

Volume 9

2018

A Geisel School of Medicine At Dartmouth Literary and Art Journal

George Knaysi, GSM '20

Cameron Yi, GSM '20

Editors-in-Chief

Julia Danford, GSM '21 Natalie Del Favero, GSM '21 Executive Editors

Reviewers:

Simrun Bal, GSM '19
Bianca Di Cocco, GSM '20
James Doss, GSM '21
Dennis Dwan, GSM '19
Diana Funk, GSM '20
Reza Hessabi, GSM '20
Lauren Kascak, GSM '20
Chris Louie, GSM '19
Michelle Scheurich, GSM '19

Julia Litzky, GSM '20 Layout Editor

Copyeditors:

Carlos Aramayo, GSM '21 Bianca Di Cocco, GSM '20 Julia Harrison, GSM '20 Reza Hessabi, GSM '20 Tala Radejko, GSM '21 Sima Sadeghinejad, GSM '21 Lily Se, GSM '21

Faculty Advisor:
Shawn O'Leary
Director of the Office of Diversity,
Inclusion and Community Engagement

Printed by Gnomon Copy. Copyright © 2018 Trustees of Dartmouth College. All Rights Reserved.

From the Editors:

Philip Pullman, the author of His Dark Materials, once said, "After nourishment, shelter and companionship, stories are the thing we need most in this world." And we agree. Imagine a world without stories. We wouldn't have our novels, TV shows and movies, but we would also be bereft of news, history, and organized religion as we know it today. Stories are a transaction of information and ideas, and they allow us to learn and grow on both an individual level and as a whole. If nourishment, shelter and companionship are necessary to maintain our present state, stories are needed to help propel us into the future.

Nowhere is the importance of a story more apparent than in medicine. The first thing a physician does when meeting a patient is to obtain a history. They hear the patient's perspective of the events that have occurred, and now it is the job of the physician to fill in the gaps. Sometimes, those stories may be as short as a child with a common cold, or it may be as long as a patient who is in and out of the hospital, through multiple surgeries and drug regimens, waiting for an organ transplant. Each patient and story are unique and remain with us as we continuously strive to im-



prove care for our future patients.

The works in the 9th volume of Lifelines provide fascinating glimpses into the lives and minds of the various people involved in medicine, including patients, family members, friends, students, and healthcare providers. We hope that you, the readers, enjoy these works as much as we did. They range from heartwarming to tragic, from lighthearted to thought-provoking, and each left us with a greater appreciation for the complexity of medicine. Happy reading.

Cameron Yi & George Knaysi Editors-in-Chief Geisel School of Medicine, Class of 2020



About the Cover:

With Lungs

Marley Korzen

This acrylic on canvas painting is one out of a collection of concept pieces for my poetry book "Heartlines". The rhythm of my work stems from research on Plant Biology, Environmental Studies, and Cultural Evolution. When I painted this piece, I was discovering how our physical bodies forgive us after emotional and/or physical abuse. I was recovering from an eating disorder, and untwining myself from abusive relationships in my life. My art reflected back to me what I always knew to be true, that healing is a belief in love for ourselves and the world we live in.

About the artist:

Nicknaming herself 'An Alchemist of Words' Marley has been writing and painting her entire life. As an artist who feels deep into her ancient roots, she aspires to unmask airbrushed lies of society by upholding the Divine Feminine through her writing and art. She currently resides in Santa Barbara, CA where she actively leads writing workshops using exercises and deep inner work that free the heart, mind, and spirit through creativity.

Follow her for updates on her Instagram: https://www.instagram.com/marleykorzen/



Table of Contents

With Lungs Marley Korzen	Cover
Anatomy Lab Stephen Plume, MD	1
Respiratory Monitor Vincent Casaregola	2
Preventative Medicine Richard Peterson	3
Being Born Vivian Martin	6
Rabid Redemption Linda Boroff	9
Heartbeats Meg Dolan	14
Boots on the Ground Daly Walker, MD	15
mother giver Marley Korzen	20
1	



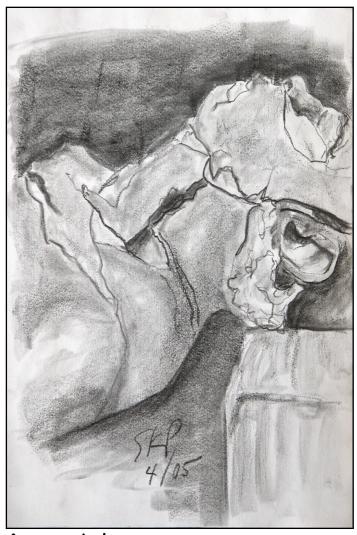
Sick Little Man Dominic Viti	21
Medical Body Parts Rebecca Lee	29
Morning Mist J.J. Barry	31
In the Hand Theatre Harriet J. Melrose	35
Zambian Nights <i>Madge E. Buus-Frank, DNP, APRN-BC, FAAN</i>	37
Orientation James Marin	39
Orientation Andrea Montano	40
Portrait Karl Lorenzen	41
At Last Karl Lorenzen	42
Some Other Spring Karl Lorenzen	43

Stability Celestine Warren	44
Grace Celestine Warren	45
My Mother's Side of the Family Teri Fuller	46
New Widow Charlie Tyson	51
Physician, Heal Thyself: Acknowledging the Liminal Space S.E. Street	54
Overdose Susan Cavanaugh	57
A Rupture While Dreaming Gerhard Schneibel	59
Composition Sand Mastrangelo, GSM '21	67
Dave Bianca Di Cocco, GSM '20	69
The Man Who Came to Assemble the Hospital Bed Michelle Matz	74



Decision Tree Reza Hessabi, GSM '20	75
In This Version Michelle Matz	84
The Final Sum	86





Anatomy Lab

Stephen Plume, MD



Respiratory Monitor

Vincent Casaregola

They have softened the room's light to near dusk, matching the mood—and the machines speak their lines in a concert of soft pulses, while the monitor tracks the vitals across its impassive face.

Breath, that can barely be heard by the tired natural ear of the drowsing aged spouse who sits in the bedside chair, is loud enough for hidden sensors in the omniscient machine.

Look, the line traces hills and valleys as a soul continues its last steps, its arduous course. The lighted spot ascends and drops methodically, like an ancient monk in a far kingdom, journeying up and down steep mountains, for a wisdom even he, in his antiquity, has yet to comprehend.



Preventative Medicine

Richard Peterson

Why, yes, thank you. I am feeling well. But you, my dear friend, look a little peaked. I see a sallowness under the eyes - a barely perceptible tremor of the hands. Are you certain you are not feeling ill? No, only tired?

Hmmm.

Come, sit for a while. No, I have time. My job was too stressful, so I quit.

Are you having any worrisome signs or symptoms? An upset stomach, perhaps. Or queasiness? The occasional rapid pulse, headache, insomnia, malaise - all could be indications of an impending medical disaster.

There are jillions of viruses out there. And bacteria. And the fungi are just waiting for the right opportunity.

Even now you might have sarcoidosis. Or amyloidosis. Maybe psittacosis. Perhaps even a psychosis. AND NOT EVEN KNOW IT.

Do you sometimes get short of breath - SOB in medical lingo? Maybe it's a collapsed lung. Better get a chest x-ray immediately.

Your body is a complicated machine consisting of many parts. Do you know the location of your Organ of Zuckerkandl? Your hippocampus? Your fabella? Ignorance can be deadly, my friend. Any moment a part may fail, placing your entire body in imminent peril.

You need to know all about your innards. Study an atlas o f the human body and dissect a cadaver.

....

You also must get tested and diagnosed, just in case. A complete blood analysis followed by total body imaging is a good start, together with a thorough physical examination and genetic history. The doctors



at the Mayo know me well. I can give you some references.

Have you kept up with the medical literature? Your personal physician is too busy to read his journals or listen patiently to your complaints. You will want to know the latest medical info and get treated properly for your unexplained symptoms. Start with *The New England Journal of Medicine* and *JAMA*. Read the more specialized journals if you're concerned about a particular diseased organ.

You never know what lurks within those hollow tubes inside you. Do you know the condition of your colon flora? Do you have mucus or heartburn? Better get your colonoscopy, bronchoscopy, and gastroscopy scheduled right away.

And while you're at it, get a CAT scan and a PET scan. Worried about cross-species infection? Better get your pet scanned, too.

Be sure to watch those informative TV drug commercials. They will alert you to diseases you may have overlooked - restless legs, psoriasis, mange. The list goes on. You must be ever vigilant. Best to be tested for these ailments before they gain a foothold inside you.

Perhaps you should contact those medical malpractice lawyers now, just in case those healthcare people mess you up.

....

Presbyopia? Here, can you read this? Blurry, is it? Hmmmm.

Leg pain? Could be clots in your veins. They may even now be moving to your lungs. Pulmonary embolism is the inevitable consequence. Then, it's game over, my friend. I'd recommend an emergency ultrasound.

Depressed? Man up and get some meds. Feeling lethargic? Skip the caffeine and take a pill.

ADHD? Hey, are you paying attention to me?

Is it just constipation or, God forbid, fecal impaction. Get that enema kit and put it to use.



Nature has built redundancy into its essential organs - that's why you have two testicles. And it's important they be properly maintained - use 'em or lose 'em. Don't worry. I know some women who can assist you.

Getting stoned? Not if they're in your gallbladder or kidneys. Those rocks will roll you.

Don't fret about appendicitis. Get that useless appendage removed now and, while they're mucking around inside you, get that gallbladder out, too. And, to eliminate the risk of diverticulitis, get a colostomy.

Borborygmus? Listen carefully. Your bowel is speaking to you.

....

And the plague....You think that's funny? Well, one bite from an infected flea, my ignorant friend, and you'll be buried within the week.

Exercise, you say? Nah, I never do it. It's too dangerous. That guy, Jim Fixx, the running guru, do you know he died while out jogging one morning? Heart attack. Kinda ironic, huh?

Does Keith Richards exercise? Do you think? Better to lie quietly in bed until the impulse passes.

Oh! Excuse me for a moment.

I'm sorry. I just now felt a subtle twinge, a slight pressure to the right of my umbilicus. Probably nothing. Just something I ate - unless....

Oh, my God! Call 911....



Being Born

Vivian Martin

You rock -Buddha bellied and taut tight astride the hospital bed, your hips grind down forward and then back.

With each breath your eyes drop - fold inward to the new life gripping you, contracting you, dissolving you.

We build a container to hold you.

Press hands to each hip and lean full weight, firm and unmoving as each crescendo builds and retreats.

Thirty years ago a surgeon's blade sliced you from me - steel into flesh.

I woke calling the name of the husband



already lost to me.

When the bed no longer holds you, you rise, lean open-armed, are enfolded.

Press forehead to forehead with your own husband.

I stand back, ever the observer, protector of your life.

Your voice deepens and I retake my post.
Hands to hip I join my voice to your voices - recite the vowels you studied, wide-eyed and pig-tailed, serious even then.
I know every scent of you - even this, the faint fragrance of your nausea.

When the vowels end we begin again until the chant circles and encircles and releases you A-E-I-O-U A-E-I-O-U

A-E-I-O-U

Hours reduce to minutes and the shine of the instruments



shocks me from my trance. You are both in the tub now, feet pressed together, arms outstretched and ready.

Her black hair, thick and wild, pushes out and something else pushes inside me - until it breaks free.

The midwife later tells you as she gently repairs your tear, These stitches are so light they will dissolve.
They will dissolve without your even knowing.



Rabid Redemption

Linda Boroff

During Charlene's thirteenth summer, she became convinced that she had contracted rabies and had only two weeks to live. Thirteen is an addled age anyway, a sort of staging ground for adult neuroses; Charlene had read that her brain was sprouting synapses at a blazing rate, and all this added circuitry not only spawned weird anxieties, it stored them away in spacious new quarters for quick access and a long shelf life.

Looking back, Charlene could easily see the traits that would someday make her more Emma Bovary than Jo March, more Lily Bart than Emma Woodhouse. But even at thirteen, worrying oneself into a frenzy over rabies when one had not even been bitten crossed the line from eccentric into full-blown neurotic. Charlene knew that her fear was ridiculous and told herself so by the hour. Yet the fear persisted, its teeth deep and locked on, shaking the girl like a rabid wolverine.

She attributed some of her hypochondria to being an early and undiscriminating reader. As a small child visiting the neighborhood library, she had not turned left and descended into the children's section, with its perky decorations and gentle, rhyming tales. She went straight up the stairs and took her seat amidst brutal adult reality.

At age nine, browsing the science section, she had come upon The Merck Manual - that handy, authoritative guide to afflictions major and minor. The Merck had no bedside manner, minced no words, softened nothing, and comforted never. Charlene's mouth dried as she read the lists of diseases and symptoms: she had leprosy, she realized, in addition to glaucoma, trichinosis, acromegaly and, just possibly, sleeping sickness. She was riddled with tumors, all inoperable. Turning to the mental illness section, she identified her manic depressive psychosis, incipient schizophrenia and progressive megalomania.



Charlene's two uncles, younger brothers of her father, attended medical school at the University of Minnesota. They would drop by sometimes to grab a lunch, stethoscopes swinging like whips from their necks, throwing around words like dextrinosis and saccharomycetaceae and Paget von Schrötter syndrome. At the arrival of these two family princelings, a cold chill would lift the hairs on the back of Charlene's neck. What if they noticed her lesions? Her lassitude and malaise? She tried to breathe normally around them but it still sounded like rales and stridor.

Usually, with time, the mundane issues of school and social life would distract her and her fears would fade or be replaced by others. In later years though, she could see that she was only banking them up like glowing coals; they lay dormant but alive, awaiting their summons to erupt again.

Summer of Hydrophobia

For a hypochondriac, rabies just may be the perfect storm: rare but incurable, agonizing beyond belief, and capable of hiding in plain view. When it came to sheer horror, rabies rang the bell, thanks to the evolutionary genius of the rabies virus.

The disease (Charlene read, barely breathing) is usually spread by the bite of a mobile creature. The virus acts on the victim's brain in such a way as to bring about, in dogs, for example—still overwhelmingly the commonest host—an irresistible urge to bite.

As a child, she had sat weeping beside her friends in the theater at the fate of *Old Yeller*; the finest dog that had ever lived, transformed by rabies into a snarling death's head, raging to destroy the boy who loved him. This evil metamorphosis was the work of the most cunning virus that had ever set its perfidious genome on planet earth.

Rabies, as Charlene learned, was actually a trio of deadly sisters who went by the elegant stage names Lyssavirus, Ephemerovirus and Vesiculovirus. With their non-segmented, negative-stranded RNA genomes, the



sisters turned heads and dominated the red carpet at any danse macabre. Despite their age—thousands of years—they were eternally fresh and deadly, reliably contagious, forever renewing themselves.

On this particular summer, having made it through eighth grade, Charlene had joined her mother and younger sister for a summer visit to their aunt's house on Long Island.

The visit started benignly enough. Aunt Elinor had two daughters; the older daughter, who was the same age as Charlene, had recently adopted an amiable German Shepherd named Wolf, whom she had acquired from some unknown source. Strays were fairly common in what was then a semi-rural neighborhood.

Charlene, nearly five-feet-ten and as skinny as Olive Oyl, her detested nickname, loved dogs with the fierce, desperate love of the outcast and misunderstood. And so it fell upon poor Wolf to provoke her worst ever episode of hypochondria.

It began with a teensy, nagging doubt. Did that hangnail on her thumb qualify as an open wound? It had bled, she recalled. She stared at the tender scab until her teeth began to chatter. And how about that blister she had just popped on her other hand? Another invitation to the Viral Sisters? She and Wolf had played catch with his saliva-drenched tennis ball; they had rolled about on the floor wrestling. They had shared snacks. Had the dog been vaccinated? Charlene tried to assure herself that he must have been, but her cousin seemed to be ignoring her tentative queries. She knew Charlene well, that particular cousin, and she was something of a sadist, not above tweaking Charlene's anxiety just a little bit, with a teasing sidelong glance. "I would miss you if you died," the cousin said with a sigh, and looked at Charlene with her pale blue eyes of infinite sadness, "Please don't die, okay?"

So Charlene tried to ignore the growing drumbeat: anyway, she knew that rabies had been nearly eradicated in the U.S. Practically. Nearly. Almost. So it was not impossible, but merely unlikely that she was infected.



"Unlikely" sounded too much like a roll of the dice to offer much comfort. Lying alone in bed, Charlene's efforts to reassure herself collapsed before the onslaught of full-fledged panic.

Confessing her fear to an adult would be a double whammy: not only would she not get the vaccine, but her distorted mental architecture would be exposed to all the world. Caught between these two dreaded outcomes, Charlene trembled through her dwindling time on earth.

As the incubation period and her lifespan shrank by the hour, she still could not muster the nerve to tell anybody. She knew that the adults, with indulgent grins, would first try to reassure her. Charlene's mother would use the opportunity to flog everyone with her daughter's high reading level. She would explain to Charlene that she could not possibly have rabies and needn't worry over such things for one more minute. Charlene would note the hint of warning in her voice that she had better not embarrass her mother any further in this preposterous way. Her mother and aunt together would dismiss Charlene's anxiety—sealing her fate. Charlene pictured them at her bedside as she lay in restraints foaming and convulsing. "She tried to tell us," they would wail, "We didn't believe her."

Somebody must have coaxed the fear into the open at last, and word quickly spread: Crazy Charlene was worried that Wolf was rabid. She quickly became a figure of welcome fun in a visit that had begun to grow dull.

That evening, Charlene's cousin approached her, holding out a tepid glass of milk. "Here," she said, with faux sweetness, "this will make you feel better." Charlene grabbed the milk with rabid fury and hurled it across her cousin's new canopy bed. The canopy was decorated with lilacs and green tendrils above a border of cotton lace; its beauty and feminine elegance were the wonder of the family. The ensuing fracas brought the two mothers running to see milk pooling in the center of the canopy and dripping from the posters onto the mattress. Charlene's cousin widened her eyes to the absolute limit of innocence, insisting disingenuously that she had "only



been trying to comfort" her frightened guest. Charlene the perpetrator, wounded and impotent, called her very own cousin a liar and a sadist.

Charlene's mother set her chin and narrowed her eyes. Hopeless, Charlene realized that she alone was responsible for ruining the visit and abusing her family's hospitality. That very night, she was packed up and shuttled off to the home of another relative, there to wait out her span on earth. "I forgive you, I hope you get well soon," her cousin had whispered in her ear, as Charlene departed.

Sometime after the dreaded Day 14 had come and gone uneventfully, and back now in her own bedroom, Charlene awakened and looked around at the scuffed linoleum floors and faded blue walls. Her father's chronically unstable business had left nothing in the budget for updating the décor of Charlene's early childhood, so the wall still sported a series of painted wooden hangings: a footsore Cinderella racing home from the ball; her coach morphing back into a pumpkin—what if Cinderella got sealed inside, Charlene had always wondered—and the footmen sprouted disturbing mouse tails that bulged from their livery. Dr. Seuss characters capered mockingly across her curtains.

But the utter mental clarity that Charlene felt that morning told her, and for certain, that she was not rabid. In her relief, she grasped, vaguely, that such good fortune carried with it a sort of mandate that she rise and encounter the world that awaited her—today, and on Day Twenty, and even perhaps on Day Five Thousand Seven Hundred and Seventy-Five. Whatever befell her in life, it would almost certainly not be rabies, which was, after all, only a guarantee that it would be something.



Heartbeats

Meg Dolan

Your confidence comes from being so vital, consistent, Zoetic. Head on her chest, listen to her sea, With your shell-ear. Lub-DUB.

Valves close shut, amiable or thummy. Mechanized clay.

Dignity rests in grape bunched cells. Tell me what is more alive than you?

Golden threads to a tapestry node.

What sound is more alive than that soft congenital swoosh?

The honorable source, to life that feels, remembers, sees.

Suffering is not what you do well, transforming into an ossified boa.

Extant mortal-pump, cherubium aesthetic.

Inherent wings for this singing Angel-organ, wings underneath us,

prolonged syncopal rest allows for a feathery-topaz flight.



Boots on the Ground

Daly Walker, MD

Lt. Colonel Stone's pulse pounded from the adrenaline rush of the resuscitation. The career Army medical officer was in the trauma bay of a surgical hospital he commanded in Afghanistan. A Navy SEAL had been shot in the chest and femoral artery. Stone had stemmed the bleeding in the man's mutilated leg. He had inserted a chest tube in his left pleural cavity to expand a collapsed lung. In the SEAL's left subclavian vein, Stone had placed a large bore line and rapidly infused a crystalloid solution that brought the soldier out of shock. The patient was now in the operating room having his leg amputated. The floor was dappled with blood that looked like it had been flung from a brush. Stone exhaled a long deep breath and slumped into a chair. The strain of war lined his narrow face. He was pleased with the way he and his team had performed. A leg lost but a life saved. He had developed a way of thinking that made the maimed seem not quite so maimed.

It was the day before Stone's tour of duty was over. For a moment, he thought of tomorrow when he would fly home from this bleak and ravaged country. The idea of going from war to peace seemed daunting. It was as if he had lost touch with all the beauty and wonders of life.

The telephone on the nurse's desk rang. An African American master sergeant in scrubs answered it. He looked up at Stone and offered him the receiver.

"It's for you, sir," he said. "The morgue."

"Colonel Stone here."

"Sorry to bother you, sir," a voice said. "This is Sergeant Martinez. We need you for a death certification."

Stone could have assigned the task of filling out death certificates to a lower ranking medical officer, but he chose to do it himself. It kept him in



touch with the darkness of war and cognizant of the human sacrifices battle required.

"I'll be right there."

Stone stepped out into the Afghan afternoon. A blast of scorched air greeted him. The sun beat down and made him squint. He put on a pair of silver aviator shades that blanked hiseyes. On a sand path, he headed toward the ramshackle tin-roofed building near the air strip that served as the morgue.

Stone's blue shadow moved by scraggly trees and piles of rock. From somewhere in the distance came the thud of artillery fire. Stone felt weary. Weary of a war he believed nobody knew how to win. He wasn't even certain what winning would be.

Stone opened the metal door to the morgue and stepped inside. He was relieved to be out of heat and wind. The pungent odor of embalming fluid stung his nostrils.

Martinez, a muscular sergeant on the mortuary affairs staff, saluted him. He wore a rubber apron over an olive drab tee shirt and fatigue pants. He was a member of an Army Reserve unit from San Juan. His cheeks were acne-scarred. His crew-cut black hair and mustache were turning gray. There was something sorrowful in the way he moved, his downcast eyes.

"Good morning, Sir," he said in a hushed voice.

"Buenos dias, Martinez," Stone said. "How's it going?"

"Like always, Sir."

Martinez led him to a stainless steel embalming table. On it lay a body encased in a heavy-duty, black vinyl bag. Stone worked his hands into a pair of latex gloves. There was a chemical taste in his mouth that he tried to swallow away. He reached down and slowly, almost reluctantly unzipped the body bag so he could examine the remains. In his deployments to Iraq and Afghanistan, Stone had seen the most mutilating wounds possible -- decapitations and quadruple amputations from IEDs, children with half of



their faces blown away by bombs.

Sometimes there were just body parts. In spite of all his years as a war surgeon, he always dreaded what he might find inside a body bag. Stone looked down at a mangled soldier. His face was scorched. His hair and eyebrows had been burned away. Stone picked up the soldier's left arm. It was stiff with rigor mortis. The fingers of his hand were gone. White bones and tendons were exposed. The heat of the explosion had melted the Kevlar strike plate off the man's body armor and welded it to his chest. Stone thought he had seen everything that weaponry could do but this was something new. He shook his head. He wondered who the young man was. Somebody's son, he thought. Somebody's brother. Maybe he was married. Maybe he had kids. Stone picked up the dog tag that was on a chain around the man's neck. He looked up at Martinez.

"What do you know about Private Nelson?" he asked.

"He was a door gunner, Sir," the sergeant said. "His Black Hawk was shot down yesterday. An RPG hit the fuel tank. His body was retrieved early today."

"Where'd it happen?"

"Zhari district, up by Kandahar," the sergeant said. "If you want to watch his chopper crash you can see it on an Islamic web site. It shows towel heads dragging him by his ankles through the street."

A moist bile rose up in Stone's throat. He swallowed hard. He tried to find some meaning in Private Nelson's death. But he found none. He had come to believe that only in living was there significance. Stone stripped off the rubber gloves and dropped them in a waste basket.

"You know," he said. "Dying should be an old man's game."

"Yes, Sir," Martinez said. "But it won't be. Long as there's wars."

"Sad but true," Stone said.

He turned and walked slowly to a desk in the corner of the morgue. From a file he pulled out a death certificate form. It occurred to him that medical school had taught him to be a keeper of life, but now he was a cer-



tifier of death. The thought depressed him.

Stone sat on a stool and stared at the wall. He couldn't stop brooding about the dead door gunner. He wondered why Nelson had joined the army. Was it starry-eyed patriotism? A broken heart? Maybe he couldn't find a job. Maybe he just wanted to fight. Stone started filling out the form, but he kept thinking about the young soldier. Why had this happened to him? Why did it happen the way it did? Everything about war seemed accidental and random.

When he finished with the form, Stone took out a leather bound journal from the pocket of his fatigues. Recorded in its pages were the names of all the men whose death certificates he had signed. Keeping score that way made their deaths seem more real to him. As he entered Nelson's name in the journal, a heaviness bore down on him that pushed him deep inside himself. Stone wanted to cry but didn't. Stone had come to doubt that there was a loving God. But he bowed his head and silently ask the Lord to bless Nelson's soul and end the war.

The phone rang. Martinez answered it. He covered the receiver with his hand and called to Stone, "Trauma bay, sir. They need you. They've got a wounded Taliban."

"Oh, good," Stone said. "He stable?"

"I don't know. They said, 'stat.' It might be the guy who killed Nelson. I wouldn't be in any hurry."

"Unfortunately, that's not the way it works," Stone said. "Tell 'em I'm on the way."

Stone rose from his chair. He hurried out the door into a hot wind. He could feel ground heat rising through the cleated soles of his rapid deployment combat boots.

The following day, Stone walked toward the helicopter that was to take him on the first leg of his trip out of Afghanistan. The air was hot and dry, the sky the color of smoke. A fierce wind blew the stench of burning garbage to him. From the entry to the morgue, Martinez appeared in his



rubber apron. He came to attention and saluted Stone. The colonel returned the salute and gave him a thumbs up. Beside the sergeant was Pvt. Nelson's metal casket draped in an American flag. The coffin was waiting for an honor guard to load it onto a C-130 that would transport the dead soldier to the States. For a moment, Stone pictured the horror Nelson had been through: his chopper bursting into flames, the Kevlar body armor fusing to his chest. The name politicians in Washington gave to soldiers like Nelson echoed in Stone's mind. Boots on the ground.

Stone took a deep breath. He turned and headed toward the helicopter. From the mountains to the north came the thump of artillery fire. Stone's footsteps left powdery tracks in the dust.



mother giver

Marley Korzen

beautiful grandmother suzanne, so you gave your whole heart and then you gave your life

and every inch of all of your strawberry pheromones to your child who took with her the same giving

mother, you give gave me life, breath and freedom gave me thought gave me freedom to think out of thought and i, mother to creation of words and dance mother to words, blessings, paintings, teachings and one day rosy pink cheeks too

for mother moon births light each night without thought, she just gives as the pear tree births fruit

giving comes easy to the feminine nature give prayer for your givers for they are the reason that you breathe



Sick Little Man

Dominic Viti

I've been on antipsychotics for, let me think, six months now, and I'm antipsychotic enough to tell you about them. They're numbing, the way holding a cold drink in winter is numbing, and cozy, the way not losing your mind is cozy: it's numbing and cozy, but it's not real life, of course, because real life doesn't come in an orange pill bottle.

Risperidone and Quietiapine, antipsychotics, and Lamictal, an anti-depressant, were prescribed to me by an Indian psychiatrist named Dr. Rastogi in his warm office in the lower east side of Manhattan following an incident involving my neck and my belt in my very cold Chinatown apartment. I admitted myself to the emergency room at Bellevue Hospital and 24 hours later I was taken up to the 18th floor where an Ethiopian nurse checked my pulse and blood levels and asked me questions like "How are you feeling?" and "Did you catch that ball game?" and "Are you experiencing suicidal thoughts?" Doctors considered locking me in the Isolation Room, that padded room you see in movies, because I was hearing voices that were telling me to hurt others, including myself, so they wanted to inject me with a cocktail strong enough to sedate me—patient 10076321, my wristband said—but instead they fed me Lithium and sleeping pills and told me to sleep it off.

Since I'm awake now, I should tell you how I ended up in this situation. About, say, a year ago, I began to suffer from what Dr. Rastogi calls a delusion. I thought that a huge bug, a really huge and black bug, a cockroach, had crawled out of my chest, out of my ribcage, other times my belly, and its babies would squirm out with it, eating away my torso and stuff, and when the skin opened the insects spread out with my organs, dark and bloody, the heart still pumping, the bones shining violet, in there. This would happen more than desired. I'd be at Trader Joe's and there it would



be, that bug, the heat of it burrowing inside me, the way bad food has to come out. And when I said, "Please help me, there's a bug inside me, I think I'm going to throw up, I think I'm going to die," the bagger shrugged. "We don't have public restrooms, try the Panera at Union Square." And when I got home and looked in the mirror, there it would be, pregnant in my chest, its wings fluttering in my gut, its antennas fingering my tonsils, its thorax writhing in my intestines. My roommate looked at me strangely, because I myself was writhing, ripping my shirt and clutching my chest and screaming the alphabet, there, in my bedroom, almost every night. That bug was part of my life, and it lived inside me, inside my brain. The delusion. Right around the day I quit my job, the visual grew so vivid and real I got in the habit of standing over the toilet and pulling the roach out myself, a cesarean strangle. I'd see bits of its abdomen in my fingers, and I'd be able to smell my insides, too, the tang of warm drainage fluid. The roach kept coming, day after day, no matter how many times I killed it. So one morning when my roommate left for work I tried killing myself. Strangling hurt, the pressure in my face, before the old belt snapped and my body hit the tile. It was also a waste because, as you know, the roach didn't exist. I attempted murder on a figment. My roommate was less than happy when he came back for his briefcase and found me lying on the bathroom floor all bloody from nailing my temple on the sink. He told me to find another place to live.

I admitted myself to Bellevue. It wasn't the best place to feel less insane. People were schizophrenic, bipolar, suicidal, homicidal, paranoid, obsessive compulsive, anxious, homeless. For once I belonged. Those poor souls taught me to never minimize my problem. Mental disorder is a serious thing, to be treated seriously. I'd be shuffling to breakfast and enter a delusion of spiders crawling out of where the floor, the Earth, yawned open. It was painful and scary because I couldn't control it, and this state of shock gently activated more delusions. The ceiling opening like a mouth with fluorescent teeth, which gently activated the voices in my head, and I'd be in another world, moist and distant, like walking into a dream. This was



casual behavior in a psychiatric center, almost expected, but I'd always feel at fault, that I had done something wrong. The nurses, who worked harder and longer hours than the doctors, really took care of me. So I was kind of lucky, almost. After the fifth or sixth episode, I had to employ a trick to banish the delusion. When I saw Dad, naked as an oyster, come at me with a knife, I lay on my back with my fingers laced and slowly recited the Hail Mary. People at lunch thought I was praying before my meal. I wasn't religious, I'd just rather be with Our Father, Who art in heaven than my father with a sharp object. But, like the cockroach, Dad kept coming. It's strange but even now, living on the orange pill bottle, four of them actually, I can feel the delusions trying to get out. If I skip my medication, even for one day, they will get out, and I'll be right back in the hospital. Sometimes I wish I was. In many ways, the streets of New York are crazier than that 18th floor.

After release, everyone began to see me as a sick little man. My family and Dr. Rastogi decided my course for recovery was talk therapy every Monday, mood disorder group every Friday, and lots and lots of exercise. "If you start to have delusions," he said, "call me. If you get off your medication, call me. If you are thinking about committing suicide, call 911." This was good advice. By all appearances the meds were silencing the carnival, except I was still depressed, and things were wholly unpleasant, even if my temple wound healed and my cockroach vanished, except for a long flash when I decided on whiskey. It was the afternoon I found my new apartment in Williamsburg. I had jogged all the way to Manhattan when I saw one of the patients, my roommate from Bellevue, an African-American man they called King Latifah, holding a cardboard sign outside Penn Station. He was still wearing his hospital gown. His face was dirty and his eyes were as empty as his pockets. Nobody put a dime in his cup. So I did, and he slapped me hard on the face. It flipped my master switch. I cabbed it back to Brooklyn, drowned at the bar, and woke up on the L train, cockroaches everywhere.



From there things got worse, even though my paintings were appearing in galleries and my art friends were saying, "Henry, you're going to be famous, man." I couldn't muster a smile, and not because they were full of shit, which they were. I couldn't smile because I was a sick little man. Of all my adorable neuroses, my least favorite was crying. I was crying for no reason, and I was crying a lot, especially when I'd eat, as if my taste buds were wired to my doubts and insecurities. I would cry all over my plate. It was upsetting to everyone. "Are you ok?" strangers would ask. "Do you need us to call someone?" And I'd say, "The onions make my eyes water," but we were at a smoothie place, so I don't think they bought it. This went on for a while, and I stopped leaving my bedroom, which worried Dr. Rastogi because I was anti-social to begin with. He feared I was cycling, a mood that swung me into skyscraper highs and gutter lows, laughs and cries, shouts and silence, subway rides in the middle of the night, all rearranged on liquor, vomiting in bushes, stumbling into massage parlors, waking up next to ex-girlfriends, next to roaches, walking nowhere for hours, sometimes days, thinking about the belt, the gun, the tub with electrical appliances, buying \$7,000 in pachinko machines on my credit card, throwing my phone in the East River.

All this flattering stuff was going on while I was unemployed and trying to paint my masterpiece, which I was crying all over, while my parents who weren't exactly loaded were paying off my pachinko debt and taking loans to furnish my undersized, overpriced apartment. My landlord, who was more or less Jewish, had a joke. "How much does a hipster weigh?" he said. "An Instagram! Isn't that funny?" No, but my landlord meant well, and he didn't ask questions when I picked up the mail with tears running down my face.

The top envelope was from NYU. I had been accepted to the studio art program in winter, to complete my thesis, "Alive," inspired by the dead. The way I saw it, memories of the dead were more alive than the living, and strangely enough, my portraits really did come alive, they stepped out



of the canvas and spoke to me, and my voices spoke back, and that's how I started making friends. This series was supposed to be my "in" to the art world, but I skipped class and clung to the bottle, after that. The depression weighed on me, and the voices got louder, more in control. Dr. Rastogi told me that it's possible the voices were my thoughts, not the disorder, that the two are indistinguishable. I never spoke of the voices again. The voices told me not to.

I really don't know if Dr. Rastogi was right. These auditory hallucinations, he called them, were more real than the voices of my parents, my pharmacist, the people on television. They were more real than real life. They understood me, told me to do things. Their orders were usually attached to crippling depression, bouts of intense sadness, where I couldn't move, and the voices would operate me, working my controls. A bugeyed guy in mood disorder group, who kind of reminded me of my roach, likened his voices to everybody he trusted conspiring against him, against his better judgment, so that no matter what he said to them, they would always be right, no room for discussion or rebuttal, just restriction and command, and no way out. The bullies of his mind. The cute girl next to him described her mind as a crowded room. "Imagine you're in a crowded room," she said, "and it's busy, and there's chatter, and it's extremely loud, and your dead grandfather is whispering in your left ear, and your asshole boss is yelling in your right, and all you want to do is order a cup of coffee from Starbucks, but the voices are so loud in your head that you can't hear a thing."

I'm not bug-eyed or cute, but I'll tell you what I think the voices are like. It's like your mind is hollow, an echo chamber blowing around all these husks of words, and there's voices coming out of your bad memories, spouting like dark flowers, flowers that are very opinionated. And these flowers never stop talking, even the wilted howl, and they're right in your ear, like a mosquito that knows your name, and the only way it'll quiet down is if you follow their every command, every hour, day, year ... you're



completely and utterly helpless. Which is weird, because the voices are, after all, you. Yet you have no power over you. It's hard to explain. The folks in group were neither right or wrong. We were all just sick in the head. That's the core of psychosis, really: sickness. And since your knowledge of the world is filtered through that sickness, the whole world becomes to look as grotesque and spoiled as you. And when there's no good left to spoil, your sickness turns on you, it becomes you, and you, the sickness, turn on yourself, a black hole for which all things rot and disappear, like light lost in shadow. There's nothing in this world that doesn't sicken you to your bones, sad and dank and putrid animals that reek of death and stupidity, a stupidity so hopeless and consuming that you buckle over nauseated, sick to your stomach, sick to your sickness. Psychosis is self-disabling. It's hard to pinpoint, but imagine that cancer has attacked your throat and there's an all-around trauma in that area, so that you can feel the eye-watering scratch and burn in your throat, but you can't call for help, because your throat is paralyzed. That's the core of psychosis: paralyzing you, disarming you, killing you, in ways even your handy orange pill bottle can't defend.

The only fight against it, to stall the sickness, is to psych yourself out, distract yourself, so you can process things. Sometimes the way to know yourself is to not be yourself, and find your identity in the difference. You need your trusty antipsychotics to do this, to rebalance your dopamine and serotonin and all that, to "find your self," the thing you lost in the first place. But what if the antipsychotics aren't enough, what if the coffee you drank slowed the delivery of the mechanism, and the voices start up in your head, and slowly it dawns on you: the bullies of your mind, the crowded room, the flowers, are all wearing your face. You knew you were the sickness and the sickness was you, but to really see yourself as the root of all that has ruined your life, that you were born this way, that you will be buried this way, that when you finally turn to the belt or gun or electrical appliances, you'll realize you've already died a thousand deaths, inside you.



I always seemed to die slower in greyer, colder, rainier weather, but I managed to eke through the winter semester at NYU and even won an illustration contest, five hundred dollars, most of which I mailed to my parents and the rest I spent on liquor, because drinking liquor gave me style with a brush. It also put me to sleep early, and not the good kind of sleep, delta sleep, just so I could wake at four in the morning, all fatigued and eureka at the canvas. Sick little man was sacrificing his mental health for his creativity, and the sickness won.

That's why in spring semester my voices and I boarded the Megabus to go from New York City to Philadelphia to leave Earth. There's not much to say about the ride, except there was this tarantula thing sitting next to me, talking about politics, and I had this nosebleed that turned my shirtsleeve as red as the Thomas Bond House, the bed and breakfast where I arrived, at sundown, and the host said, "Henry, Henry, so good to see you, welcome back," and I said, "Hello, good to see you, good to be back." Moments like these make you question the whole suicide thing, because if you're able to change your mood for someone else, why not yourself? I guess I was just used to hiding the sickness. Every day was sort of a dreary game of pretend. Sometimes the delusions or hallucinations or whatever became so three-dimensional and lifelike I couldn't tell what was real or fake. The bus, the host, the hotel, could have all been in my mind.

But before I ramble on about my trip and problems, I want to tell you about who I met at the hotel. Her name is Sarah Bond. Sarah is the daughter of Thomas Bond. She was the last friend I made on Earth. I happened to meet Sarah because she lives on the third floor, room 302, and she was standing right in front of me. So I said, "Did they name this room after you?" and she said, "Yes, are you enjoying your stay?" and when I didn't answer, she said, "What is your name?" and I said, "Henry," and she said, "Henry, are you all right? You seem like something's wrong," and I said, "I'm fine ... I just have a lot on my mind," and she said, "Where did you get that scar?" referring to my temple. I told her I was sick and trying to kill a



bug. She laughed and we talked. Sarah wanted to paint for a living. I said part of me wanted the same thing. The other part wanted to call 911. Talk to Dr. Rastogi or my mom and dad. Sarah watched me uncap my orange pill bottles and eat all of them at once. "What was that about?" she asked, but I was too tired and stained to explain myself. I was just ready for the end. It was silly, but inevitable. I had been dead a lot in winter, and it was time to make things official, tidy and physical; I arranged the stepstool just so beside the bed and tied the sheet in a neat little knot around the post. While the other guests were downstairs drinking wine and listening to Beethoven, I was slipping my head in a cotton halo, my voices saying their goodbyes, my heart beating without cockroaches, my arms dangling by my sides, tick tock tick tock, as my eyes followed the grey-pink swirls on the carpet, dim as light could be, those curtains, those large brown cabinets and bureaus standing up to the pictures on the wall, the maps, the land-scapes, the portrait of Sarah Bond still alive.



Medical Body Parts

Rebecca Lee

Elbow

It's always been crooked with the axis of change. Age curls into something safe.

Made up of a million, microscopic gestures, Giving-in never happens just once.

Restless aches for moving forward: an elbow, too rusty to extend. Elastic skin. Hidden veins.

Arms freeze fast in place.

Coagulation

It's a system of lines, they said. Notebooks, scrapped white and blank. Too complicated for words, they said: Punctuation; Impacting no body.

Lines measure the distance that crowds out reaction. Straight mouths of circumstance, live with clenched fists.

Alternative fact.

Fists beg palms to give in and surrender. With no warning and no alarm. Paper skin reads easy:



This is the process of a steady warmth hardening.

This is the end of the line.

Arthritis

Snap-back and recoil from a distant memory held in the ache. Cramped together where movement morphs stiff, slide-show moments will paralyze.

The frozen cracks separate.

Photographs age prematurely.

Warmth settles in where bones used to be.



Morning Mist

J.J. Barry

The man awakened in the cool grey of the early morning and looked out the window at the still, mist-enshrouded lake. He got out of bed quietly, trying not to awaken his wife of 30 years as she slumbered under the blankets. He pulled on some clothes and made his way down to the dock with his fishing rod and tackle box.

The boat's engine fired immediately and settled into a pleasant burble. The noise broke the silence. He figured it had awakened his wife through the screened window but figured she would descend back into sleep as soon as he had left. The boat backed out of its slip, the engine still at idle, then spun forwards and headed off into the gloaming.

Fog closed quickly behind the boat. Within moments, the grey enveloped the man, and he might as well have been twenty miles off instead of twenty yards. He kept his vision split between a compass on the dash and the narrow margin afforded him ahead of the bow. Even though he had been on this lake dozens of times, he knew how easily one could get turned around in poor visibility. He didn't want to end up on the rocks lining the shoreline.

As he drew away from home, the man advanced the throttle a little, still far below what it would take to put the boat on plane. The low growl of the engine now mixed with the sound of the swirling water as the boat parted the mist en route to his favorite spot. The spot lay in a small bay where the shore was devoid of cottages. He recognized it from the depth profile on the finder combined with the compass heading. A quick jog towards the shore brought enough clarity to confirm his location, then he pulled the boat out into deeper water and cut the engine.

The quiet returned as the mist wrapped around him again. The ripples from the boat's motion radiated out in all directions until they



became lost in the fog. He could hear them splash unseen against the rocks on shore. In a few minutes even that sound had gone, and stillness reigned. As far as he could tell in his little bubble of visibility in the fog, he could be anywhere. The only thing in sight was the placid surface of the water, the boat, and his isolated place in the cloud.

After pausing a minute or two just to soak in the soft sounds of the invisible forest on the shore, the man extracted a lure from his tackle box and tied it onto the end of his line. His first cast reached outward to the limits of his sight in the fog. The lure plopped into the water with a tiny splash, which radiated out before dying away, and he slowly retrieved the plug, the reel clicking as it wound on the line. Nothing. He cast again and again, taking a simple joy in the rhythm of casting and retrieving. He varied the location and depth of his casts to seek out the fish wherever they were, but in a way he hoped nothing would happen to interrupt his solitary rhythm.

There! A small strike. He cast again to the same location. Again the sudden tug, but this time he hooked it. Judging from the resistance he felt on bringing it in, he guessed something small. Yes. A small bass. He carefully unhooked it and released it. Maybe someday it will grow into something more worthy of the species.

The man rinsed off his hand in the lake water, then wiped it on the leg of his jeans to dry it. The water felt warm in the cool of the early morning. Jeans. To him they had always been jeans. He recalled that some of the old-timers used to refer to them as dungarees.

But wait. Didn't he qualify as an old-timer now? He knew that some of the young people at work regarded him as a 'fossil'. No one ever said it to his face, but still he knew. He had learned to use a computer, but he would never be as adept as those that had grown up wedded to their keyboards. To him the computer was just a tool, not a way of life. He still had a few tricks that the computers didn't know. Should be enough to get himself through the next couple years, until retirement.



If he even had a couple more years. The doctors had been non-plussed when they told him the results of the scan, but they had urged the surgery soon. When he had tossed out waiting a month, the oncologist had become alarmed. No one had told him to get his affairs in order. In fact, there had been much happy talk about early detection and managing a chronic disease. No one told him whether this finding qualified as early detection. So instead of a month, they granted him two days. He had spent the first day at work, making sure that everything got handed off properly. That was yesterday. Even a successful surgery would keep him out of the office at least a couple weeks. Things at work would not wait that long.

Here at the lake, little had changed. Making plans might seem to be courting trouble. Besides, what was there to do? Closing up the cottage for the winter was not difficult. He and his wife had done it for years. The boat? Taking it out of the water in August seemed wrong. He had taught both of his sons how to maneuver a trailer, so someone could do it even if he were not available. The sons would be here on Labor Day weekend. If help turned out to be needed, they could do it then.

Another cast. And another. The sky began to lighten, but still the fog isolated him. On one of his casts—he had long ago lost track of how many--a sudden strike, much more deliberate and massive than the first. He set the hook and began to play the fish up to the boat. The thing certainly felt substantial, he thought. Finally, he brought the fish alongside and scooped it up with the landing net. Indeed, the bass was much bigger than the first. The portable scale from his tackle box confirmed it. 3 pounds, 3 ounces. If he were trying to catch dinner, the bass would certainly be worth keeping, but he was not, so he released the fish.

No more casts. He had caught something worth keeping. No need to do more. Just sit back and appreciate the fleeting morning. The mist thinned as the sun rose above the edges of the trees on the shore. Directly overhead a patch of blue opened. The fog prevented vision directly out to the side, but straight up one could see the sky, mostly blue with a few



cotton balls of white high above. Sun tried to penetrate the mist, glinting on the smooth face of the water, but not quite succeeding in breaching the diffuse wall surrounding him. A gorgeous day promised. Not a day for white coats and hushed conversations, yet he knew that is what lay in store.

He waited until the mist had dissipated enough to see the shore, then he fired the engine to motor back. Maybe the day seemed inappropriate for spending in a conditioned indoor environment with flashing lights and tubes attached to your arm, but he considered it philosophically. What better sort of day to face the possible culmination of your life.

The man put the boat on plane for home now. He hoped not for the last time.



In the Hand Theatre

Harriet J. Melrose

A green gown, No jewelry.

A regional block: the arm flops Like a fish on a pier.

Someone puts it back. The cart's rolled to the left

Hand theatre: each hand has an O.R. Of its own, mirror opposites.

The hand's strapped to the hand-board. So many heads cluster around,

So many hands, So many tools,

Each performing a part in perfect synchrony, As in a ballet.

Exsanguination, volar subluxation. Proximal phalanx chondromalacia,

More commonly known in patellae. I love these words.



They tell me mysteries of the body — Mysteries of joints and bones,

Mysteries of repair. *Ulnar, radial, inflammatory synovitis.*

Attenuation: extinction of ligament Strength and movement. Erosion

Of bones, inflammation of tendons And joints. The bone tips are *decorticated*.

The outer layer of the tips Peeled back, as one would peel

Bark from a green branch To toast marshmallows.

The ballet ends with tension-band fusion, Monofilament wire and pins,

Monocryl for skin. A compression dressing

and splint for wrist and thumb. Hand and arm are swaddled to the elbow

In a soft, cloudlike material, Then wrapped in layers of stiff tape

Until it's thick as a baseball bat. I carry it like a baby in its sling.



Zambian Nights

Madge E. Buus-Frank, DNP, APRN-BC, FAAN

On the darkest of Zambian nights, we saw you practicing... Sans electricity, the room dimly lit by a flickering flashlight. Held by one, and then another, each in turn. Illuminating the scene.

You were breathing life into the infant simulator With a bag and mask device That only yesterday was foreign and mysterious Celebrating each rise of her chest - a victory of sorts.

Not like the others—the stories you told us without a single tear Of countless limp and lifeless babies
When there was simply nothing you could do
Except reach for the toe tag in your pocket, attach it, and move on.

Unfettered by the oppressive heat, Your faces gently cloaked by the ethereal veil of the white mosquito net,

Furrowed brows, intense concentration Beads of sweat collecting on your upper lip.

We were but voyeurs, watching through the unscreened window.

Transfixed at the site.

First one, then another, no my turn!



Celebrating this newfound skill.

Your voices break the vow of silence.

Of countless lives lost, births that were never counted

As our training team slips away into the Zambian night

Invisible but forever changed.

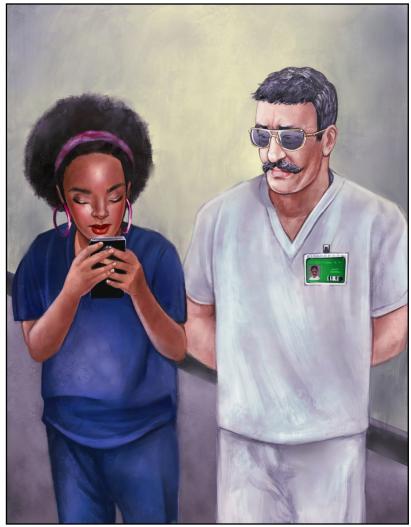


Orientation

James Marin

On a locked in-patient mental health unit, tragic comedy, or night terrors. Cameras everywhere—Big Brother watching—like the Eye on a dollar bill. One-to-one observation for their safety, hard after back-to-back shifts. When the snow falls, come the calls.... Mandation! Recidivism off the scale. Patients mark time between intake and discharge, trying to bump up benefits. Trust in pharmacopoeia but don't get complacent. The civilized veneer on people is thin. In the end, do any of us have completely good mental health? So went what was said by retiring staff to the new hire on their first and last shift together.



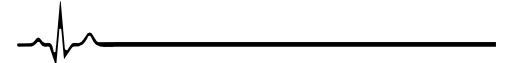


Orientation Andrea Montano





Portrait Karl Lorenzen





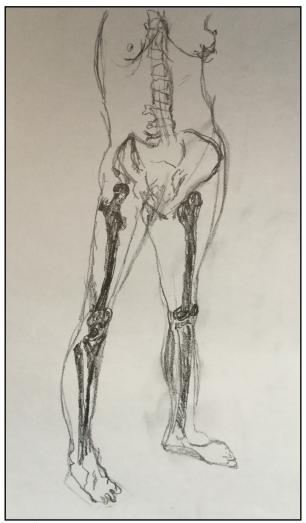
At Last Karl Lorenzen





Some Other Spring

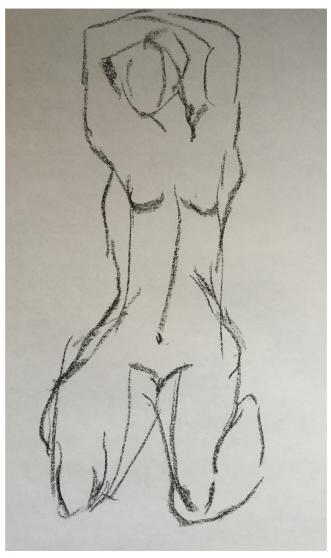
Karl Lorenzen



Stability

Celestine Warren





Grace

Celestine Warren



My Mother's Side of the Family

Teri Fuller

"If you want to keep a secret, you must hide it from yourself." ~George Orwell, 1984

1675delA: that's the specific sequence of my hereditary breast cancer genetic mutation. Mine is a *BRCA1* mutation located on chromosome 17. It is a tumor suppressor gene. A caretaker. Its job is to create a protein that helps repair damaged DNA. When the tumor suppressor gene is mutated, damaged DNA goes unrepaired and cancer cells can grow. Multiply. Spread. Unchecked. Women with this type of mutation have an 80% risk of developing breast cancer by age 90 and a 55% increased risk of developing ovarian cancer. The two chief mutations are *BRCA1* and *BRCA2*—though there are hundreds of variations. Researchers officially linked *BRCA1* with breast and ovarian cancer in 1994. Before that though, in the 40s, British researcher Sir David Smithers looked at 450 breast cancer patients and showed that breast cancer runs in families.

Breast cancer runs on my mother's side of my family. It ran in me. My mom. Grandma. Aunts. Great aunts. First cousins. Second. All *BRCA1* carriers.

My mother, diagnosed with breast cancer in 1979, did not know the secrets of her DNA. She was 29, too young for breast cancer, her Midwestern doctor said. She died when she was 31. I was 4. My brothers were 8 and 12.

After my mother's death, her older sister, Aunt Barb, felt a lump. It was breast cancer. Then, my grandmother, Grandma Peterson, felt a lump. It too was breast cancer.

For years, we didn't talk about the cancer. We did not talk about my mother. Photos of her went away after she died. Aunt Barb said my mother



collected horse statues and had hundreds of them. They went away too. We didn't visit the cemetery. I knew she was dead but didn't know why. In 1981, in a small, rural town, there was no grief support for my father. And he was stoic like he had been taught to be. Grandpa and Grandma Peterson and Aunt Barb were afraid of losing us three kids. They respected my father's decision to erase her from our family narrative. "To a fault," Aunt Barb said, "we bowed down to your dad because we didn't want him to take you kids away."

I found out in sixth grade. It was time to learn an instrument in band, and my music teacher chose the clarinet. There was a small instrument rental shop in town and Grandma Peterson took me. The salesman explained what size I'd need and how to soak the reeds in my mouth before attaching them to the instrument. Then, Grandma and the salesman talked about cancer. His wife had died. My grandma's daughter had died. Breast, they both said.

On the way home, I asked Grandma why I did not know how my mother had died. Why no one ever told me. Why I hadn't asked. Grandma said people didn't talk about things like that. Not polite to mention. I knew my Aunt Barb and Grandma had been sick just like my mother but I didn't know why.

My oldest brother, Rich, didn't find out how our mother died until he was in his 30s. Rich was married. His wife, Cheryl, was talking to my Aunt Barb about Cheryl's mother's breast cancer diagnosis. Aunt Barb brought up our family's struggle with it. Her own. Our mother's. Our grandmother's. Cheryl didn't know it ran in our family. Rich hadn't told her. He hadn't because he didn't even know himself.

After the trip to the instrument store, I wanted to know more. I asked Aunt Barb. She told me breast cancer ran in the family. I wondered if I would get it. I wondered if Aunt Barb's daughter would get it too. In the 90s, Mary-Claire King, professor of genome sciences and of medicine at The University of Washington, found out why breast cancer runs in



families, and she found the answer in DNA. More specifically, she discovered the *BRCA* cancer gene--the gene that hid in my family's DNA. In 1994, Myriad Genetics began genetic testing for high-risk individuals.

In December of 2002, Aunt Barb was working for a group of gastroenterology doctors in a Chicago suburb. She was the head nurse. The doctors said Aunt Barb ran the place. Anyone who wanted access to the doctors had to go through her first. That included the representative from Myriad Genetics. Myriad wanted the doctors to use Myriad's colon cancer genetic testing on patients.

"I've read you have genetic testing for breast cancer as well," she said to the rep.

Aunt Barb shared her story—that she, her sister, her mother, and others in the family had had breast cancer. Myriad could test for a possible genetic mutation.

At the end of the work day, after Aunt Barb granted the Myriad representative access to the doctors, Aunt Barb had a private conversation with one of them, Dr. Murphy. She told him she'd like to be tested for the *BRCA* mutations. The doctor, though not a geneticist, ordered it for her. Dr. Murphy even said he would pay for the test himself if insurance did not cover it. It did, though. It cost \$2400.

In February of 2003, the test came back positive. Aunt Barb had the *BRCA1* genetic mutation. There was a reason it ran in our family. The reason was in our DNA.

Aunt Barb told Grandma Peterson about the genetic mutation. About why she, my mother, Grandma Peterson, and others developed breast cancer. They had a long conversation. Private. Just them. When Aunt Barb asked Grandma Peterson if she would be tested, Grandma Peterson said no.

"I feel bad enough that I may have caused this," Grandma said. "Besides, what would I do with the information anyway. Knowing why doesn't change anything."



Aunt Barb respected Grandma Peterson's decision. Aunt Barb felt Grandma Peterson's decision was a generational one. Poking around in one's DNA was scary, not something someone should mess around with. But Aunt Barb shared her results with me and her daughter. Her daughter, age 31, was tested in April of 2003 by one of the top geneticists in the Chicago area. His name was Dr. Boris Pasche and he worked at Northwestern. Aunt Barb paid out-of-pocket for her daughter's test. Four hundred dollars. It wasn't wise for her daughter's insurance carrier to know the results and then later possibly deny treatment for the disease claiming it a preexisting condition. She was just a number to Myriad Genetics. Anonymous. An anonymous patient who also had the *BRCA1* mutation.

Then, I got tested. Mine was \$400 out-of-pocket too. Another anonymous patient with the *BRCA1* mutation.

Neither Aunt Barb's daughter nor I did anything at that time. I was scared. She probably was too, but no surgeries. No removal of breasts or ovaries.

Then, in 2007, I was diagnosed with breast cancer when I was 31: the same age my mother was when she died. My only child, Lily, was only days old when I felt a lump. I was later biopsied and officially diagnosed when Lily was 9 months old. I no longer had a choice of prophylactically removing my breasts, so I had them torn out. A bilateral mastectomy. They took lymph nodes too and later my ovaries.

Aunt Barb's daughter, my cousin, sent a card after I was diagnosed but didn't communicate beyond that during my treatment. Her mother, Aunt Barb, and I grew closer. Aunt Barb did what my mother was no longer around to do.

In my bedroom, I put a bulletin board of photos on the wall. People I loved. One picture was of my cousin. Even though we did not talk, we had been close when we were younger. She was an older sister, of sorts. Then, we grew up. She got married, moved to the suburbs, and had kids; I moved away from the farm, went to graduate school, and majored in En-



glish. I dated a boy with a mohawk, had progressive politics, and started a local chapter of The National Organization of Women. Then I got married and had a baby as well.

I sent her an email after I put up the bulletin board. In it, I told her I loved her. That I looked up to her since I was little. That I missed her and wished we were closer. She did not respond. She told Aunt Barb she never received it. I had missed my chance at reconciliation.

During chemotherapy, my cousin and I did talk once on the phone. We argued. I had unfriended her on Facebook and she was angry. I wanted support she did not, could not, give. "I'm not going to thank you for getting cancer," she said on the phone. She owed me nothing. Nothing more than an occasional Get-Well card. And for that, I cannot blame her. I was her worst nightmare. What she most feared. I was what ran in our family. I was what happened because of our 1675delA.

My cousin had a prophylactic bilateral mastectomy and hysterectomy when her youngest at the time was 5 months-old. She did not want what happened to me to happen to her. For the secret of our DNA to show itself as it had to me. She had children too. Neither of us wanted to leave them motherless. Like I had been.

My daughter, Lily, is now 10 years-old. I'm nine years out of my breast cancer diagnosis. Lily has a 50/50 shot of inheriting the mutation, our 1675delA. It's the flip of a coin. Myriad, still the leading genetic testing company, won't test anyone under the age of 18. That means eight more years until we learn what secrets lie within her DNA.



New Widow

Charlie Tyson

Can one wear sunglasses to a funeral she wondered

after all they're black

and she looked so sleek in her wraparounds.

Not impious if a sunny day.

One would have to stand far back so the casket wouldn't shimmer in the lenses.

Eyes two impassive coffin-blanks.

Yet so important to look attractive to show others she was still alive.

"I still like men you know," she'd told Amy at the funeral home.

Plain loyal Amy father's favorite

who thought she might as well fling herself on the pyre



like those widows in India

maybe wanted to give her a push.

That morning sunglasses perched on bleached locks she reconsidered,

steeled herself for one more lifetime of deferral.

How beautiful may a widow be when haggardness is proof of love?

No more winking in the glass

not when Sue and Tess and all the rest would peer in her face for clues

and she would assure them yes it was a "terrible loss" and a "shock for all of us."

The soil they cleaved to cover him still hot in the noonday sun.

She snapped shut her compact, capped her lipstick,



lifted her black handbag (somehow heavier without the glasses)

walked wincing into the glare of light and other retinas.



Physician, Heal Thyself: Acknowledging the Liminal Space S.E. Street

Earlier this year, our son fell ill with Dengue fever and was evacuated by air ambulance from the Solomon Islands. He arrived at midnight at the major city hospital where my husband had trained as a doctor thirty years previously. I worked as a nurse for many years before leaving to study cultural anthropology, ritual, and comparative sociology.

Observing the emergency staff that night in a workplace where the stress of trauma and death becomes essentially normalized was both poignant and troubling.

In the first few hours that it took to stabilize our son, the emergency room was relatively quiet, the staff going about their various tasks in an efficient but relaxed manner. From around 3:00 a.m. onwards, there was a flurry of sirens. The automatic doors swung open at unpredictable intervals, patients in wheelchairs and stretchers arrived accompanied by paramedics and anxious relatives. The first code blue alarm of the night sounded and we watched the medical staff disappear to a critical emergency in the resuscitation bay. Some time later, there was the sound of high-pitched screaming followed by shouting. Another code blue alarm sounded an hour or so later. The third sounded around dawn, at the same time as the nurses told us that not only had our son's platelets levels dropped again with the possibility he might hemorrhage, but that his white cells were so low he needed to be placed in isolation immediately. My husband stayed to talk to the nurses. I approached the desk to ask a nurse if the doctor in charge of our son could speak to us when she returned from the resuscitation bay.

As the doctors filed back in, the nurse approached the registrar in charge of our son. The registrar was shaking her head without turning around. As I stood there, I overheard that two of the resuscitation patients



had died. When, after a few minutes, the registrar turned to face me, I realized that it wasn't that she was refusing to speak to us but that she couldn't speak. Her young face spoke for her: shocked, discombobulated, and utterly depleted. I nodded and retreated. The day shift was starting. Another doctor arrived to manage our son's care and his transfer to the isolation ward from where he was discharged three days later.

Whilst not a panacea for the relentless and accumulative pressures of the hospital work environment, the experience of a friend, a cardio-thoracic anesthetist, is an instance of how therapeutic it can be to simply acknowledge the significance of the liminal space.

He was called into the operating room late on a Saturday night. A young man had been stabbed in the chest by a gatecrasher at his sister's eighteenth birthday party. The operating room was crowded with the trauma team, the surgical team, the nurses, and the technicians. Every person was focused on saving this young life. Unfortunately, the patient had lost too much blood and eventually the call was made and the time of death announced.

"No one ever becomes inured to that moment, that sudden void," my friend told me.

He went on to explain how there is always a brief pause after this type of death before the staff begins the routine of cleaning up and packing away. The surgeon is usually the first to leave to speak to the relatives. The boy's parents and sister were waiting at the end of the corridor. But tonight, before anyone had moved from his or her position, a voice rose above the perfunctory exchanges. This never happens.

"May I say something please?" It was a young nurse. She was resting her gloved hands on the boy's chest.

"I know there are people of many different faiths in here tonight. Perhaps some of no faith. We don't know the faith of this young man. I hope you don't mind but this boy's family and his friends are about to receive the worst possible news. Does anyone mind if we bow our heads in



silence for a moment?"

Everyone bowed his or her head.

"And finally," she said, "I would like to say to this young man: we did our best. We wish you well on your way."

The catharsis in the room was immediate. Something was recovered, held, and released in that brief recognition and stillness.



Overdose

Susan Cavanaugh

For the record, I walked in the park night and day hearing what the doctors said:

we took him out, we put him in intensive care, we took it out, we put it in, he needs more blood, his blood is thin, he likes the morphine.

Me angry, you addict, I got the idea I'd feel better with at least a cold.

Stayed out in the rain all night in only a t-shirt and jeans, trying, at least, to catch one.

No sickness upon me, I phoned you on advice from your lead physician. Told you a story. In it we live

in a palace, thick oak doors, gilded bannister, massive staircase. I come in from a storm,



see I'm trailing rain on a clear waxed floor, think I should go outside.

As I turn to leave, I hear your voice, all voice no words. Deep in the palace, a door slams,

a slam that sets me in motion. With that you are in a garden. Butterflies. Wings to the sun.



A Rupture While Dreaming

Gerhard Schneibel

Victoria was eating dinner with her young son and her old mother when she said: "I need to go to the hospital tonight. The electricity is still out and they need my help."

Her mother nodded and swallowed her food. "Your son needs his mother tonight. You shouldn't work so much." Washed pots and pans were stacked drying next to the sink and the light in the apartment came from a few bare bulbs. Outside the open windows in the parking lot a birthday party was taking place with music playing and raffle winners being called over loudspeakers. "Ricardo came by. If only you would take it on yourself to apologize and show him you're still his woman."

"Did you have a good time with your dad?" Victoria asked her son. Hector speared a gooey piece of plantain with his fork and pushed it around his plate. "We went down to the store and I got an ice cream." "I'll call him later and ask him what he wants," Victoria told her mother, tousling Hector's hair. "He needs a bath and shouldn't be in bed later than eight."

With the sun setting and the streets emptying out, the taxi driver dodged some potholes before taking the highway to the hospital. In the back seat, Victoria retreated to the privacy of her smartphone. Even during the worst days, when huge fights broke out because Ricardo quit hiding and brought his girlfriends to the apartment while she was at work, her mother had insisted a woman's role in life was to suffer. The couple's mutual torment had expanded like a natural disaster: inevitable and void of underlying reason. Right after the divorce, the suffering that had masked Victoria's loneliness evaporated. Feeling diminished in her capacity to shape the world to her liking, she stared out the taxi window as they arrived at the hospital: a long, rectangular construction of cement slabs. Relatives of the



sick had set up little campsites with foam mats and electric lanterns, sitting slumped against railings or clustered around stairwells in languishing groups. A diesel generator mounted on a parked truck chugged away.

She was stopped in the hallway by a nurse pushing a small metal cart with one misaligned wheel that squeaked and rattled. "¡Doctora!" the nurse said, waving her hands. "The pharmacist told me our antibiotics are no longer good. The refrigeration is gone because of the power outage."

"The entire supply?"

"Si. You speak English, right? Dr. Sandoval said there is an American patient with appendicitis upstairs. His blood test came back showing elevated white blood cells and Dr. Sandoval says that, since you speak English, he should be your patient."

"I'll go meet him," Victoria told the nurse, taking the patient's chart. "You coordinate the operating room and the surgical team."

She found the patient a room with six other people. He was asleep with his mouth hanging slack. She squeezed his shoulder, shaking it until his eyes popped open.

"My name is Dr. Méndez. I'm here to help you," Victoria said as he struggled to prop up his torso using his elbows. "Don't exert yourself. Stay laying down."

"What's wrong with me?" he asked, looking scared as he studied the features of her face.

"We believe it's an appendicitis, but I want to double-check." She pulled up his shirt and probed his soft belly with her fingers, moving methodically across its surface. When she pressed down near his right hip, he winced in pain. "How big does the pain feel? Can you describe it?"

"It's the size of a quarter, and it's spreading and making me feel nauseous."

"That pain and your blood tests tell me you'll need an operation to remove your appendix." Her words were neither kind nor sentimental, only practical.



"Can I fly home and get it done?"
She pulled down his shirt and sat next to his bed. "No."
"Will I die?"

"Sometimes we have to cut away ruined parts of the intestine. Any operation carries a risk." Victoria watched as the patient closed his eyes and caressed his own brow, palpably afraid. No longer a tourist engaged in voyeurism and certain of a safe exit, he was now part of the same reality that confined her. Her training dictated professional detachment, but she wanted to comfort him.

"Can I ask you something? How did you end up so far from home?" He started telling his story, and the words tumbled from his mouth like he hadn't talked in a long time. The notion to leave behind his life – single, living in an apartment and working as a bank teller – had come to him abruptly one day while enjoying a restaurant lunch of shrimp and fries. As he bit into one of the crustaceans and its flesh gave way between his molars, he found himself thinking about an article on slaves held on shrimp trawlers in Asia. It dawned on him that chance had served him the best possible of lives, and that no other place or time could have served him more richly.

"I kept seeing things on TV about how you should live your life to the fullest, and I couldn't really think of a good reason not to," he explained. He'd felt exhilarated when the plane had touched down in torrential rain, buoyed by winds that whipped about the palms and palmettos. He'd loved the town's squat, brick houses painted in dusty pastels, and, in particular, a crumbling colonial building with sapling trees sprouting from the cracks in its masonry. Then, when an unexpected pain stabbed him in the side, he kept it at bay with Ibuprofen. He sweated on a rough-knit blanket draped over the hotel bed, aware of the hot pulses of blood in his body and unable to stop shivering. The street vendors' cries, dull and repetitious, reached up to his window as they hawked fish and ripe plantains. The sun rose and dipped to the horizon, setting alight the clouds billowing high above the



town. Four days passed before he called for help.

"You're brave," Victoria said.

"Not really, I just decided to live. Honestly, I never accomplished anything or gave back in any real way."

There was a silence as Victoria considered what he'd said, feeling a little tremor of excitement. She could save him. "Normally I would explain this to your family, but since you're alone here I need to be clear that you are in a dangerous situation," she said. The patient inhaled, his belly swelling as Victoria stroked his clammy cheek with her thumb. "This is routine work for me, though, and I'll take care of you. I won't let you down."

"Can the operation happen soon? I don't want to lay here anymore." "Yes. We're getting everything ready now."

Leaving the room to go scrub in, Victoria passed the anesthesiologist on her way to see Dr. Sandoval. A small man with thin hair and a bulging vein on his temple, he was sitting in his cramped office filling out paperwork. "The antibiotics are going bad," Victoria told him.

He took off his round spectacles and rubbed his eyes hard. "I know. We should get a new shipment in a couple of days."

"My patient needs an operation now, though. I'd like to transfer him to another hospital."

Dr. Sandoval hiked his eyebrows. "I've had families pushing me for transfers all day, and I filled every spot I could get. The waiting list is long."

"He's likely to die if we let him get any worse."

"Then you should operate him here and hope for the best. I'm telling you, the transfer lists are full. There will be more antibiotics in a few days."

Victoria felt the muscles in her face twitch and the oily sensation of a tear forming in the corner of her eye. She hadn't felt so plagued by helplessness since the day Ricardo moved out. Dr. Sandoval was watching her expressionlessly as she wiped the tear before it could roll down her cheek and left his office. In a small chamber beside the operating room, Victoria



cleaned her hands and arms meticulously and, with the help of a nurse, donned her surgical garb. Through a one-way mirror, she saw the anesthesiologist putting the patient to sleep.

The incision she made in his right side was about two inches long. She started by slicing through his skin, which yawned open. After cauterizing the edges of the cut skin, she pulled them apart with tongs and sheared through the lumpy fat below. Prying open his abdominal muscles, she reached into his stomach cavity with forceps and turned them slowly to pull a wormy tube from his body. The appendix was about three inches long and splayed open at its swollen end like a sausage burst in the pan.

Clamping off the diseased organ, Victoria cut it out. Then she tied a ligature, cleaned the abdominal cavity with saline solution and placed stitches. In the call room afterward, when she let her weight sink into the upholstery of a recliner, she drifted in and out of sleep. Later, she found the patient had awoken from his anesthesia.

"Am I okay? Or am I going to die?" he asked.

"The operation went well," she said, watching the bubbles in the clear IV tube quiver as antibiotics dripped from the bag above the bed.

"You can tell me the truth and I won't complain."

Surprised by the clarity and lack of fear in his voice, Victoria decided to be honest. "The upcoming hours are going to be crucial as your body fights the infection," she said. "I have to tell you, though, that the power has been out for more than a week now. There's a chance the antibiotics are spoiled."

"Then I'd rather think about something else. Will you tell me about yourself?" He lifted his head just barely off the pillow, pulling taut the sinew in his neck as he looked directly at her. There was a yearning in his eyes. "Well, I was born in a village nearby and grew up here in town. I learned English in school and became a doctor to help people. What else do you want to know?"

"Are you happy?"



"Maybe not. I'm divorced from my husband and have a son."

"Good people deserve to be happy. You spend your life preserving those of others."

"That's true, but I need you to sleep now. Your recovery depends on it."

"Okay." He let his head fall back onto the pillow.

Leaving the patient to rest, Victoria got a small, strong coffee in a plastic cup from the machine and went out to the courtyard behind the hospital. Swallowing the coffee in two parts, she was lingering by a drained fountain when her phone rang.

"I've been trying to call you. Why wouldn't you answer your phone?"

"¡Mamá! I was doing an operation. How could I? I'll come home now that I'm done." Victoria left the hospital and took a taxi back to the apartment. She found her mother sitting on the couch in a cotton night-gown, her arms bare and her veiny ankles protruding from a pair of fuzzy slippers. "Mamá, how was Hector?"

"He did his homework and went to bed," her mother said without averting her eyes from the game show on the television.

"The electricity at the hospital is still out," Victoria said. After a moment, she added: "I don't think I can stand this anymore."

"It just makes you want to cry. Did you call Ricardo like I asked you to?"

"I told you that I was doing an operation. Should I have been thinking about Ricardo?"

"I'd like to see him treated right, that's all. He is my son-in-law."

"He's not, because I divorced him."

Going down the hallway, Victoria looked inside the door to Hector's room to see her son hugging his stuffed elephant, a solar system of phosphorescent star stickers glowing on the ceiling. She was amazed at the sight of his spindly young body. It was expanding rather than decaying. The



quantity of his blood was increasing, his organs and muscles were growing in size and his brain was gaining intelligence daily. She loved him for the resilience with which his young life claimed a space in an inhospitable environment. His survival was both righteous and innocent. Inside of her bedroom, Victoria stripped down to her underwear and climbed between the sheets. Her own path forward was less clear. For a long time she felt alert and, without sleeping, thought of the patient alone in the hospital.

Early in the morning her phone buzzed with a text message. "Your patient's status has deteriorated and he was moved to intensive care," it read. Getting up from bed and dressing quickly, she slipped out of the apartment and went to the hospital. The intensive care unit was a small room with four beds crowded by machines tangled in cables. A breeze coming in through the cracked windows gently lifted specks of dust and turned them around in the morning sunlight. Seeing the patient unconscious with a ventilator mask strapped to his face, Victoria used her professional training to divert her frustration. She'd felt inspired by this man on a search and had wanted for him to live.

"I'm sorry, but there isn't anything we can do for him," Dr. Sandoval said in a hushed tone, standing behind her. "He can't feel any pain."

Victoria turned around. "We should have transferred him."

"The lists were full," he answered, bags under his eyes. "Someone else would have had to die in his place. Don't blame yourself."

Victoria left the room, placing one foot in front of the other with no destination in mind. She could have saved him at another place on earth or another point in time, but not here and now. The glass doors of the hospital slid open and closed behind her automatically. Out on the sidewalk, she watched the traffic passing. A security guard, a shotgun resting in the crook of his arm and a bandolier of shells slung around his torso, bent down to a large cement flower pot and ran his splayed fingers through the thick carpet of yellow blossoms. Righting his body, his gut swelled as he yawned profoundly. Across the street, a woman with an infant in a sling stood pat-



ting out cakes of cornmeal. She cooked them for customers on a battered sheet of metal suspended over glowing coals and served them with meat.



Composition

Sand Mastrangelo, GSM '21

there was energy the Saturday before, unsettled.

bounced from washer to dryer, tried on scrubs a second time.

watered plants, soaked in the river.

I read once that water is calming. that the chemical composition of the body originates from the sea.

the negative ions in water enhance our ability to absorb.

Oxygen.

balance levels of serotonin, concentrate.

someone once told me: you're too sensitive to be a doctor.

quieting the mind, meditation. medication.

two days, one more.

that's exactly why I'm here.



You.

you didn't seem to mind when I pressed my scalpel into your occipital protuberance too gently at first, so I had to try again.

when I exposed your deep fascia or that my face held fear.

I whispered in your ear: thank you for giving me the opportunity to be afraid.

blunt dissection. patience. prone position.

looking back,

it's all superior reflection.



Dave

Bianca Di Cocco, GSM '20

I think most people were a bit concerned after the apocalypse.

For one thing, the definition of the word *apocalypse* is the "complete final destruction of the world." And the word *final* can be defined as "coming to an end, not to be altered or undone." So no one expected to still be alive after the rains of fire, let alone see their family, their neighbors, that guy from the office they didn't particularly like… It was a bit of a shock.

The second cause of concern was the state of the environment. Humans had never really grasped the concept of "conservation." And since everyone had expected to either vanish into oblivion, arrive in an afterlife, or wake up reincarnated as a new alien life form, we hadn't been taking the best care of the earth. But once the apocalypse ended, we had to face the reality that the earth was an absolute mess and we were all still stuck on it. The air was thick with pollutants. Grass had gone extinct. And the oceans were overrun with discarded plastic totem poles that people had started worshipping on their last day.

The third cause of concern was the zombies.

And the fourth cause of concern was that the zombies were completely unlike the horror movie creatures we had learned about on *The Walking Dead*. These zombies wanted brains, yes, but they also wanted a seat in Congress, guaranteed wages, and health benefits.

So yeah, people were concerned.

I had my own concerns. I had been a college student in the days leading up to the apocalypse. I had majored in a cappella, because why not? The world was about to end. There was no need to choose a major based on future job prospects because there were no future job prospects. I have to say, it was a good fit for my final days. I led a number of renditions of *Amazing Grace* as the sky reddened with flame and people started sobbing



into their totem poles. I really felt that I was making a difference.

But once the rains of fire had ended and everyone realized that life as we knew it had not ceased to exist, I decided I needed to do something with the rest of my life. Eventually, I settled on becoming a doctor. I had heard that there were a cappella groups in medical school. Also, a large segment of the population now had third degree burns, so I thought I could once again be helpful.

So I applied and, miraculously, was accepted.

While the rest of the world struggled to resume a normal pace and clean up the mess society had been making for thousands of year, medical school was a well-oiled machine. I learned about cells and proteins, the heart and lungs. I studied a lot in dimly lit libraries and ate free candy out of little glass jars that sat on the administrators' desks. If I didn't look out the window and see the red sky, I could almost pretend that I was living in the beforetime.

And then there was anatomy class.

In the beforetime, medical schools sought out cadavers for students to learn anatomy. Now, medical schools used zombies. My zombie's name was Dave.

He was a cool guy. On the first day of anatomy lab, he apologized to me.

"I have this bad cut on my forehead," he explained, poking at the sutures. "It'll heal up in a few months before you do the face dissection, but I just wanted to apologize for being reckless."

Dave was an older guy—70 maybe—and he liked to swing his legs off the dissecting table as I worked. Most of the zombies in the class were silent, happy to have a paying job and not wanting to screw up their chances of being asked back next year. Dave, on the other hand, was overjoyed to be there and told me that as often as he could.

"I'm overjoyed you're learning so much," he said during the first week as I examined his trapezius muscle. "Can you see the accessory



nerve?"

"Umm..." I said, poking at his back with a gloved finger. "Not sure..."

"Keep digging then," he said with a grin. That day he was lying on his stomach, as if enjoying a massage. "I'll shrug if you find it." He laughed at his own joke.

Dave knew a lot. He knew almost every muscle, nerve, and vein in the body.

"I used to be a surgeon," he explained, keeping his hand stock-still as I dissected through his palm. "Look at that—not a quiver!"

"Do you miss it?" I asked him.

He shrugged with one shoulder—I had accidentally severed his left accessory nerve and its ends hadn't fully reassembled. "Yes and no. I'm glad I retired when I did. If I didn't, I would have been fired as soon as... well, as soon as I got zombified. Stupid laws. Can't believe people think I'm just going to start devouring someone's brain once they're alone in the office with me."

Yeah. Stupid laws indeed. You'd think that after the apocalypse, humans would have learned a little something about kindness and tolerance. Instead, discrimination was still rampant. Working in an anatomy lab was one of the few jobs zombies could get.

It wasn't painful work (zombie nerves don't transmit pain well) and it didn't leave them with any permanent disabilities (zombies can regenerate almost any body part). But it also wasn't entirely pleasant. The zombies had to sit still for hours as we worked, and then take excellent care of their wounds in between classes to prevent infections. Plus, the atmosphere in the room could be tense at times. Some of my classmates weren't as comfortable around zombies as I was, and so the medical school had hired an armed guard. He stood stock still in the corner of the room with a shotgun, ready to fire in case someone went rogue.

Still, Dave never complained. Not when I accidentally severed his



phrenic nerve or on the day I removed all the tiny bones in his ears. He was always his excited self, eager for the chance to teach me something new. Days turned to weeks, and weeks turned to months. And all too soon, the last day of anatomy lab rolled around.

Dave was a mess, both physically and emotionally. I had dissected nearly every part of his body, and he was crisscrossed with shiny pink scars from earlier in the year. As I carefully sutured the skin on his scalp back together, I started crying.

Even though I was behind him, Dave could tell I was upset. He told me to put down the needle, which I placed on a red plastic tray with shaking hands, and he turned towards me. His eyes were glassy as well, but he pulled me into his arms before I could see a tear fall down his cheek. "What are you doing that for?" he asked. "You can always visit me next year. I'll be here, same time, same place, same dissections. You can even warn the next kid about my aortic arch variation so they don't freak out and think I don't have a left vertebral artery."

I nodded when he let me go, but I found that my throat felt tight and I couldn't muster up any words.

Dave patted my shoulder. "You're going to be a good doctor, you know? Not everyone is so kind to us zombies." He gestured around the room, where my classmates worked in silence. "You're exactly the kind of doctor this new world needs, so you need to go and make a difference." This got a short laugh out of me. "How? The world is so screwed up right now."

Dave shrugged—with both shoulders this time. "Do little things. Be open to change. Be kind to people. Keep singing a cappella." I found myself wringing my hands together; his words had reminded me of something. "We have a performance next week, actually. It's just a casual thing in the courtyard behind the school, but maybe you'd like to come? There'll be snacks."

"Brain food?" There was a mischievous glint in Dave's eyes. Or per-



haps it was just the shine of tears.

"I'll see if I can swing you some."

Dave grinned. "I'll be there."

And so, a week later, as my classmates gathered in the courtyard, I lead another rousing rendition of *Amazing Grace* under a pink sky. I saw Dave off to the side of the crowd. He was trying to blend in, dressed in an oversized grey sweatshirt with the hood hiding his face. But I knew it was him. I knew every part of his body, from his frontalis muscle all the way down to his flexor halluces longus tendon.

Our eyes met and he flashed me a quick thumbs up. His mouth moved, forming something that looked like, *Majoring in a cappella was a good idea*.

I grinned.

Misty sunlight filtered down from the sky like soft red theatre lights. The wind, carrying smoky volcanic dust, tickled my nose. And I kept on singing my song for Dave.



The Man Who Came to Assemble the Hospital Bed

Michelle Matz

The man who came to assemble the hospital bed hardly said a word, just a small *good morning*

and *this won't take too long* as he lugged the frame and mattress upstairs. It can't be easy to bring a death bed to the

dying. If I could have gathered everything that was broken I might have said *I'm sorry* but how do you even

begin. A few weeks later, a different man came to disassemble the bed. *good morning*, he said,

this won't take too long as he lumbered slowly upstairs.



Decision Tree

Reza Hessabi, GSM '20

People used to think radiology was a dying art. By the time I got to medical school, robots were diagnosing ACL tears and joint inflammation better and faster than humans. Scans were cheaper and faster than ever before. Other specialties were throwing MRIs at patients like candy at Halloween. I couldn't stop thinking about this as I jogged through the Emergency Department. About how I didn't belong here. I was a computer science engineer with a newly-minted MD, the byproduct of Python and C++ courses infiltrating medical education. I was a master of the robots that almost wrecked my field. Not really the stuff of an ED.

But my attending told me the head of the ED needed me. So here I was trying to learn this hospital's byzantine pathways without a map. I hurried past expensive impressionist paintings, forcing the hospital's prestige down my eyeballs – a direct contradiction to the shuffling despair of people waiting to be seen by the understaffed team. The air was filled with a sense of defeat I had only ever experienced in my poor-as-dirt hometown.

This was Yoribrook Medical Center. It wasn't supposed to feel like this. It was supposed to be a shining star in medicine, with quantum AI that made predictive diagnostics on a population level and gene therapies capable of curing someone of cancer as an outpatient. That's why I came here, why I busted my butt for four years and put myself in a sinkhole of debt. I wanted to work in a place where I'd have the opportunity to do great things.

I arrived at the ED's doctor pod and a mustachioed man with tree trunk forearms looked up from a computer. "You the kid?" he asked. I took a step back for a moment, not really sure what to say. "Yes?" I figured would be the best bet.

"Dr. Encina told me you were his best," he said, reaching out his



hand. "I'm Dr. Mongel."

Dr. Mongel! His name came racing from the depths of my brain. I remembered reading about him during orientation. He was the chair of the ED. I took his hand, and shook it a little too hard. But who cares? My attending had personally recommended me to the chair of a department. That was a big deal!

"Jason Straga," I said, introducing myself past when it was socially acceptable to have done so. I cringed. Playing to the radiologist stereotype: awkward and self-conscious.

"Nice to meet you Dr. Straga," Dr. Mongel smiled and got up from his chair. "Follow me."

"So, where are you from?" he asked in a cheery voice.

My answer to this question only ever got one of two reactions: polite shock or camaraderie.

"Tylion, on the Western border."

"Really?" He was one of the shocked ones. "So you're a miner's son then?" He seemed to know what everyone else knew Tylion for: meteor ore. I grunted a yes.

"How'd you end up on Earth?" he continued, still cheery as if this was the best conversation ever. "Tylion's a long ways away from here." It felt disingenuous, but I could also be blowing things out of proportion. People like Dr. Mongel were often well-meaning. Besides, if he was like every other attending at this hospital, he'd spent his entire adult life inside the bowels of elite institutions. How often did he meet an asteroid miner's son?

"I'm a dual citizen. Mom's from Earth. Dad's from the colonies," I answered as succinctly as possible.

"Huh," he nodded, tongue in his cheek. I couldn't tell if that meant he understood or if he judged. Either way, I wasn't comfortable talking about my colony heritage with him. I just wanted to focus on what he needed from me.

"What did you need help with?" I asked as we passed a scribe droid



tittering away in its nasally voice to another physician. Dr. Mongel and the physician nodded to each other.

"I have an opportunity to do some research that will put Yoribrook on the map." He put a hand on the stairwell door. "Do you want to be a part of moving science forward?" he asked.

This was a trick question. "Yes?"

"Then come on." He pushed into the stairwell. Jogging down several flights of stairs, I could barely keep up. We exited at what felt like the bottom of the earth. It was dingy and dark, the linoleum on the floor looking like it didn't even have nano-wash. Grey doors lined the hallway in front of us, like some alternate dimension of a hellish office space.

"Where are we?" I asked.

"We're on the Utilities Level right now," Dr. Mongel said. "And down that hallway is a closet with specimen collection tools. But the AI isn't recognizing my credentials, so I need your help reprogramming it."

"Me?"

"Well, you're a radiologist, aren't you?" he nudged me in the ribs jokingly.

Red flags flew up in my head. "Am I allowed to do this?" I asked. "I'm allowing you to do it." He continued down the hallway.

This didn't sit well with me. Did Dr. Encina know this is what Dr. Mongel needed me for? Maybe I was overthinking this. All I had was a gut feeling. Nothing concrete to act on. Maybe people here really did respect my skills.

We reached the closet. Next to its door was a console that jutted out a good ten centimeters or so. An AI's face lit up above it and prompted us with a few questions.

Dr. Mongel stood there, arms crossed, waiting for me. What would happen if I refused? Would I be fired? Would I really miss out on this opportunity because an attending was being unorthodox?

"Listen, kid, sometimes you can't do medicine by the book. Some-



times, you have to cut the red tape yourself and do what's best for your patients. Let that be your first lesson here." He waved his hand towards the AI, ushering me to do my job.

Fair point. I opened up the programming panel on the console. This felt more like home than the ED. I entered the AI's terminal program and typed a few commands to get the lay of the land first. I switched a few permissions around, made sure there were key phrases I could use to come back and wipe them from the system, then closed the panel.

"Should be good to go," I said.

Dr. Mongel smiled, clapped me on the back, and ordered the specimen collection tools he needed. Those weren't the usual tools we learned about in school. Were these for a xenospecies? Did Yoribrook even treat aliens? I followed him back up the stairs, wondering if I should say something.

Just before we left the stairwell, I stopped him. "Listen, sir, I would like to know exactly what's going on here. I am very uncomfortable with this situation." Back in medical school my mentor had told me to say these exact words in this exact setting. I didn't think it would work back then. I didn't think it would work now.

"Alright, fine." Dr. Mongel turned.

I tried to hide the look of absolute shock on my face.

"A patient's agreed to be part of a study, and I need to biopsy liver tissue. Is that alright with you?"

I immediately backed off. I must've crossed a line. "Sorry, sir."

Dr. Mongel sighed. "No, it's okay. You have every right to know what's going on." He paused as another scribe droid floated down the stairs and out of sight. "Listen, son. Right now, I need as much discretion as possible from you. The study is in its preliminary stages, and we didn't expect this patient to be ready now. That's why the closet didn't have my credentials. I'll make sure you get recognized for helping out, and you can even join the study if you want later on. But for now, keep things close to your



chest, hm?" He squeezed my arm, the way many physicians have done in my life to comfort me.

For the first time, the gesture wasn't comforting. Joining a research study was a great opportunity. Landing one my first day of residency was particularly good luck. So why didn't it feel good?

I let Dr. Mongel go off to biopsy the patient and made my way back to the doctor's pod. Should I wait for him? Do I go back? I should go back.

But curiosity tugged at me. Who was this secret patient? Was I right? Was it an alien? Few Sinha, if any, were treated at Yoribrook. One of the Big Y's fiercest competitors had already cornered the xenomedicine space in this area. Renara Hospital was renowned for its work in xenobiotics, and despite Yoribrook's many advances, it lagged behind in that one field.

So what was Dr. M doing with specimen tools for a xenospecies? I looked at the holocomputer, still lit up. It wouldn't hurt to check the EMR and see, would it?

I looked around. A few nurses passed by here and there, but overall everyone was busy with their own work. I tracked down the note and saw that there was in fact a Sinha here. Named Eren. Odd name for a Sinha. Usually their names were a string of vowels I could barely pronounce. She was in for Tanndin overdose. I knew that drug well. Too many of my friends died from Tanndin back home, the drug of choice for everyone stuck with a future mining meteors. She was heavily sedated and it didn't look like she had a translator to speak English. As if being a Sinha on Earth wasn't already disadvantageous enough, she couldn't even speak one of the Common Tongues.

Wait a minute. No translator? Sedated? She was just here for an overdose, why did Dr. Mongel need a biopsy?

Closing the note, I noticed an email open. My stomach fell to my knees. I looked up, half-expecting the mustachioed Dr. Mongel to be walk-



ing down the hallway with a malicious grin on his face. But he wasn't. Just the same scribe droid from earlier going into another patient's room. "What the hell?" I whispered, rereading the email. But there was no doubt about it. It was referring to this Sinha. Dr. Mongel was trying to biopsy Eren's tissue for a study. She didn't give her consent to this. She wasn't even awake!

I closed everything and left the holo as I found it. Too shaken to say or do anything, I sat at my chair catatonic. It was the 22nd century, who did this anymore? Was there someone I could report this to? Did I even have the time?

Leaving the chair behind, I made it halfway down the hall before fear stopped me in my tracks. This was my first day. My first day at a hospital I'd dreamed of. What would I be getting myself into if I reported this? I pored through my memories of medical school, praying I'd remember something from an ethics seminar.

Of course nothing stuck. I went to the seminars for free food. My phone buzzed loudly, like an earthquake in my mind. It was my attending, wondering why it was taking so long. "Oh great," I clenched my teeth, beads of sweat forming on my brow. Here was an out. I could leave this all behind. Why worry about this? It's one Sinha. One patient amongst the hundreds you're going to serve. You'll do better next time. Don't screw up your dream. Don't screw up your career.

Or I could go to the authorities. But Dr. Mongel was doing this to her now. Right now!

A scribe droid wheeled past me, the bulbous head nodding to me, saying, "Doctor." It entered into another patient's room. I was frozen. He called me a doctor. I was a doctor.

I am a doctor.

I sprinted towards another patient's room and pressed the code button. That would catch Dr. Mongel's attention. Running out as fast as I could, I did the same to two more rooms before heading to Eren's. I did my



best to avoid any hallway Mongel could go down, walking as fast as my legs could carry me, ignoring the burning sensation in my calves.

On my way I grabbed a wheelchair. When I got there, I peered into the room. There she was, breathing peacefully. Beak chittering away in her sleep, green skin moist with the oil most Sinha excreted. Tentacles atop her head jittered with every breath. I set the wheelchair aside and grabbed some IV packs from the nurse's cart, shoving them into my white coat. I turned off the monitor, and slowly removed what connected her to the bed. I went through my mental checklist of everything they had taught us about xenophysiology in medical school, but nothing useful came up. After 100 years of the Sinha being around Earth, I had expected a modern approach to xenohealth. My instructors had promised me as much. But all I ended up getting was the same two hours of instruction generations of students have had.

The Sinha awoke with a scream. I took my hands off her immediately, putting them high in the air. What the hell was I going to do now? Her eyes glanced at the specimen collection tools Mongel had left behind. They got even bigger, taking up more than half of her face. Figuring action spoke louder, I took the tools and threw them against the wall as hard as I could. They clattered to the floor in an echoing mess. Probably shouldn't have done that, but at this point I wasn't worried about what I should or shouldn't do. Sometimes you have to cut the red tape and do what's best for your patients.

"Eren," I said in as soothing a voice as possible. Her eyes shrank back down to their normal size. "Eren, I'm here to help." I didn't have a clue how to mime this. But I tried, swinging my arms around like a monkey. Her beak opened and closed rapidly. Was that laughter? Didn't matter, she wasn't screaming. I brought the wheelchair to the bed.

"I'm going to get you out of here now," I said. God, she was strapped to the bed! I ripped the straps off and her slender fingers wrapped themselves around my arm. She gave me a squeeze, then sat in the wheelchair.



That was comforting.

We got outside the room, and my scrubs were soaked through with sweat. At the end of the hallway, just in front of the elevator, someone noticed me. Of course it was Mongel. His bellowing made me jump out of my socks.

"What are you doing?" he roared as he sped towards me.

I slammed the elevator button repeatedly. God these things were slow. I kept looking back, and Eren kept looking at me. I had no words of encouragement for her. Her fear was mine.

But I was the one with the white coat. So I held her hand and slammed the button harder.

A ping came. Finally! I wheeled her in, and almost kicked the 'close door' button. Mongel couldn't speed walk fast enough. He wouldn't make it. But before the doors closed, he yelled, "You're done here! You hear me Straga?"

As the doors closed, I sighed. What had I gotten myself into? "We're going to take you somewhere safe, alright?" I said to Eren, knowing it meant nothing. Hopefully one of the xenodocs at Renora would know how to speak with her.

The elevator got to the garage level and I wheeled Eren out. It was eerily quiet. Speeding towards my car, I hastily opened the passenger side door and helped her in. As I stuffed the wheelchair into the trunk, I heard footsteps. Like some sort of impending doom marching towards me. Instead of panicking I was somehow incredibly and unexpectedly calm. This wasn't hard. I had only two options. Leave Eren in the car, tell them I'm sorry and take the consequences. Or drive out of here, pedal to the metal.

I pressed a button on my key and the car hummed to life, lifting a few inches above the ground. I got in and drove out of the garage like a bat out of hell. As I sped away from my dream, from the hospital that meant so much to me, I looked over and saw the corners of Eren's aquamarine eyes



curl up. A smile if I ever saw one.

If the consequence of this meant I was done with this hospital, then fine. I'd be done. Done chasing prestige. Done chasing the praise of my attendings. But I wasn't done being a doctor. I placed a hand on Eren's shoulder and squeezed, smiling at her. I'd earn this white coat, even if it meant I'd lose it.



In This Version

Michelle Matz

you turn 47 next Wednesday. They fixed you.

On your 48th, you'll tell the story about the time

you asked the doctor with the pebbly voice to just *scoop it all out*

as if the teenager with the after-school job at the ice cream shop could save

you. Your friends are giddy. For a minute there things had looked grim;

a stage IV diagnosis, the odds of survival about 1 percent.

But now! So much to celebrate.
And this restaurant!



What a coup getting a reservation. Sure, you were hoping for

something closer to 6, but 8 is ok. Everything is ok.



The Final Sum

Cameron Yi, GSM '20

"The beautiful thing about DNA," said the lawyer, "is that genes cannot lie."

Matt stared at the tall woman in her crisp pantsuit from his side of the courtroom. The pressed lines of her clothes were as sharp as her nose and the predatory look in her blue eyes. Those eyes made Matt feel nauseous, as if he were some piece of meat hung to dry and she were a vulture circling overhead, waiting for the right time to strike. He wondered what truth her genes would tell. Perhaps that she was born with a morally ambiguous compass and a gilded tongue, Matt thought, like most in her trade.

"Your Honor," the lawyer turned to face the judge. "This man here—" Matt watched in morbid fascination as one perfectly manicured hand vaguely gestured at him. "—who calls himself Dr. Reed, is hardly befitting of his title. He is a quack. A phony of which we have not seen the likes of since Clark Stanely and his snake oil. He may have graduated from medical school, a well-renowned one. But whether he qualifies to be a physician is an entirely different matter."

How difficult it was to build, and how easy it was for the walls to come crumbling down around him with a single huff. Matt looked on in a daze as the lawyer gestured to her client.

"We have a first-hand account of the reprehensible acts Dr. Reed has committed. Your honor, I would like to call my client up to the stand. Mr. Sordin, if you would."

A plump little man stood up, stuffed tightly into a suit that looked two sizes too small. Matt frowned at him in distaste. He remembered those shifty eyes. Mr. Sordin had shuffled nervously into his clinic several months ago, in much the same manner that he now shuffled to the witness stand with his swollen ankles bulging out beneath his pants. Matt had never



imagined that Sordin and his shifty eyes would lead Matt to be sitting in this courtroom today. Sordin paused at the stairs, panting slightly, before regaining his breath and slowly making his way to the stand.

"Thank you, Mr. Sordin. I know it can be quite difficult for you to climb stairs, much less go about your daily life. Members of the jury, Mr. Sordin here suffers from severe heart failure. Any one of his acquaintances can tell you that Mr. Sordin is a very generous man, but his heart is too big to properly sustain the circulation in his body. He has what is known as a dilated cardiomyopathy. Is this correct, Mr. Sordin?"

Mr. Sordin nodded, his rounded chin forming two crevices with each jerk of his head. "Yes, that is correct," he squeaked breathlessly. "And it is my understanding that you went to Dr. Reed in the hopes that he could provide a surgical solution for your condition."

Again, Sordin nodded, dimpling the intersection of neck and chin. Matt wondered why the lawyer had bothered to bring Sordin up to the witness stand at all if he were going to mimic a bobble head.

"Of course, the standard practice for surgical treatment of such severe heart failure today is a heart transplant. At most reputable institutions, Mr. Sordin would have received a new heart. However, this was not the route taken by Dr. Reed. Instead, Dr. Reed performed a left ventricular reduction—"

"That's what he asked for!" Matt said loudly. "If you listen to the Electronic Audio Record I submitted, you will know that I urged him on more than one occasion to opt for a heart transplant, which I would have been more than happy to provide—"

The judge smartly rapped the gavel. "Dr. Reed, please refrain from speaking out of turn."

"Thank you, your Honor." The lawyer turned smoothly towards the jury. "We have, of course, listened to the EAR attached to the EMR. How Dr. Reed has managed to use the national EMR for his practice with his questionable credentials is beyond the scope of this case, but it is true that my client specifically requested the ventricular reduction. Due to Mr. Sor-



din's religion, he is not permitted to accept non-human alterations to his original body. The transplanted heart offered in standard practice is a 3D printing using stem cells, which Mr. Sordin's religion does not consider to be of 'human' origin. This left Mr. Sordin to wait on a transplant list which has become quite sparse with few willing donors following the development of regenerative medicine. His only remaining option, Mr. Sordin felt, was to find a physician who was willing to perform the more outdated ventricular reduction surgery."

Matt thought 'religion' was a strong word. Mr. Sordin had not appeared to ascribe to any systematic belief system, instead holding rather strong personal views that the government was attempting to control the citizens via carefully monitored transplant organs. Matt was no psychiatrist, and he could hardly diagnose a patient as delusional from a single conspiracy theory, but he now regretted not having taken a closer look at Mr. Sordin's mental condition.

"Dr. Reed, no matter his initial hesitation, did finally agree to perform the ventricular reduction. My client was led to believe that the surgery went smoothly under the hands of a well-qualified surgeon. But as you have seen, Mr. Sordin still suffers from profound heart failure. This disaster of an operation is impairing my client's daily life. My client was misled."

Matt seethed. The ventricular reduction had controversial evidence at best prior to the advent of printable organs, and Matt had told Mr. Sordin so. The man had had the oddest look in his shifty eyes as he appraised Dr. Reed. I'm not sure you have the luxury of turning me down, the little man had squeaked in his breathless voice. I have heard your practice is on the brink of bankruptcy. I will, of course, be paying for the operation out-of-pocket. Matt now had to wonder if this were a ploy from the very beginning.

"Thank you, Mr. Sordin. You may return to your seat. Your Honor, I would now like to call Dr. Reed to the stand to answer some questions." The judge nodded in consent, and Matt walked mechanically to the stand,



perching nervously on the chair after taking his oath.

"Thank you, Dr. Reed. Now, Dr. Reed, have you met Mr. Sordin before today's court case?"

"Yes," Matt said tersely.

The lawyer waited. When Matt refused to speak further, she asked, "And how do you know Mr. Sordin?"

"He was a patient of mine."

"And what did you treat Mr. Sordin for?"

"Severe heart failure with an ejection fraction as low as twelve percent likely due to his dilated cardiomyopathy. His condition was further complicated due to his obesity and high cholesterol levels putting him at risk for a future cardiovascular event."

"And how did you treat Mr. Sordin?"

"I recommended a heart transplant. I may not have the capacity to print organs in my own clinic, but I often outsource my organs from other, as you called it, 'reputable institutions,' then perform the transplant procedure myself. However, as you have said, Mr. Sordin refused the transplant and asked for a ventricular reconstruction surgery. His refusal did not appear to stem from religious reasons, but a belief that the government—"

"Dr. Reed," the lawyer said calmly. "I don't believe you are an expert in determining what constitutes as religion. We will stick to the matter at hand. The validity of your credentials."

Matt stiffened. There was only one thing that might possibly call his credentials into question, but there was no way either the lawyer or Mr. Sordin could know it.

"Dr. Reed, for which specialty did you complete your residency training?"

"C-cardiothoracic surgery."

"And did your medical school approve of your decision at your Specialty Selection?"

Matt froze completely. He had not heard the words "Specialty Se-



lection" since he had graduated, but the day was forever imprinted on his mind. "Yes," Matt said defiantly. "They did."

"If I understand correctly, Dr. Reed, that approval was contingent upon several conditions. Perhaps you can elaborate on the day of your Specialty Selection for the jury, Dr. Reed. Not all of us have the privilege of experiencing such a momentous occasion."

....

"Congratulations 2120!" a banner read in flashing lights. "Welcome to your Specialty Selection!" Past the banner was a row of what looked to be large steel eggs with flashing red lights. Matt knew his classmates were inside, but nothing of the inner proceedings could be heard from where he stood. One steel egg began to flash green, and automatic doors swooshed open to reveal its vacancy.

Matt stepped into the sleek kiosk. There was not much here: a chrome metal seat that was cold to the touch facing a screen that neatly fit the machine's oval structure. Matt presumed he should sit. He did so. The screen brilliantly flared to life.

"Student ID?" came a cool female voice. Matt carefully typed the combination of letters and numbers on the keyboard.

"Thank you, Matthew. W. Reed," said the voice. There were slight pauses between each syllable, clearly enunciated. It reminded Matt of those cheesy holiday e-Cards. "I am called Samantha. But you may call me Sam."

Matt fidgeted on the hard seat. "Hello, Sam," he replied. He felt compelled to answer this rather human line of dialogue. The screen flickered in response, displaying a thumbnail of Matt's school photo with an accompanying profile: national exam scores, college GPA, prominent awards and extracurricular activities. Matt stared at the neat little summary, wondering if this was the sum of his twenty-six years of life.

"Matthew. W. Reed, you have passed all your classes. You have no disciplinary marks. Your Medical Doctrine, or MD, exam score is sufficiently high to include most specialties for consideration with the excep-



tions of dermatology and aesthetic medicine. Please place your right index finger against the flashing blue indentation on the wall."

Confused, Matt did as he was told. He heard a rush of air and a faint prick on his finger pad. Matt quickly withdrew his hand, startled to see blood welling from his finger.

"Thank you, Matthew. W. Reed. I will populate your list of options now."

Matt's profile on the screen was replaced by a lengthy list of specialties in alphabetical order. *Anesthesiology. Genetic Medicine. Oncology.* Hastily wiping his finger on his jeans, Matt scanned the list down to the second half of the alphabet, looking for one specialty in particular. *Pain Medicine. Psychiatry. Regenerative Medicine.*

"Matthew W. Reed. Please select your top three specialties in order of interest."

Matt paused. He scrolled back up to the top. Perhaps he shouldn't have scanned the list so cursorily. *Molecular Medicine. Robotic Medicine. Transplant Medicine.* Matt frowned, scrolling to the top once more.

"Matthew W. Reed. Please select the top three specialties of interest to you in order of interest."

Cardiology. Nephrology. Pulmonology. Matt went through the list two more times.

"Matthew W. Reed. Please select the top three specialties of interest to you in order of interest."

"Just a minute, please," Matt muttered, knowing full well he was speaking to a machine. There was a fine line of moisture beading his upper lip. He licked at it nervously, inching painstakingly slowly through the list.

"Matthew W. Reed. It appears you have not yet selected any specialties. Do you require assistance?"

Was it just his imagination or did Sam sound irritated? Matt hoped his inability to find his desired specialty wasn't due to a temporary brain lapse. "Yes, I would like some assistance," he said.



"What can I assist you with, Matthew W. Reed?" Sam asked. The screen flickered as Sam populated a new list of options. Matt selected the "I don't see my specialty" button.

The screen blacked out. Matt wondered if he had broken Sam. He was just about to exit the kiosk—how did these doors open anyway? — when the face of the Dean popped onto the screen.

"Matt!" the Dean said in surprise. "I hardly would have thought you required assistance on your Specialty Selection. What can I help you with?"

Matt winced a little. "I'm having difficulty finding the specialty I'm interested in."

The Dean chuckled. "Too many options, eh? If I remember correctly, you did quite well on your MD exam. Give me a second to pull up your information here. What were you considering?"

Matt took a deep breath, calming himself down. The Dean would clear up this situation, he was sure of it. "Cardiothoracic surgery, sir. It's all I've been interested in since I was a child."

There was an awkward silence from the other end. "Err, hello?" Matt said. He heard a faint coughing sound as the Dean scratched his large nose on the screen.

"Well, see here, Matt," the Dean said. "Cardiothoracic surgery, or really any kind of surgery, is going to be a little difficult for you. There are plenty of other tremendous specialties—"

"Why?" Matt interrupted. "My MD score was more than sufficient!" "Yes, your MD score is not the problem here. Surgery just isn't an option."

"Sir!" Matt said desperately. "I came to medical school to become a cardiothoracic surgeon! Perhaps you don't remember, but I explained how my father passed away during his valvular replacement surgery—"

The Dean sighed, removing his glasses. "Yes, Matt. I do remember your personal statement. Quite well-written. I'm sorry for your loss. If I recall correctly, the surgeon who operated on your father turned out to have



a hand tremor. Really ought not to have been operating in the first place. Am I remembering this correctly?"

Matt nodded.

"Well, Matt, this new process of Specialty Selection has been created to thwart preventable cases such as what occurred with your father. The blood sample the kiosk took from you is checked for known pathological genes. And unfortunately, it seems you have quite a high risk for Parkinson's. With your experiences, I'm sure you understand the danger."

Matt stared at the Dean. "H-how is this even legal?" Matt spluttered. "I never gave permission for my blood to be collected."

The Dean coughed again. "I'm sorry to say Matt, but since you will be a healthcare provider, we are not required to ask your permission to check your genome for characteristics that could potentially be harmful to your patients. Your permission was implicit in your decision to become a physician—from the minute you stepped into that kiosk to decide what kind of care you will be providing. Rest assured, we adhere to strict rules of confidentiality. Your genome cannot be accessed by anyone outside of this institution, or by anyone here other than administration directly involved in your education."

There was a dull thudding in Matt's ears. The dean's words bounced around inside him, resounding louder and louder each time. He flushed a dark red and jumped up to his feet. "Are you telling me I did all this work—years of preparing for medical school...even getting through medical school—just to find out that I can't be a surgeon?"

The Dean peered thoughtfully at Matt's face through the screen. "Your results also show markers for genes that have some association with Intermittent Explosive Disorder. Fortunately, behavioral and conduct disorders have not yet been included in our Specialty Selection screening process, as the evidence hasn't demonstrated a high enough sensitivity or specificity. I would, however, be careful of expressing anger in the workplace in the future. Professionalism is key." He leaned back in his leather



chair and sighed deeply. "Matt, you know I'm quite fond of you. I think you have significant potential in any of these remaining fields. I can see you being a respectable figure in any of them. If you insist on becoming a surgeon, however, there is a possibility."

Matt sat down again and waited, staring at the screen.

"You would have to go abroad. I'm afraid no hospital in the U.S., or in most developed countries, will accept such a high-risk surgeon. You might have a chance at a surgical residency if you commit to a global health program. Of course, this would mean that you are willing to live outside of the United States during the entirety of your medical career."

"But testing positive for those markers doesn't even guarantee that I'll get Parkinson's!" Matt cried. "And even if I did, the average onset isn't until 60 years of age."

"Matt," the Dean said gently, "that is a risk you'd be conferring onto your patient. I will tell you this in confidence, but we screen for several conditions even prior to medical school. We remove applicants from the pool that are at risk of mental health conditions such as narcolepsy, epilepsy, to name a few. We strive to nurture physicians who can do the most for their patients. How is a physician to treat a depressed patient if they are depressed themselves? I am happy to say we have seen a great reduction in physician burnout as well. As for the average onset of Parkinson's, you know quite well that an average is just an average. You could very well develop symptoms earlier. And even if you did somehow develop Parkinson's at the age of 60, you are realistically looking at practicing well into your 80s with our increased life expectancy. Matt, I know it may be hard to swallow, but you took an oath to do no harm. I've given you your options. Now I'm sure you'll make the right choice."

"Dr. Reed?"

Matt jumped. He was back in the courtroom, the judge peering at him and the jury waiting for a response. "Yes, your Honor?"



"Please answer the question."

"Y-yes. There was a condition."

"If you could elaborate, Dr. Reed?" said the lawyer.

"I was told I might be accepted to a cardiothoracic surgery residency program if I committed to practicing abroad."

"And why might that be, Dr. Reed?"

Matt could feel his hands sweating and he tried his best not to shake. There was no question that this lawyer knew his secret. There was no point in lying.

"Because—because my genes showed a risk of developing Parkinson's."

There were furious whispers among the jury and observing audience.

"Silence!" The judge rapped her gavel. "If the plaintiff will please continue."

"Yes, your Honor." The lawyer lifted a thin stack of paper and placed it in front of Matt. It was a printout of his entire genome, highlighted to his faults and flaws. "As the jury members can see, the evidence I have submitted clearly shows the risks in Dr. Reed's genetics. Genes do not lie. Dr. Reed had Parkinson's in his future and was thus told that he may only proceed with cardiothoracic surgery training if he were to go abroad. Dr. Reed, have you ever practiced abroad?"

"No," Matt whispered.

The lawyer smiled thinly. "You see, members of the jury: this man, Matthew W. Reed, had no intentions of ever honoring the condition by which he was accepted into his cardiothoracic residency program. He disrespected the institutions that tried to raise a physician who would benefit the medical field. He disrespected the society that has supported his medical education. And worst of all, he has disrespected his patients by disregarding his oath to do no harm. By ignoring that essential condition, Matthew Reed has forfeited his qualifications to practice surgery, let alone be



a licensed physician within the United States. My client was deceived into thinking that that this man was qualified to operate on him. And we know what the outcome of that surgery looks like. Members of the jury, this case goes beyond a simple lawsuit of a failed surgery. This is the new epidemic that we as a society must try to stem. Dr. Reed is not an exception. There is a plethora of these so-called 'physicians' with unregulated private practices that are scamming patients. These physicians may feel that they are entitled to their choices, regardless of the laws we have created based on the evidence of their genes. But we must remember the poor patients, like Mr. Sordin, who have very real illnesses, and that physicians such as Dr. Reed are preying on their vulnerability. Members of the jury, I rest my case."

"Mr. Reed, do you have anything further to say?" asked the judge. Matt opened his mouth. In that second, unspoken words of injustice filled the courtroom to somehow soften the stone-hard faces and the shaking heads. Words that explained how he had clearly warned the patient that the chance of complete recovery was low. That he didn't even have a tremor, much less Parkinson's, if anyone would bother to bring in a physician to evaluate him. That the school had broken their promise of confidentiality. That his genes were his alone, and not for the viewing of strange eyes. That he had not chosen to be born this way. He clenched his jaw shut and slowly shook his head, watching the rest of the case unfold as the plaintiff was awarded the full amount in compensatory and punitive damages, and as the judge proclaimed that Dr. Reed was to be stripped of his medical license effective immediately. He sat there holding the thin stack of papers containing his genome, wondering if this was the sum of his life.



Acknowledgements:

This year's publication could not have come to fruition without the support of the following patrons. We would like to thank the Geisel School of Medicine at Dartmouth, the Office of Diversity, Inclusion, and Community Engagement, and the Geisel School of Medicine Student Government for their continued financial support. A big thank you to Shawn O'Leary for his guidance and to Julia Litzky for her expertise in formatting. Finally, to all of our friends within the Geisel community who have provided emotional support and encouragement—thank you!

LIFELINES is a literary magazine featuring works of creativity and non-fiction from Dartmouth students and healthcare professionals, as well as current and former patients. The mission of LIFELINES is reflected in its name: to be a thread winding amongst all those who have been touched by the medical experience, and to weave a literary tapestry offering the much-needed creative outlet for doctors, medical professionals, and patients alike.