken up by patches of woods, a river, flatlined on the foreground, a ridge itching the eastern horizon.

She braked the moped on the outskirts of a ring of cabins. An elongated house painted the same shade of off-white was erected at the heart. To the west, there was a large garden that looked mostly barren aside from a few rows

of a short, ruddy-colored crop, unlike any harvest I had ever seen. The stiff leaves fluttered overhead, but there was no wind. No people. If not for the slate gray of the veil pressing down on us, I would have been quick to call it pastoral, peaceful, even.

“Are you from here?” I asked Loess.

She swung her leg off the seat and hopped onto the points of her toes. “I don’t really think anyone’s from here. Unless you count Esker.” She took off her helmet, and her coiled hair sprung free from its enclosure. Her brown skin was unusually bright given the limited sun exposure. Most smooth-skinned faces were enhanced for advertisements and it was rare to search for pores on a face and truly find none. She smiled. The first true smile I had seen since setting out on this ill-conceived journey. “Ma brought me here when I was a kid. I guess it’s been...fifteen years? God, that’s forever.”

“Is this...Felsen...”

“Felsenmeer,” she said with a nod.

I eased off the bike. The soil was soft under my soles. I had a wild impulse to take my shoes off. “Why did you bring me here?”

“Would you rather I had dumped you in Minisink? You could have bought a bike there, probably. I think there’s even a motel that hasn’t been infested with roaches. But you said you were desperate. Minisink would have turned you back the way you came.”

I was surprised that she would have put so much thought into it. I breathed deep, from the basin of my belly. I had never thought that air could

have a *flavor*. I knew that the smell of food cooking could tint the air in a room: the umami of ramen boiling in a pot, the curdled aroma of day-old yogurt, left out on the counter overnight. Ivan had a cauliflower stir fry he liked to make that coated the kitchen in a particularly flatulent reek. But those had all been layers atop a default odor of insulated living. It hadn't crossed my mind that the world I traveled through had any scent until now, because now breathing felt like liquid sliding down my trachea, and each alveolus swelled to accommodate the tide of diatomic gas, a concoction I had long survived on but never paused to savor.

Air tasted how I imagined microbial resin at the bottom of deep-sea vents would taste. Like organic matter. Like epochs.

Loess was unloading her pack from the back of the bike.

"I thought Felsenmeer was supposed to be the lowest point in this region," I said.

"Ah, so you've heard all about us," she mused. She seemed unsurprised.

A stroke of panic dragged through me as I debated how to respond. The tenants of ethical ethnographic practice compelled me to reveal my intentions, to remove my gloves and lay them out on the table as a means to demystify myself as the other. But was I even doing ethnography? I could hear Vanya's voice now, laden with gravity, as she broke pieces of chalk off against the blackboard: *Damned is the anthropologist who strays from her notes. Cursed is she who lets her recording device stall. The rituals of mundanity would be data*

lost, and without, the project is a ruse: an exercise in self-enlightenment. My adviser, ever the enchantress.

I never took physical notes. There was no charge on my phone. Even if I wanted to record the latent functions of paralanguage—by Vanya’s own example, the phonologically-rich clips of an informant mouth-breathing in between takes—I didn’t exactly have the means. Or the energy, not now, at least. It all felt so inconsequential given the doubt nestled inside my chest about even having any true intentions to divulge.

“Everyone’s heard about the stones,” I said, in an attempt at generality.

“Well, you’re not wrong. Come see.” She swung her pack over her shoulder and gestured for me to follow her. We walked into a stitch of gnarled, stunted trees at the edge of the encampment and climbed over a cluster of boulders. She pushed a bare branch out of the way at the top, clearing my view for the valley beyond.

“That’s Felsenmeer.”

From high above on Barrow Mountain, Felsenmeer shone in the heart of the valley. I thought, at first, that it was an illusion. Sunlight could not scatter against the gray stones, not like that, not since the Trouts promised dim skies and a world of low albedo. But where the forest fell away, a river of boulders carved through the earth, made of a rock that somehow parried the veil-light. As I stared at the trail of stones, haunted by an unearthly pale, I felt my legs stiffen beneath me. My muscles seized. I thickened with dense layers of ice, slowly transforming the bedrock beneath me under my own weight. I imagined

filling the valley with my vastness. I imagined sliding into the ghost of the glacier.

“But the hawks prefer the heights,” Loess went on. I shrunk back into my body. “So we stay up here, on the same plane where the old hawk sanctuary operated decades back, looking over it.”

It was another detail the Gregorsky woman had failed to note. Not like I was keeping track.

“Where is everyone?” I asked.

She pointed up. “Hunting.”

Three dark birds dipped low, disappearing against the backdrop of the eastern ridge. At first, I thought Loess was referring to those distant wings as ‘everyone,’ and I imagined a village populated only by birds-of-prey and the mad, young woman who kept them. But then I saw them; the people in the trees below, so small I couldn’t see their faces, like spiders prowling the mountainside.

“I’m late to meet my mother,” she said. “I’ll show you where you can get something to eat. There’s an outhouse off the trail, behind those rocks over there. You can use my cot if you’re tired.”

“You’re too kind.” I watched her climb back down the boulders. “I hate to impose—”

She was already halfway across the compound. Not so talkative, this one. I followed her to the center longhouse, which up close looked older than the other buildings. The original stonework was painted over, and it reminded me

of the cabins-in-the-woods of slasher fame. Inside, the air was cool and it looked more like a compressed mess hall.

Loess showed me to the closets in the kitchen that were stocked with non-perishable foods: a vat of congealed honey, gunny sacks of uncooked rice and dried beans, even a plastic container of powdered milk. There were cans of meat and vegetables on the highest shelf. I picked up a tin of corned beef and rolled it over in my palm; the stamped expiration date was from two weeks ago. Loess snatched the can from my hand and put it back. "Off-limits. We save these up for feast days." She gestured me out of the way. I stepped to the side and she lifted a hatch door on the floor where I had just been standing. A square, underground bunker stuffed to its brim with leafy, umber-tinted produce.

"Is that refrigerated?" I asked.

She shook her head. "All nature's handiwork. A crisp four degrees C, year-round." She began rifling through the stalks and roots. "We're in drought," she said before quickly listing off the names of the goods: *blackberries, chicory leaves, scallion shoots, yellow chanterelle, rock tripe, oyster 'shrooms, garden cress, purple potatoes, turnips*. And I could have my fix of any of them. How did non-rabbits go about eating this stuff? Surely not *raw*?

"Oh!" Loess said, pulling up another hatch, "Protein!" The second compartment was deeper in the ground and packed with little bundles wrapped in cloth. She picked up one and pulled back the string. It was a frozen rat.

“There’s a wood-fire stove if you want to cook this cutie up,” she said, smiling at my discomfort.

I tried not to look too long at the rodent’s crumpled limbs, its stiff fur.

“Don’t you have any electricity?”

Loess hesitated before packing the rat back into the frozen vermin chamber. “Yes, technically. But it’s pretty restricted. There’s one old power line that goes through here, and the government charges us a fortune to use it. Esker only turns the power on for necessities, like when we have to charge our bikes or when she needs to use the computer.”

I don’t know why I was so surprised that they had a computer when I had been quick enough to assume that surely no place existed that wasn’t constantly humming with electricity. Either way, it looked like my phone wasn’t coming back to life anytime soon. I was beginning to understand why the Gregorsky woman had only lasted two weeks.

In a few hurried breaths, Loess pointed me to the outhouse beyond the garden and to a small cabin on the fringes of the ring that stood out for the yellow streaks on its door. “I live there; it’s in a nice shadowy spot where you can get some rest.”

“When will you—”

“I really have to run,” she said. Then she was off past the garden, down a path I couldn’t see, snaking through the crooked trees. The last sound I heard from her was a throaty whistle, and the leaves shaking against each other.

I was too exhausted to inter myself in the web of my own skepticism. The empty compound aside, the frozen rats and fixed electricity regardless—I just wanted to sleep. I used the composting toilet, ate a handful of bitter blackberries, and found Loess' mattress in the far corner of the shadowy, little house. My last thought, before sinking, was of the rental pod worker's disappointment.

#

I was drowning, again.

At first, all I could make sense of was the rumbling pressure in my ear. The sound of thousands of tons of water pressing in on me from all sides. There was a high-pitched wailing noise, as well—like wood and metal singing against each other, or the agony of a much deeper creature that had never touched the surface-light.

The water above me was rabid with the tint of a foul sky, but it still gleamed in mocking columns as I slipped deeper. Underwater, the veil gleamed. Below, the dark was soft and impenetrable all at once. I did not want to sink into it, to become a corpse on the other end, but it looked comforting. Warm.

I realized, then, as my lungs burned for breath, that this was not the pond in the park downtown. This was much too deep, and there was neither dock nor scholar's shadow blackening overhead. No one was pushing me down.

I fought the urge to gasp, to inhale the briny water—the sea I had plunged into on my own accord. But I needed to hold out, to keep my lips

sealed. Just one push up, one kick and I would taste the air, taste the epochs...

A tickle on my nose brought me to the point of inhaling, and I woke.

The warm breath on my face belonged to a boy with pronounced dimples in his cheeks and short, floppy braids on his head. He hovered over me, and I could feel his elbows digging into my ribs.

“Are you a ghost?” he asked when he saw that I had woken.

I blinked. “I don’t think so.” My voice cracked.

“Oh.” He looked relieved. I tried to discern how old he was, but analyzing age in children was like taxonomizing a different species to me. Seven? Ten? “I thought you were because you’re so white. I thought a dead person was in my bed.”

I jolted upright. “This is *your* bed?”

He hopped to the floor and giggled at what I could only assume was sheer panic in my eyes as I worked out where I was.

“*Now* you look like a ghost,” he said.

“Marl!” came a woman’s voice from a room over, too deep to belong to Loess, but similar in cadence. “Do you have selective hearing or something? Get your ass out of there!”

Now it was his turn to look like the living dead as his eyes went wide. He shot out of the room, feet barely touching the floor. “I wasn’t!” I heard him shout. “I was just looking for my shoes, I swear!”

The room marinated in sheets of gray, with only the glow from a candle on the center table keeping it from succumbing to night. There was one empty cot beside me and two more lining the adjacent wall. No blankets, no pillows. It was practically unfurnished by my standards—or rather, by Ivan’s neurotic decorating habits, which were the only standards I had to go by. That man had owned a vase for every surface, a tiny, deformed succulent for every dark windowsill.

I unfolded my limbs, felt my joints pop. I wandered out of the room into the dark hall and followed the sound of tempered voices into the parallel room. It was identical to the one I had just emerged from. I found a woman sitting cross-legged at the foot of a cot, finger-weaving some sort of fibrous rope into a basket or a sack. The boy—Marl—clung to her arm as she ebbled her elbows in and out, fingers twisting and folding over the fibers at a masterful speed. Her eyes looked like Loess’, the liquid amber irises, but there were faint lines around her lids.

“See what you’ve done now, Marl,” she said, hardly looking up from her work. “You’ve woken our guest.”

“I’m sorry, I thought Loess lived here,” I said.

“She does.” The woman pulled a long tangle out of her skein. She smiled. “I’m her mother, Bryn.”

“And I’m Marl!” The boy jumped up, raising his fists in triumph.

She shushed him. “Welcome to Terra-Firma, Margot.”

It looked like Loess had already done all the hard work of introducing me while I was still asleep. Now I had one less excuse not to assimilate, one less daunting task with which to distract myself from actual human engagement.

“This isn’t Felsenmeer?” I asked.

“Those are the stones. We, the little people on this rock, are Terra-Firma.”

Gregorsky’s presentation pitched a canvas in the back of my mind, her vexatious laser pointer jotting across my thoughts like an insect on acid: *What is undeniable is that this group, having dubbed themselves Terra-Firmans, after the Latin phrase terra-firma, or ‘solid earth,’ have redefined what cosmology and social living meant for themselves in the modern age.* God, how grandiose. She was one hot take away from claiming they were surrogates of the forgotten Roman goddess of the same name. I wanted to swat her voice away, wanted for once to pass an hour without the hot breath of academia against my neck. But the thing she had said next about the connection that the people had to the so-called *underlying*—whatever that meant—that I couldn’t shake. That word was drawing me down, cold in my feet.

“Will you be staying with us for long?”

I rubbed my arm. “I, uh, I don’t know. I don’t really know where else to go.”

The little boy clasped his cheeks with his palms. “Mom, she’s an orphan like us! We have to keep her.”

“He means outcast,” she said. “And we’re neither of those things, Marl. I’m sitting right here in front of you!”

“Oh yeah.” He rubbed the back of his neck, gave a sheepish grin, and then darted past me into the hall.

And then I was spiraling into *observer*-brain: the state of mind where I forgot how to exercise my facial expressions, to put any unrehearsed words to voice. It was probably why I was so shit at fieldwork. But I caught myself threading associations between the candlelit scene that played out before me and the visual culture of a generation far removed. There was something pioneering about it, but I resisted that word because certainly this wasn’t the ‘frontier.’ Sure, we tended to delegate all areas that the MagLev could not reach as the ‘borderlands,’ but frontier was someplace that had managed to hold out against the shadow of civilization. As I watched Bryn’s fingers twine in and out of a knot of rope, heard the wooden panels of the floor groan under Marl’s feet in the adjacent room, I thought that I was bearing witness to an elaborate staging of antiquated living, but the actors were all of a new age, born into a future that had not yet been chronologically realized.

A door cracked open from out in the hall, and Loess strode into the room. I forced myself back into participant-brain. She removed the thick, elbow-length gloves from her arms.

“Sleep well?” She didn’t wait for me to answer. “Esker wants to see you.”

“Me?”

“You didn’t think you’d just slip in here without notice? Everyone goes through initiation. Good thing you’re rested, people have been known to piss themselves from the hazing. And that was before they even got to the surviving-naked-in-the-woods-for-a-week stage.”

“What the hell is wrong with you?” Bryn raised her skein as if she were about to chuck it at Loess. To me: “Relax, honey. Esker just has questions. No hazing. We’re not a fraternity.”

I let out a breath, visions of forced tattooing, psychological humiliation, and eating rotten food settling.

“Esker is what, your herald?” I asked. The Gregorsky woman had only mentioned a leader briefly, and not by name.

“Just come.” Loess grabbed me by the wrist.

#

I had theories about Esker, none of which were based on any preliminary knowledge provided at the university nor firsthand contact. My theories took root in the simple fact—technically speaking, belief—that anyone who founded an off-the-grid commune could not have done so successfully without surrogate motives, least of all without an inflated opinion of one’s self. I folded this woman into the fabric of cult-mentality. There was something else there, that wasn’t being said. What got her out of bed in the morning? A delusional crusade against the government? Religious fanaticism, a new Messiah? An astrological mission, a bearer of apocalypse? Alien interventionist? Was there money wrapped up in this? Sex? A front for human trafficking?

The clips I rolled in my head, the scenes from the docu-series and biopics, seemed far-fetched now. In the few hours since arrival, I had already ruled out the more sinister origin stories. It was a gut feeling kind of thing. Speaking to Loess and Bryn and Marl had assured that. But I didn't buy into the "existing for the sake of existing" crap that the Gregorsky woman had preached from her podium. People didn't just hole up on a mountain with a flock of hawks at the turning point of a global climate crisis for the hell of it. And the woman who started it all could not be a neutral figurehead.

When I first saw her in the longhouse, Esker was eating raw fungi from a bowl, snapping off the mushroom caps with the front of her teeth. She was much older than I expected—late sixties, early seventies. But the only measurement of her years was in the bags under her eyes, which were the color of bruised peaches, and the sun-spots that freckled her face. Old women in the City disguised their age under the shadow of high collars and faint incision scars below their ears; they dyed their hair shades called Merlot Red and Champagne Blonde. Esker had no loose skin to veil, and the wrinkles about her face looked like they were meant to be there, complementing the geometry of her cheekbones, her pointed chin. She kept her hair white, cropped close to her skull.

Loess abandoned me at the head of the table with a squeeze on the arm, a squeeze I both didn't think I deserved and didn't want to end. Why couldn't she stay to sponge up my awkward silences? *Do not be the interviewer*, I told

myself. Whenever I tried to fit my fat thighs into my field-pants, I always came across stiff. Odd. Interrogating, even.

“Please, sit. I should like to share a meal with my guest,” Esker said in a modulated voice.

“Thank you.” As I moved to take a seat, I noticed the hawk perched on a mount behind her. I was struck by its size: a heaving, ruffled breast, yellow feet clenched around the branch, talons the length of my little finger. Its feathers were cream and coffee-colored, except for the tail; the tail was rust with strips of orange, sunset-like. No leash, no collar, nothing tying it down. It was just asleep on the branch.

I sat across from Esker and she smiled gently. “He’s handsome, isn’t he?”

“I’ve never seen one up close,” I admitted.

“Their migration patterns are not what they used to be. You’ll be hard pressed to find a red-tailed any further south of here.” She dabbed her lips with a cloth napkin. “You’ll know, then, that I’m Esker. And you?”

“Margot.”

“I know your name. But *who* are you?”

I raked my fingers over my knees, but resisted the instinct to look away. Esker’s eyes were damp with knowing; she could see through my intentions, the ones I didn’t wholly know for myself.

“I’m not sure I know how to answer that.”

She pushed the bowl across the table so that it sat in front of me. “Try some.”

I stared at the flakes of rock tripe, the shriveled gills of oyster caps, the shoots of warty chanterelle. I couldn't remember the last time I had eaten a mushroom, and certainly not an uncooked one. Still, I picked up a stem at random and stuffed it into my mouth. It tasted mildly peppery, slightly fruity. I wanted to scrape its sensory memory off my tongue.

"You may think you've stumbled into a haven here, Margot," Esker said while I made myself chew the rubbery flesh. "City girl like you, this might as well be another world. Look, I don't know your story. I don't quite care for the details. I would be perfectly at peace bringing you in, setting you up with a cot, and taking on your education of falconry, of the land, myself. Our trust of outlanders has helped us grow. But it has also made us victims of the veilmakers, too relaxed around those who would dare to diagnose us. So you understand why I've got to ask."

So she was wary of diagnosis from third-parties. I swallowed. "I used to be a researcher. *Used to be.*" I deigned a small laugh, mostly in disbelief at myself for my honesty. "Well, I still am as a technicality, I think; my ID hasn't been deactivated at the university. But I left that all behind."

The hawk made a whistling sound through its nostrils as it slept. Esker leaned forward over the table. "Why leave? A cushy career in academia. Smart girl like you. It doesn't make sense."

It was a good question.

None of it made sense.

I sucked in my breath as I felt the old wound open, and the two Margots cracked apart. Yolk spilled between them and I was conscious of Esker's eyes; she saw my mess for what it was, sticky inside me.

"I loved it once," the other Margot said. "I wanted to be an archaeologist, at first. I wanted to dust away the new world for the old. But then an adviser told me that all the great monuments had already been excavated and all the undiscovered ones had long been lost to flood or inaccessible after the Scream. I believed her, and I went into cultural anthropology. As if that were a more *practical* field. But I didn't mind. From an early stage I saw it as the study of the animal that became a god. I don't know where it came from—I had a nostalgia for our extinct siblings, *homo rudolfensis*, *erectus*, *neanderthalensis*, those who gave their blood to us, and who we killed over it. I was sentimental about the extinction of the megafauna in Australia, the mammoth population in Siberia, the giant sloths in Peru. I saw culture as the gatekeeper of biology; what drew us to sex, to hunting to the point of annihilation, to community-making, was at first evolutionary. At first. But it was only through the screen of culture that these things were realized or forbidden. Unnatural behavior did not exist until we argued for it. I loved those questions. But I couldn't ask them. I couldn't find a field. I was stuck under the thumbs of the gods I wanted to research, and I only ever saw walls."

The words came like an unexpected tide, high around my ankles.

"Ok, I *am* a researcher. I might always think like one. But I'll never write a monograph. Vanya will never drape the doctoral hood over my head." I looked

long into Esker's eyes, as if to impart, *I'll never amount to anything, so you don't have to worry about me.* It was too painful to admit. Instead, I said, "I was under the impression that those at Felsenmeer had *unlocked* something about how to live in this age...I came because I can't seem to figure it out for myself. I can't seem to live, in all the functions of the word...whatever that means."

Esker sat back, and it was as if that movement of loosening signaled the bird to awake. Its pale, yellow eyes snapped to mine, and it stretched out its wings to their full span as if in greeting.

She smiled. "You are not the first wandering academic to fall onto this rock," she said. "There was a woman who came through this valley six or so months ago. She took so many pictures I hardly ever saw her eyes. The constant flashing scared the hawks into the canopy. We gave her bedding, fed her good roots and stews, and told her our stories, but she did not want to forage or hunt alongside us. She only wanted to follow us when we hiked down to the stones, and her questions were harsh. She spoke of a 'primitive spirituality'—seemed rather pleased with her theory—and when I denied such a value, she demanded to know why, then, we had chosen to live so far from modern amenities, if not to become shadows of our contemporaries."

A researcher who questioned with her canines. It had to be the Gregorsky woman. The question *why?* was one I had myself entertained, but I didn't want to pose it and appear as obtuse as my predecessor.

Esker answered it, anyway, staring past my shoulder at a nowhere spot on the wall: "Urbanites tend to think we are here to prove something. We're not

here to prove anything.” Her veiny fingers curled over the tabletop. “Quite the opposite, really. The rest of the world is trying to prove themselves. To justify their self-worship.”

“But if the rest of the world is worshipping itself...what do you worship?”

A dry smile wrinkled her face. “Wouldn’t you like to know? Come tomorrow. Hunt with us.”

CHAPTER SIX

I woke to Loess tossing a pair of heavy gloves onto my chest. “We’re late,” she hissed from across the dark room.

I blinked at her silhouette, forgetting for a moment all spatial awareness or depth perception. I flooded back into my body when she threw another, softer garment at my face.

“Wear these.”

I shrugged out of my city clothes and wrangled my arms through whatever it was she had given me. Loose-fitting, natural fibers against my skin. Then I followed her shadow out of the cabin into the pre-dawn fog. She moved with ease through the blackened encampment while my own feet tripped over roots and staggered dangerously close to cabin corners. I wondered why we were out so early. The morning air was bracing, electric in my lungs, but there was still that sodden smell of an earth that had not touched the sun.

We joined a growing congregation of shadows on the outskirts of the little village. It was the first time I had seen the other Terra-Firmans, but I could not make out their features in the low light. My ears pricked towards Esker’s voice, a smoky sound trailing from the center of the group.

“...as they may never dwell together,” Esker was saying.

“What won’t?” I asked Loess under my breath.

“*Day and night.*” Annoyance was tight in her voice.

I clamped my mouth shut.

“Be open,” Esker went on. “Be vast.”

Before I could puzzle over those adjectives, a three-fingered whistle ripped out of her, as if plucked from between her ribs. Her tawny hawk, which I hadn't even seen on her shoulder, took wing. With its release, the canopy hummed with life, and more hawks joined it in the sky. I lost track of their shapes against the night, but from their caws could tell they were rising higher, flying further. The dusk became static with the whistles of this strange tribe and the cries of their birds. If Loess had not latched her gloved hand onto my elbow and *yanked*, I might have stood there lost in the noise.

The hunt had begun.

I tore after Loess and the rest down a winding footpath that was steep as hell in the underbrush. They went so *fast*. With the visibility this low and the way so precipitous, I could not tell when my feet were on the trail or tumbling through uncultivated mountainside, ankle-deep in crackling ferns. I couldn't see the others, but I could hear them crashing through.

Finally, Loess seemed to notice me struggling and slowed down.

“Where—“ I wheezed “—where are we...*going*...”

The sky was going yellow-gray, and I could see her as if through a chiffon screen, swerving between trees.

“The stones,” she said, eyes tracking the hawks above.

I wondered if they hunted rats out in the open on the boulders.

“What is it about those rocks, anyway? You worship them or something, don't you?”

She didn't look back. "Esker always told us that when she was a kid, when this was still valued land, the locals warned her never to climb into the center of the stones. The boulders go deep out there, and if small things like humans slip between the rocks, they may fall and fall and fall and may never be able to find their way out again."

I swept brambles out of my face, still straining to match her stride. My ankles clambered together, twisting over rock and moss and the occasional log.

"I've only ever pressed up against the edge of Felsenmeer." She wiped a lick of sweat off her forehead. "I had been too afraid to explore a ghost, especially one that could swallow me whole."

A ghost. My thoughts migrated to the strange, calcifying feeling I had in my sinews when looking over the valley yesterday. The feeling of liquefying and re-freezing into a mold of what once steeped low, what once carved slices out of rock like it was slow-baked treacle. An inverse of geomorphic history. Becoming negative space. Becoming a ghost.

My speech possessed none such eloquence: "So you're saying you *don't* worship it? But you fear it?"

She ignored me. By now the sunrise was doing its smoldering warp of the night, layers of neon violet and cranberry red erupting over the naked tree branches as if from a stopped-up volcano to the East. The sides of Loess' face became molten with the light, and I tracked her ears like flames through the thick wilderness.

A hawk swept low and screeched, so unexpectedly close to my ear that I felt the nerves flare out from my jugular notch to the knotty base of my sacrum. Esker and the rest of the hunting party had long been lost down the neck of the footpath. I paused for a moment to catch my breath against a trunk. It felt like all the muscles in my chest were squeezing my lungs into a bezoar, a tiny rock lodged beneath my sternum that no air could pass through. I looked up from my exercise in inhaling to find the woods stricken with a sunrise so bloody that the subsoil was a crime scene, the crinkly leaves the canvases of plasmic splatter. The path was no longer clear to me, and Loess? Loess was gone.

I bolted on the heel of panic downhill.

“Loess!” My shout shut up the chatter of waking birds, and it went a dead kind of quiet in the canopy. “Wait up!”

“—faster way! Don’t—” Her voice etched in and out. “—last hawk—”

“What? Slow down!”

It became clear that these woods were meant for wading, not running. The underbrush tore my skin up, and every other step was to avoid the teeth that jutted out of the soil, the jagged ends of an earth that had been ripped apart and thrown back together with the shifting of the plates. A slow-moving violence immortalized in the stone, and sharp as it punctured my soles.

Loess’ muffled voice was like audio from a film reel, skipping and clipping and rewinding. What I could hear didn’t quite sound like English anymore, or any human language.

“—stay close, now—close, now—stay close—faster way—fast—way,
faster—”

I built up her name in my throat one last time, ready to release its wings. But my foot snagged into a root. The name choked against my closed teeth. My body pitched forward into open air, for a moment, afloat.

I soared into the womb of the woods, and plummeted, shoulders over heels over fingers over toes, down the old mountain.

#

I heard a dead god scream in the thralls of the valley, but when my eyes flickered open, I saw that it was only the call of one of the hawks circling overhead. My white breath tufted above me, and I watched it dissipate into the plum-soaked sky. The hawk’s shadow darted low over the treetops.

Loess had said that this place used to be an avian sanctuary of some kind, that Esker had lived in the arms of this valley her whole life. That, of course, would explain the fixation on hawks. I wondered if they had evolved to the point where they could speak each other’s languages; if Esker had learned to recognize the different noises that red-tailed hawks made. Territorial squawks, mating calls, maternal chirps. I knew very little about birds full stop, but by some random interest in national symbols had come across a piece of red-tailed trivia: the high-pitched screech was a male announcing his territory during the mating season. It was also the voice that American filmmakers used to dub the bald eagle in the Golden Age of motion pictures. The red-tailed hawk was the bald eagle’s voice actor. Still, the call did not sound so patriotic or

proud to me; it sounded desperate, but in a kind of way that cut cold and unsettling, to the marrow of my bones. And cold was not a feeling that I found so easy to imagine.

I lay suffused in this transplanted avian misery, flat in a cushion of leaves. When I moved my arms, I felt the pressure of soon-to-be bruises beneath my skin. Sore, but not broken. In truth, I didn't know what broken felt like. But there was still give to my arms, still inertia in my woody legs.

I propped myself up, and my elbow sunk under my weight into the concealed hollow of a long-abandoned burrow. It struck me suddenly that underneath this mountain, boring between the layers of living rock, through the bio-matter that fed the ornamental trees, was a network of tunnels. A secret world of voles and mice, of snakes and blind worms, that had survived the fires and the floods, the weighty heat and the tide of mid-century extinctions—organisms that rubbed up against the edge of the underlying. Salma Gregorsky's sure analysis reverberated now: *The disparity between their name, their connection to the underlying, what is solid beneath their feet, and the god-spirit they have identified in the hawk, is key to our understanding of them as liminal beings, between earth and air.*

Had she been getting at something, after all? I listened for the world below.

I wondered what the underearth things heard in the fissures between organic and inorganic, if they heard the groan of the mantle, cradling the center core. If they heard a quake before its vibrations reached the upper-crust,

if they felt the earth shift, nanometer by nanometer, and the seas move to appease it. I closed my eyes and listened for it: the terrible slosh of terra-firma.

I heard only the hawks scream.

I realized, then, how long the shadows of the trees had stretched. The once violent sunset above was now the inside of an orange peel, white-gold, becoming faded with veil. Had hours passed in a few moments of contemplation? Loess was nowhere to be seen.

#

I imagined Mary Shelley filling out my bones as I trudged the long way uphill. The brambles in my hair—the dregs of Creation. The mud on my knees—an exfoliating mask. The rising molars of stone twisting my ankles—a force of terrible cruelty and power. But Shelley had never truly known the agent of restoration that she had her mad scientist name as nature; she had lounged in her lawn chairs, had ridden past it on horseback, had watched through the curtains as the tempest shattered. Here I was thick with it.

I straddled the mountainside as I hiked up and up, for what felt like an hour, until I was close enough to the veil to draw my fingers through its mist. The last boulder overcome, I stumbled, gasping, back onto the flat outcrop of Terra-Firma. There, in the middle of the gray day, the shadows from the hunting party were humans fully-fleshed, going about their duties. The majority of them were fit and middle-aged, though there were a handful of barefooted children darting about, and even one or two close to my age.

At the center of the circle of cabins, Loess sat skinning fresh rats by an empty fire pit.

“I think I get it now,” I said as I approached her.

Her lips were half-formed around a smile in her conversation with a red-headed teen. That wilted quickly when she saw me.

“Do you, now?” she focused on the plump rat in her hand. A little dried blood rimmed its snout. “Have some revelation while dicking around off the path? Esker’s well pissed.”

“For what?” I asked. “I got *lost*.”

The red-head looked uneasy. He backed off.

“She really wants to help you, you know?” I watched as she slipped her knife into the loose fur at the back of the rat’s neck and began to carve a smooth line down its spine. She dug her bare thumb into the incision and began to peel back the fur. Not a drop of blood. “Alright then, what did you *get*? Proselytize me.”

My eyes were fixed on the activity of flaying. It reminded me of unsticking a sweaty sock from a foot. The skin came off like a garment in one piece, apart from the ears and tiny phalanges. Pink sinew gleamed underneath.

“Well?”

I rolled in my lips. I felt a little mad, now. She would think so, too, were I to tell her about the hour I spent lying in the mud, feeling the Earth breathe against my back, rather than hunting with them.

“I...” I turned my gaze towards the sky. “I just realized...it’s a lot different out here.”

She looked at me with a dumb expression that matched how inane I felt.

I prattled on. “Than the city, I mean. The veil is thinner.”

“The veil...is *thinner*?” She laid the flap of fur atop the pile she had accumulated and added the body to the basket of fleshy rat corpses. Before I could react, she had handed a stiff rat over to me and fit a small-bladed knife in my right hand. “Do you know the first thing about how veils work?”

I stared at the bulging black eyes, the shriveled nostrils, the pickled tongue poking out of its teeth. It was still warm.

“Of course I know how they work,” I said. “They are thinner in some places and thicker in others, depending on the conditions of that environment pre-Scream. I know a Trout engineer whose only job is monitoring the veils to find areas that need thickening.”

She began to skin another rat, and I mirrored her movements with my own blade. I felt the puncture deep in the acid of my gut and sensed each cell splitting and dying as I dragged the knife down its back, vertebrae scraping along the way. Blood welled up. I had dug too deep. The fur matted with sticky red.

“You’re operating under the assumption that any one area *needs* thickening.” She stared as my fingers went wet with blood. “And you’re misinformed. The Trouts target us out here. Your City sees more sun than we ever will.”

“That can’t be right.” I thought of how gummy the air tasted in the City. The veil there was like a ceiling sagging with mold, pressing down on you no matter where you went. Here it was a vault—not open, not blue, but suggestive of air, of sky beyond.

She snatched the mutilated rat from my hand and began to clean it and strip back the fur. “Our world is engineered, Margot. That means the cogs need to be choking up dust somewhere to brighten the living conditions for the rest of the goddamn planet. Veils work by cutting back the energy coming in from the troposphere, right? You’re not an idiot; that means there’s less energy in the water cycle, less rainfall, agriculture goes kaput, and what do you know? We’re in drought. Any engineer worth his salt knows that it’s impossible to keep the environment stable on a global scale if you’re fucking with systems elsewhere. To keep the rain falling in the Heartland *and* the skies dry along the coasts, they’ve got to veil the land they deem most useless. So that engineer friend of yours—he looks at a place like Barrow Mountain, thinks, *well, there’s no capital here, the land can’t be farmed, and the towns are already empty from Lyme, so what’s the loss?*” She peeled off the fur with one fluid motion. “Why else do you think we’re hunting rats for our dinners?”

I held my bloody hands out in front of me, feeling insect-like. “How do you know so much about this?” Perhaps the better question was, *how did I not?*

“Off-the-grid’s not the same as ignorant,” she said. “Just because I haven’t been to your city doesn’t mean I haven’t been on the Internet, or, I don’t know, read a book.”

“Ok,” I said, sensing her defenses rise. I sedated my voice. “I mean, if all that is true...then you’ve got a right to be upset. But you seem to live well here. If it’s really so bad, why has Esker built up this community, why here?”

Her shoulders relaxed. Noticing my hands, she passed a rag over to me. “We live how we are meant to live, and ask for little more. Why should we be the ones to leave?”

It was a topic much betokened by anthropologists. We flocked to displaced communities and refugees. The uprooted souls of the Anthropocene were the carrion that we fought for funding over. I thought about the Athabascan tribe that had been relocated from the mud-puddle of the Arctic Circle; I thought about Kumail rubbing those coveted fellowship dollars between his fingers as he touched down in South Vancouver to conduct his research. He had mentioned offhand, once, when he described the project to me, that he wanted to bring the Athabascan plight to national attention.

“So you want to help them move back North?” I had asked.

“No, God, not that. It’s not habitable up there,” he had said. “And anyway, the aspects of Arctic life that were integral to their storytelling are, quite simply, *extinct*. The Athabasca Glacier is a stream. I just think people should know. People don’t *realize* that the Scream—the havoc *wrought* by the

Western world—stripped members of our *own* species of their culture. They are entitled to some recompense, don't you think?"

Recompense, in the form of publicity, charity, or even government stipends, had been enough. It was our way of giving back to the peoples we hyper-analyzed and aired out for the world to read.

I saw now in Loess' eyes that it would never be enough.

I cleaned up my hands, but a few spots of blood had already soaked into the dirt. I stared at the individual grains of soil, almost black in color, and thought again of being perched on the teeth of the Earth.

"The raptor sanctuary has been here for over a century. Esker's family has been settled in the valley for even longer. It's this modern derangement that people like her should leave the land behind so that large corporations can playact restoring nature to its rightful state." She stood and picked up the basket of skinned rodents.

I thought about my own preconceptions of settlement. I had been born on the thirty-fifth floor of a midtown hospital, at the witching hour between three and four in the morning. My mother, who had been labeled by the obstetrician as of "advanced maternal age," brought me home to the same brownstone with the wafer-thin walls that she would eventually die in. They had only been renting at the time, but the row house was still a marker of status, especially in the real estate market at the time. But before it had belonged to them it had belonged to another white-collar couple, and perhaps *ad infinitum* into antiquity. There were no roots there. And there would be no

roots, given the inevitability of the site being condemned as a result of my father's manic hoarding. Speaking of rats...

“You'll take all these to Ma, alright?” Loess nodded at the pile of furs on the ground.

I sucked my teeth at the prospect of those slick and putrid membranes touching my bare forearms.

“Yeah, anything.”

CHAPTER SEVEN

A middle-aged woman with her hair drawn back into a long, salt-and-pepper tail stirred a pot of rat haunch, garden cress, and purple potato cubes over the hearth. Congealed in broth, one could've mistaken the rat for strips of beef. Its taste, though, was more reminiscent of slow-cooked chicken, and it broke up into tender morsels in my mouth. The stew was surprisingly filling, and even the flavor I didn't half mind.

Esker's gaze from across the dinner circle, though, was sour as vinegar under my tongue. I slurped from my bowl and pretended not to notice, and when young Marl tugged on my sleeve asking to play a game called 'camouflage,' I hopped up at the opportunity to forget, in effect, the hour or three I had spent traipsing through the forest. 'Camouflage' involved me closing my eyes while he ran from rock to rock, looking for the best shelf of bark to hide his face behind, and then acting aghast at the disappearing boy. "I could have sworn I saw him over here," I would say while crouching at his feet, my face inches from his squinty-shut eyes, "But it looks like a new tree just spontaneously grew!"

"Wow, you must be stupid or something," he said when we had been going at it for thirty minutes and Bryn had called him to bed. "I was there the whole time!"

I clamped my fists on my hips and watched as he galloped away. “Yeah, or maybe you’re just such a good hider!” I called. *Jesus*. Were all kids this brimming with unearned confidence?

There were only a few older members perched around the dwindling fire, Esker among them. Rather than face her disapproval, I rubbed the back of my neck and headed for the cabin. I bypassed the room where I could hear Bryn negotiating Marl into bed (“Your growth is going to be stunted, you know that, kid?”), and slipped into the cool room with the four cots.

I stared at the blue shadow of the ceiling until I couldn’t tell what was the actual wood and what was dream-wood, reconstructed by sleep spindles. Particulates of the sub-conscious magistrate floated on the surface of my cornea, irritating my eyes. I blinked between hallucinations until I couldn’t stand the taste of my own spit in my mouth anymore. I heaved myself out of the cot and padded out of the room, buzzing on a mélange of lucid ochre. Out the door, my bare toes threading into the grass, I felt like I needed to break the last strands that bound me to that trance of half-sleep. I ran.

The moon simpered overhead, as much of a filmy orb as it had been in the city. There were no stars. Never stars. Stars were flecks of paint on a Giotto skyscape, pixel-patterns on a VR game’s backdrop. They were pure fantasy. I let my feet carry me across the compound until I could clamp my teeth around the wind expelling from my lungs. I could almost see the ghosts of those white-gold pinpricks in the cosmos as I let the oxygen leak out of my cells.

Everything burst at once, and I folded out back of the longhouse onto my knees. I couldn't shift the macrocosms out of the fog, nothing would. But the sound of voices that did not want to be heard, hoarse in their under-tones, lifted me from my crouch. Inside the main cabin, Loess's voice was a lyric over the motor-rote of conversation.

"You're just one person," came Bryn's maternal coil. "You're a right fool if you think you can—"

"Ma, trust me just this once, will you? I've rode the valley mile-for-mile, month-on-month. That Trout is practically brushing against the grasses on the flat. And it's drifting closer each day we let it stain the sky."

"That doesn't mean it'll come anywhere near us."

"*Near?*" Loess squeaked a laugh. "Near is gone. It's *in* us, Ma. You don't move an inch on this mountain without being *stuck* in it."

"*Enough* with the dramatics." Bryn leaned on a desperate note. "I don't know where you got all this goddamn air in your head. Esker, please?"

At first, there was no word from the heiress of Barrow Mountain. I resumed breathing, sucking the soil into my lungs. I filtered the earth-molt until I heard, through the white wood-panel siding, Esker's voice rise.

"You're hasty, Loess."

"I am no—"

"Tell me, what is it that you plan to do?"

Silence dripped between them. Then, Loess' voice was softer: "I'm going to shoot it down."

Bryn inhaled a jagged breath. “*How in the hell—*”

“With what?” Esker asked.

“With—with—”

Bryn snorted. “She’s never seen a weapon in her life. You’re speaking out of turn, as usual.”

“I know about the artillery,” Loess snapped. “I know about the bunker, the one you don’t want us to know exists. I know there’s handheld missiles in there. Firearms. Old stuff, fifty years old. But it’s all untouched. All pristine.”

The world outside the long-house melted away and I felt like I was in between Loess and Esker, feeling their eyes hot on my head as they stared each other down.

“Is that true?” Bryn asked.

I pressed my ear against the wall, as if I could suction their voices into my skull. But their words were becoming thinner. There were footsteps, moving further away. I only heard patches of Esker’s long speech, but the gravity of each word—hefty as lodestones—left little to be imagined.

“—left to me by my father’s father,” she was saying when my ear turned back in. “I had wanted to be rid of its memory because it instilled in me—” Her voice clipped out here, and I passed a second or five listening to the blood rushing in my throat. Then: “It was that very fear I wanted to leave in the past. But history has had its share of those who feared hubris.”

What do you mean? I mouthed. If I had taken a moment to un-peel myself from my indecorous position against the exterior of the house, I would

have had the shame of mind to re-evaluate the whole of my anthropological training. Eavesdropping in the dead of night? Kneeling barefoot in the grass to hear whispers through a wall? One-tick, two-tick on the list of ethical violations. Yet how could I bring myself to moral high-ground now? Not when the truth I so craved was hemorrhaging like honey from between these panels...

“My family feared apocalypse. But to them, it was a strictly biblical threat. They stored their second-amendment-rights underground and waited the day when the government would rift and send foreign officers to ferment its soil. My grandfather didn’t know it would come in the form of climate-altering Trouts. My Pa, though, he saw matters much like how you see the world, Loess. He brought me up with the knowledge that settlements didn’t survive by taking, taking, taking. Civilizations have always interred within their very foundations antidotes to the excessive self-pride they saw in themselves. The price for over-estimating human capability, for denying natural order, was always to give back to the spirits of the earth an intermediary vessel.”

There was a question on the cusp of Loess’ voice, but I only caught the tail-end of it.

“—a vessel?”

Esker’s voice was liquid hearth, brighter than before as I heard her press closer to the wall I stymied my breathing against.

“Something that could close that gap between the world beyond and the world within, between the force of nature and every attempt to tame it.”

Bryn was saying something now in a hushed and hurried voice. “No sense in it” and “fear-mongering” rang clear above the rest.

I felt, very suddenly, the blood vessels thrum in my veins. My whole body was pulsating.

“—it there, then? What’s the ammo for?”

I did not hear Esker’s answer. I could only think that, for the long span of my failed academic career, I had compartmentalized all I knew about the truth fossilized in geology and the human arrogance salvaged from anthropology. My thesis—that civilization armed itself with subcultures that clung to notions of human ingenuity—was, to be frank, a shit house built on sand. The idea, though, was that these coterie comprised the coping mechanism of Anthropocene, so that, as a whole, we would not despair in the uninhabitable Earth. But that had been misdirected from the beginning. I had been trapped in that house where all the paintings on the walls were from other worlds and all I could see out the window was sunset. The separation, between “human ingenuity” and that which must remain untouched by it, was always accepted because the view out the window didn’t go very far. But now I saw that the two could not be divorced from one another. Habitation and nature were not in reaction to each other. And as long as they were viewed that way, the great settlements of this planet would continue to entomb themselves in the very gulf they saw between culture and the underlying.

I waited for Vanya’s grumble: *Shallow theory, shallow theory*. But it never came.

The longhouse drifted further into the dark behind me as I felt the split take root. It was not like the first time, when I had stepped out of a shadow of myself as if I were kicking off ill-fitting shoes. There was no movement from “Old” to “New Margot.”

This split was internal. The glacier filled me up, hard blisters of ice sticking to my bones, seizing up my joints. The circle of lantern light that marked Terra-Firma was fading behind me. I teetered over the edge of the outcrop, the black forest swirling beneath. The glacier cracked me in two. We flowed over.

#

Underwater, the hawk’s shadow circled out of reach. Its primary feathers flexed like fingers on the edge of the world as it dipped near the surface.

But this silhouette was not bleared by ripples, as it would above a slick of water. This hawk was opalescent, shimmering.

As soon as I recognized the glaze for what it was —the underbelly of ice— I felt the water molecules gather into clusters against my skin, re-arranging themselves into prismatic shards that multiplied at an impossible speed. Pyramids of ice crystals sealed me in place, and I was trapped in cold, made to stare up at the spiraling penumbra of the hawk.

Leviticus and Deuteronomy included the hawk in the list of abominations, the things unfit for consumption or human appreciation. An unclean omen, the *tachmac* with the blood-drawing talons, the skull embedded with Satan’s garnet eyes. I had always thought: a conflation of translation; the

men who wrote those passages were thinking of the crepuscular nightjar or an extinct cousin of the ostrich. But ancestry necessitated that the birds carried the weight of biblical plague.

Notwithstanding, the sense that hawks were omens of things-to-be-seen. They were futurologists of the horizon, their vision sharp as needles through worsted wool. Perhaps the Terra-Firmans thought they saw them for what they were.

It took all the muscles in my face to blink my frozen lids. When they creaked back open, the sky was gray with morning and the hawks were just voices above the veil.

I cracked my neck.

The knot of my tailbone dug into rock, but the blades of my shoulders and balls of my heels pressed into soft turf. A trail of adrenaline shot up my spine at that thought that the moss and the soil and the calcified layer of hard stone and prehistoric fossil would give way to the churning plastic of the mantle, the liquid iron mixed with nickel mixed with silicon. I'd crash hard into that dense furnace of Earth's geothermal temper; it was cast in pitch, as impenetrable as night. No stars at the center of the world, no light, no fiery hell. Only a rumbling mineral. I could feel it vibrate through the crust. The nocturnal things were quiet in the canopy. Could I hear the core? Was I imagining it?

I stopped breathing.

No, no, there was nothing now.

Only my damn heart, only the blood rushing to my head. Fuck.

I propped myself up and looked around. I was lying at the edge of the crumpled forest. And to my left, inches from my outstretched fingers in the weeds, was the first boulder of Felsenmeer. It was wider than I was tall, and all flat on the top like a bed. I shook off the pounding in my head, the hangover of whatever mania inebriated my blood the night prior, and stood.

Every atrium in my chest clenched when I saw the river of rocks.

It was like looking into the open artery of pre-history.

I reached for the first boulder, to press my palm against one of the beasts of ancient origin that had been abandoned by the ice. To cross into this resting place for periglacial monoliths.

“Stop!”

A man’s voice rattled from behind me. I shrunk my hand back and turned to see him crash out of the brush. He wore the same linen tunic as Esker and Bryn, but was shorter than either of them so the fabric came halfway down his thighs.

“Get back from there,” he said, reaching out gently to me. “Christ, you look like you’ve rolled down the whole mountain.”

I looked back at the boulder, at the silent cells beyond it. “But I—”

He took my arm and began to guide me away. “You’re lucky I found you. Let’s get you back home.”

Home. My skin prickled. I didn’t want to leave, not when I was so close to *knowing.*

But I didn't resist. All ichor had drained.

PART III: TERRA

CHAPTER EIGHT

I should have known the receptors in my brain were suffering some nervous collapse when the lifeless phone by my cot buzzed with an incoming call. I watched it tremble against the floor from my perch at the end of the bed. There was no phone service on Barrow Mountain, and the battery had not been charged since I left the City. But the little white rectangle thrummed with light and the four black letters of Ivan's name.

My fingertips felt like tiny sacks of pins and needles as I reached for it. Electric to the touch.

I swiped to receive the call.

Static filled the dark room.

"Hello?" I croaked.

The electrical hissing intensified, pitch rising and falling. Almost like the loping of a voice. A man's voice.

"Ivan!" I said. "I can't hear you, Ivan! The connection's—"

The door to the cot room swung open and Esker filled the frame.

"Margot." There was the dead timber of her voice, like driftwood on the surface. She floated while I froze below.

I tucked the phone under my thighs. The static hushed.

"Col tells me you were wandering near the stones."

It was like teenagedom all over again. Trying to look an adult in the eye and speak soberly when you were caught coming home drunk at an ungodly

hour. Except, my father had known too well that I was more homebody than rebel. He almost certainly resented the fact that I had not given him the chance to humiliate his teen like other self-respecting fathers.

I hadn't drunk anything, but my head lolled atop my neck. Every movement felt weighty. "Who's *Col*?"

She shut the door behind her and the light fled her features. Her shadow settled beside me on the cot. "Col is my partner."

The man with the short legs. I stared at the wrinkles on Esker's face, which were like deep caverns in the low light. He was much younger than her. I wondered what Terra-Firmans thought about marriage or love or sex. I had yet to ask, and now seemed like a bad time.

Her fingers spread into my hair. She began to pick out brambles, clumps of dirt. She dangled a desiccated leaf in front of my nose so that I could see the bird's nest I had made of myself.

"I know that you have not been with us long, Margot," she said. "Perhaps if you followed us on the hunt, you would understand. But someone should have told you why we don't touch the stones of Felsenmeer." She crushed the leaf between her palms. "You had asked me, the other night, what do we worship when the rest of the world worships only itself?"

I thought seriously for a moment. Tides of information collided. The puckered words of Salma Gregorsky, ringing from her pulpit, claiming that they worshiped the "god-spirit" they saw in the hawk. The photo she had projected of lines of Terra-Firmans toeing up against the boulder field as if in solemn

prayer. The pressure in Loess' voice, the fear of slipping between the stones, being swallowed by a ghost. The underground goliath I felt groaning against the bottoms of my feet in the valley. I strained my thoughts for the common thread.

"You either worship everything," I said, "or nothing at all."

She was quiet for a moment. "You've felt it."

I shivered. *It*.

"My father felt it. He ran the raptor sanctuary for twenty-odd years before he became restless. I was working in the City, writing up legal reports for a pathetic wage, when he called me up, tear-stricken. He said to me, 'God's under there, Esker. And she won't let me sleep.' I ignored him. I told him, 'Pa, you're over-tired. You're too old to be running up and down a mountain all day.' But the calls continued. 'Esker, the hawks know.' 'Can you feel it shaking, too?' He developed this theory that the hawks migrated here, to the valley, every April, because they were drawn to something under Barrow Mountain. They flocked to the trees along the boulder field, where they built their nests and hunted the vermin that hid in the gaps between the rocks. He thought they worshiped *it*, whatever *it* was, that dwelled below."

I thought about *it*. The marriage of friction and gravity that bellowed from the center of all things. The only thing that could crack the shell of the lithosphere, uproot the putty sea beneath, and scatter Earth's carefully molded stone was the ice. The glacier. To know one, you must become the other.

"But do *you* worship it?" I asked.

Esker stood. She traveled to the far end of the room, where the dark clutched the right side of her body. “After a month of my father’s calls, his claims, the line went quiet. I was relieved, at first. His paranoia had settled. But then his assistant at the sanctuary rang me. Said he went down the mountain on the first day a Trout blackened the sky and he hadn’t been seen since. I took the first and last pod leaving the City; they told me as I advanced through the checkpoint that I could not come back. This was back when these woods were infested with ticks, fat with Lyme. The outbreak was crippling that summer, and they were shutting the gates for the foreseeable future. I never went back.” She expelled a ragged breath. I could sense what she was going to say next.

“I knew that he had gone to Felsenmeer. I knew that’s where he disappeared.” She paused.

“The stones swallowed him,” I said. I thought about the bunker Loess had found. I thought about Esker’s father, attempting to shoot the Trout out of the sky, and slipping between the boulders.

“You’re...right.” She looked at me dead on. “I went down there, but I couldn’t go out onto the stones to look for him. A fear, deep to the soles of my feet, kept me back. I don’t know if I heard *it* the way my father had, but I knew then that he had been telling the truth.”

I remembered the ice swelling in my throat, colonizing each hollow part of me until I could do nothing but shatter with it. That truth.

“I founded Terra-Firma not long after that realization. I’m not sure that we worship the god under Felsenmeer, if you can even call it that. How can you worship something that took your own blood?”

Easy. Adopt the mindset of any number of ancient civilizations. The Mesopotamians voluntarily offered themselves in the Great Death Pit of Ur. The Mayans preferred their human offerings painted blue in honor of the rain god Chaak. The Judeo-Christian god ordered Abraham to kill his own son to prove that he would be willing to go to whatever ends to bring his Lord glory. Really, what was the difference between worship and fear?

“But that place is sacred to me,” she said. “That’s the resting place of Pa.”

What was it she had said through the walls the night before? About a vessel? About the world within? *Being open, being vast...*

“You must never touch those stones, Margot.”

They will swallow you, were the words unsaid. They didn’t need to be. Esker’s intent was smoke close to the ground. It riled around my feet.

#

Back against a stump at the edge of camp, I stared veil-ward. Sulphate aerosols were not meant to have shape, or even texture. They were fine globules in the mist, pieces of atomic energy that could quicken light or totally reflect it. But no one could tell me now that there were not crinkles in that first leaf of sky. That I couldn’t, if given the chance, fly up there and peel off the layers of veil, one by one, like fragile, unleavened sheets of baklava.

I sat there for most of the day while Terra-Firma carried on. Marl poked me once or twice. "You stink," he informed me blithely before springing back to the garden. He wasn't wrong; the last time I had drawn a bar of soap over my skin had been the morning before I left the City.

Bryn crouched beside me come mid-day. She offered me a foil-wrapped bar of chocolate. "I know you think we've just got rats and leaves and berries out here. But I keep a stash of the good stuff."

I stared at the foil. It seemed so unsuited to the woody hew of my palm.

Bryn made an airy sound in the back of her throat. "You can't keep on like this."

I looked up at her. What did she mean? Did she want me to cease feeling the bulge of the earth? The strain of centuries of bluster and metal and core? All gone, all forgotten? That would be like extracting the marrow from rehabilitated bones.

"You never felt this way when you first came here?" I asked.

"This place'll bring you to your knees. Make you feel all kinds of ways. But you gotta live. *I came here to live.*"

"You could *live* anywhere," I muttered.

"I wasn't living before."

What was that meant to imply? That all who hadn't toiled up this mountain and sent hawks hurdling into its vale were living shallow existences? "Some don't have the privilege of living like this," I said. "Some are born into the heart of civilization, and can't very well find their way out."

“You did,” she said, and I inhaled at the blow, at the barbed truth of it. What had stood in my way? Neuroticism, ego, insecurity? If Ivan had been there he would have justified me with the chronic label of manic-depressive, but here I could only take the blame head on: I had not been held back. “It wasn’t about fleeing civilization,” Bryn said. “That’s not what any of this is about. I had a kid on the way. Their dad left Loess and me in a trap house on the fringe strip. I fit every junkie profile on the wrong side of the city gates. I saw some tightly-laced City folks driving through, and, somehow, convinced them to take me to wherever it was they were going. Wouldn’t have had such luck if they didn’t see the round belly, the snotty kid. They brought me here, but they didn’t last long on the land. Marl came along. I stayed.”

The glassy domes of my eyes felt like they were spinning. The veil blotted and ebbed.

“So you never came here because of any eco-conscious? Sense of climate justice?”

As I said it, it was as if the paintings my mother so loved were hanging in the balance. Should there be no pristine Earth to return to, should there be no such thing as sublimity...then those memories were just paint on deckled canvas.

Bryn snorted. “Hell, no! You think *I* knew the first thing about what was happening in the world at the time? My world was small but so very fragile. Me and my kids. If it didn’t feed us, or clothe us, it wasn’t worth the energy. But you know what? Esker, she gave me that security. And I soon felt the

importance of this place. At first, when I saw what life could have been, I wanted to blame those fuckers in the sky.” Her eyes darted up to the veil and back to me. “But that’s not it. Here, it’s easy to see how everything—and here I’ll get corny on you—every tree, stream, system, how it’s all connected. You can’t plant a potato without pushing around the earth. You can’t hatch a hawk without sacrificing a few vermin for the roosting mother. People—*us* people—we’re one goddamn enormous system. I rotted for *years*, not because the temperature got warmer, not because the government tried to cover up its mess and put the climate on pause. I rotted because *people* forgot how to coexist.”

I met her soft eyes. I wondered what it felt like, to look at your life and to know how you got there, to know why you stayed. I had never known the world in such clear terms. I had known fog, and lots of it.

I couldn’t hold it in: “That’s why you don’t want Loess to go after the Trout.”

She sighed. “Aren’t you up in everybody’s business?” She paused, lower lip caught between her teeth. “That Trout, the one you’re talking about, has lurked in this valley for over a decade. Shooting it down wouldn’t do jack shit. It’s got a hundred brothers and sisters up there.”

But would it stand for something? I wondered. *What would one Trout’s defeat symbolize?* I felt myself straighten out again. My fingers and toes were warming.

Bryn turned abruptly. “Well, if you don’t make yourself useful you’re dead weight.” She cackled and beckoned me with her hand. “I’ll get you a basket. We’re digging up potatoes.”

#

I spent the rest of the day with my fingers deep in the warm soil, excavating gems of knotty tubers. Even after Bryn and the rest retired for their dinner, for their cots, I stayed. Right when I thought I had uprooted the last potato, another hard clump of dirt would turn into a plump, new specimen. I plucked potatoes long past the sunset melting into inky-blue night. The moon must have been full above the veil, because I could still see the moving contours of my knuckles in the dirt, even without a hearth or lantern-light.

I could not say how much time passed. I dug until the scent of humus was rich in my nostrils. Until the undersides of my fingernails were lodged with clay, and the pile of misshapen potatoes spilled out of its basket. I stared into the black ditch I had dug. Below the topsoil, earth breathed. I felt it roll off my face. Condensation on my lids.

There was a well with a rusty tap at the head of the garden. I made my way over there to scrub my fingers with the communal soap, a chalky bar of wood ash and lye. Practically medieval. Suds up to my elbows, almost glittering in the dark. I scrubbed rhythmically; there was no sleeping, now. Only scenes from a life abandoned. Of a time by the pond in the downtown park when Ivan had gotten that look in his eyes—the *I’m-about-to-propose* look—and I had told him no before he could get the words past his lips. Of that night, when I had

un-blocked my father's number and called him for the first time in over a month to distract myself from the sadness in Ivan's eyes. Dad's voice had been scratchy. He kept clearing his throat and prophesying economic depression. *Keep your assets close to your ass*, he would say when he got like this. Of the bathwater I steeped in all night to avoid the shared bed, scrubbing and scrubbing and scrubbing because I felt so dried up inside.

My fingers went pruney as I thought about how easy it would be to tip back over the ledge and get drunk on that unbridled power all over again. It had been a vulnerable feeling. But it felt good to be vulnerable. It felt good to not be all there was, just the dried-up voice in your head and the skin wrapped to your bones. It felt good knowing there was something terrible and great beneath you. But then I thought about Esker's warning, about what Bryn had said: that this was not living.

The water was still running when something came crashing down from the steep outcrop in the brush. I recognized Loess' figure by the way her feet stabbed the ground. She turned, ever slightly, and the stubborn pale of moonlight fought through the veil to illuminate her. Pack strapped to her back. Helmet under-arm. Her hawk, a ruffled chaperon on her shoulder. And then—the glint of cold metal, a barrel, a stock: a hunting rifle, its neck tight in her hands. She didn't even know how to hold it.

I twisted the tap until the stream of water stopped. Her eyes snapped to mine. That's when I saw the rage in her hands. They shook around the gun, but not out of fear. It was a boiled-up kind of anger, tight in her jaw. Her

shoulders were tense with it, and even her hawk's beak was buried into its plumage, clenched. I wondered if its talons were slicing into the skin under her shirt.

"Hey, city girl," she said. "You should get inside."

I stepped forward. "Where are you going with that." It wasn't a question.

She copped a glance at the old rifle. "Trout'll be low this morning."

"How do you know."

"It comes out of the veil like clockwork. Once a week, early. Lower every time."

I was quiet.

She kicked the stand propping up her moped by one of the cabins. She whistled at the hawk and it released its grip on her shoulder, taking wing above in one, full gust.

"Good luck to you, Margot." She hitched her leg over the seat, slid her helmet on one-handed.

It was too final. "When you're done," I said, "where will you go?"

She revved the engine. "Off to hunt down the rest."

The other Trouts?

What could she do?

One person?

Loess was gone. Her hawk a black arrow following her down the dirt road, down the mountain, down to the fields where I crashed the pod.

Something bloody lined the valley. At the edge of all things. I stared down at my dehydrated palms as they slowly pooled with orange light.

CHAPTER NINE

And within that vein of maculated time, it was dawn.

I squinted into the valley, and my eye caught three or four dark wings up above the mountain, circling one another like bodies in a firmament. I fixated on their spiral. They appeared to be tight in conversation, suctioning in towards each other with each heartbeat of the wind that lifted them. They ebbed in and out of debate. Then, against a backdrop of atomic orange and bursting alloy, I saw them clash in a sigh, in the pulse of a strange and simple organ. From the centrifugal point of impact, I saw a single hawk fall.

Crumpled wings, headlong, dead-for-sure.

Into the lowest part of the valley.

Into the stones.

They may fall and fall and fall and may never be able to find their way out again.

I left the camp asleep behind me and began the steep descent to Felsenmeer.

What did I think I would find in the sea of rocks? A broken-winged hawk, twitching under the sunrise? A dead bird, a body in need of burial? Did I see myself as an embalmer working against the clock, rushing to stuff the chest cavity with sawdust, leaves, and linen, to bathe the beak in sweet oils? I had no tools with which to extract the knotty organs, no ceremonial vials nor smelling salts.

Why did ritual seem so important, why now?

There was a corner of the human brain that attached symbol to matter without much regard for the synapses firing in between. At our grayest matter, all that we were was a suffering of associations, the very same that made the Neanderthals marvel when they first saw open-mawed faces in their flames and attributed the experience to something bigger-than-this, something sacred. There was no agency in the assignment. Esker had seen death and beauty in the dark wings of the red-tailed hawks, but she did not think about why. It was a lie that we as a species actually thought through our associations; the rationale was always after-the-fact. Automatic auguries swooped low over our forests.

And when they fell dead from the sky, the latent routine of symbol-making crashed with it.

I did not think I could survive another loss like that.

#

To think like ice was to expand, to unfurl from the inside out—like a glass shattering as the water froze within. But ice was also lighter than its liquid counterpart; it floated on the surface, moved swiftly over land, splintering stone and debris that accumulated beneath. I followed the glacier's trail all the way to Felsenmeer.

When the trees fell away and the boulders came into view, amber and ivory blocks under the daybreak, I shrunk back into myself. Red-tailed hawks were scattered atop the stones, all with wriggling vermin in-talon. Some bashed

their prey's skulls against the rock; others picked at the fur, spitting tufts into the air. Blood splattered against the boulder nearest me; a vole had been dropped from a great height—flattened instantly.

Far be it from me to make observations on raptor behavior, but this was no feeding frenzy. The bodies of the underground things were being left mangled on the open boulder field. I looked up as the hawks took flight without their prey, and as I tracked them into the sky the dawn went dark. A shadow swallowed everything.

I backed up into the trees. The shadow above the veil was quickly growing, until all the Felsenmeer stones lost their shine and the hawks became black blots as they fled the scene.

Then, the Trout's belly sliced under the haze. As more and more of the massive blimp descended, I could feel the ground becoming cooler. The hawks screeched in the canopy.

On that first day in the corn fields, the Trout had seemed benign. A gentle giant, lumbering past on its way to higher winds. But here, it was right on top of me. Here, it was pressing in, pushing air out of the way, a tumor burgeoning out of the veil. I collapsed to my knees as more of its silver hull became visible. I thought, *It will grow and grow until it has filled every empty space in this valley.*

But then I heard a gunshot sing out from the far south.

The Trout hissed. At first, the great blimp of Greenfinger retained its low-hanging shape, a bloated melon un-pruned from the stem. But in the space of

an intake of breath, the rusted batons and ribcage frame combusted. The ripe fruit erupted into a ball of flames, brilliant as the sunset in the foreground. The force of the blow lit up the sky all around it. I saw my own hands glow iron-white in the fire-light, saw the stones and the fine branches of the ragged trees illuminate with a blinding radiation. I knelt, half-dazed, staring as a piece of inferno took shape in the air before me.

“My god,” I said. I had never uttered such a thing aloud.

What was once an aerostat blimp descended fully below the veil. The flames caught so quickly that I got little sense of what the Trout in its entirety looked like. The huge mass turned on its end, keel to bow, and seemed to slowly sink in one blaze.

I felt a clammy finger of sweat drag down my forehead, but wasn't bothered by the heat.

For this thick in the swelter, a euphoria was growing wild inside me.

As the outer skin of the Trout melted away from the rapid flames, an aluminum skeleton was revealed. The ribs collapsed first, folding in on themselves. No more lungs. The nose collided with the stones head-on, and all that followed shrunk in a swath of smoke that was black enough to blot out the dawn. I covered my head as the beast made groaning, crackling landfall. When I looked up, there was only a twisted mass of girders—the seared bones of what was once a mighty airship—bending into deformed angles under the incessant fire.

Mangled liked this, the Trout that haunted the valley of Barrow Mountain did not seem so big. No longer a monster of mad Victorian design. It was all burning, all broken. I slowly pulled out of my crouch and stepped forward to stare out over Felsenmeer. The Trout had landed on the far end of the river of rocks, but I could taste the thick smoke against the roof of my mouth. I knew that the heat must have been immense from the puckering sensation on my bare arms and legs, but I was numb to the temperature.

I approached the rocks.

There was nothing in the rumble of the ridge that could have prepared me for this moment: as the last pines fell, the earthsong welled up underfoot. I stepped over a log, and my boot met the sandstone of this new quarry. Stone against leather against skin. The earth battered beneath, lava curdling in a gut of a most precious organ. I tuned into the underworld.

I had always known: Barrow Mountain was the resting place of periglacial monoliths. They were hidden always under the clay and the loam, and the cover of wood. But just because they were buried did not make them dead. They writhed in the under-earth; I felt them now. I lifted my chin into the smoke and saw a hawk's silhouette streak over Felsenmeer. Not all symbols were lost, not yet.

#

Now. The final passage into Gaia's nervous system. I secured my footing on the flat breadth of the boulder. I shivered despite the flames that battered against metal mere yards behind me.

I...I was doing it. This was it. My feet flat on the first stone.

The wind blew the smoke to the east so that all of the acidic sunrise was obstructed. I blinked through this new kind of darkness, half fire, half suffocating soot. All that kept me moving were the rubble bones underfoot.

Bones of what earth was, before the moon crashed into her lungs. Before the celestial bodies lived in suspension, and the rock that was the asteroid that roamed the milky path plummeted into her core of oxygen and aluminum and silicon to mold aquatic masses into her skin. Before the impact shifted the primordial tides into bearers of salty life. Before the rock made the flesh. Before the flesh made the thought. Before the thought made the faith.

But that faith had catapulted, back into the barrow. Where all things would eventually rest.

I thought it apt, now, as I fastened my grip on the peak of the next boulder, that the Trout was dead on the rocks while the hawks swarmed above. By its etymology, Anthropocene claimed centrality of man. The narrative of life on Earth privileged humanity in its telling; it was the greatest trope of anthropocentrism that put that Trout in the sky, that ensured it always *looked* from *above*. Shot down from the veil, burning, it was no use pretending that the world functioned from the inside-out. Not when the vehicles that floated on *the verge of human potential* were at the mercy of the same chemical reaction that marbled stormy skies and lifted plates from their bedrock. Same stock, same soot, same soil. Once above, now *in*.

I saw now why Loess had to shoot it down.

How else did you show the veilmakers that they were not aliens in their own world?

#

The raw whites of my eyes burned. I could not blink.

I smacked the back of my neck as omens beat their black feathers around my head. I was dizzying, spiraling. I felt myself becoming less and less; the cellular detritus that layered my body was being replaced by knowledge that was not mine. What was I before the fall? Before I crashed into the valley, how was I known? I stared at my feet. My boots were gone, now it was just naked skin against stone. What was I searching for?

#

There, lodged into a crevasse, a palm spread, a flay of fingers set sail. A hand, bright against the smoke, beckoning.

I leapt deeper into Felsenmeer. My ankles popped at the impact. One rock to another, between misshapen boulders and the chasms that gutted them. I petered over the river, knees bending, palms bracing, until I reached the point where the fingers grasped.

One, two, three, four, five digits. Limp.

I switched my fingers into the hand's and latched, hard. When I tugged, I channeled the wrath of bodies unseen, of cthonic organisms interred deep within my own muscles, each cell firing with the other cell to create a creature more powerful than rock itself. But the texture wasn't right. I felt this woody palm, this unhewn skin, but I did not feel *who* it was. It did not feel human.

With a final yank, the hand broke free from the narrow crevasse. I looked on in horror at what I had extracted. There was no arm attached to the wrist, only a dangling mycelium. Cream-colored, fibrous roots sprawled from the joint and branched into the dark abyss. The hand was not a hand at all, but a fungal growth. The tangled fibers that hung from the fleshy mass were swarming with eukaryotes, coated in chitin. I shriveled away, dropping the hand to the stone. There, the mangled mass of cartilage and skin twitched. Then, the lines in the palm opened, breathing a life of its own. Spores erupted from the slits like a stream of white smoke.

I ducked to avoid the cloud, which disappeared against the backdrop of veil-light and embers. The hand deflated, but the interlocking fibers, which I saw now were made up of both veins and roots, spasmed. I watched as they crawled, serpentine, back into the crevasse. I lowered my bare belly against the boulder and peered inside.

The boulders go deep out here.

You may fall and fall and fall.

Never to find your way into the light again.

I peered into the universe from epochs ago.

At first I saw nothing. I only felt hot air, rancid breath, funneling up from the depths. But then, as my eyes adjusted, I saw clearly the vegetative webs that coated the stone walls. The organism—for it was one, united—exhaled in and out. I leaned in further, squinting into the shadows.

There was something growing in there, something rising, slowly. I blinked, and for a second I thought I saw a red light throbbing deep at the bottom of the earth. The glow was just enough to illuminate the outline of the growth, and I could see the form of another hand. I ignored the revulsion curdling in my stomach and reached for the fingers. My uncovered elbows scraped against the boulder as I reeled the hand up, breaking strands of the yellow filaments along the way.

I stifled my cry when I saw the second hand in the hellish light. Attached to its wrist was another hand. And attached to the second hand were the locked knuckles of a third. And so on and on and on. I yanked, my skin drawing raw against the crag, until thirty-odd clones of the same hand were up-heaved onto the river's surface, like vertebrae linked in a spinal column. I fell back to take it all in, and choked out a breath against the spores swirling in my lungs.

#

In all this, the veil shed a steady flurry of embers. It would have been the first snow the upstate had seen in some twenty years.

I wondered if Esker had been at Felsenmeer to see the last one. Her restless father—surely he had witnessed it.

In all this, then, I knew whose hand I had uncovered. Blunt fingernails, arthritic knuckles, veins braced beneath dappled skin. An old man.

#

What had I really fished out of the underlying?

When the glaciers mounted their escape from the lowlands, due North, what had they left interred in the stones? What could recreate the body with nonhuman materials?

Some mycological manifestation of that association most feared, a gruesome evolutionary mimesis. The misleading hyphae, the sporocarp that mimicked man's gnarled hand. Not mere mimicry, I realized, but betokening. An apologue direct from the open mouth of the god-spirit, the mineral that kept the earth from spinning into dust. *This is what you are*, it hissed. *This is what we all become*.

Spores and stone. All spores and stone.

#

Esker had said that her father went down the mountain on the first day the Trout appeared above the valley. It was thought that the stones had swallowed him. Esker believed he rested here in death.

But had he known what I now knew? That the *antidote*—to the self-fulfilling prophecy of, dare I use the A-word? *apocalypse*—was to become that intermediary vessel. *He* had become the sacrifice, and not by chance or loss of balance—*no*. No, he had given himself. He had known what all ancient civilizations knew. The Serbians at Skadar. The Greeks at Arta. Even, some might say, the English at London Bridge. They built bridges and monasteries and cities and walls, and when those came crashing down, they sought propitiation by immuring their own kind in their foundations. They could not settle until nature was appeased in some way.

Somewhere along the way, we forgot how to give ourselves back.
Somewhere along the way, our technology instead of our bodies became the mediator of human-environmental relationships.

I drew my own hands onto my stomach. My nakedness, an inexplicit condition. But I could feel the god thundering with every exposed inch of my skin. I saw, latched between the fingers of the final linked hand, still tilted over the gulch, a feather.

The reddish feathers had been crushed by the fist. The dead hawk's wing was trembling, half-encased in mycelium, becoming something else.

#

The Trout groaned abreast Felsenmeer as the last tongue of fire ripped through the remaining frame. When the final girder fell, clanging, against the boulders, I knew that it was time.

I lay on my back against the flat of the stone, the half-mauled rodents scattered on either side. I remembered Vanya's plagiarized maxim, that all fieldwork was drowning, never to come up for air until it was over. But when was it over? How did you determine when you had learned enough, heard enough, *felt* enough? My whole life had been drowning, and I still couldn't claim to have some inside knowledge about how the other side lived. I didn't think that was possible, not when I couldn't even parse out for *myself* how to live. And god, how unbearably unfair, to have suffocated so long for nothing but the realization that living was impossible in a world outgrown.

Vanya and Kumail, Ivan and my father, Esker and Loess—none of them had given me the answer. Terra-Firma had gotten me closer, yes, but I would not know my worth as an agent until I reversed the narrative. All my life I had studied *anthropos* as the key actor in Earth's history. I had only tuned into other people's voices, had only ever despaired when my own went quiet. That could no longer be. There were other voices in the story. The abiotic ones. The ahistorical, the tentacular, the nonvertebrate. The true terrans.

I stared up at the dizzying cosmos that the handprint of smoke had created against the veil. One last vision of the bloody sunset—so cruel in its beauty. One last look into the face of anguish.

I closed my eyes. I felt the glacier ripping through me, as it had done in this valley epochs ago.

The hawks knew.

I felt them descend on my exposed body upon the rock. Talons lodged into the canals of my ears, wings beat like drums around my head. Like priests, they punctured their offering with imprecations, until I could hear nothing but their screams.

The end.

CONCEPTUAL FRAMEWORK

Literature is an uttering, or outering, of the human imagination. It lets the shadowy forms of thought and feeling—heaven, hell, monsters, angels and all—out into the light, where we can take a good look at them and perhaps come to a better understanding of who we are and what we want, and what the limits to those wants may be. Understanding the imagination is no longer a pastime, but a necessity; because increasingly, if we can imagine it, we'll be able to do it.

—Margaret Atwood, “Aliens Have Taken the Place of Angels”

INTRODUCTION

It was during an unusually cool and wet summer that Mary Shelley—at the time, eighteen—sat across the hearth from Lord Byron, Percy, and Polidori and first saw the pale student of unhallowed arts in the flames. Unbeknownst to her, only a year prior, in 1815, the most powerful volcanic eruption in human history was recorded at Mount Tambora in Indonesia. The sulphates released from the carnage of the volcano coated the earth in a veil that dulled the sun and lowered the surface albedo. Glaciers shunned after the Ice Age tentatively descended from their redoubts; boulders uprooted and new permafrost colonized the soil. The ensuing year—“The Year Without A Summer,” the year Mary Shelley deemed it too “wet” and “ungenial” (Shelley 1818: 9) to bask by the lake—was the year three budding literary minds resorted to passing the time indoors, telling ghost stories. The year *Frankenstein, or The Modern Prometheus* was penned.

To think: if a magma chamber over seven thousand miles away had not ruptured and cast heavy volcanic ash into the stratosphere, thereby altering the earth systems and causing extensive climate anomalies in the Northern Hemisphere—we would not have the first book of science fiction, at least not in the form it ended up taking. As crops failed and livestock died across Europe and North America, Mary Shelley was on the brink of her adulthood and her career in literature. The damp and the dark, the bleak summers, the dry winters, and the bloody sunsets not unlike that of *The Scream* (believed to have

been caused by the later eruption of Krakatoa (Olson 2004)) created a generative environment for Shelley. It is unsurprising, then, that nature features heavily in *Frankenstein*. Shelley unravels the relationship between the creator and the created by presenting us with characters who are two sides of the same coin: Victor, who desires to know the inherent secrets of the universe, and the monster, who desires to know the inherent secrets of man. The monster attempts to follow in his creator's footsteps by trying to master his "godlike science" (Shelley 1818: 115) of language and, ultimately, to become like a god—only his perception of god is man. Similarly, Victor pursues the secrets of the inaccessible universe by trying to be like a god in the sense of possessing a 'divine' influence over nature. Both characters long for a state of godlike instrumentality over the natural world and the breadth of scientific knowledge.

Mary Shelley ultimately condemns the creation of purposeless life and makes a case for nature holding the upper hand in all affairs of creation. The work of creating life with a purpose should be left to the pure beauty of the natural world, whether inspired by divine intelligence or not. Motivated by that argument, Bruno Latour raises the moral a rung higher: "Let Dr. Frankenstein's sin serve as a parable for political ecology [...] The goal of political ecology must not be to stop innovating, inventing, creating, and intervening. The real goal must be to have the same type of patience and commitment to our creations as God the Creator, Himself. And the comparison is not blasphemous: we have taken the whole of Creation on our shoulders and

have become coextensive with the Earth” (Latour 2011). In a self-defined age of Anthropocene, handling the climate crisis begs for this type of anthropological sensitivity that Shelley emblemizes in her characters’ internal struggles.

For example, Victor’s impressions on beauty are influenced by the austere nature he observed in his developmental years in Geneva. Nature, under Victor’s observations, is given a sublime position that he longs to understand. Before setting out to create the monster, Victor describes himself “as always having been imbued with a fervent longing to penetrate the secrets of nature” (Shelley 1818: 41). Despite this beauty, Victor claims to have been “insensible to the charms of nature” and more concerned with his own lust for knowledge. It is not until after his monster comes to life and he realizes his error in playing God that Victor begins to equate nature with the divine. In the wake of his brother’s murder, Victor wanders into the mountains to watch a storm.

While I watched the tempest, so beautiful yet terrific, I wandered on with a hasty step. This noble war in the sky elevated my spirits; I clasped my hands, and exclaimed aloud, "William, dear angel! this is thy funeral, this thy dirge!" As I said these words, I perceived in the gloom a figure which stole from behind a clump of trees near me; I stood fixed, gazing intently: I could not be mistaken (Shelley 1818: 77).

Nature is the divine; in this moment, it possesses the spirit of Victor’s brother. Victor cannot bring himself to see the hideous monster as the product of divinity—a sign, perhaps, that the act of creating life is not meant for the work of men, and that only that which is formed by a divine will can be beautiful. When overcome by his work, Victor is more obsessed with creating his own

creature of beauty than appreciating the natural wonders of the divinely created nature around him. Victor considers the monster a failure not because the monster is a menace, but because the monster is not beautiful. He realizes too late that only the creative and beautifying power of nature can accommodate live-giving with purpose.

The “parable for political ecology” in *Frankenstein* operates subtly and offers new ways of thinking about nature, creation, and human dominion. It is a metaphor that converges the literary with the anthropological, that turns the narrative perspective inwards before reflecting it out onto the cultural and social contexts in which it was written. Writers of fiction, particularly science fiction, are involved in a tradition of, as anthropologist Leon E. Stover and author Harry Harrison write, “[peering] over the anthropologists' shoulders as the discoveries are made, then [utilizing] the material in fictional works. Where the scientist must speculate reservedly from known fact and make a small leap into the unknown, the writer is free to soar high on the wings of fancy” (Harrison, Stover 1968). But “fancy” and “wonder” make up but one stitch in the tapestry of fiction; narrative, as a structure, as a form, is by its very design a vehicle for anthropological knowledge.

The need for new avenues of ethnographic data are ever the more necessary in a changing environmental landscape. In “Climate and Culture: Anthropology in the Era of Contemporary Climate Change,” Susan A. Crate suggests that anthropologists should not just work to advocate for or empower local populations, but that they should also serve as globalized agents for

change with non-anthropological approaches (Crate 2011: 183). By honing in on such “partiality,” such “situated” phenomena, writers of science fiction are better able to elaborate on not just the anticipatory effects of climate change, but on reflecting present political, cultural, and ecological issues onto an imagined future. It is important to regard the multimodal ethnographic form as something that is not static but culturally relative, contingent upon subjectivity, and existing between systems of meaning. In the chapter entitled “Partial Truths” of James Clifford and George E. Marcus’ *Writing Culture: The Poetics and Politics of Ethnography*, the process of arriving at ethnographic “truth” is described as embodying both literary and historical fiction forms. It is not reductive to think of some ethnography as fiction, because it is an honest assumption of the “partiality of cultural and historical truths” (Clifford 1986: 6) and the systems that exclude and bely them.

It’s no surprise, then, that many reputed anthropologists have turned to the novel as a mode of conveying ethnographic data: Zora Neale Hurston with *Their Eyes Were Watching God*, Laura Bohannon with *Return to Laughter*, Amitav Ghosh with *Sea of Poppies*, Camilla Gibb with *Sweetness in the Belly*. It is my goal in these coming pages, and in the prior novella based off the resulting conceptual framework, to prove that cultural encounters, when conveyed through the vehicle of fiction, open up the reader to alternative thinking. Moreover, science fiction as a genre is particularly successful in this endeavor, especially when it comes to settings, characters, or narrative devices that allow us to confront the current climate crisis. I will outline the current

technocratic paradigm, trace patterns of modernity and the politics of sight wrapped up in the associated green rhetoric, and explore the technological capacities that emerge when nature and culture are framed in contention with the other. Just as the monster dismantles Victor's notions of nature, science fiction casts aside the veil of modernism by exploring the agency of the nonhuman, imagining technology as a mirror, and prescribing the future anterior.

THE TECHNOCRATIC PARADIGM

The Holocene is no more, scientific minds at the International Geological Congress declared in August of 2016. *Make way for the Anthropocene!*

The epoch that marked the end of the last glacial period and saw humanity traverse oceans, build up kingdoms and nations, destroy them over again with war, and craft technologies of survival unlike those of any other species over the past twelve thousand years was snuffed out in a convention center in Cape Town. There was a call to dub a new geological period of humanity: quite literally, the ‘epoch of man.’ But how does one determine the point in our collective history where humans went from being participators to monopolizers of the planet? Where culture embarked on the alleged rift from nature and its constituents imagined an anthropocentric world?

While the congress was satisfied to mark the onset of the Anthropocene as firmly in the mid twentieth century, around the time of the first detonation of a nuclear device at the Trinity Test in 1945 (Waters et al. 2015), other scholars such as Nobel-prize winning atmospheric chemist, Paul Crutzen, argue for an earlier start during the Industrial Revolution (Crutzen et al., 2007). Whenever the Anthropocene began depends on how one defines the point at which human activity exceeded the forces of nature (Bubandt 2017: 122). The distinction is arbitrary—whether or not industrialization is the source of environmental problems or later nuclear endeavors pushed us over

the edge, there is little doubt that we have since passed that imaginary threshold and are sitting under the veil of anthropogenic cause-and-effect.

In his contribution to the anthology *Arts of Living on a Damaged Planet* entitled “Haunted Geologies: Spirits, Stones, and the Necropolitics of the Anthropocene,” anthropologist Nils Bubandt chronicles the impact that the eruption of an Indonesian mud volcano has on its victims as scientists and politicians argue over the source of the eruption: corporate greed and mismanagement of the oil industry or nonhuman, natural forces. Bubandt identifies necropolitics, or “the subjugation of human life to the powers of death in the context of war, terrorism, and weapons of mass destruction” (Bubandt 2017: 124), as existing at the core of the contention between nature and politics. It is exactly this inability to classify the differences between our own world and the natural world, subject to our re-building and destruction, that permeates the concept of the Anthropocene. It is an epoch riddled with conditions that may be shaped by human activity while at the same time being increasingly out of human control.

By raising questions at the cusp of chaos and control, of nature and politics, the Anthropocene itself facilitates an imagination of *what-could-be* that is not contingent on predictions and futurology, but rather, existing self-awareness. The concept of the Anthropocene, Bubandt claims, is a science-fiction-like character because it “opens up to a retrospective reading of the current moment, a ‘paleontology of the present’ in which humans themselves have become geological sediments or ghosts” (Bubandt 2017: 135-136). While

science fiction has been frequently dismissed as envisioning a future far removed from our current reality, the genre engages acute realities of the present age to imagine futures that call into action critical thinking about current climatic, social, and political issues (Streeby 2018: 174). For example, Octavia Butler's 1993 science fiction novel, *Parable of the Sower*, involves a young woman who, believing that humankind's destiny is to settle beyond the stars, forges her way through a ravaged 2020s America as society collapses around her due to climate change, corporate greed, and wealth inequality. According to Priya Chandrasekaran's presentation at the 2017 American Anthropological Association meeting, Butler's futuristic novel is not so much a prediction of apocalyptic climate catastrophe, but rather serves as "an affective mirror, reflecting the unbridled consequences of neoliberal ideology, resource grabs, racism, and economic segregation" in the present (Blacke 2018). In the same way, the Anthropocene may serve as a mirror, asking us to excavate our own impact on the hypothetical fossil record, transforming us into reluctant 'paleontologists of the present.'

If the International Geological Congress did not meet in 2016 and see the need to evaluate the geologic time period, we would have drifted onward through the twelve thousand-year long Holocene, perhaps aware of our necropolitics but unable to define them. But because we have self-identified the Anthropocene as the age of human exploitation of the environment, we have named ourselves as engineers in our own extinction. We are not looking back on the fossil record of previous epochs, nor are we strictly looking towards a

future that appears more apocalyptic by the day; we are looking at ourselves, as the living fossils. No matter when the Anthropocene precisely began, it can be in part defined as the moment where extreme “landscapes of death and extinction” (Bubandt 2017: 137) forced self-analysis of the technocratic paradigm. “If modernity dreamed of the future,” Bubandt claims, “the Anthropocene dreams of the present as seen from the future, a perspectival shift that makes our necropolitics apparent to ourselves in the starkest of lights” (Bubandt 2017: 137). Perhaps it is no surprise that it was in the mid-twentieth century, around the time that the Anthropocene is proposed to have begun, that science fiction and climate fiction were catapulted into popular media. The very “perspectival shift” that reflects the present reality onto an imagined future is opposed, however, by the attempt to reflect the future onto the present—the attempt of the ecomodernists.

The ecomodernist philosophy, which argues that humans must protect nature by decoupling anthropogenic impacts from the natural world through the use of technology, has been proposed with the goal of creating a “good Anthropocene.” Ecomodernism has its roots between the pages of a handful of books on ecology and futurism: namely, Stuart Brand’s 2009 book, *Whole Earth Discipline: An Ecopragmatist Manifesto*. Brand warned that technologies such as solar and wind power were too “soft” to be scalable to the pace of fossil fuel energy dependency. Denser cities, more nuclear power, transgenic crops, restored wildlands, and, most notably, *geoengineering* were deemed as necessary for achieving a sustainable society (Brand 2009). Conceptual

frameworks such as Brand's brought together nineteen self-described "scholars, scientists, campaigner, and citizens," under the support of the Breakthrough Institute, to author *An Ecomodernist Manifesto*. In this environmental philosophy, the authors define a "good Anthropocene" as one where humans take advantage of their developing social, economic, and technological powers "to make life better for people, stabilize the climate, and protect the natural world" (An Ecomodernist Manifesto 2015). By using sweeping, optimistic language that emphasizes "spiritual or aesthetic" arguments over utilitarian ones, a case is made for the "active, conscious, and accelerated" decoupling of human well-being from the destruction of nature.

Nature in and of itself is defined by its distance from humanity; the ecomodernist authors characterize nature as the landscapes and ecosystems that have been consistently altered by human influence. It is important to note that this definition of 'nature' is not universal, but rather a side-effect of the worlding practice that has emerged in the Anthropocene. Anthropologist Marisol de la Cadena offers a radically different politics in *Uncommoning Nature: Stories from the Anthro-Not-Seen*. While the destruction of what we know as nature and natural resources has been caused by humans, that intervention is not what defines 'nature,' she claims. Rather, she gives the example of indigenous groups responding politically to the ruination of the environment by joining movements and participating in protest. They resist the "anthro-not-seen"—a process of worldmaking "through which heterogenous worlds that do not make themselves through practices that ontologically

separate humans (or culture) from nonhumans (or nature) [...] *both* are obliged into the distinction (and thus willfully destroyed) *and* exceed it” (de la Cadena 2019: 40). De la Cadena calls for an alliance between environmentalists and local guardians that is underpinned by “uncommonalities” and that would make the partition of the world into diversified humans and homogenous nature a matter of political concern.

It may be safe to say that scrutinizing the politics of that partition is the furthest thing from the ecomodernists’ mind. In fact, their core tenet requires increasing the separation between humans and nature, and one way the authors propose to accomplish this is by “intensifying human activities—particularly farming, energy extraction, forestry, and settlement—so that they use less land and interfere less with the natural world” (An Ecomodernist Manifesto 2015). The “natural world,” here, is defined by that which is untouched and must remain untouched by human activities. But their lofty goals of not only mitigating climate change but also alleviating global poverty are necessitated upon human technology that is depicted as both natural yet cut off from any interaction with nature. The contradiction is clear: interfere less with nature by interfering more in it...but by their distinction, intensification efforts occur only in the realm designated to humans, to culture, to settlements and agriculture and energy production. Rather than prescribe a future that is deeply infused with our present ecological and political realities, the ecomodernists idealize a future that can be both separated from current practices, uniquely defined, and imprinted upon the world *now*.

Techno-optimists include carbon capture technologies, genetically modified organisms, and, perhaps most dramatically, geoengineering, or the large-scale attempt to alter Earth systems to offset the impacts of climate change, under the scope of eco-modern feats. The most widely proposed method of geoengineering, stratospheric aerosol injection (SAI), involves mimicking the natural process of volcanic eruption whereby sulfate aerosols emitted into the stratosphere have a global dimming effect that lowers the greenhouse gas effect. In *The Planet Remade: How Geoengineering Could Change the World*, science writer Oliver Morton describes how the 1991 eruption of Mount Pinatubo in the Philippines gave scientists a first-hand look at the impact that twenty million tons of sulphur dioxide slowly oxidizing in the atmosphere could have on global systems. As sulphates combined with water vapor in the stratosphere, a veil of aerosol mist was created that covered the entire globe for several years, blocking a small amount of incoming light. When a similar volcano, Mount Tambora, erupted in 1815, the ensuing years saw cold summers in Europe, glacial activity creep ever-South, and frost in the New England July (Morton 2016: 86). For the Pinatubo event, the stratospheric veil precipitated a strengthening of circumpolar jet streams, which led to colder winters in the North Pacific. At its most elementary level, a veil of that magnitude may cause less incoming light, which causes less evaporation, which leads to less water vapor in the atmosphere, meaning a lessened greenhouse effect, and overall less rain. With such low soil-respiration levels, more carbon stays locked in the soil rather than contributing to the

greenhouse effect, and the diffuse light means a dimmer sun and a brighter sky: perfect for plant leaves and photosynthesis (Morton 2016: 98).

It doesn't take a meteorologist or geochemist to understand why ecomodernists may see potential in simulating the effects of sulphur-emitting volcanic eruptions. After all, what better way is there to intensify human actions in a way that is seen as natural while at the same time giving the appearance of minimal "interference" with the natural world? The proposed methods of stratospheric aerosol injection would involve casting a veil far above the clouds and our immediate perception, into a part of our world that is as alien to us as the deepest trenches of the ocean. For all intents and purposes, the stratosphere is as much a part of our biosphere as any other layer of the atmosphere, but it would be easy to treat any geoengineering that occurs on that far layer of our world as distant from nature. While research for the technology required to blanket the stratosphere in sulphates is still in its infancy, at least three methods have been proposed, as outlined by Oliver Morton: the expensive invention and production of a new kind of aircraft, the cheaper use of vast balloons that would drag behind them hosepipes attached to sulphuric acid pumping stations on the surface, or some sort of hybrid airship combining the two (Morton 2016: 106). On the whole, any one of these methods would be cheaper than global efforts towards total climate change mitigation.

Morton characterizes the proponents of SAI as "the Veilmakers" (Morton 2016: 54). They may be military, fulfilling an initiative that one country alone

has decided upon. They may soar through the stratosphere with defenses against attack, or the geoengineering itself may be a form of attack. They may be professional employees, put to task by international organizations. Whoever ends up engineering the climate for whoever's agenda is the subject of much speculation, and writers of science fiction and climate fiction have been the first windows into the varied possibilities. Jules Verne, a crucial figure in the lineage of science fiction, was one of the first authors to write about human attempts at geoengineering in his 1889 novel, *The Purchase of the North Pole*. In it, a group of "avaricious capitalists" (satirizing on contemporary Americans) scheme to physically alter the Earth's axis of rotation in order to access coal reserves in the Arctic (Streeby 2018: 20). At the end, the attempts fail miserably, and Verne declares to his reader that "to modify the conditions in which earth is moving is beyond the efforts of humanity" and that "it is not meet that mere humanity should change anything in the order established by our Creator in the system of the universe" (Verne 1889). The question on how far the "efforts of humanity" should extend is rendered, then, a moral one that pressed upon individuals even in the late nineteenth century. It is a question that still prevails. Ultimately, Morton claims, "the challenge of geoengineering is to imagine changes beyond that human realm, but to its benefit" (Morton 2016: 81). He calls to mind the Greek mathematician, physicist, engineer, inventor, and astronomer, Archimedes, who famously said, "Give me a lever long enough and a fulcrum on which to place it, and I shall move the world."

Geoengineering has need of both levers with which to move the earth system

and of fulcrums, of places on which to stand: an institution, a shared goal, a new understanding of nature, a seat of balance.

Some might say there is risk in partaking in such a “Promethean science,” or any experiment to safeguard humanity against threats from the ambition of science itself (Morton 2016: 112). After all, the ultimate crime in Mary Shelley’s *Frankenstein* is not that Dr. Frankenstein plays god by stitching together dead body parts, but that he abandons accountability for his creation as soon as it draws its first breath. The question of accountability, and the language that governs it, continues to surface as new technologies develop in the face of imminent climatic rupture. In his article, “Love Your Monsters: Why We Must Care for Our Technologies As We Do Our Children,” Bruno Latour surmises that *Frankenstein*, which was written at the height of the Industrial Revolution, “foresees that the gigantic sins that were to be committed would hide a much greater sin. It is not the case that we have failed to care for Creation, but that we have failed to care for our technological creations” (Latour 2011). This failure, he claims, is to be expected in this epoch of modernism-for-the-sake-of-modernism that self-identifies as “the Anthropocene.” So how can the “technological creations” that exacerbated climate change also amend it?

Morton concludes that geoengineering with veils “is not an antidote to climate change. It is an additional form of climate change, one that has some effects that oppose those of climate change brought on by greenhouse warming” (Morton 2016: 114). But as for the other effects? Dramatic warming

of the tropics at the equator and poles, upwelling of nutrient-rich water that produces algae blooms and kills off coral reefs, regional food shortages and agricultural failure due to drought in developing countries, alterations in surface salinity and torrential floods in areas where it is already wet, and an ever-present risk of termination shock should the veil be lifted from the atmosphere at any point... Such risks have been explored very little by ecomodernists, by politicians signing the Paris Agreement, by advocates of geoengineering. Truly, one of the only mediums that has played out scenarios rooted in the present day psychological, ecological, and systemic reality of climate change is fiction.

PATTERNS OF MODERNITY

The 'veil' itself is more than just a physical layer of aerosols, imagined as tucked away above the clouds. It is a shroud that obscures attention from the central human-devised sources of climate change, confounds understandings of unequal relations of exchange, and diverts our gaze from where environmental burdens are felt most. The risks of such a hidden-in-plain-sight technological attempt, which will be elaborated upon later, are exemplary of the techno-optimist attitude of the ecomodernists. In effect, the metaphorical veil disguises a western master narrative bent on re-centering the human.

The motivating principles of modernism, a term that was once used to describe literary texts written between 1900 and 1945, has since come to encompass these narratives of 'progress.' In his chapter in *Writing Culture*, Stephen A. Tyler describes modernism as, like Christianity, having "taught us to value postponement, to look ahead to a scientific utopia, to devalue the past, and negate the present" (Tyler 1986: 139). Both beholden to authority and taken with scientific convention, modernism's narrative seeks advancement by shuttering the blinds on the past. It stands to reason, then, that ecomodernism would entertain "a scientific utopia" of climate stability that is achieved by forgetting geomorphic and meteorological history, and instead visualizing the human as the rectifying agent in the future anterior.

Because the narrative of modernism is one of the disentanglement of science, morality, religion, law, technology, finance, and politics, it assumes a

position that Latour defines as belonging to “one who expects from Science the revelation that Nature will finally be visible through the veils of subjectivity—and subjection—that hid it from our ancestors” (Latour 2011). In reality, the enchanting technological language found in documents such as the Ecomodernist Manifesto and the subsequent Paris Agreement casts a ‘veil’ over the displaced environmental costs of climate change, further mystifying accountability for locally-felt consequences and anesthetizing meaningful political action. While the SAI veil only exists in the realm of ecomodernist speculation, a metaphorical ‘veil’ is being draped atop the rhetoric that surrounds nature and human impact in the Anthropocene. Although environmental proposals such as the one found in the papal encyclical, *Laudato Si’*, favor sober clarity over technical jargon, the circulation of highly-romanticized technological solutions continues to support language that falsely delegates climate change as a moral issue, commodifies nature, and disguises complicity. We cannot create a “good Anthropocene” so long as we “confuse the monster for its creator and blame our sins against Nature upon our creations” (Latour 2011). To clear up this confusion, we must first examine the language of technology and accountability.

In her critique on ecomodernism, “Unearthing Human Progress? Ecomodernism and Contrasting Definitions of Technological Progress in the Anthropocene,” anthropologist Cindy Isenhour argues that the authors of the manifesto “conceptualize technology as a mediator of human–environmental relationships, one that can essentially serve as a means for humans to

separate societal development from a reliance on the natural environment” (Isenhour 2016: 318). Technology is given the agency of mediation, and thus a conundrum arises: by insisting that technology is a natural advancement for separating societal development from a dependence on nature itself, ecomodernists insist that more modernity is the solution for the unintended consequences of modernity: ever increasing intervention. Similarly, since SAI is modeled off actual geophysical processes of volcanic eruption and the meteorological consequences of such, its proposed implementation has been described as ‘natural.’ After all, the Earth has seen countless epochs cycle through bouts of climate change, caused by everything from volcanic activity to changes in oceanic chemistry.

The efficacy of mimicking such a process is a great, modern delusion that lurks behind the language of what is ‘natural’—and often, the full body of information is left out (i.e., natural volcanic activity has been implicated in at least four mass extinctions, such as the catastrophic Capitanian extinction at the end of the Permian period (McGhee 2018:181)). Science fiction writers of the mid-twentieth century were among the first to scrutinize the obsession that modernity has with pantomiming a version of nature that is at once overblown and unexamined. For example, the main conflict in Kurt Vonnegut’s 1963 novel, *Cat’s Cradle*, involves the releasing of Ice Nine, a top-secret solid polymorph of water that is similar to naturally occurring ice, into the environment. The new molecular form of ice has a melting point of 120 degrees

Fahrenheit, leading to the freezing of all the world's oceans and the onslaught of violent storms with apocalyptic tornadoes.

Cat's Cradle and many other contemporary members of the genre examine the patterns of modernity and chart their course as technologies are invented, unleashed, and self-effaced. In tandem with this literary critique, the main critique of the Ecomodernist Manifesto is a critique of modernity as a tool that can enact climate mitigation, international development, and global economic growth all at once. "To embrace these technologies is to find paths to a good Anthropocene" (An Ecomodernist Manifesto 2015), the authors declare. What such language entails, however, is embracing "a long history of Western progressivist thought" and basing this so-called good Anthropocene on "a historical product linked to an emerging urban middle class during the industrial revolution, not a universal perspective" (Isenhour 2016: 325). It is in these attempts at efficiency, at utilizing natural ecosystem flows while at the same time distancing humans from them, that ecomodernism misses the mark. Not only does current evidence resist any proof of successful decoupling, but, as Isenhour observes, the greatest expense of environmental degradation is found elsewhere (Isenhour 2016: 321). The language of ecomodernism, and of modernism itself, shifts the burdens of environmental costs so severely that they are entirely obscured in favor of perpetuating a sense of freedom even as technology allows capital to exploit markets.

The externalization of costs upon those least able to resist is lost in the shadow of the 'veil' and is aggravated by the unfounded belief of ecomodernists

in the ‘ability’ of modernism to liberate humans from “insecurity, penury, and servitude” (An Ecomodernist Manifesto 2015). Latour refers to this narrative as “the modernist story of emancipation,” and it is a narrative so attractive that “it makes one wish to run forward to break all the shackles of ancient existence” (Latour 2011). There is danger in such a powerful story, for emancipating ourselves from our “repellent past” is no different from emancipating ourselves from nature itself. It is at the same time “proof of increasing mastery *over* and freedom *from* Nature” (Latour 2011)—characteristics of “the Great Acceleration,” or the period of human-driven impacts on the environment in the second half of the twentieth century, as described in Amitav Ghosh’s book, *The Great Derangement: Climate Change and the Unthinkable*. Ghosh claims that the Great Acceleration, in line with the trajectory of modernity, has reinforced the illusion “that human beings have freed themselves from their material circumstances to the point where they have become floating personalities ‘decoupled from a body’” (Ghosh 2017: 161). The rhetoric of ecomodernism, of the veil freeing *anthropos* from the material world, has the dangerous potential to stifle traditional modes of understanding nonhuman narratives.

CONCEALMENT AND ACCOUNTABILITY

Ghosh names the greatest risk of such a separation between humans and their material circumstances as being “the extinction of exactly those forms of traditional knowledge, material skills, art, and ties of community that might provide succor to vast numbers of people around the world [...] as the impacts intensify” (Ghosh 2017: 161). Those “forms of traditional knowledge” in peril of extinction under modernity’s heel are, in *Parable of the Sower’s* alternate reality of Earthseed, re-consolidated and re-packaged in a religion that provides “succor” to victims of apocalypse.

Octavia Butler’s main character, Lauren Oya Olamina, has a condition called hyperempathy, which allows her to feel the physical pain and pleasure of everyone she meets. When her home is destroyed and her family is murdered, she travels north with a growing group of survivors to found a community based on a religion of her own design called Earthseed. Operating under the belief that all “seeds” of life on Earth are destined to be transplanted beyond the stars, she writes her beliefs down in “The Books of the Living.” Earthseed’s central tenet, “God is Change,” is intended to get followers to understand their own agency and ability to instigate Change (which is the same as the Divine):

*All that you touch
You Change.
All that you Change
Changes you.
The only lasting truth
Is Change.
God
Is Change.*

(1.Verse.1-8)

There is great creativity rooted in change, Butler claims through Lauren, and people are never without some amount of power to affect their lives. In the case of *Parable*, that change is necessary because humans' destiny is to outgrow Earth as a result of abusing its natural resources. The establishment of a new pattern of thinking that confronts ecological costs in Earthseed is in direct contradiction to those idealistic modes of separation touted by modernists. By way of idealistic language that defines nature as apart from humanity and technology as naturally mediatory, "the modernist story of emancipation" (Latour 2011) that ecomodernism promotes not only conceals displaced environmental burdens, but also eliminates the need for essential community ties and traditions that are inextricably "coupled" with nature.

In alignment with his critique of modernism, Ghosh identifies another document that employs the same mystifying language of accountability and technology as the Ecomodernist Manifesto: The Paris Agreement, an accord among the United Nations Framework Convention on Climate Change that was reached in December 2015. The rhetoric surrounding climate change in this agreement continues the tradition of referring to the crisis as strictly a moral issue assigned to individuals rather than one that necessitates political action at large. While the Paris Agreement is an acceptance of the scientific research on the cause and trajectory of climate change, it does not supply a blueprint for stabilizing the climate and relies primarily on aspirational maxims and the hope that technological transition is achievable. Such hope is imparted by

language that is “highly stylized in its wording and complex in its structure” and rich with lines that “pour down the page in a waterfall of gerunds” (Ghosh 2017: 151), such as the repetitious use of phrases such as “recalling” and “welcoming” and “recognizing” (Paris Agreement 2015: 1). The agreement descends into clause after unfinished clause that, after eighteen pages, only amounts to two full sentences. Ghosh describes the text as providing a “giddy virtuosity” and “euphoria” for the romanticized image of world leaders negotiating peaceably, perpetuating the scientifically “impossible” goal of limiting the global mean rise in temperature to 1.5 degrees Centigrade (Ghosh 2017: 152). What’s more, the Paris Agreement only halfheartedly identifies the reality of imminent climate change, favoring descriptors such as “adverse effects” or “impacts” (Paris Agreement 2015: 21) over more pressing language such as catastrophe, crisis, or disaster. The vocabulary of ‘negative impact’ resonates as an irritating side-effect that is distant and can be easily overturned rather than as a globally-felt and ever-looming environmental emergency. Such language has a double-effect of championing the signers as stewards of ecological well-being and as the only benefactors capable of sweeping away the “adverse effects.”

Ghosh condemns the rhetoric as acting “like a shimmering screen” that conceals “implicit bargains, unspoken agreements, and loopholes visible only to those in the know” (Ghosh 2017: 155). One loophole that does the work of concealment and withdrawal occurs in the section titled *Loss and Damage*, that states that “the Agreement does not involve or provide a basis for any liability

or compensation” (Paris Agreement 2015: 8). With that brief statement, any legal agency is immediately deflected from victims of climate change. While employed undercover at a slaughterhouse, political scientist Timothy Pachirat observed firsthand how significantly society is organized to distance and hide uncomfortable realities from view. His book, *Every Twelve Seconds: Industrialized Slaughter and the Politics of Sight*, suggests that he might characterize this language of displaced environmental costs as operating within a zone of confinement that distances and conceals the creation of physical, linguistic, and phenomenological barriers. A ‘Politics of Sight’ that includes “organized, concerted attempts to make visible what is hidden and to breach, literally or figuratively, zones of confinement” would then be necessary “in order to bring about social and political transformation” (Pachirat 2011: 236). It wouldn’t be too far of a stretch to project the “zones of confinement” articulated by the Paris Agreement’s rhetoric onto potential attitudes towards SAI.

Geoengineering that involves such wide-scale implementation will inevitably obscure responsibility and accountability from the designated “veilmakers.” (The question of *who* does the veilmaking—if it is any one country, nation state, or international organization, and if other nations should be expected to match the veilmaking capacity/maintain the veil—is an ongoing dilemma that will be discussed later on). In a physical sense, the veil would be concealed above the clouds, but it would also obscure potential disastrous climatic side-effects in the rhetoric it will inevitably promote—the morally

hazardous language of “perpetual growth.” In advance of such disastrous effects, a new transparency wants for accessible language that knows its audience and avoids imbuing them with spurious hope. The Paris Agreement does not offer the path to any such “transformation;” rather, it overloads clauses with aspirational rhetoric that congratulates the signers as the champions of a romantic eco-future. Ideals of a future ignore the fact that, as Ghosh remarks, “something has gone wrong with our dominant paradigms,” and instead promote the current paradigm of modernism, which has created the dilemma of “perpetual growth” to begin with (Ghosh 2017: 153).

While the technological goals of the Paris Agreement and the Ecomodernist Manifesto are in alignment with suggestions made by climate scientists, both texts do little in the way of laying out solid premises and rely, instead, on the language of “perpetual growth.” With each metaphor of productivity, another stitch is added to the “shimmering” veil of modernism and the urgency of climate change dims ever more. Cixin Liu’s science fiction novel, *The Three-Body Problem*, imagines the devastating effects that such reckless uses of the language can have on humanity’s future.

In *The Three-Body Problem*, one of the perspectives followed is that of Wenjie Ye, a child of China’s Cultural Revolution who loses all hope in humanity after witnessing its sins against itself and against nature. As a professor of astrophysics, Ye believes that because humankind can no longer care for their fellow man or the planet, it is necessary for an alien species to take over and “eliminate human tyranny” (Liu 2014: 215,341). Ye observes the

Cultural Revolution as having a reverberating effect on the Chinese perception of an “alternative modernity” in the developing world. The rhetoric with which officials regard scientific progress veils the true impact of new technologies by avoiding political symbolism. For example, Ye’s proposed experiment “to aim a super powerful radio beam at the red sun” (Liu 2014: 264) is shot down because it would be perceived as a political attack on Chairman Mao, who is often compared to the “red sun.” The term “sunspot” is also prohibited because the Chinese translation, “solar black spots” (Liu 2014: 264), implies the color associated with counter-revolutionaries. Negative interpretations of technological language would be enough to bring about political disaster, so an alternative modernism strikes with highly anesthetized language that instills political ideals and visions of a future ignorant of the dilemmas of the current paradigm. The disregard with which humanity has approached environmental issues puts all of its constituents into grave danger, and while the true threat of the novel is the invasion of an alien civilization escaping its own climatic catastrophe, Ye believes that life would be worse off without intervention. The alien invasion, then, may be an allegory for a ‘Politics of Sight’ that makes visible what is hidden by quite literally and violently breaching a global zone of confinement.

TECHNOLOGICAL CAPACITY

In the same way that humans in *The Three-Body Problem* are desensitized to confronting the true source of “human tyranny,” the Paris Agreement’s targets are founded on “the belief that technological advances will soon make it possible to whisk greenhouses out of the atmosphere and bury them deep underground” (Ghosh 2017: 152). These technologies, however, are only beginning to emerge and would need to be implemented on a much wider scale to succeed. For example, biomass energy capture and storage (CCS) would require planting bioenergy crops “over an area larger than India” to make any significant impact (Ghosh 2017: 152). The rhetoric brought to life by industrial capitalism and modernism, to some extent, deifies technology and causes those in close proximity to these advances to re-conceptualize the very medium that contributes to climate change: carbon dioxide.

In her article, “What is Carbon Dioxide? When Is Carbon Dioxide?,” Gökçe Günel investigates the ways that CCS professionals imagine carbon dioxide as a neutral gas that can be bought and sold as a commodity. “Carbon capture and storage is a provisional fix, extending the fossil fuel economy until a time when the world may perhaps switch to renewable energy sources,” Günel notes. “In order to make this provisional fix work, CCS professionals proposed a reconceptualization of carbon dioxide, not as waste that should be taxed, but as commodity” (Günel 2016). From the extensive legal, political, and chemical definitions given to carbon dioxide, however, CCS professionals find it

difficult to produce the molecule as a commodity based on a system of commensurability and exchange. The process of commodification, then, has to occur “through practices of ‘linking’ rather than flattening, recognizing the various legal, political, and material appearances of carbon dioxide. At the end, the multiple existences of carbon dioxide refashioned the ways in which CCS professionals thought about this chemical compound and how to transform climate change mitigation and governance” (Günel 2016). The decision to reconfigure understandings of carbon dioxide as not a waste but a commodity does the work of concealment, proposing that the environmentally-detrimental qualities of carbon dioxide should not be elucidated but instead covered with a veil of possibility: the possibility of expansion, of strengthening the fossil fuel economy. Because while in rhetoric it may seem bizarre to render a gas a commodity, it is in reality a calculated mechanism by which contemporary global inequalities are further re-entrenched and political ecologies are exacerbated. Ultimately, CCS technologies conceal the truth as to how such energy-intensive networks brought about climate change to begin with.

If any of the aforementioned eco-proposals’ targets are to be met, there must be a fundamental reinterpretation of what “expansion” and “progress” entail. This new conceptualization, Isenhour posits, should recognize “the capacity of technology to mystify unequal relations of exchange and the shifting environmental burdens in a highly unequal global society” (Isenhour 2016: 325). In the context of SAI technologies, veilmaking may have the potential to do the work of mystifying not only because it is an intervention that would

occur out of sight and would literally shroud the atmosphere, but because the question of who exactly would feel the “environmental burdens” of geoengineering is not immediately clear and, by extension, such burdens would certainly not be equally felt. Simply put, climate shifts are *not* uniform, no matter how much control the veilmaker claims to possess.

The inevitability of aberrant climate shifts across the globe is reassured by the Geoengineering Model Intercomparison Project (GEOMIP), which runs models of engineered worlds with veils to compare them to a greenhouse planet. Although most models of engineered planets on GEOMIP show fewer intense precipitation events, higher plant productivity, and less drought overall than in the progressed greenhouse simulation, it is impossible to achieve stable environmental conditions across the entire planet. As a veil reduces energy coming into the troposphere, it also reduces the energy driving the hydrologic cycle. In the end, this means less rainfall and a risk to the agriculture in developing countries unprepared for sudden and possibly dramatic drought (Morton 2016: 118). While there is a chance that humans could achieve a level of geoengineering that benefits most (compared to living on a rapidly degrading greenhouse earth), “almost every level of geoengineering would be suboptimal for most regions of the planet” (Morton 2016: 164). For example, one engineered model of the 2070s projected that if China were to remain at a stable temperature, India would chill. Conversely, if India were to maintain a stable temperature, China would overheat (Morton 2016: 121). During the 1970s and 1980s, a similar effect was observed when sulfates emitted in the

industrial Northern hemisphere correlated with extreme droughts in the Sahel zone of Africa. The source: an equatorial rainbelt called the Intertropical Convergence Zone that steals the rain away with it as it avoids cooler hemispheres (Morton 2016: 295).

If it were possible to focus geoengineering so that a particular region or hemisphere would “win more,” other regions would most certainly “win less”—which in and of itself wouldn’t put the region in a worse position than it would be in had the greenhouse effect continued uninhibited, but would comparatively feel a whole lot like losing. Morton raises the question then as to *who* decides where the veil is situated and *how* they are held accountable (Morton 2016: 164). Who are the veilmakers? As technology develops, it becomes more and more a mechanism of control: control of the environment, control of convenience, control of human prosperity, control of human suffering. The issue of what agency wields this control is referred to as the “whose-hand-is-on-the-thermostat” problem, but that language implies a division between the instrument of control and the pre-existing institution that uses it (Morton 2016: 164). It is a perspective of human intervention that echoes the ecomodernist attitude of separation between human activities and the natural world. Only the separation here is more than just humans from nature; it is a demarcation of instrumentality from politics, of decision-making from technological development, and ultimately, of humans from other humans.

Such distancing proves the power that technocratic innovation has when it comes to maintaining ecosystems, especially in an age of Anthropocene that quite literally defines itself by the centrality of the human. In his essay, “Globes and Spheres: The Topology of Environmentalism,” anthropologist Tim Ingold argues that the topology of environmentalism situates humans *apart* and *above* the environment, i.e. as operating in a global rather than a spherical lifeworld. In this discourse, “we do not belong to the world, neither partaking of its essence nor resonating to its cycles and rhythms. Rather, since our very humanity is seen to consist, in essence, in the transcendence of physical nature, it is the world that belongs to us” (Ingold 2000: 214). When modern technology places human interest outside of the physical world, it reinforces the notion that the world is an object of transformation that is something that, by definition, must remain in balance. In the case that our idealized ecosystems go “awry,” interventions such as SAI become more than just a possibility: they become a “responsibility” of the veilmakers.

The moment that intervention becomes apolitical is the moment that it becomes easy to veil not only the uneven burdens placed on humans, but the root cause of climate change. The reality is that SAI veils, if implemented, would cool continents while having little to no effect on the temperature of the oceans. This is significant because climate change is moderated by the ocean (Morton 2016: 151). SAI and other forms of sunshine geoengineering would do very little to curb the process of carbon dioxide being absorbed into large bodies of water. This process, called ocean acidification, “imperils many of the

world's coral reefs and a number of other ecosystems too" (Morton 2016: 152). Because these methods of geoengineering involve, in different ways, "the decoupling of carbon-dioxide from the climate, [they] can lead strength to arguments against reducing carbon-dioxide emissions" (Morton 2016:154). Again, the rhetoric is eerily similar to the ecomodernist mindset of "decoupling" human well-being from the destruction of nature. In this case, a technology such as SAI may be touted as a sufficient-enough response to the issue of climate change that, if implemented, would give industrialized nations an 'excuse' to continue burning fossil fuels. Because SAI acts as a veil for greenhouse gases rather than an exterminator, veilmakers may easily convince themselves and others that carbon dioxide is divorced from climate issues. Morton refers to this rationale as a "moral hazard" (Morton 2016: 158) that is initiated by even *talking* about geoengineering. That is not to say that discussions of geoengineering cannot be had; however, we must be increasingly aware of how we delegate climate-altering technologies—not as a fix-all, not as a deity, not as a technocratic means of circumventing politics.

Whoever the veilmakers would be, it is clear that cooling some parts of the planet would have detrimental environmental effects on other regions, and that the ocean would go on acidifying regardless. If the veilmakers are to have any accountability for droughts in Sahel or overheating in China, they must rethink the capacity of technology and the necessitations of progress. Alternative implementations must be discussed, such as designs that are regionally-based, temporary, surgical, or incremental, so as to avoid

environmentally burdening developing nations (Morton 2016: 162, 295). Above all, if geoengineering is to be implemented on a wide scale, the veilmakers should approach its rhetoric with “reinventing politics” (Morton 2016: 164) in mind rather than further decoupling from nature. Indeed, innovative technological advancement may certainly help avoid some of the dangerous impacts of climate change, but methods such as SAI and CCS, which dream of quite literally hiding carbon dioxide in the oceans or underground never to be exhumed again, are not “cognizant in both mind and policy that if technology continues to enable uneven capitalist accumulation, we are potentially crowding out alternatives with greater potential for more just, and thus effective, climate mitigation and adaptation” (Isenhour 2016: 325). On its own, technology is not enough; the underlying social system that does not neutralize the externalization of costs upon those most impacted by climate change must change.

Clearly, the current paradigm of modernism commodifies the acknowledged crisis rather than acts upon it. David McDermott Hughes compares slave labor in Trinidad and Tobago to the regional oil industry because both forms of energy rely on complicity. In his book, *Energy Without Conscience: Oil, Climate Change, and Complicity*, he questions why the use of fossil fuels has been made commonplace and not been considered an ethical issue. “From Chacón to Stollmeyer to Persad to Kublalsingh to Manning, influential Trinis have constructed a mental model of the ability to do work,” Hughes writes. “As they bought, sold, and debated that good, they branded it

as one thing: as a necessary, available, unquestionable means to everything modern. Even as modernity transformed one product after another—from sugar through to plastics—producers and consumers perpetuated this narrow vision of energetic means. In imagining those means as fuel, they cut off other ways of thinking about energy” (Hughes 2017: 151). In both Isenhour and Hughes’ analyses, a limited perspective on the products of modernity has overpowered the potential for discovering more efficient, effective, and equitable means for climate mitigation and energy production. The Ecomodernist Manifesto and the Paris Agreement cut off the energy conversation before it can even unfold because the discussion of technology is trapped in modernist tunnel-vision. Hughes opens up this conversation, characterizing the vastly-held view of oil as being a “negative blessing, a curse” (Hughes 2017: 148). However, if oil were to be regarded as a “positive blessing,” as being “so powerful and so precious that one would want to use it sparingly, reverently” (Hughes 2017: 149), then perhaps the best way to contribute to the downfall of fossil fuel exploitation would be to venerate its very use.

ALTERNATIVE FRAMEWORKS

What more fitting and present discussion of veneration and humanity's relationship with nature is there to reference than that of one of the most influential religious institutions of the modern world? In 2015, a few months after the UNFCCC adopted the Paris Agreement and one month after the publication of the Ecomodernist Manifesto, Pope Francis released his second encyclical entitled *Laudato Si'*, or in English, *Praise Be To You*, with the subtitle, "On Care For Our Common Home." In the Catholic Church, encyclicals are written by popes to express issues of great significance and are second only in rank to the Apostolic Constitution. The subject of this encyclical is both a critique of consumerism and irresponsible development and a call for unified global action against environmental damages and climate change.

Immediately, *Laudato Si'* sets itself apart from its contemporary texts on environmental issues by the language it adopts. Ghosh praises the encyclical for "the lucidity of its language and the simplicity of its construction" (Ghosh 2017: 150) along with the "sober clarity with which it addresses complex questions" (Ghosh 2017: 152). Language is important when considering the audience of a text; here, the Pope's primary audience is the 1.2 billion Catholics that live across both developed and developing nations alike. On the other hand, the audiences of the Ecomodernist Manifesto and the Paris Agreement are not so clear. From its spiraling language to its vague discussion of the "adverse impacts" of climate change, The Paris Agreement only seems to

service itself and appeal to its own signers. The Ecomodernist Manifesto makes out that it is addressing the human population as a whole, but its rhetoric is only palatable to an upper-middle class that benefits from increased modernism.

Additionally, while the Ecomodernist Manifesto and the Paris Agreement are bogged down by the highly idealized rhetoric that technological advancements will be the saving grace of climate change, *Laudato Si'* “strives to make sense of humanity’s present predicament by mining the wisdom of a tradition that far predates the carbon economy” (Ghosh 2017:153). The encyclical recognizes the need for traditional knowledge and other community ties to conjure new ways of thinking about energy production, similar to Hughes’ vision of viewing fossil fuels through the lens of a “positive blessing.” In a section entitled, “The Globalization of the Technocratic Paradigm,” *Laudato Si'* directly criticizes humanity’s approach to technological growth: “The basic problem goes even deeper: it is the way that humanity has taken up technology and its development according to an undifferentiated and one-dimensional paradigm [...] We fail to see the deepest roots of our present failures, which have to do with the direction, goals, meaning and social implications of technological and economic growth” (Pope Francis 2015). This “one-dimensional paradigm” is the reign of modernism, which has, as previously discussed, produced ideals of a technocratic future that relies on continued, rigorous growth. *Laudato Si'* acknowledges this paradigm as being deeply

rooted in “our present failures” and motivated, first and foremost, by economic development.

When discussing the underlying issue of modernism, Pope Francis does not shy away from using the terminology of devastation: “The pace of consumption, waste and environmental change has so stretched the planet’s capacity that our contemporary lifestyle, unsustainable as it is, can only precipitate catastrophes, such as those which even now periodically occur in different areas of the world” (Pope Francis 2015). In truth, the Encyclical avoids any such mystifying or concealing language that so dominates the texts of The Ecomodernist Manifesto and the Paris Agreement. Instead of “obscurity” and “technical jargon that enshrouds” the leading discussions on climate change, *Laudato Si’* “strives to open itself, in a manner that explicitly acknowledges the influence of the saint who is the pope’s ‘guide and inspiration’” (Ghosh 2017: 154). Indeed, openness and transparency are continuously emphasized in the encyclical, and the Pope draws on “the wisdom of tradition” that he has assumed from his namesake and the patron saint of ecologists: “Francis helps us to see that an integral ecology calls for openness to categories which transcend the language of mathematics and biology, and take us to the heart of what it is to be human” (Pope Francis 2015). Thus, we are tuned into another striking difference between the previously discussed texts and the encyclical: the indivisibility of “what it is to be human” from nature.

Over and over again, Pope Francis emphasizes the interconnectivity of humanity with nature: “everything is interconnected, and that genuine care for

our own lives and our relationships with nature is inseparable from fraternity, justice and faithfulness to others” (Pope Francis 2015). That’s a far cry away from the core tenet of the Ecomodernist Manifesto, which defines nature by its distance from humanity and calls for an increased separation between humans and nature by way of technological advancement. While the Paris Agreement is less vocal on the front of humanity’s relationship with nature, its aspirational rhetoric obscures any alternatives to the technocratic paradigm. Bruno Latour writes these attitudes off as being the greatest failure of political ecology:

Just when all of the human and nonhuman associations are finally coming to the center of our consciousness, when science and nature and technology and politics become so confused and mixed up as to be impossible to untangle, just as these associations are beginning to be shaped in our political arenas and are triggering our most personal and deepest emotions, this is when a new apartheid is declared: leave Nature alone and let the humans retreat – as the English did on the beaches of Dunkirk in the 1940s (Latour 2011).

In accordance with Latour’s notion of a world where “science and nature and technology and politics” are irreversibly enmeshed in one another, Pope Francis writes of a reality where the very inseparability of humanity from nature requires that citizens of the world not have a “blind confidence in technical solutions” that, when linked to modernist business interests, only drive the two apart. The encyclical prides itself in the “associations” that Latour claims humanity has declared a “new apartheid” over: an intentional distancing that forgets the people who cannot circumstantially separate themselves from nature.

This perceived distance is further felt because the self-appointed “champions” of environmental justice (or the signers of texts such as the Ecomodernist Manifesto, but particularly the Paris Agreement) are world leaders and high-ranking professionals who can afford to adopt a separatist mindset in regards to anthropogenic forces and nature. Pope Francis emphasizes the lack of intimate knowledge or contact that such professionals have with the people who suffer from displaced environmental costs the most:

Indeed, when all is said and done, [the excluded] frequently remain at the bottom of the pile. This is due partly to the fact that many professionals, opinion makers, communications media and centres of power, being located in affluent urban areas, are far removed from the poor, with little direct contact with their problems. They live and reason from the comfortable position of a high level of development and a quality of life well beyond the reach of the majority of the world’s population. This lack of physical contact and encounter, encouraged at times by the disintegration of our cities, can lead to a numbing of conscience and to tendentious analyses which neglect parts of reality. At times this attitude exists side by side with a “green” rhetoric (Pope Francis 2015).

Having “little direct contact” with those most disadvantaged by climate change allows those in power to spout a “green” rhetoric that favors miraculous technology over bridging the gap between man and nature that modernism has carved. The fact that the writers of the Ecomodernist Manifesto and the signers of the Paris Agreement are “far removed” from those most in contact with the climate crisis is reflected in the numbing language that anesthetizes direct political action on a global-scale.

Current techno-ecological examples make it clear: the veilmakers cannot, within any inch of scientific feasibility, ‘shroud’ everyone. In fact, it becomes more and more obvious that in order to reach comfortability for the few, a great

many must suffer the effects of an unstable climate—be it via SAI or CCS or altering the axis of the earth’s rotation (ala Verne). Journalist David Wallace-Wells’ book, *The Uninhabitable Earth*, is a galvanizing text that, while at times alarmist in its apocalyptic portrayal of the planet post-climate change, actively avoids “the eerily banal language of climatology” (Wallace-Wells 2019: 5) that numbs modern documents and manifestos. “The belief that climate could be plausibly governed, or managed, by any institution or human instrument presently at hand is another wide-eyed climate delusion,” he states, in tandem with Ghosh’s criticism of ‘deranged’ modes of political and socio-economic thinking. “[...] And yet now, just as the need for that kind of cooperation is paramount, indeed necessary for anything like the world we know to survive, we are only unbuilding those alliances—recoiling into nationalistic corners and retreating from collective responsibility and from each other. That collapse of trust is a cascade, too” (Wallace-Wells 2019: 24-25). So long as the rhetoric of ecomodernism continues to immobilize action and as proposals for geoengineering projects increase, “collective responsibility” will become more of a distant dream. The veilmakers, whoever they may be—one country, a league of nations, a militaristic force—must answer crucial questions as to the optimum level of geoengineering, the ability of other allied veilmakers to match that capacity, and the logistics of sustaining a veil for generations.

Because, ultimately, once veilmaking is initiated, the process can’t exactly stop. If the veilmaker were to pull back the curtains, to curtail the emission of sulphates or cease them altogether, the earth systems would suffer

from “termination shock” (Morton 2016: 118). The cooling effect would rapidly fade, and in just a few years warming would catch up with the planet (dramatically so, if fossil fuels had been consistently used). Most lifeforms would not be able to adapt in time, and the current mass extinction would be expedited to a devastating, irreversible degree. As previously stated, veilmakers might avoid such a catastrophe by conducting veils that are regional, temporary, and surgically coordinated (Morton 2016: 295). But there is no way of knowing for sure, and only fiction can speculate.

We are brought, then, to a contentious crossroads: how do we avoid ensconcing ourselves in a veil of green rhetoric? While *Laudato Si'* has certainly received its fair share of criticism for its attempt to marry religious doctrine with science, one can't help but wonder that if every mode of traditional knowledge mined its own rhetoric to reach its communities, then the global climate-consciousness would be closer to achieving meaningful change. There is a great need to redesign the veil of rhetoric that surrounds the Anthropocene and technocratic innovation; *Laudato Si'* offers one such example of reconditioning. The other highly situated, vastly overlooked mode? Redesigning green rhetoric through fiction.

REDESIGNING GREEN RHETORIC

The notion that science must remain autonomous from religion or any other form of traditional wisdom and vice versa feeds into the problematic ecomodernist tenet of “decoupling” anthropogenic impacts from the natural world. Even Latour invokes Christian belief to problematize the hypocrisy inherent in such attempts to separate humanity from nature:

If God has not abandoned His Creation and has sent His Son to redeem it, why do you, a human, a creature, believe that you can invent, innovate, and proliferate — and then flee away in horror from what you have committed? Oh, you the hypocrite who confesses of one sin to hide a much graver, mortal one! Has God fled in horror after what humans made of His Creation? Then have at least the same forbearance that He has (Latour 2011).

By rendering religiosity in metaphorical terms—in some respects, idiomatically—Latour taps into a well of rhetoric that is neither “green” nor strictly theological. It is, however, familiar to the vast stretches of Western civilization that have been raised on a language that perpetuates Christian allusions. “As simultaneously anthropologist of and missionary to the Moderns,” literary critic and theorist Barbara Herrnstein Smith, author of “Anthropotheology: Latour Speaking Religiously” writes, “Latour has attempted to solve or negotiate it by forging an original idiom—a way of speaking—that joins compelling evocations of religious experience to passionate theorizing in the service of a prophetic summons to worldwide conversion” (Smith 2016: 347). Latour recognizes that to create a dialogue on environmentalism with “the Moderns,” he must avoid language that further conceals accountability by

utilizing the intimately-understood rhetoric of religion in the West. For this reason, he criticizes the Ecomodernist Manifesto and praises *Laudato Si'* because it takes “seriously what it means to live ‘at the end of time,’ and in its redistribution of agency, it [adds] ‘our Sister, Mother Earth’” (Latour 2015) as an agent. In the encyclical, Pope Francis discredits the discourse of the Anthropocene as a narrative of “perpetual growth” (Ghosh 2017: 153) and instead emphasizes the need for a new rhetoric of sacrifice to achieve environmental stability. It is in the encyclical’s marriage of traditional

The very attempt to marry traditional wisdom with science begins the process of closing the upheld divide between humanity and nature, and that is where true transparency ultimately reigns. Perhaps, then, it is fitting that Latour calls upon both religious rhetoric and popular narratives such as *Frankenstein*. Mary Shelley’s famous tale of a scientist relinquishing accountability for his creation that goes on to cause massive heartache and destruction is not unlike modernism’s predicament of catastrophic climate change. The lesson that Latour draws from the novel is that rather than perpetuate modernism, a “compositionist” rhetoric and way of seeing the world must be adopted: “one that sees the process of human development as neither liberation from Nature nor as a fall from it, but rather as a process of becoming ever-more attached to, and intimate with, a panoply of nonhuman natures” (Latour 2011). Critics of the Ecomodernist Theory and the Paris Agreement align to declare that we must not abandon our creations, our monsters, our children; we must follow through on their education. We must reattach

ourselves to the nonhuman, rethink efficient and equitable means of energy production, and we must first accomplish this by redesigning the veil of rhetoric that has defined the Anthropocene up until this point.

Ultimately, the ecomodernists' "good Anthropocene" cannot exist because the language that surrounds its proposal misplaces moral obligation, commodifies nature, conceals complicity, and relies on a romanticized "modernist story of emancipation" (Latour 2011). This dream relies on discourse that "subjects us to the time-honored narrative of human ascent into a distinguished species; a naturalized, subtly glamorized rendition of the T' as on a par with stupendous forces of Nature; a homogenized protagonist named 'the human enterprise undefended for either its singularity [...] or its insularity'" (Crist 2013: 140), Eileen Crist writes in "On The Poverty of Our Nomenclature." The conservation of a historically-constructed human identity—that of a "champion" of the environment, holding dominion over nature—has caused the modern Western world to prioritize technological advancements and attempts at geoengineering as if they are the only methods of confronting climate change. To reverse this, a new rhetoric should address "alternative forms of human life, deconstruct historical ideals that subject humanity to "its totalizing ideology," and disavow affirmations of "the centrality of man" that behoove a "techno-scientific" rationalization of imminent climatic rupture (Crist 2013: 141).

For too long more modernism has been the proposed solution to the environmental wounds of modernism. But, as anthropologist Anna Tsing

observes in “Earth Stalked By Man,” “the master’s tools will never dismantle the master’s house” (Tsing 2016: 13). A “good Anthropocene” relies on what Tsing calls “ecologies of alienation” (the upholding of a technocratic paradigm that decouples man from nature by calling upon humanity to supervise itself), but more alienation will only conceal and further “exacerbate” the problem of climate change (Tsing 2016: 13). Concealment through the language of technology and accountability, then, is the first obstacle of modernity that must be rectified to allow the public to recognize the reality of their plight.

To overcome this obstacle, we must rethink how we conceptualize human-nature-relationships materially. Tim Ingold claims that both ecocentric and anthropocentric conceptions of nature imagine humans on the outside-looking-in, an approach he flashily coins as “anthopocircumferentialism.” In this pattern of worlding, the West situates itself externally to nature, viewing ourselves as aliens looking down on a globe that we can both observe and act upon. Instead, he suggests, we should turn to perspectives of dwelling-in that entrench humans in the natural world. Anthropocircumferentialism “is under increasing threat from those—including many anthropologists—who would turn to local or indigenous cosmologies of engagement for sources of insight into our current predicament” (Ingold 2000: 217). The perspectives that position humanity at the edges of nature rather than at its core are reinforced by language.

Science and technology studies scholar, Donna Haraway, would champion overhauling language as the only thing that can guide us out of the

current ecological disaster. In her book, *Staying with the Trouble: Making Kin in the Chthulucene*, Haraway advocates for a new medium of eco-activism that values how language translates ideas and stories: “It matters what matters we use to think other matters with; it matters what stories we tell to tell other stories with; it matters what knots knot knots, what thoughts think thoughts, what descriptions describe descriptions, what ties tie ties. It matters what stories make worlds, what worlds make stories” (Haraway 2016: 12). Language directly impacts how the public consumes stories because it is a direct portal into the worlds that we might not otherwise access. Narrative exists in the synapses between the “knots,” the “descriptions,” the “ties.” Often, a frame narrative begets a secondary narrative that toils with symbol and metaphor and references to produce meaning that the audience can internalize during the reading or listening process. Haraway calls for us to think about anthropology “as the knowledge practice that studies relations with relations, that puts relations at risk with other relations, from unexpected other worlds” (Haraway 2016: 12). In a similar way, *fiction* cannot do the job of translating “other worlds” unless it confronts relations with other relations, creating conflict.

More than that, how we talk about ourselves and tell stories about our shared human history *matters*. Delegating the current epoch as the “Anthropocene” is insufficient in Haraway’s eyes, because it privileges humanity in the narrative of life on Earth. The language of the ecomodernists, of the Anthropocene, attempts to reflect the future onto the present as if

human relations exist within a closed system, divorced from other landscapes, other lifeforms. Much of fiction, especially sci-fi and cli-fi, does the opposite: reflecting the present reality onto an imagined future, thereby putting “relations at risk with other relations” and presenting humans as subject to their surroundings. Haraway proposes an alternative to the self-fulfilling etymology of the Anthropocene: “Chthulucene.”

The Chthulucene is neither sacred nor secular; this earthly worlding is thoroughly Terran, muddled, and mortal. All of these stories are a lure to proposing the Chthulucene as a needed third story, a third netbag for collecting up what is crucial for ongoing, for staying with the trouble. The chthonic ones are not confined to a vanished past. They are a buzzing, stinging, sucking swarm now, and human beings are not in a separate compost pile. We are humus, not homo, not anthropos; we are compost, not posthuman [...] Unlike either the Anthropocene or the Capitalocene, the Chthulucene is made up of ongoing multispecies stories and practices of becoming-with in times that remain at stake, in precarious times, in which the world is not finished and the sky has not fallen—yet. We are at stake to each other. Unlike the dominant dramas of Anthropocene and Capitalocene discourse, human beings are not the only important actors in the Chthulucene, with all other beings able simply to react. The order is rather reversed: human beings are with and of the earth, and the other biotic and abiotic powers of this earth are the main story (Haraway 2016: 58-59).

The “chthonic ones” that Haraway claims are inextricably involved in human life and death are the ancient and ever-persisting rank of earthbound creatures—the ahistorical, the tentacular, the nonvertebrate, the true terrans. The root of “Chthulucene” references these creatures and situates them at the center of earth’s story. The cephalopods and flatworms and crustaceans of epochs past are not alien or extinct; they make up the same “compost pile” that humans will inevitably join in detritus. Thus, a humbling connection is drawn:

we are not “posthuman;” rather, to be human is to be of the earth. Thinking about the Anthropocene in the terms of posthumanity ignores “multispecies stories” that put us at stake with each other. We cannot afford, Haraway drives home, to write off the other “biotic and abiotic powers” of the earth as passive, as distinct from us. We must instead tell stories and pursue modes of communication that encapsulate this era of multispecies worlding and participate in sympoiesis—a collective creation, a “becoming-with.” Fiction is one such mode.

In fact, the imagination that fuels fiction is bitterly absent from the rhetoric of ecomodernism. Haraway mourns that the Anthropocene lends itself “too readily to cynicism, defeatism, and self-certain and self-fulfilling predications, like the ‘game over, too late’ discourse [she hears] all around [her] these days, in both expert and popular discourses, in which both technocratic geoengineering fixes and wallowing in despair seem to coinfect any possible common imagination” (Haraway 2016: 59). Both the Ecomodernist Manifesto and the Paris Agreement are evidence of one of these elocutions: the “self-certain” portrayal of a team of eco-warriors gearing up to launch geoengineered solutions. The other side of the discourse “wallows” pessimistically, and their acceptance of the catastrophe of climate change is little more than an excuse for self-pity. Very rarely is a balance struck between the two, except for within modes of creation that are precipitated by imagination, such as fiction. When considering the implementation of SAI, for example, people are put directly at stake with each other (veilmakers vs.

people, people vs. policymakers), but a culture that refuses to imagine the consequences of these relations will not reap the benefits of technocratic innovation. This is mainly because the creation of the veils would not be “sympoietic,” and if implemented in today’s self-defined Anthropocene, it would not utilize the tools of imagining new ways of living and dying: tools that Haraway refers to as SF, or “speculative fabulation, speculative feminism, science fiction, science fact, string figures, so far” (Haraway 2016: 35-36). Speculative fiction is regarded, then, as an instrument of co-fashioning, having the ability to open up new perspectives on our connections to each other and the world. Sci-fi in particular is rife with adventures of these ideas, these new forms of speculative thinking.

It is important to note that in advocating for sci-fi as a viable narrative tool for processing the climate crisis, alarmist portrayals, scaremongering tactics, and hellish apocalyptic settings are not the goal. Haraway herself challenges: “How can we think in times of urgencies *without* the self-indulgent and self-fulfilling myths of apocalypse, when every fiber of our being is interlaced, even complicit, in the webs of processes that must somehow be engaged and repatterned? Recursively, whether we asked for it or not, the pattern is in our hands. The answer to the trust of the held out hand: think we must” (Haraway 2016: 39). By including the “cthonics” in on the narrative of life and acknowledging other non-human forces, we open ourselves up to radically alternate worldmaking, which is crucial to broadening the scopes of our imaginations. It is only through these modes of thinking that we avoid

reducing “urgencies” of the era to pure “apocalypse,” to irredeemable environmental disaster, and instead turn to constructive and creative perspectives of the catastrophes that characterize the Anthropocene. Fiction provides an accessible platform for speculative thinking to unravel these “webs of processes.”

There is a concern, however, that science fiction as a genre indulges “self-fulfilling myths of apocalypse.” In *The Great Derangement*, Ghosh disagrees with the idea that science fiction is better equipped to address the Anthropocene than literary fiction. His view is that this “new” genre of science fiction, “climate fiction,” is “made up mostly of disaster stories set in the future, and that [...] is exactly the rub. The future is but one aspect of the Anthropocene: this era also includes the recent past, and, most significantly, the present” (Ghosh 2016: 72). He fears that sci-fi/cli-fi is unable to do justice to the webs of the past, the present, and the future ingrained in the Anthropocene because of the challenges of the contemporary writer—challenges that have evolved from modern literary conventions that were formed during the advent of carbon accumulation in the atmosphere (Ghosh 2016: 7). Based on the traditions of early sci-fi writers such as Jules Verne and H.G. Wells, Ghosh claims that sci-fi cannot escape its connotations of futuristic narrative. It is implied, then, that issues that deal with dimensions of temporality like climate change are unfortunately consigned to nonfiction, and are hardly ever taken seriously or lauded in reviews because they are not ‘literary.’ Ghosh makes the assumption that ‘literary’ circles associate sci-fi

with extraterrestrial fantasy and interplanetary travel narratives, and therefore those cli-fi novels that attempt to deal with climate change are diminished because of the identification of the genre with these tropes. Altogether, he does not find sci-fi to be “serious fiction,” and refers to the overarching family of speculative genres as resigned to the “outhouses” of fiction (Ghosh 2016: 24). Ultimately, though, Ghosh’s argument hinges on arbitrary literary labels, not on content, and he fails to reference any of the successful works of science fiction that have had considerable cultural impact. In fact, Ghosh is unable to prove *why* it should at all matter that a self-described “literary” establishment (comprised of a very small subset of ‘elite’ academia and unpredictable publishing industry standards) is aesthetically or contextually at odds with the popular interstellar settings of a percentage of the foundational works of sci-fi. At no point does Ghosh convince that sci-fi *doesn’t* have a tradition of addressing the challenges of the Anthropocene.

The problem, Ghosh would argue, is not that science fictions resists the Anthropocene, but that the Anthropocene *itself* resists science fiction: “it is precisely not an imagined ‘other’ world apart from ours; nor is it located in another ‘time’ or another ‘dimension.’ By no means are the events of the era of global warming akin to the stuff of wonder tales” (Ghosh 2016: 72). Certainly it is true that the Anthropocene cannot be talked about without treading into the “uncanny” territory of the intersection between a multiplicity of “nonhuman voices” and parallel time-lines (Ghosh 2016: 73). But sci-fi’s strengths are in capturing these “webs of processes” (Haraway 2016: 39); they are not merely

“wonder tales.” For example, Butler’s *Parable of the Sower* envisions a world that is not based on “security, protection, or distinction” but rather on “practical and contingent relationships, forged through actions rather than identities” (Blacke 2018). It is a story that involves a hyper-empathetic narrator who recognizes that the “old saws of Western thought” (human exceptionalism and bounded individualism, according to Haraway) cannot possibly provide solutions to the problems they bring about.

Therefore, *Parable* is not about abstracting a threatening future that has been ruined by environmental and political disaster; in actuality, the narrative recognizes climate change as a living “body” that incarnates “violence, love, collectivity, scarcity, abundance, bondage, and survival, all at once” (Blacke 2018). Climate change is not a prophet of catastrophe; it is a deity in its own right. “God is Change,” Lauren Oya Olamina writes in her new religion’s creed. For that to be the case, the followers of Earthseed would have to worship teleological time itself. Clearly, the claim that sci-fi deals solely with the future and therefore can’t possibly handle the scope of narrating the Anthropocene is unfounded, given that much of the genre is involved in reflecting present political, cultural, and ecological issues onto an imagined future. Good science fiction complicates the relationship between nature and culture, between human and nonhuman agents (aliens, animals, AIs, etc). It features patterns of war that we can recognize, revolutions that echo historical and current socio-cultural shifts, technological advancements that burden the modern scientist, that shape the modern capitalist.

Despite these oversights, Ghosh makes compelling observations about the reality of a 'literary' establishment that does not take sci-fi or other genre fictions seriously. This dismissal has serious, even dangerous, implications for future generations:

In a substantially altered world, when sea-level rise has swallowed the Sundarbans and made cities like Kolkata, New York, and Bangkok uninhabitable, when readers and museumgoers turn to the art and literature of our time, will they not look, first and most urgently, for traces and portents of the altered world of their inheritance? And when they fail to find them, what should they—what can they—do other than to conclude that ours was a time when most forms of art and literature were drawn into the modes of concealment that prevented people from recognizing the realities of their plight? Quite possibly, then, this era, which so congratulates itself on its self-awareness, will come to be known as the time of the Great Derangement (Ghosh 2016: 11).

By imagining a future where “readers and museumgoers” must situate their lives around the realities of climate change, Ghosh raises an important question: what literature do they turn to that is not drawn “into the modes of concealment” that cloud so much of modern discourses? Like other mediums of traditional art and wisdom, fiction carries between its pages a legacy of not only its author, but of the culture in which it was constructed. Fiction offers those “traces and portents” of “inheritance” that future generations so desperately crave to make sense of their identities. The ultimate shame would be for them to look back and find nothing but the rhetoric of ecomodernists, rhetoric that veils accountability, that numbs urgency. Ghosh rightly fears how our generation will be viewed without the circulation of art that reflects the multidimensionality of climate change. Unless we are to be perceived as complicit, our popular fiction must be as self-aware as we pretend to be.

However, Ghosh would not consider sci-fi to be a self-aware genre, and he presents a hope that literary fiction may fill that void should attitudes on the association of climate issues with sci-fi desist. While he denies sci-fi's ability to make connections to the present, he provides no evidence of the temporal limitations of the genre. What he takes issue with is the *reputation* of the genre and a superficial label that determines where it sits on the shelf in a bookstore—limitations that, in all possibility, *could* hinder its ability to reach particular audiences. But one might argue that nowadays there is just as much if not more of an audience for genre fiction than for the so-called 'literary' novel.

Take any mid-to-late-twentieth century sci-fi novel and consider its re-readability, its legacy among literary critics and in popular culture alike. Margaret Atwood, world-renowned author of the highly-acclaimed *The Handmaid's Tale* and *Oryx and Crake*, explains her initial hesitancy to label her books works of science fiction: "For me, the science fiction label belongs on books with things in them that we can't yet do, [...] and speculative fiction means a work that employs the means already to hand" (Atwood 2005). But, ultimately, she is at peace with the label and considers both terms interchangeable because they explore the same questions teased by the human imagination: of consequences for technologies, of the limits of nature, of the relationship of man to the universe.

Given such examples as Atwood, there is little doubt that sci-fi *can* be literary, which lends itself to the notion that 'literary' fiction *can* include

elements of multispecies worlding. The distinction is *meaningless*. When Ghosh claims that modernity is the culprit for science fiction's demarcation from the literary mainstream, he does so only under the supposition that sci-fi caters to the deepening of "the imaginary gulf between Nature and Culture" and that Nature "comes to be relegated exclusively to the sciences and is regarded as being off-limits to [Culture]" (Ghosh 2016: 68-69). Science fiction, as a hybrid that bridges Nature with Culture, is therefore suppressed in the modern literary realm. But this alone is not excuse enough to abandon sci-fi's capacity for narrating the Anthropocene; all genres, to some extent, are hybrids of each other. Even the imaginary delineations for what makes a novel 'literary' benefit from this hybridity. In the end, the question of labels that Ghosh wrangles with is insufficient cause to dismiss sci-fi. Storytelling is crucial to the practice of thinking in radical new ways, and therefore it does not matter what "outhouse" a narrative inhabits. In Haraway's words, "Storying cannot any longer be put into the box of human exceptionalism" (Haraway 2016: 43).

SCALE-MAKING AND SCIENCE FICTION

Sci-fi presents the future as a metaphor. Sci-fi reveals the nonhuman as an historical agent. Sci-fi imagines technology as a tool of self-confrontation. Arguably, Ursula K. Le Guin has been one of the most exceptional American voices in this mode of examination during the latter part of the twentieth century. She wrote sprawling volumes of science fiction and fantasy that carried new narratives across the same meticulously crafted worlds. Unsurprisingly, much of her fiction was influenced by the lineage of cultural anthropology in her family. The profession of her father, anthropologist Alfred Louis Kroeber, inspired the protagonists of many of her novels. They were academics, cultural observers, social investigators, emissaries for other worlds. Perhaps most famous of these voices is that of Genly Ai, an envoy sent on a mission to convince the gender-neutral citizens of Gethen to join the Ekumen, a galactic union of worlds, in her 1969 Nebula and Hugo award-winning novel, *The Left Hand of Darkness*.

In *The Left Hand of Darkness* as well as her other novels, Le Guin utilizes a method of storytelling she refers to as “the carrier bag theory of fiction.” The method comes from the theory that women were the earliest creators of tools, utilizing bags to carry food before weaponry was even conceptualized. Le Guin connects these origins to the structure of fiction as a ‘feminine’ form wherein “the natural, proper, fitting shape of the novel might be that of a sack, a bag. A book holds words [...] A novel is a medicine bundle, holding things in

particular, powerful relation to one another and to us” (Le Guin 1989: 169)—similar to how ethnography gathers in one place human and nonhuman relations. Donna Haraway praises Le Guin for popularizing this style, and advocates for more stories that act as “capacious bags for collecting, carrying, and telling the stuff of living” (Haraway 2016: 43). Certainly in *The Left Hand of Darkness*, a state of sympoiesis is reached in the synapses between textures of life, emic imagery, physical details, depictions of nature, and imaginings of living and dying. The “becoming-with” that is so crucial for developing new modes of thinking about issues such as climate change ripens in *The Left Hand of Darkness* when relations between the abiotic and the biotic are held against each other, as if in a “carrier bag.”

Le Guin’s storytelling doesn’t only help to reconfigure ideas about gender and sexuality, but it also helps to understand the webs of processes in societies by way of individual accounts. It is not insignificant that Ai’s objective is to convince Gethenians to join the Ekumen, which holds the belief that all humanoids across the galaxy have a common origin. He receives much of his knowledge about life on Gethen from the unlikely ally of Estraven, the prime minister of the nation of Karhide who relinquishes his title to assist and travel with Ai. While Ai scrutinizes Estraven’s apparent ‘abandonment’ of his people, Estraven constantly strives to serve Gethenians as a global society. He does this by attempting to get closer to Ai, to build trust with this alien envoy by recounting to him intimate narratives, aphorisms, and realities of Gethenian life:

He told it as only a person of an oral-literature tradition can tell a story, so that it became a saga, full of traditional locutions and even episodes, yet exact and vivid, from the sulphurous fire and dark of the pass between Drumner and Dremegole to the screaming gusts from mountain-gaps that swept the Bay of Guthen; with comic interludes, such as his fall into the crevasse, and mystical ones, when he spoke of the sounds and silences of the Ice, of the shadowless weather, of the night's darkness (Le Guin 1969: 96).

It is through these details that Ai learns of how the environment shapes the Gethenian outlook. Le Guin draws the reader's attention to the difficulties that come with communicating across cultures, but also to the advantages of sharing knowledge: advancing science, bridging cultures. As they journey across the frozen, Ice Age-era landscapes of Gethen (a.k.a Winter) together, rich details of life emerge piece by piece as if a spotlight is passing over an immense world. Beyond the depictions of raw nature, the artifacts of folklore, and the oral histories and sayings, the perimeters of this world do not appear to exist; each minutiae, each particle of being, suggests an environment that is at once measureless and substantial. The travelogue that develops allows us to understand how the mysterious, gender-neutral citizens of this planet identify themselves with place and connect to the land.

One such observation Ai makes has to do with the inextricability of nature from culture on Gethen. Early on in the narrative, Ai resigns that the main cultural bridge that he will have to develop will not be understanding the unique ambisexual nature of Gethenians as he originally expected, but in understanding the relationship the people have with the environment itself. "And in the end," he notes, "the dominant factor in Gethenian life is not sex or

any other human thing: it is their environment, their cold world. Here man has a crueler enemy even than himself” (Le Guin 1969: 96). At first glance, Gethenian society would appear to develop much more slowly than his own, but he realizes that they *must* advance with caution because they possess a startling self-awareness of the carrying capacity of their world. Their lives, their technologies, and the things they hold dear reflect this ingrained sustainability. While depictions of Gethenian cityscapes against the harsh ice and snow may appear bleak and rudimentary, they embody *durability*, a core value of the people. Later in the novel, as Ai and Estraven are about to make the dangerous trek across the Gobrinn Ice Sheet (a large glacier that creates the border between the nations of Orgoreyn and Karhide), Ai realizes just how insignificant Gethenians perceive themselves to be. “But the ice did not care how hard we worked,” he thought. “Why should it? Proportion is kept” (Le Guin 1969: 257). In that moment, he embodies the Gethenian point of view, and suddenly surviving the ice seems like more of a game of chance at the hands of nature than a reflection of his drive to unite their peoples. Self-awareness takes hold, and what is at stake changes.

In the same way, what is at stake for the reader may change. Through vivid details of tundra, emotionally resonant imagery, calculated observations, frozen sensations, and frosted textures, the reader is better able to understand the composition of a reality other than theirs and, in turn, reconsider their own. In an article in the *Paris Review*, Charlie Jane Anders emphasizes that “a huge part of the value of a science-fiction story like *The Left Hand of Darkness*

is that it allows you to imagine that things could be very different. And then, when you come back to the real world, you bring with you the sense that we can choose our own reality, and the world is ours to reshape” (Anders 2019). In this way, sci-fi, besides being an accessible avenue of entertainment, operates as a diagonal critique: a social commentary on our own world that is mediated by another. Many may come away from *The Left Hand of Darkness* questioning their preconceived notions of gender norms, but many may also emerge from the pages with a subtler sense of urgency to evaluate their patterns of thinking.

In the introduction to her novel, Le Guin famously says that “science fiction is not predictive; it is prescriptive” (Le Guin 1969). These novels are vessels; they are “carrier bags” of other realities—not meant to foretell our own, but to sharpen it. To provide a fulcrum on which we can stand and situate ourselves before attempting to pivot the world as Archimedes imagined he could with his lever. Science fiction writers should not be conceived as prophets or futurologists. If we are to do so, then Ghosh may very well be right in saying that future generations will look back on sci-fi writers’ contributions to literature as “deranged.” No, we must view the contents of these “carrier bags” as consisting of “a web of connections infinite but locally fragile” (Le Guin 2017: 15). In the section entitled “Monsters” of *Arts of Living on a Damaged Planet*, Le Guin’s essay, ‘Deep in Admiration,’ calls for this web to include and classify what would be seen only as natural resources as “fellow beings—kinfolk” (Le Guin 2017: 16). In *The Left Hand of Darkness*, readers are compelled to adopt the perspective of the Gethenians and see the “sulphurous

fire” and the “sounds and silences of the Ice” as vivid members of an epoch, just as active in the narrative of life as the humanoids that inhabit the land. If Ai does not do so, he cannot hope to survive the journey and bridge their two worlds. The involved reader internalizes this environmental desperation, this empathy out-of-body that cultural investigators such as anthropologists strive to achieve with their interlocutors. “Open your eyes; listen, listen. That is what the novelists say” (Le Guin 1969), Le Guin writes in the introduction. Haraway may offer an addendum to that sentiment: *open your mind; think, think*.

Thinking in radical ways in the age of the Anthropocene is crucial to dethroning humanity from the insular and centermost seat of history. The concept of the Anthropocene relies on scale-making, and its discourse has predicated on a “historical legacy of human dominion [that] is not up for scrutiny, let alone abolition” (Crist 2013: 131). Science fiction novels such as *The Left Hand of Darkness*, *Parable of the Sower*, and *The Three-Body Problem* shift this perceptive scale; they scrutinize a history that “has itself unfolded by silencing nonhuman others” (Crist 2013: 133). The extent of the current climate crisis makes it clear that we cannot afford to continue to obscure these nonhuman narratives. Science fiction tugs at the veil that the constructed Anthropocene has secured over environmental injury, brings these voices to a strange, new light, and overall expands “the discursive space for challenging the domination of the biosphere” (Crist 2013: 141). Science fiction such as *The Purchase of the North Pole* and *Cat’s Cradle* actively imagine “techno-scientific” forces of geoengineering that further rationalize this domination rather than

dismantle it. The narratives that emerge from the hubris of Ingold's notion of anthropocircumferentialism do not necessarily clarify the failings of the ecomodernist perspective; rather, they complicate them. It is precisely in this embroilment of perspectives that science fiction creates some semblance of "truth."

Getting at this truth, Margaret Atwood might say, is a matter of "understanding the imagination," of knowing who we are and what we desire as constituents of Earth. This interrogation can no longer be "a pastime;" it must become "a necessity; because increasingly, if we can imagine it, we'll be able to do it" (Atwood 2005). In that urgency, Le Guin would agree, and she insists that in her fiction, the only truth she can understand or express is "logically defined, a lie. Psychologically defined, a symbol. Aesthetically defined, a metaphor." To her, science fiction isn't about defining the future. It is about describing "certain aspects of psychological reality," which can only be done so by inventing "circumstantial lies" (Le Guin 1969) —one might say, a requirement in the creative process of all fiction writers or anthropologists seeking to effectively fill their "carrier bags." The parallel with ethnography is clear. What sets the genre apart as a medium for alternative thinking about the climate crisis is that it combines both the explication of science with the implication of poetry and prose. Sci-fi dismantles. Sci-fi re-couples. Sci-fi prescribes.

CONCLUSION

There has been much mention in this conceptual framework of “the veil.” When I think of a veil, I think of the arranged marriage of a bride-to-be whose eyes are misty white under a curtain of lace and chiffon. There is hope and adventure and certainly beauty at the end of the aisle. But it is all glittering candlelight and undefined shapes to her. They are shades of a future, not yet defined, but they promise something fantastic—or at least, she’s been told that they do. It is a legacy she walks towards, a vow to the lineage of human tradition, that grows warmer as she nears the altar. By the time the veil is lifted from her eyes, she has already been handed over to the narrative. She is already ensconced. Even if she sees the ugliness of her situation, will she have the language to escape?

Arranged marriage is not ecomodernism, but the rhetoric that surrounds it certainly reads like a betrothal. And how enticing that rhetoric at first appears—the original veil, of course, is the volcanic shroud of aerosol mists that covers the globe and dims the sun. A natural phenomenon! The anatomy of the Earth at work! There is great promise, then, in creating a veil from stratospheric aerosol injection that sits above the clouds, out of sight, protecting the world from the greenhouse effect. A solution so natural, the *engineered* aspect is entirely eclipsed.

But then the science explicates; the models warn: whoever these veilmakers may be, they will face the ethical dilemma of deciding where the veil

targets, who the veil ignores, when the veil begins and ends, if ever. A new veil draws down: the veil of anthropogenic cause-and-effect. It is a metaphorical veil that obscures attention from the human-devised sources of climate change, that disguises a western master narrative of human dominion, of centeredness. It is a veil of subjectivity and subjection, of enchanting technological language that mystifies accountability and unequal relations of exchange. It is a veil that diverts our gaze from where environmental burdens are felt most and anesthetizes meaningful political action. This shimmering veil of modernism, of possibility, of human exceptionalism and expansion—it is a veil of rhetoric. Green rhetoric. We march on down the aisle, the words of hope flitting about our ears, our eyes only open to the pleasing shapes of a convenient future.

It is my hope that my own science fiction novella toys with these teleologies. Bruno Latour believes that the best way to escape the echo chamber of modernism is to learn to tell “Gaia stories” or geo-stories (Latour 2017). The Lovelockian theory, entitled the “Gaia” hypothesis, poses that the Earth is a composition of the biotic and the abiotic, created together in the inaugural, boiling deep-sea vents, and that one cannot be extracted from the other. In *The Veilmakers*, the post-climate engineering world features a protagonist who is unexpectedly confronted with the irreconcilability of this bifurcation of nature and culture. I sought to compose a world where geological history has been forgotten as veils—literal and metaphoric—envelop society. I wanted to explore the psychological trauma that occurs when those veils tear, violently, and closely-held patterns of thinking unravel.

Writing this novella has been an exercise in making truth out of an imagined future—in other words, lying. My original ambition was a work closer to a traditional novel’s length, so what you have read is truly only half of the story. In the future, I hope to expand the narrative beyond the veil’s breach, to widen the scope of the plot so that it features a confrontation of the veilmakers themselves. I cannot help but worry that I am as delusional as Ghosh warns in attempting to fill the shadow of works of science and climate fiction that have come before me. I make grand claims in this framework—that science fiction has the power to poke holes in the veil, to reorient ideals of human exceptionalism. Le Guin and Butler and Shelley and Cixin and Verne and Vonnegut did it. What gives me the big idea that I can do so, too? But I must remember: inspiration is not delusion. Being “deep in admiration” is not derangement.

When I am bogged down by these fears, I remember the words of Le Guin.

All fiction is metaphor. Science fiction is metaphor. What sets it apart from older forms of fiction seems to be its use of new metaphors, drawn from certain great dominants of our contemporary life—science, all the sciences, and technology, and the relativistic and the historical outlook, among them. Space travel is one of these metaphors; so is an alternative society, an alternative biology; the future is another. The future, in fiction, is a metaphor.

A metaphor for what?

If I could have said it non-metaphorically, I would not have written all these words, this novel; and Genly Ai would never have sat down at my desk and used up my ink and typewriter ribbon in informing me, and you, rather solemnly, that the truth is a matter of the imagination (Le Guin 1969).

It takes quite a bit of bravery to lie like a fiction writer. But, in the end, it is the name of the game.

BIBLIOGRAPHY

- Anders, Charlie Jane. "The Left Hand of Darkness at Fifty." *The Paris Review*, March 12, 2019. <https://www.theparisreview.org/blog/2019/03/12/the-left-hand-of-darkness-at-fifty/>.
- Atwood, Margaret. "Aliens have taken the place of angels." *The Guardian*, June 16, 2005. Accessed April 29, 2020. <https://www.theguardian.com/film/2005/jun/17/sciencefictionfantasyandhorror.margaretatwood>.
- Blacke, Emma Louise. "Toying with Our Teleologies: Reflections on What SF Can Do for Anthropology." *The Geek Anthropologist* (blog). Entry posted April 5, 2018. Accessed December 4, 2019. <https://thegeekanthropologist.com/2018/04/05/toying-with-our-teleologies-reflections-on-what-sf-can-do-for-anthropology-as-technology-of-alternative-selves-speculative-instrument-fantastical-lens-danger-detector-and-wisdom-machine/>.
- Brand, Stewart. *Whole Earth Discipline: An Ecopragmatist Manifesto*. New York: Viking, 2009.
- Bubandt, Nils. "Haunted Geologies: Spirits, Stones, and the Necropolitics of the Anthropocene." In *Arts of Living on a Damaged Planet: Ghosts of the Anthropocene: Monsters of the Anthropocene*, edited by Nils Bubandt, Heather Anne Swanson, Elaine Gan, and Nils Bubandt, 121-38. Minneapolis: University of Minnesota Press, 2017.
- Butler, Octavia E. *Parable of the Sower*. New York: Four Walls Eight Windows, 1993.

Catholic Church, and Sean McDonagh. 2015. *On care for our common home: the encyclical of Pope Francis on the environment, Laudato Si'*.

Clifford, James, and George E. Marcus. *Writing Culture: The Poetics and Politics of Ethnography*. Berkeley and Los Angeles: University of California Press, 1986.

Crate, Susan A. "Climate and Culture: Anthropology in the Era of Contemporary Climate Change." *Annual Review of Anthropology* 40, no. 1 (2011). Accessed December 4, 2019.
<https://doi.org/10.1146/annurev.anthro.012809.104925>.

Crist, Eileen. "On the Poverty of Our Nomenclature." *Environmental Humanities* 3, no. 1 (2013):129-47. doi:10.1215/22011919-3611266.

Crutzen, Paul, Will Steffen, and John R. McNeill. "The Anthropocene: Are Humans Now Overwhelming the Great Forces of Nature?" *Ambio* 36, no. 8 (December 2007). Accessed December 4, 2019. https://www.pik-potsdam.de/news/public-events/archiv/alter-net/former-ss/2007/05-09.2007/steffen/literature/ambi-36-08-06_614_621.pdf.

de la Cadena, Marisol. "Uncommoning Nature: Stories From The Anthro-Not-Seen." In *Anthropos and the Material*, by Penelope Harvey, Christian Krohn-Hansen, and Knut G. Nustad. Durham: Duke University Press, 2019.

"An ECOMODERNIST MANIFESTO." An ECOMODERNIST MANIFESTO. April 2015. Accessed April 20, 2019. <http://www.ecomodernism.org/>.

Ghosh, Amitav. *The Great Derangement: Climate Change and the Unthinkable*. Chicago:University of Chicago Press, 2017.

Günel, Gökçe. "What Is Carbon Dioxide? When Is Carbon Dioxide?" *PoLAR: Political and Legal Anthropology Review* 39, no. 1 (2016): 33-45. doi:10.1111/plar.12129.

Haraway, Donna Jeane. *Staying with the Trouble: Making Kin in the Chthulucene*. Durham: Duke University Press, 2016.

Hughes, David McDermott. *Energy without Conscience: Oil, Climate Change, and Complicity*. Durham: Duke University Press, 2017.

Ingold, Tim. "Globes and Spheres: The Topology of Environmentalism." In *The Perception of the Environment: Essays on Livelihood, Dwelling and Skill*, 209-18. London: Routledge, 2000.

Isenhour, Cindy. "Unearthing Human Progress? Ecomodernism and Contrasting Definitions of Technological Progress in the Anthropocene." *Economic Anthropology* 3, no. 2 (June 2016): 315-28. doi:10.1002/sea2.12063.

Latour, Bruno. "Love Your Monsters: Why We Must Care for Our Technologies As We Do Our Children." *The Breakthrough Journal*, Fall 2011. Accessed April 20, 2019. <https://thebreakthrough.org/journal/issue-2/love-your-monsters>.

Latour, Bruno. "Fifty Shades of Green: Bruno Latour on the Ecomodernist Manifesto." *ENTITLE Blog*. Entry posted June 27, 2015. Accessed

December 4, 2019. <https://entitleblog.org/2015/06/27/fifty-shades-of-green-bruno-latour-on-the-ecomodernist-manifesto/>.

Le Guin, Ursula K. "Deep in Admiration." In *Arts of Living on a Damaged Planet: Ghosts of the Anthropocene: Monsters of the Anthropocene*, edited by Nils Bubandt, Heather Anne Swanson, Elaine Gan, and Nils Bubandt, 121-38. Minneapolis: University of Minnesota Press, 2017.

Le Guin, Ursula K. *The Left Hand of Darkness*. New York: Ace, 1969.

Liu, Cixin. *The Three-Body Problem*. Translated by Ken Liu. New York, NY: Tor Books, 2014.

McGhee, George, Jr. *Carboniferous Giants and Mass Extinction*. New York, NY: Columbia University Press, 2018.

Morton, Oliver. *The Planet Remade: How Geoengineering Could Change the World*. 2nd ed. Princeton, NJ: Princeton University, 2016.

Olson, D. W., Doescher, R. L., & Olson, M. S. *When the sky ran red: The story behind the "Scream"*. Sky & Telescope, 2004.

Pachirat, Timothy. *Every Twelve Seconds: Industrialized Slaughter and the Politics of Sight*. Yale University Press, 2011.

"The Paris Agreement." UNFCCC. December 2015. Accessed April 20, 2019. <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>.

Shelley, Mary Wollstonecraft. *Frankenstein, or The Modern Prometheus*. New York, NY: W.W. Norton & Co., 1818.

Smith, Barbara Herrnstein. "Anthropotheology: Latour Speaking Religiously." *New Literary History* 47, no. 2-3 (2016): 331-51.
doi:10.1353/nlh.2016.0017.

Stover, Leon E., and Harry Harrison. *Apeman, Spaceman: Anthropological Science Fiction*. New York, NY: Doubleday, 1968.

Streeby, Shelley. *Imagining the Future of Climate Change: World-making through Science Fiction and Activism*. Oakland, California: University of California Press, 2018.

Tsing, Anna. "Earth Stalked by Man." *The Cambridge Journal of Anthropology* 34, no. 1 (2016).doi:10.3167/ca.2016.340102.

Verne, Jules. *The Purchase of the North Pole*. Chicago, Il: Sequoyah Books, 2004.

Vonnegut, Kurt. *Cat's Cradle*. New York, N.Y.: Delta Trade Paperbacks, 1998.

Wallace-Wells, David. *The Uninhabitable Earth*. London: Allen Lane, 2019.

Waters, Colin N., James P. M. Syvitski, Agnieszka Gałuszka, Gary J. Hancock, Jan Zalasiewicz, Alejandro Cearreta, Jacques Grinevald, Catherine Jeandel, J.R. McNeill, Colin Summerhayes, and Anthony Barnosky. "Can nuclear weapons fallout mark the beginning of the Anthropocene Epoch?" *Bulletin of the Atomic Scientists* 71, no. 3 (2015). Accessed December 4, 2019. <http://ib.berkeley.edu/labs/barnosky/BoAS.pdf>.