YOU MIGHT FEEL A LITTLE PINCH

A Thesis

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by

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BIOGRAPHICAL SKETCH

Sarah Scoles received a BA in Astrophysics from Agnes Scott College in 2007. The knowledge she gained from studying the sciences figures heavily in her work, which has been published in *DIAGRAM*, *Sotto Voce*, and *SNReview.*

To all the people who gave me ideas, since it turns out I’m not a very creative person.

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THEY WERE ONLY KIDS

During my fifth-grade year at Stenstrom Elementary, Home of the Stallions, my mother dressed up as the school's mascot on Fridays.

"Why are you dressing up as the horse?" I asked her when we picked up the costume from the costume store.

"It's not a horse," she said. "It's a stallion. And a member of Jimmy Buffet's band once wore it at a concert."

"Who is Jimmy Buffet?" I asked.

"Margaritaville," she said. "Someone you don't want to be."

Sometimes when she talked, she either did not mean the words for me or she thought I was smarter than I was. That doesn't matter, though. What matters is that my mother, on Fridays, became an animal, and I became her keeper. It was a job that, like her sentences, was not meant for children.

In the parking lot of the costume shop, she put the horse's head over mine, said, "How do you look?" and pulled down the car's vanity mirror. Looking through mesh eyes at the sloping nose and the forehead like a parking lot, I could hardly convince myself that I was under there. I had disappeared.

It was awesome.

I did not know why my mother had volunteered to be the school's mascot. It had been decided at a PTA meeting, and PTA meetings, like Jimmy Buffet, were a mystery to me. I only knew that my mother was a willful outsider, attending meetings but never running for office. The most popular girls had mothers who were President, Secretary, Treasurer, Campus Beautification Coordinator, and I wanted to be popular. Now, though, I know that having my mother write the *Hoofbeats Newsletter* would not have changed my social status.

Here's why: Before class one day, Sharon Szymanski (a fifth-grader who

owned outfits, not just pieces of clothing) asked if she could copy my homework.

"I know you did it," she said.

"Of course I did it."

"Well, let me see it. I just want to check something."

"No," I said.

"Why?" she asked. "Are you a bitch or something?"

I just shook my head, over and over, like a windshield wiper.

"You must be," she said. "Good thing I know now."

This is characterization.

I never, of course, told my mother about this incident. A) because I was not allowed to say the word for a female dog, B) because I preferred to keep my indignities to myself, and C) because Sharon was wrong, and I was actually quite nice.

This niceness, combined with relentless completion of vocab worksheets and aggressive division of two whole numbers, qualified me to be a safety patrol. In an ideal world, all of the slacker kids would have been jealous of my status and reconsidered their negative behavior patterns when they saw how cool and authoritative I looked in my neon orange sash, making sure no one ran in the hallways or upset the before- or after-school equilibrium. "Man, I wish I were a safety patrol like Claire Stucke," I imagined them saying. "If only I didn't talk out of turn every three seconds, I could have my own fashion-forward sash."

Unfortunately, what actually happened was that I said, "Please don't throw your trash on the sidewalk," and they said, "What, are you a bitch or something?"

When the PTA president asked me, as a safety patrol, to guard my mother the mascot while she stood greeted the kindergarteners and also the people who called me names, I did not say, "No one respects the authority of ten-year-olds, especially when ten-year-olds are me, and I can't even stop them from throwing their Airhead

candy wrappers on the ground, so how am I supposed to stop them from hurting my mother?" I said, "Yes, ma'am."

"Your mother is not allowed to speak or give away her identity, so you will have to answer questions and make sure no one touches the costume," the president said. "You know Jimmy Buffet wore it, right?"

"Yes," I said. "It's a very important costume."

The very important costume sat in our hall closet all week, waiting for Friday. Thursday night, I stood in front of the closet and stared into the costume's eyes. I was almost afraid to touch it, in the way that it's scary to touch the lion statue at the zoo, like you might rouse it, make it decide to digest you.

When my mom found me there, she said, "Tomorrow's my big debut. Are you excited, kiddo?"

And although I didn't know why she was debuting in the first place, I sensed it had something to do with how she loved me, so I said, "Yes, I'm excited," although I felt more like hiding inside the costume myself.

The next morning, my mother loaded the costume into the car, laying it carefully along the backseat so that it looked like it was sleeping. "You don't have to do this, Mom," I said.

"What?" she said. "Are you embarrassed? I'm sure your friends will all think you are very cool." She grabbed the top of my thigh and said, "This is a very cool thing we're doing."

"I know," I said. "Thanks for being a cool mom."

She smiled into the steering wheel like no one, not even my father or something, had given her a compliment quite like that one. "I am pretty cool, kiddo," she said. "That's how I gave birth to such a cool kid."

I stood outside the teachers' bathroom door while my mother fit herself into the body of polyester fur and then set the stallion's face over hers. I bounced my

foot like it was on a manic treadle: My fear of the cooler students was now accompanied by the fear that my mother might find out I was not one of them, and that she would feel sorry for me.

Then my mother emerged, in all her equine glory, and I said, “Ready, Stenstrom Stallion?” and tried to look the way brave people did. Holding her hoof, I led her outside.

At the car ramp, my orange sash and I were nonchalant. “Yeah, I’m guarding this horse,” I imagined saying to someone who asked me if I was guarding this horse. But the younger kids, who always got to school first, just waved and said, “Whooooooooaa, it’s a horse!”

“Stallion.” I said. “Our mascot. Go school spirit!” My mother put her hoof up for high-fives and down for low-fives and did clumsy jigs, her tail swishing behind her. The little kids didn’t seem interested in knowing who she was. They walked up to their newly arrived friends and said, “Look, it’s our mascot,” and when the friends said, “What’s a mascot?” they shrugged and pointed at my mom.

Even as the older kids arrived, they treated the stallion with the respect she deserved. They danced with her; they scratched her nose; they laughed when she tried to chase her tail, which horses don’t actually do, but facts seemed irrelevant. Even the fact that I was a loser seemed to be lost in the shuffle of interspecies bonding rituals. People gathered and smiled and asked, “What are you doing here?” and I said, “Well, I’m guarding this stallion,” and they said, “From what?” because they intended my mother no harm and could not imagine anyone who would.

The stallion pretended to flex its muscles, and I said, “The stallion works out,” and everyone laughed again. My mother and I were quite a team.

“How’d you get this awesome job?” my peers asked.

“I got 100s on my spelling tests,” I said. They laughed, and it was okay that they thought it was a joke.

Then, Sharon Szymanski got out of her mother's car. She said, "Hey," which she had never said to me before.

"Hi," I said. Everyone was watching.

"Who's that?" she asked, tilting her head in my mother's direction.

"Oh, that?" I said. "It's the Stenstrom Stallion. I'm in charge."

"I meant who's inside," she said, unimpressed.

"I don't even know," I said, "so I couldn't tell you."

She peered into the costume's eye holes and said, "I bet it's Bobby Thorpe. Is it Bobby Thorpe?"

"No," I said, cinching my sash. "It's not Bobby Thorpe."

"Well, it's a boy, right?"

"I said I don't know."

The stallion stuck out its front foot to shake hands with Sharon.

Sharon slapped my mother's hoof away. "Stop it, Bobby," she said.

Then Bobby Thorpe appeared. "What's up, guys?" he asked. The crowd murmured "nothing" and "look, it's a horse."

"Who's in there?" Bobby asked. He got close to my mother and tried to lift the head from her body. She put her hooves up in a "whoa, there" gesture.

"Please back away from the stallion," I said. "It needs room to graze."

"And who are *you*?" asked Bobby.

"Claire Stucke," I said. "I'm in your class."

"I know who you *are*. I meant who are *you*. Like to tell me what to do."

"I'm the guard," I said. The stallion nodded enthusiastically and pointed to my sash.

"Stallion says Claire's the guard," said Bobby. "I bet I could get past the guard."

Sharon said, "You totally could."

The tide's turn against me was fast. The crowd, which began to feel like a mob, agreed with Sharon. People edged closer, contracting.

"Watch this," said Bobby, and he stepped between my mother and me.

"Bobby, leave the mascot alone. It's only here to make people happy," I said.

"I'll only be happy," he said, "when I know who it is."

Sharon was moving to my mother's side. She grabbed the end of the costume's arm and ripped it back, exposing my mother's silver linked watch. "It's a girl!" she yelled. "This stallion is a girl."

Bobby said, "She's tall for a girl," and then reached his hands toward the snout.

My mother stepped backward and tried to do another dance, but this time no one found it funny. People pushed her back toward Bobby and Sharon.

I placed myself between the stallion and everyone else. "You'd better get to class," I said, more firmly than I'd ever said a state capital or a vocab word.

My mother, who looked unruffled, as the stallion's expression remained necessarily stoic and its fur could not stand up straighter, tried to walk toward a planter on the other side of the mob, but Bobby grabbed her by the elbow and instructed Sharon, "Off with its head."

When I saw Sharon lift her arms, I rammed her with my head and knocked her to the ground. I had never even pinched anyone before. After Sharon looked at the blood on her elbow and told everyone how gross it was, she said, "Who do you think you are, you little bitch?"

"Little bitch and her hell horse," said Bobby.

"Fuck horse," said someone else.

"Shit horse," said someone else.

"Fucking shitting horse," said Sharon.

Still, my mother said nothing. I expected her to take off the horse head and

ask where they learned to say such bad words, or yell at me for using violence to solve my problems, but she didn't. She just stood there, taking it. Not even snorting or whinnying for help.

"Let's get out of here," said Bobby, who began walking toward class. "This is so *over*." But it was a fake-out: He turned back, ran toward my mother, and started pulling at the costume's zipper.

"You can't do that!" I said. He kept unzipping. Spiting my mother's attempts to trot away, he held fast to the costume, following behind her and tugging. "Run faster, hell horse," he said.

My mother stopped, grasped his hand in her hoof, and, with the force of an adult, removed it. She pointed toward the classrooms.

"That girl is strong," he said. "She's probably ugly."

"Hey," I said to Bobby, who had never said "hey" to me. "Hey. Bitch," I said. "That's my mom inside that horse."

All motion stopped, as if the school's temperature had suddenly dropped to absolute zero. All of the kids went silent like they'd never spoken before, and like they certainly hadn't said things like "hell" and "shit" and "bitch." I went over to my mother, and I said, "Please can I take your head off?"

But the stallion shook her head no. She just stamped her foot and pointed toward the classrooms, and the bell rang anyway, so no one had any choice but to leave, because despite how they acted, they were only kids, and even though I was afraid of them, they were afraid of things like bells and the potential that inside a sweaty animal costume was a grown-up who might tell on them.

I walked my mother the horse back to the teacher's bathroom, not saying anything because saying something would have involved crying. Unfortunately, I cried anyway, hunchbacked against the doorjamb while my mother removed the body and face of something more vulnerable than I ever wanted her to be.

“That was pretty exciting, wasn’t it?” she said once she emerged. “I wonder where the administrators were. I thought they kept eyes on these things.”

I wiped my face and looked in the other direction and made my voice higher so it would seem happier, and I said, “Yeah, very exciting.”

“I know you’re crying,” she said. “My ESP told me.” She turned my head toward her and put it on her shoulder. Her shoulder smelled like a person. “I had everything under control,” she said.

“They were hurting you,” I said. “They called you names.”

“They just wanted to see who I was,” she said. She leaned me back and made me look at her, which is the worst thing anyone can do when you’re crying. “They were just curious about me,” she said.

I waited for a long time, just breathing in the sweat molecules from her shoulder. “I don’t want to go to class,” I said, finally, and she said okay and signed me out at the front office, saying I had “an absolutely vital dentist appointment.”

I didn’t know how I would ever return to Stenstrom Elementary, knowing that I had attacked the PTA president’s daughter and called the toughest ten-year-old boy a female dog, but I also didn’t know how I could go home, knowing that I had let people call my mother an ugly, fucking, shitting horse.

I carried the stallion’s emptied body to the car, and when my mother tried to lift the costume into the backseat, I pulled it away and wrapped it around myself, tugging its fur in a soothingly rhythmic way.

She was quiet for a while, and then she said, “Do you want ice cream?”

I nodded; she drove. She let me stay inside the car while she bought two medium, cake batter-flavored cones; we ate them in the parking lot. When mine dripped onto the horse’s face, I tried to rub it in before she saw, but she said, “We won’t tell Jimmy Buffet. Besides, it'll come right out.”

I stared at the floor mat, where my feet were stacked on top of each other.

“You’re a cool mom,” I said, water falling from my face onto the school mascot, my mother’s shell, a very important costume that I could easily ruin.

They say that when you grow up, you forget how important things once were to you. They say that your lows and highs will seem flat, like all the stakes have been taken out of them. You know, someday you'll look back and laugh. You'll have a different perspective. You'll be a different person.

When I come home to visit—with my graduate degree and my two-year lease and my Cutco knife block—my mother will not let me drive while she is in the car.

“Whenever I hand you the keys,” she says, “I just picture you as this kid in elementary school, with your big glasses and your backpack all scrunched up near your neck, and I think, 'How can I trust this child with two tons of machinery? What if she hurts herself?'”

“I'm almost the same age as you were when I was in elementary school,” I say. “Besides, this is my car. That I bought.”

“Doesn't matter,” she says. “I'm always the mother; you're always the baby. Now go sit shotgun.”

When Sofia Breen's imaginary turtle, Werner, died, she did not follow the proper, prescribed grieving process. Sofia and her parents had different definitions of the word "proper." They believed in Kubler-Ross; she believed in keeping quiet.

"Werner was just not a Darwinially equipped animal," said her father. "I think you've been denying that for a while. But you can get angry about that. Then you can bargain about it. Then you can be depressed about it. And then you can accept it. Okay? Doesn't that sound good?"

Sofia was ten years old, but because of her parents' inability to connect with small children, they had artificially aged their daughter. Since her first birthday, she had been given "supplemental material," as they called it.

Sofia's inflated mental age was reflected in her reading level, which was a stunning Grade Twelve even though when she entered fifth grade after that summer, her class would be reading "chapter books" in which the chapter divisions were purely nominal.

Her parents were intellectuals of the self-proclaimed type, and they believed their daughter's prowess was completely due to their "fostering" of her "early interests," although one would think such highly educated people would have considered the genetic component of Sofia's intelligence. She had a remarkable mind and was the offspring of two similarly outfitted people, a brainchild if there ever was one.

And so when Sofia initially begged her parents for a pet, she appealed to their logic with a five-paragraph essay, to their vanity with the concluding statement, "You have raised me to be a responsible member of society," and to their soft spots with a software-edited picture of her frolicking in a field of domesticated

baby animals.

“That was a convincing presentation,” Sofia's mother said. “That level of preparation should be lauded.”

“Indeed, indeed,” said her father. “Does her school have a debate team?”

Mr. and Mrs. Breen took Sofia to the pet store, where she was permitted to pick one pet, as long as it was small and clean. She walked over to the reptile section, reached into a turtle tank, and pulled out nothing. She smiled down at her empty, dripping arms and held out her hands like she was clamping a Frisbee.

“I want this one,” Sofia said. “He is a Red-Eared Slider. That’s the perfect species for this climate.”

Sofia’s parents, always supportive, supported her right to creative expression, going so far as to take the nonexistent turtle to the cash register.

“Just this one, please.” Mr. Breen winked at the mouth-breathing teenage cashier and handed him a $5 bill with a note that said “Keep it.”

After Sofia brought her turtle home, she observed him for a few days and then named him Werner.

“Like Heisenberg?” Mrs. Breen asked.

“And his Uncertainty Principle,” Sofia replied. She moved her hand back and forth along a parabola that represented the turtle’s shell.

“I always knew she would come around to Quantum Mechanics,” Mr. Breen said, “given enough time.”

“You’ll never know exactly where he is or how fast he’s going,” Sofia said. “So watch out when you’re walking around.”

Werner’s shell looked vaguely Triassic, and he spent a lot of time nosing the air pockets that appeared around the water purifier Mrs. Breen had placed in the aquarium. Sofia sat next to the tank for longer than she sat anywhere else. She

contracted and relaxed her voluntary neck muscles in time with the turtle. She pretended she could feel the water's equal-and-opposite force against her skin and the soft pop as the bubbles escaped the water's surface.

Sofia knew that a turtle's shell had no more feeling than the pink part of a fingernail. She ran her fingertips over her thumbnail to see how much nerve stimulation she could sense, to see how much Werner could feel her.

Picture the empty aquarium in Sofia's old room, the purifier swallowing water untainted by excrement or bloated nutrition pellets. It made white noise all night, and Sofia could not sleep without it.

Werner needed a bigger home, Sofia told her parents, because he felt confined and was bored by the translucent pebble floor and the faux swamp scene glued to the back of his aquarium. This time she had a scatterplot that showed a positive linear correlation between space and satisfaction.

"You can't put a number to happiness," her father said.

"But you can put a price on it," she replied and produced a cost-benefit analysis proving that Werner's move to the backyard would help the Breen family economically.

"It's a nice neighborhood," Sofia said and smiled, and her parents said okay to her freckles, mismatched outfit, and fuzzy logic. Werner the anthropomorphic imaginary friend was given permission to occupy the lawn.

So Sofia collected rocks and arranged them in a circle outside the small pond Mrs. Breen had created one summer before Sofia was born. The turtle had πr^2 square meters to explore. From the French doors of their living room, Mr. and Mrs. Breen watched Sofia gently place nothing on the ground, and then continued to watch as she nudged nothing toward the water.

“I think Werner will be happy there,” Mrs. Breen said to her husband, who looked like things had gone too far.

Sofia soon noticed the way Werner looked at the woods outside her yard. If the turtle could have felt it, and if Sofia had known the word for it, she would have said it was lust. But she didn’t know the word for it, because she was eight, and the closest she came to feeling it was when she thought about Christopher Dixon. He, his dark cowlick, and his as yet uncorrected overbite lived next door.

Sofia liked to imagine playing with him, but she always ended up wearing a white gown to her daydreams, and Chris always appeared in a tuxedo. They were dressed for weddings wherever they went—the four-square court, the monkey bars, his kidney-bean pool—but in reality Sofia never went any of these places and wouldn’t have known what to do if she had gone.

She had never spoken to Chris Dixon; in fact, she rarely spoke to any other children unless forced to, usually for in-class group projects, and in these situations, she always said, “You guys can go play. I am fine on my own.”

She would have been solitary were it not for Werner, who pulled his head in when she told a scary story and wobbled it out to touch her hand in moments that called for sympathy. Sofia's sense that Werner felt confined persisted, so she gathered more stones and made his home gradually larger, attempting to bribe his desire out of him.

If someone had taken time-lapse aerial photography of the Breens' backyard, they would have seen a series of concentric circles that resembled a Lilliputian launchpad or a blown-up bull’s-eye, depending on who was looking. But the only one doing surveillance was Sofia, and she was too young to see what was going on.

If Sofia increased the radius of Werner’s enclosure by a factor of two, the area would increase by a factor of four, so the circle was a very efficient shape, as

far as cages went.

One day Sofia choked. Not in the idiomatic sense of the word—in the very real object-in-the-larynx way. It was hard for her to remember a time when air was going into her lungs instead of out. Her breath was blocked by a piece of tropical-flavored bubble gum. While sitting on her porch contemplating who decided what "tropical" tasted like, she had forgotten to swallow properly. After thirty seconds of thinking, "It will be okay. This will be over soon. The air will blast its way over that lump of sugar, and I will not have permanent brain damage," she gave herself over to the sentiment, "I am probably going to die now." Sofia was calm because she didn't have enough oxygen to grasp the gravity of not having any oxygen.

Ninety seconds into her episode, Sofia's abdominal muscles contracted and caused her to throw the gum up. She stared at it for quite some time before turning to face away from her house. Christopher Dixon was standing at the end of the driveway, bouncing a multicolored plastic ball. They looked at each other, silent, as the smell from Sofia's vomit crept over them.

"Want to play?" he asked.

"I'm busy," she said.

Later, she said to her parents, "I vomited. I could have died."

"It happens," said Mr. Breen.

The day Sofia Breen's turtle died, she told her parents that the size of Werner's cage was now π(the radius of the backyard)^2 square meters. There was nowhere to expand his circle. This time she did not have spreadsheets or pie charts.

"Can we get a new house?" Sofia asked.

"No, why do you ask?" said Mrs. Breen.

“Because Werner needs more air,” she said. “He looks past his rocks like he needs to breathe what’s outside.”

“It’s the same air. You know that diffusion produces homogeneity.”

“Turtles don’t understand physics.”

Later, when Sofia carried Werner's body to her parents and told them that she had found him on his back, dead—a lie—her mother asked, “Do you want a new one?”

“We can afford it,” said her father, tastelessly.

“Werner is in a better place now,” said her mother, who normally spoke derisively of religion.

“You don’t know that,” Sofia said. “You never even knew where he was when he was alive.”

“We could have a funeral,” suggested her father.

Because she brought her parents nothing, just an armful of air, they gave her very little in return.

“It’s your fault this happened,” Sofia said, a statement she doubted her parents understood.

Right before Sofia killed Werner, she sat in the circle of rocks and touched his nose, paraded her pointer and index fingers around on his shell. She did this every day, but this time was different. Because this time she flipped him over, onto his shell. Turtles, Sofia knew, asphyxiated from the organ-on-organ pressure caused by this unnatural position. How would the weight of her own intestines feel on her lungs, were that anatomically plausible?

Sofia lay next to Werner and held hands with his foot until the end. She focused her eyes straight ahead and never looked at him. She cried without sound

and convinced herself that this really was better.

When Werner took his last breath, the carbon dioxide spread radially around Sofia Breen, forming a suffocating sphere that was first the size of her hands, then of her house, then of the whole world, until, at last, it was so diffuse that no one outside the ring of rocks could tell that anything had happened at all.

THE WORDS OF GOD

I.

When Brooke and Ruth Thierce were small together, they played a game called Orphans, in which they traded parents for adventures, since orphans in the books Brooke read had better lives than nonfictional children with adults who cared, fed, sheltered, and loved them. During this game, Brooke and Ruth were alone in the world, the woods behind their house their only overseers.

Brooke and Ruth found a patch of ground hemmed on one side by a semicircle of willow trees. They blocked the other side off with bright lawn chairs their family owned but never used and so would never miss, giving themselves a space in which to be solitary together. This was their new home.

While inside their outdoor orphanage for two, they planned expeditions—berry-gathering, bathing, scouting for intruders, stealing from supply trains that resembled bushes—but one expedition ruined everything, or so Brooke saw it.

"Let us go forth and find a pet," Brooke said one day.

"The only animals here are bugs," Ruth said, swatting one.

"Get some faith," Brooke replied.

They peered around tree trunks and tiptoed over pine cones, trying not to scare potential pets away. After an hour of walking concentrically around their dwelling and not finding any signs of life, Ruth stepped on something that made a disruptive cracking noise, louder than a twig.

The sisters stared at the place where Ruth's tennis shoe met the ground. Underneath the rubber was a ribcage, which was connected to other parts of a former animal: tail, feet, teeth, snout—it was all there.

"I've heard about this," Brooke said.

“About what?” asked Ruth.

“Dinosaurs,” said Brooke. “Fossils.”

“Don’t be stupid,” said Ruth. She was two years older.

“I’m not,” said Brooke. When she lifted the skeleton and carried it back to their quarters, Ruth wrinkled her nose and would not come back in unless the bones were at least five feet outside the entrance.

“Let’s play that we are orphan archaeologists,” said Brooke.

“That sounds boring,” said Ruth. “Let’s play house.”

“That sounds boring,” said Brooke.

“Grow up,” said Ruth.

II.

On the day that Brooke Thierce grew up, she was ten years old.

Brooke’s room was a child’s room. An observer could tell because of the length of the bed and the brightness of the decor but not because of the bookshelves, which showcased the kind of literature adults of the middle-aged generation deemed to be literarily important, historically significant, and socially influential.

It was in this room, where Brooke spent most of her time after the orphanage was abandoned, that God first spoke to Brooke.

This is the first thing He ever said to her: “The people of the world should amalgamate and perambulate en masse to the vermillion fields of their naissance, should they not?”

Though Brooke could not decipher the sentence, it had sprung from her cortices. She was not at first certain that the voice in her head was God—it was not particularly male or deep or authoritative—but she could not think of anyone with a bigger vocabulary. And usually when something had no explanation or appeared

out of nowhere, people called this God.

"Dear Heavenly Father," she said, "Is that you?"

"You are a specimen of empurpled epidermis whose zeal will fly from handles," He said.

"Dear Heavenly Father," she said, "What?"

And then He was silent.

Brooke rose from her bed and took the Bible from its shelf. She tore the margin from a page of the Old Testament and wrote on it "God speaks to me, so I might be a prophet," then a colon, then the two sentences God had given her. She would save these for the day she could understand and share them, like other prophets. She placed the thin piece of paper back inside and shut the book.

Brooke looked at the Bible—its length, its width, its rectangularity—and was glad that inside the cover, its shape was imperfect, its contents corrupted.

It's funny that when God talks to me He uses all those words from my nineteenth-century novels, Brooke thought.

"Dear Heavenly Father," she said. "Why are you exploiting my reading material? Get your own literature." In Brooke's opinion, she and God now had a rapport that allowed for joviality.

"Ha. Ha," said God.

III.

Over the next week, God continued to speak to Brooke, and although His revelations began to make more sense, there was always some word, some antiquated turn of phrase, that Brooke could not have used on her own, and so she knew it was God. And so it was, and so it would be, she thought, for ever and ever.

She always said, "Amen," after she wrote down her revelations.

Sometimes her chest was sore after she heard His voice, but she had been

told of a burning in the bosom, an infestation of the Holy Spirit that bore witness to the gospel truth. But the burning felt more like an aching, and one day she removed all her clothes to get to it. In her bedroom, in front of her books, Brooke looked at her nudity in the full-length mirror that was meant for making sure her Easter dresses were not wrinkled in the back. *Funny body*, she thought: It had changed.

She positioned her skin centimeters from the glass and stretched it so the pores and pigmentations were clear: Her breasts were budding (as the *Proper Development* book in the living room said they should). Since she was old enough to hear God, she supposed she was old enough to have widened areolae.

Brooke's mother knocked on the door. "Baby?" she said. "Baby, what are you doing in there? It's awfully quiet." Her parents called themselves "laissez-faire," meaning that they had better things to do than pay attention to her, until they thought she was doing something wrong.

Instead of, as proof of her non-baby status, throwing open the door and thrusting her breasts in her mother's face, Brooke said, "Reading."

IV.

"There are anachronisms in the old and relics in the new, and you should hide them not from the multitudes," God said to her the next day, during her brain's first quiet seconds after waking.

Anachronism, noun, the dictionary said. *An object, custom, or linguistic term that does not belong in or originate from the time period in which it is seen or shown.*

As she wrote God's latest words in the Bible's margin, she understood. "These modern verses certainly are anachronisms next to the Isaiah," she said. "You are so right."

She got down on her knees. "Dear Heavenly Father," she prayed. "Here am

I.” But apparently this was too direct, God was shy, and when she sought Him out He retreated behind a soundproof cloud.

Brooke crossed the hall and went to Ruth’s room. “God talks to me,” she said to Ruth. “I’m supposed to tell everyone what He says.”

“I hope He tells you something worth knowing,” Ruth said, not looking up.

“Want to play and I’ll tell you about it?” Brooke asked.

“I’m busy,” said Ruth. She held her hand in front of her face and looked at her fingernails.

Brooke nodded and left before Ruth could notice the physiological manifestations of her hurt feelings.

V.

That night, Brooke dreamt of great lizards hatching from eggs. They were her height, but then they started growing larger, and they rubbed their scales against her skin. “Stop, guys,” she said. “Stop.”

But they just said, “Baby,” hissing it, though the word has no Ss, through their rows of teeth. “Rub, rub, rub,” they said. What had begun as gentle exfoliation became violent scraping, and soon her old skin was gone. The lizards—dinosaurs, really—were tall, so tall. Brooke grew scales and inches until she was just like them.

“Brooke,” they said, “you will betray us three times before cock’s crow.” The dinosaurs’ skin peeled and flaked away until only ossified remnants were left.

When Brooke woke up, she wrote, “God wants me to find dinosaurs,” in the Bible. “They are the things He wants me to hide not.”

Suddenly, Ruth flung herself through Brooke’s door. Her satin pajama dress swung around her ankles. “Ask if Tyler likes me.”

“Ask who?” Brooke said.

“God.”

“Who’s Tyler?”

“A boy.”

Brooke paused, closed her eyes, bowed her head, and put her fingers against her temples. “Tyler doth not care that you liveth,” she said.

“You didn’t even ask Him for real,” Ruth said. “You don’t even care about me.”

Brooke was about to proclaim that she did, more than anything, but by the time she was ready to be sincere, Ruth was gone. Later, when Brooke prayed for forgiveness for her lie, God said, “Accountability is thy sole colleague in these, the last days.”

He was right, Brooke realized. She did not realize that for the first time, she had understood God without having to open a dictionary.

VI.

“I’m accountable for lying to you,” Brooke said upon entering Ruth’s room, but Ruth had her hand cupped around the mouthpiece of a cordless phone.

“I have to go, Tyler,” Ruth said. “My sister has a problem understanding doors.”

“That is just not true,” Brooke said. “I understand more than you think.” She pushed her fists into her eyes so that the tears borne of unexpectedly changing the subject would stay where they were.

The sisters stared at each other while from the phone’s speaker came the roller coaster voice of a twelve-year-old boy. “What’s going on? Where did you go?”

“I got breasts,” Brooke said. Ruth smiled, so Brooke continued. “Want to play Archaeologists tomorrow? God says you can invite Tyler.”

VII.

Brooke chose the street's vacant lot as the excavation site. Its size was the envy of the whole cul-de-sac, and more surface area meant a higher probability that the next edition of *Nature* would feature Brooke, a smile on her face and a petrified bone in her hand. "God sent me to show you these relics!" she would say in all the interviews. Tyler would not be allowed to speak.

When Tyler first walked through the sliding glass doors into the yard, Brooke immediately sent him back inside with instructions to obtain three flathead screwdrivers, three watercolor paintbrushes, and a garden shovel. "Take your time," she said.

"Whatever," he said.

"I've got my eyes peeled on you," Brooke said.

Ruth waited for Tyler with her arms crossed, her eyes on the horizon.

"God says you shouldn't like him so much," Brooke said.

"Does He?" Ruth said. "Maybe you should stop listening."

VIII.

The vacant lot was full of white rocks. "These are just cement blocks," Tyler said to Ruth, pressing his hand against hers. "There's nothing old in them."

"Shh," whispered Ruth. "Play along. For me."

"God led me here," Brooke, who had heard them, said. "This is not playing. This is serious adult work."

"Tell us what to do," said Ruth. "We're here for you."

"The screwdriver is for chiseling," Brooke instructed. "Fossils have to be pure and uncontaminated. The paintbrushes are for wiping away the rock dust."

Ruth and Tyler listened to her: they chiseled softly; they dusted slowly; they

behaved. Then, “I found something!” Tyler said. He held a handful of cement dust aloft and said, “It’s in here! It’s in here!”

Brooke placed each foot delicately upon the ground as she walked toward Tyler, not wanting to break the thing. Why had God given it to Tyler? What was wrong with her?

When Brooke got close, Tyler made a monstrous noise and threw the dust on top of Ruth. He said, “Oh, excuse me, madam,” and wiped the dust from her skin with his fingers.

“Use the paintbrush!” said Brooke. “That is what the paintbrush is for! You’re contaminating her!”

Crying, she ran to the house. “Dear Heavenly Father,” she said. “Where are you?”

IX.

Ruth and Tyler were gone when Brooke went back outside. She could see the dig site, just a pile of chips and flakes. She pulled her shirt tight around her torso, and, seeing the strange shadow her body made, moved behind a palm tree. A tiny frog jumped from its trunk onto Brooke’s leg, and then two more followed, bright against her skin. “Where are your parents?” she asked.

She scooped them into her hand and looked them in their black eyes. Every part of them was wet and alive. “You are yourselves,” she said, amazed at this fact. “You decided to be here now with me.”

She called them A, B, and C, and she put them in a bug catcher with some twigs and pieces of palm frond, and she sat with them in front of her mirror. She watched their movements, marveling at the progress they had made from tadpole to present, until she fell asleep.

X.

All night the frogs made tiny noises, crying out for water for their thin skins. One by one their lives fled from them, their slimy bodies first becoming dry, then gone. Brooke neither heard nor witnessed any of this.

When, the next morning, Brooke opened her eyes and saw the three tiny skeletons, she screamed for Ruth, but no one heard.

Large words came to her in a rush, sentences forming and then evaporating, but they were all constructions she could have created them herself. It was as if God was no longer speaking to her, as if she were on her own. This, she realized, was what it meant to grow up.

"I left you unable to hydrate yourselves, and now your flesh hath rotted itself into sublimation," she said to the dead amphibians. Brooke picked up the bug catcher orphanage. The plastic hard against her chest, she bowed her head and cried, her water dripping through the breathing holes and onto A, B, and C.

"Babies," she said, "babies," rocking them. Bones fell from twigs and plinked against the plastic edges. Bones slid against one another other and locked joints.

When she sat the skeletons on her desk, they looked like a museum exhibit. She pushed their spines until they snapped. Their anatomies crashed down. She covered the whole of their bodies with her hands and their shards poked through her skin. "Ashes to ashes," she said after she had ground them to grey dust. Though she knew that those words had been said before, this time they were her own.

Andrea was an assignment.

The last chapter in my eleventh-grade Psychology textbook was “Human Grief.” Before Andrea, the only grief I had any experience with was the kind referred to when my mother said, “Kay, don’t give me grief, or I won’t let you go bowling with your friends tonight.”

I lived in the suburbs. I was once talented at ignoring those whose lives didn’t cross the path between my locker and the Chili’s next to the mall. Then my teacher, Ms. Scharfenberg, gave us an assignment called “The ‘u’ in Grief.”

Carrie leaned over and started to say something, but Mrs. Scharfenberg looked directly at her and said, “That means you.” Carrie sighed and slumped back and lifted a middle finger under the table.

We were supposed to communicate with someone who was grieving, to find out firsthand what it was like. Ms. Scharfenberg gave us a handout of project guidelines, which included a five-page write-up detailing our “journeys into the land of compassion, understanding, and insurmountable woe.”

The class looked at the guidelines and grumbled in the same collective voice used to express annoyance at a pop quiz or a test with a low class average. In our sixteen-year-old minds, these things were all equally inconvenient.

“I want you to be sad,” Mrs. Scharfenberg said, “just for a little while.”

When I got home from school that day, I began work on my project. The first link on my internet search for “communication + disease” was a site that paired healthy children with cancerous ones, and although I resented being called a child, I filled out the pen-pal application and testified that I was neither a convicted felon nor a forty-five-year-old man. The Children’s Cure Coalition paired me with

Andrea because of our age (16), gender (F), intended college major (astronomy), and geographic proximity (central Florida). Andrea Mason of Arnold Palmer Hospital for Children and Women sent the initial email, which said:

Hi, nice to meet you. I get osteosarcomas all the time. You don't. We should talk.

What could I possibly say back to that? She was right. But I had a deadline, and if I wanted to grieve, I knew I had to start working.

Hi, Andrea. My name is Kay. Did you know that osteosarcoma has the word 'mascot' in it? Also 'moose' and 'star.' A moose would be a strange mascot. A star would probably be better.

I'm sorry I'm rambling. I don't know what to say because "What's childhood cancer like?" and "Get well soon" seem equally inappropriate, and those are the only things I can think of.

Andrea, I later learned, had Li-Fraumeni Syndrome. She called it her "idiosyncrasy," as if it were a part of her personality, something that endeared her to people. Andrea's mother, unsuspecting Mrs. Mason, had passed on a defective copy of the *TP53* gene, which produced the P53 protein that could fix everything. However, Andrea's body believed it was above repairing itself.

Andrea could have gotten lung cancer from walking into a bar to ask for directions, or skin cancer from forgetting to put sunscreen on her ears. The oncologists—or "oncles," as she called them—were good at nipping the cancers before their cells budded.

The hundreds of DNA mutations I got every day from power plants and aspartame were captured, quarantined, and crushed before I became aware that some sequence said ACCGTA instead of ACCGTT. For Andrea, however, these banalities were alphabetic assassins.

Before I left the computer, I received an email from Carrie.

Kay,

My house Friday? I really need to talk to you about Brian. I'm, like, disillusioned. Or something. Anyway, life sucks. See you in stupid class.

I didn't hit Reply. Carrie wasn't going anywhere.

The next time Andrea wrote me, she just said, "We should meet somewhere," which is exactly what the admins of the Childhood Cure Coalition didn't want us to do, at least not immediately. In fact, the website explained why computers make good mediators: "At this fragile time in life, when the importance of appearance is exaggerated, these adolescents have little to no hair, do not have good suntans, and have tubes poking from many parts of their bodies. Electronic communication is a way for them to escape the nervous sideways glances they get and the elephant-in-the-room conversations they have when their peers visit the hospital."

When I pointed this out to Andrea, she replied, "I don't really care what you think of me." We decided to meet on Friday. Her house.

Andrea's house, which was a few miles northeast of Orlando's city limits, was decorated in a fashion that made me believe her mother had robbed every craft fair on the Gulf Coast. Each of the shelves on the entertainment center held a wooden two-dimensional animal, each suspended in the motion of a different human activity: club-swinging cows, piano-playing pigs, poker-dealing wallabies. They filled the house with the kind of cheer that would disappear if you turned your head the wrong way.

"You must be here for Andrea," said Mrs. Mason. She was wearing a velour

warm-up suit and a bandana disguised as a headband. “Don’t you girls be too wild,” she said loudly before whispering, “Andrea’s fragile,” around a cupped hand. I looked at my shoes, and she led me upstairs.

Andrea was lounging on her bed, looking up at a large poster on her ceiling. The walls were covered in overlapping prints of nebulae, galaxies, and stars.

“Are you Andrea?” I asked.

“Doesn’t this give it away?” she replied, patting herself on the head.

“Stupid question,” I said. “Sorry.”

I put one foot on top of the other and interlocked my fingers, a stance that looked like the beginning of a martial arts sparring sequence. “I’m Kay.”

“Come in,” she said. “If you look nervous, my mom might come upstairs and try to mediate.” Andrea gestured toward the spot on her bed that I was supposed to occupy, where I was supposed to look comfortable. When she flopped back to a reclining position, the equal-and-opposite reaction to her movement was almost imperceptible—she was so small.

“Every week I study a new astronomical object,” she said, still staring at the ceiling. “At the end of the week, when I know everything about it, I tape up Hubble Telescope reprints of my subject.” She paused before adding, “It’s because I’m not in school.”

I remained silent for a few seconds, imagining what Andrea looked like sitting in the rectangular glow of her web browser, hyperlinking her way through the universe. I wondered if she read scholarly journal articles, or if she stuck to popular science magazines and encyclopedia summaries. I imagined that she was the kind of person who would want citations and diagrams in her research materials, and it made me like her more. It made her more like me.

“What are you studying?” I asked.

"Cataclysmic variables," she said.

Andrea's manner forbade me from showing pity, unease, caution, or pride. She did not have time for them. She had the social grace of a PTA mom and the authoritative bite of a CEO. She made me feel okay admitting that I had no idea what CVs were, while in my life outside the Mason house I would have feigned familiarity with the latest peer-reviewed papers. "Yes," I would have said, "that is my *favorite* kind of variable." But with Andrea I felt like I could just ask.

"They are binary systems," she replied. "A white dwarf—which I researched last week—is the size of the Earth and the mass of the Sun, and it pulls atoms from a regular star, killing it and causing periodic explosions." She moved her arms into a circle above her head and then broke them, bouncing hard on the bed. She repeated this gesture before collapsing back against her pillows. "That was me being a cataclysmic variable, in case you didn't get it," she said, and smiled.

I liked astronomy because space goes on forever. Maybe Andrea liked it for the same reason. Maybe the universe made her problems seem cosmically insignificant. Maybe her body identified with its self-destructive tendencies.

"What is chemotherapy like?" I asked.

"My parents are pretty relaxed about everything. My mom even lets me dye my hair any color a week before any session."

As Andrea spoke, she twirled imaginary strands around her fingers, tucked stray wisps behind her ears. I tried to picture her with lime ringlets, then a violet ponytail. She seemed like the kind of person whose ponytail would swing when she walked, a protein metronome.

"Right now I'm going through the life cycle of a star," Andrea said. "Every time I go to the hospital, I dye it the color of the next stellar phase." She brushed transparent bangs out of her eyes. "It's for fun."

“What’s next?” I asked.

Andrea pulled my sleeve to bring me closer to her, and I obliged quickly, imagining the scene that would ensue if her forearm shattered in the effort. Andrea pointed to the poster she had been staring at since my arrival. It was, she told me, a Hertzsprung-Russell Diagram

“I know,” I said.

The graph showed temperature on the x-axis and luminosity on the y-axis. When stars’ data were plotted, the points fell into tidy groups that reflected their age and size: white dwarfs, red giants, super giants, main sequence—names that sounded scooped from low-grade science fiction novels.

Before her last round of therapy, it had been yellow—not blonde, but the color that comes with packs of eight crayons. I pictured Andrea that way, with braids and buns and whalespouts and updos and finger waves of noon-tinted hair.

Andrea’s mother appeared in the doorway. “There are some cupcakes in the trunk of the car if you want to go get them. It will be fun for you.”

Her mother drove a Dodge Caravan even though Andrea was her only child. Andrea filtered through the grocery bags full of “good for you stuff,” as her mother had said, as if our sixteen years had not given us knowledge of fiber and vitamins. Andrea emerged from the plastic bags and held the cupcake container next to her cheek. She tilted her head and smiled.

“I’m really good at photo shoots,” she said. “Everyone loves a happy cancer kid.”

Later that night when I got home, my mom asked me what I was doing with Andrea, and I said, “Research.”

“Carrie called,” she said.

“That makes sense,” I said, and went to my room.

Andrea and I existed together in a closed system; it seemed like a betrayal to allow anyone else in. Carrie wouldn't have understood. She would probably make up her entire Psychology report. Something like, "My cousin's grandmother died the other day, and as I sat by her bedside and watched her chest rise one last time, a single tear rolled down my cheek, and I realized that sadness is the emotion that allows us to truly appreciate our happiness."

I spent the night at Andrea's house the next weekend. Carrie called three times before I left, and every time I told my mom to say that I was inextricably busy with something.

"Are you two fighting over a boy?" my mom asked, smiling hopefully.

When Andrea turned out the light, we settled into her bed, and I listened to her breathing, worried that she would just stop. I tried to exhale when she did, tried to imagine that I was not me—that I had been transported up and over and down into Andrea's body and was resting there, sheathed in her skin, willing her lungs to expand when they did, her body to do as I said. I could tell from our breathing that she was not asleep.

"Are you asleep?" I asked.

"No," she said, "I can't."

"Neither can I."

There was a long pause. "You're the only friend I didn't meet in a support group." She sat up halfway and turned to me, her stare so sharp that my circulation could feel it. "Do you ever wonder what it's like to die?" she asked.

"Yes," I said. Then, "Are you scared?"

Andrea nodded but said, "It's not like being alive is great fun, either."

I moved my hand toward Andrea and wrapped my fingers around hers. She

watched the five helices we had made as if waiting for them to do something unexpected. She went to sleep; I stayed awake for hours.

Lying there in the dark, posters of the expanding universe looking down at me, I felt like everything in my life had a deja-vu quality, as if I had lived it already and this was some illusory second-time-around. I became convinced that I had died and that what I considered life was actually some bizarre purgatory, where I would experience everything over and over and would only sense its cyclical nature once or twice, as a vague, unnerving shiver.

I was supposed to return to the Mason residence two days later, after Andrea's oncologist check-up.

"Hi, Kay," Mrs. Mason's phone voice said to me after school on Monday. "I think we'll have to postpone your playdate."

The previous chemotherapy hadn't done its job, and the oncles had discovered that Andrea's bone cancer had spread to her ribs. They had to be removed. She was being re-admitted to Arnold Palmer the next day.

I said, "Okay. See you later."

For the next week, I did not initiate anything—I only responded, like a primitive life form, to stimuli.

"Are you okay?" Carrie asked.

"Yeah," I lied.

"Do you want to go bowling with us this weekend?" Carrie asked.

"Yeah," I lied.

Carrie talked to me, and I replied. Teachers gave me questions, and I gave them the answers. My mom put food in front of me, and I ate it. The lights went out, and I slept. *This is my life*, I thought.

A week after Andrea's surgery, I was allowed to visit her. Arnold Palmer Hospital was, on the outside, a colony of glass cylinders. Their albedo hid what went on inside, where the tell-tale sterile smell was masked by piped-in cotton candy and popcorn scents. In the lobby, there was a framed copy of "The Patient's Bill of Rights," which stated, among other things, that patients could expect time to play each day, the right to carry their favorite toy into operations, people to knock on the door before coming into a room, and doctors and nurses to laugh with them. While these rules were, I was sure, made with good intentions, their effect was the same as the deceptive architecture and the perfumed air: a this-isn't-happening mentality that may have been fine when Andrea was a toddler but that must have seemed cruel as time, and tumors, progressed.

"I'm here for Andrea Mason," I said to the receptionist. "I would like to see her."

"Andrea," she replied, "is one of our favorite patients."

"Neat," I said.

"Room 317. It's Andrea's second-favorite room."

Andrea's room only had one picture. She saw me glance at the stand next to her bed, where a framed white and red cataclysmic variable rested.

"I'm behind in my studies," she said. "I haven't moved on yet."

I wanted to say, "Neither have I," but instead I said something about how if you had to be stuck on something, CVs weren't so bad. It was just talk.

Andrea's dusting of hair was colored red in preparation for the chemo that would begin soon. "Red giant," she said, pointing to the top of her head, which was an interjection when viewed next to the rest of her, which was all very pale. I said nothing, because I was sixteen and because I was in a hospital to see another

sixteen-year-old and because that sixteen-year-old was probably dying and I probably wasn't.

She said, "This morning I told my mom that I wished there had been prenatal genetic testing in the 80s."

Andrea was sitting up in a patch of sunlight on the bed, drinking a Coke, as if she not care about what these things could do to her. The doctors had removed five ribs. "They're trying to stave off metastasis," she said. She leaned back and showed me the scar, a vertical set of cross-hairs on her abdomen. I put my palm against her stitches.

Without those bones, her stomach felt the way I thought an amoeba would. I imagined an amoeba like a tumor taking over the world. It would swallow everything, or maybe just me and Andrea, shifting its pseudopods until we were fully digested.

"My life is pretty tragic," she stated. "How many people can say that without being melodramatic?"

I turned away from her and walked over to Hubble reprint, ran my fingers over the inky globes instead of putting my hands over my face. Though I tried to void my mind, thoughts continued to form, flicker, and then fade into each other.

When I turned back around, I was surprised to see tears on Andrea's face. Maybe she was just upset over a fight with her mother, I thought, or a particularly sad news story, or a poor test grade. My mind created an alternative existence for her, one that was not always divisible into neat categories: pre-cancerous and cancerous.

Andrea said my name, softly, and so I went to her bed and pulled her body close. I imagined our cells combining with each other and then dividing again. Meiotic.

Breathing in her dead skin particles, I let them cycle through my respiratory system until they were no longer foreign bodies, but part of my own. Microscopic relics that scientists a thousand years from now could extract from my fossilized remains so that when they scraped a sample of my bones, they would be able to say, "Someone definitely got under this person's skin."

I liked to think that some of my epidermis was below Andrea's, floating in her bloodstream, or caught in her throat. Maybe that was the catch in her voice when she finally spoke again.

"Just go," she said.

"Shut up," I said.

"I know you want to," she said. "I want you to."

"Just shut up," I said, and put my cheek against her shoulder bones.

I wanted to crush Andrea. Engulf her until she died and then set her formless body against the angled back of the bed. Walk right past the doctors and nurses who would hear the steady tone coming from the clip on her finger.

I wanted to walk out both sets of automatic doors, feel the sun's radiation on my skin, eat entire packets of aspartame, open up my chest and stuff tar into my lungs, take estrogen pills just for the fun of it, and not think about what any of these actions meant for anyone's subcellular structure.

Having a friend who used to have cancer is different than having a friend who might get cancer, which is different than having a friend who has cancer. That is what I would say to Mrs. Scharfenberg, to Carrie, to my mom when she asked why I was sulking.

I could say that it wasn't fair that so many variables relating to your own life are set before you are even born, and that they can be cataclysmic for no reason at all, and that if a cataclysmic variable was a metaphor for Andrea and me, I

wouldn't know who was the normal star and who was the dying star and who was the killing star and who was the strong star, but that it wouldn't matter because all those words fit too nicely together to be meaningful.

"Go," Andrea said, again.

I imagined removing five of my ribs and giving them to her. I could almost feel the stretch and pop of her skin as I pushed them through and snapped them into place.

But, "Stave off metastasis," I said, and let go. Walking out the door of Room 317, I wished the newly boneless place in my body did not feel so empty.

The tour guide at the Peter Whitmer Farm visitors' center was a twenty-one-year-old missionary. Her name was Sister Porter, and while I examined the complicated floral pattern on her mid-calf-length skirt, she waited for me to tell her which ward I attended. She assumed that if I was here, I must be a Mormon making the circuit to the Church's eight official historical sites in New York, but my trip was far from a pilgrimage. I was on my way to visit family upstate, but the neat font and the rectangularity of the text on the roadside proclamation "Visitors Welcome" compelled me to travel down the road to the historical house, and to the chapel, perhaps to experience how it felt to be, for the first time, an outsider.

"I have an aunt who goes to your church," I lied.

"Well, Emma," Sister Porter replied, "you'll get the long version of the tour, then," meaning that she would have to explain everything to me, and although this was not necessary—having grown up in the Church, I was sure I knew as much as she did—acting curious was easier than either admitting sacrilege or feigning piety. "Let's start with the chapel," she said.

The Fayette chapel was exactly like the one I had attended: an extended family-sized row of plush pews centered on a pulpit, two rows of small benches framing the large one, and a vaulted ceiling holding up chandeliers that looked like they could have withstood an apocalypse-sized earthquake.

"If you want," Sister Porter said, "I can take your picture."

Although I had left the Church ten years before, when I was seventeen, I could still feel the scratch of the rough pew coverings on the backs of my arms, still picture priesthood holders on the pulpit, still taste the dissolution of the sacrament bread on my tongue, the small cup of sacrament water always inadequate to wash it

down.

"No, thanks," I said.

Sister Porter began her speech, telling me that Joseph Smith and four other men first organized the Church here, right here on these very grounds, and asked me if I could feel the presence of something special.

"Like an aura?" I said.

"That," Sister Porter said, "is the Holy Ghost."

What I felt were the 177 years' worth of pheromones that had seeped through best-dress Sunday clothes, slid down the benches, through the carpet, into the ground: They were in its foundation. Maybe that was what Sister Porter felt, but I doubted it.

Being in the Fayette Chapel made me think about Hyrum. I wondered if he told anyone about us, or about what we did, but my guess was that he felt the same way he had before. Hyrum had always had more faith than I did, though we acted equally firm. Maybe it was because he was descended from Mormon pioneers; maybe it was in his blood.

My parents were converts. They had wanted me to grow up with religion; they had been looking for it. Their search produced two devout adults and, eventually, their devout daughter. They found the Church, as they phrased it, when I was four.

A year after their baptism, my parents decided it was time for our family to be sealed in the temple.

"Sealing is a way for us to be a family," my mother said, "forever."

"How long is forever?" I asked, because at the time I did not realize that this question was both trite and unanswerable.

"We'll all find out," she said, "together."

After we walked into the temple, I was taken from my parents by a woman in a long white gown who led me to a dressing room with a large gap between the bottom of the door and the carpet.

"Here," she said, handing me a shrunken version of her outfit and a pair of tiny white stockings that looked like a two-bodied snake. "Put these on and let me know when you are ready to come out."

I shut the door and struggled with the items. I had trouble navigating the stockings around my toes and the tight curves of my knees. I fell on the floor with my feet in the heads of a nylon python, its body loose around my ankles.

I crawled through the space under the door, naked except for the synthetic material binding my legs together.

"You must go back inside," said the woman. She was clearly unaware of the panic that constricting clothing induced in five-year-olds. "You are not proper," she said, which hit me as both pronouncement and prediction, though it would be years before I could pin those terms on her words. At the time, it was just a feeling.

"Please," I said, because I thought that was how you got things.

"No, little Sister," she said.

I said, "Thank you," because I thought that was what always came next.

Inside the sealing room, I knelt across from my parents at a velvety altar. There was a mirror behind them, and there was a mirror behind me, and everything in the room was repeated over and over, getting smaller and farther away each time. All the shrinking, receding images formed a cone that almost, but not quite, converged into a point.

I positioned myself so that when I looked in the glass, my head exactly filled the space between my parents'. In the mirror, I looked at them looking at me, and our three-headed image was reflected, the laws of optics holding as deep into the

mirror as I could see. Although our image almost became so small that it disappeared into itself, there was no end to us. We were together forever.

When I was growing up, our pantry was filled with cylindrical tins and vacuum-sealed baggies of rice, lentils, evaporated milk, dried apricots, and flavored gelatin, all the food groups stored against the possibility of a biblically predicted disaster. I had always thought it strange that right next to the kitchen was a stockpile of sustenance, the calories ready to be used in the battle of the Last Days. The idea was that in the event of an apocalypse, the TV stations would blare their emergency broadcast signals, the radio stations would interrupt their music-commercial-talk cycles, the people would panic, and we would sit in our basement munching on trail mix until it was all over and we could emerge, victorious because of our virtue. These scenes transformed our basement into a womb and our family into a set of triplets. At the end of the movie, played out again and again in my imagination, we were born again as new people into a new world, fully nourished if a little bored with the menu.

"If you transgress against Heavenly Father," my mother said whenever I disobeyed, "you will not be spared at the Second Coming, and our family will be separated for eternity."

"I would never do that," I always said, speaking of both the transgression and the separation, and I meant it. After these conversations, I pondered the concept of eternity.

It had several names, each with a different connotation. Eternity: religion. Infinity: mathematics. Perpetuity: economics. Forever: love and promises. I liked to think of these words in combination with each other.

1. forpetuity: indefinite payment for love or broken promises

2. eterfinity: a heaven which does not change when you add one to it

3. eterever: an afterlife that is exactly as promised, and full of love

I liked to take an idea I had just learned and transform it, spin it around in my mental centrifuge until it emerged as something different and new. Something whose parts had been separated, rearranged, combined. Something that was not incorrect, but would have been marked wrong on a test.

My interest in Hyrum was piqued because he, unlike most of the boys in my physics class, was not physically repelled by a girl who imagined her brain a high-speed mechanical device.

Our relationship began, like so many high school affairs, in a high school class. We were learning about superfluids, liquids that exhibited counterintuitive behavior beginning at a certain temperature, the lambda point. They lost all viscosity and overcame all friction. They crept up the edges of their containers and out onto lab tables, until they reached a new kind of equilibrium.

“I can’t conceptualize zero viscosity,” Hyrum said as we were leaving class. “How can something not feel friction? I'm going to be bad at this problem set.”

“I can’t conceptualize infinity,” I said, “and I can still do my calculus homework.”

“I can’t conceptualize infinity, either.”

“Can you conceptualize anything?”

I was not prepared when he leaned in to kiss me, but I let our lips meet because he wanted to be romantically involved after being intellectually insulted. He could have taken my remark as emasculation, gotten defensive. But after our too-long closed-lip kiss, he said, “I’ve always thought you were really smart, Emma.”

“I’ve always thought you were really eloquent, Hyrum,” I said. My mouth

turned up in a lopsided, John Wayne way.

"You're funny."

"You're insightful."

We stayed that way—innocent, playful, usually at Hyrum's expense—until I began to be prodded by my awakened sexual desire. And, more concretely, his.

Hyrum was the kind of person I wanted to be. My mother used to tell me, "Date people who bring out the best in you." Hyrum was righteous without being self-righteous; he was an honorable priesthood holder; he was smart and funny; and, most importantly, he believed.

When he prayed to know if the gospel was true, he got an answer; when I prayed, I got the sound of fan blades against the air of my room. I thought that he could teach me to be more like him, so that maybe I could get answers, confirmation. Instead, I taught him how to kiss a girl.

One night my mother caught us in Hyrum's car in my driveway, and after she called his parents, she said, "You know what kissing leads to."

"I can kiss Hyrum and not have sex with him," I replied.

"That's what you think."

"Mom, I don't want to know that about you."

This conversation was an emotional volta: I was forced to admit that I should have been ashamed of the things I was doing. To everyone else, Hyrum seemed a saint. And he was. Except when he was with me.

"Why do you do this to me?" he asked, staring at his erection in the light from my parents' halogen porch bulb, installed to forestall situations exactly like this one. "You know this is wrong."

"I think you might have done that to yourself," I said, and walked through the front door, leaving him alone with the doormat. I watched him from inside my dark

house, and in the unnatural blue glow he looked like he was about to give a soliloquy, but he exited stage-right and walked bow-legged back to his car. Playing the role of frustrated cowboy, he roamed the frontier with hormones for spurs and a saddle of guilt.

Before I fell asleep each night, I pictured the two of us naked. It didn't matter where, and pretty soon it didn't even matter that I was with him. I replaced Hyrum with other classmates, his brother, his father, my teachers.

Sexual sin, our Sunday School teachers always told us, was equal to murder.

The day I touched it was the last Sunday of the month. The next week would be testimony meeting, when anyone in the congregation could go up to the pulpit and express their feelings about the Church of Jesus Christ of Latter-Day Saints. It was supposed to be faith-affirming. It was supposed to be re-inspiring. And although testimony meeting is special, every Sunday is supposed to make you feel the Spirit.

Hyrum was sitting on the pew with my family just like he had since we started "casually seeing" each other. At that point, I had been casually seeing Hyrum for about nine months. My mother waved to Hyrum's parents, and they waved back. Hyrum flashed his parents a practiced pre-missionary grin and grabbed a hymnal.

Hyrum was eighteen and would leave for his mission on his nineteenth birthday. I didn't know where he was going to be sent, but I knew that he would be successful; sitting next to him and hearing his voice hammer the bassline of "Faith of Our Fathers," I thought that he would make a good spokesman for the Church. If he were a stranger who knocked on my door in his white-shirt-and-tie uniform, I would be converted, at least in some sense of the word.

“I think I might love you,” Hyrum whispered into my ear as the last cadence of the song reverberated and pressed its chords against us.

“I love you too,” I said. I should have said, “Thank you,” like everyone else.

After the hymn was over, the congregation dispersed, and I led Hyrum to the sacrament closet. It would be safe. Everyone was in Sunday School. No one would know.

Hyrum’s breath came fast and hot through the tiny holes in the cotton of my dress when he put his head against my heart.

“Please,” I said, “Let me.”

He knew what I meant, and his silence was both assent and defeat.

He thanked me when the twelve-second hand job came to its natural conclusion. After his first orgasm at the hands of another, Hyrum became suddenly a businessman, curt and stoic and not about to give anything away. I tried to get him to look at me, but his eyes would not meet mine. He was ashamed, but I could not forgive him that, because I was not.

I scuffed the toe of my shoe at the wet spot on the floor, and when tears pressed against my eyes, they produced a revelatory vision: I saw my parents’ reflection in the temple mirrors, and I was not there.

I looked at the water that had splashed over the edges of the sacrament cups in time with our clumsy rhythm, and said nothing. Hyrum left without lifting his gaze from the ground. He left me alone with the bread and water, consubstantiated body and blood. I pushed the spilled liquid around with my fingers, and when I thought the stain of evidence was thin enough that it would evaporate before anyone noticed, I slipped out the door. If only I could have flowed under the door and crept into a new world: out my container, free of friction. Instead I headed back to Sunday School, throwing up in the bathroom on the way there.

After church, my mother repeated her warning about transgression, and I again replied, “I would never do that.” She could not hear that the words sounded different this time—dense with an opposite meaning, and thus hollow.

That night, I did not disable the alarm system until I was sure everyone was asleep. Inside the house, I felt like my thoughts could seep under my door and flow into all the rooms of the house. They would act like superfluids, growing pseudopods and climbing up the stairs into the master bedroom. My parents would be awoken by a cold wetness nosing under their comforter, their daughter in a form not quite as they expected.

Once the disabling code had been safely punched and the door soundlessly opened, I walked onto the lawn and lay down on the grass. If I kept my eyes open against the night sky, I could imagine that it was an amorphous animal that would descend, surround me, digest my body, and metabolize me into someone new.

The stars seemed to go on infinitely, but as I thought about eternity without my family, I felt the sky’s constellated cytoplasm constrict around me.

The next morning I called the bishop and asked him to pencil me in.

Behind his L-shaped desk and under the staring portraits of the prophets, Bishop Markovitz seemed more imposing than he did on the pulpit.

“I am told you have something to tell me,” he said.

I looked at my hands, the stuccoed walls, the maroon and forest green upholstery, the tithing envelopes resting in the compartments of a vertical shelf—each a creator of my guilt in its own special, devastating way. This was not like Catholic confession, where faults slipped through small holes separating you from judgment. It was like a job interview in which the first question is, “What is the worst thing you have ever done?”

“Forgive me, Father.”

“Emma, why don’t you call me ‘Bishop’ like everyone else and tell me why you asked to meet with me today.”

“It was Hyrum, with his convincing tongue, in the sacrament closet,” I wanted to say. But my seventeen-year-old mouth was too full of I-shouldn’t-haves and I-wouldn’t-agains and all kinds of I-wishes, so I said, “Bishop, you know Hyrum loves me.”

Believing this meeting was the only way to stagger back to the straight and narrow path, I told him that I was not pure anymore. He asked for more detail.

After I told the Bishop when, where, and why I had touched Hyrum, he said, “Tell me more.” Sweat had begun to form between the wrinkles of his forehead, and I could see from the whiteness of his knuckles that his interlocked fingers were putting pressure on each other.

“I thought a straightforward confession was enough,” I said.

“No, in order to be forgiven,” he said, “you need to tell me exactly what happened.”

“I did.”

“I need more detail.” I could hear the desperation in his voice, and it was the kind of desperation that comes with power. The kind that believes it will be rewarded, in the end.

I looked at Bishop Markovitz’s pants because I wanted him to have an erection, but his zipper was flat. He only wanted me to have a place in heaven. He really believed, this old man. I wished that he had been a hypocrite, a lecher, because then I could have blamed my loss of faith on his behavior. But I could not. This time, it was all me.

I only spoke to Hyrum once after that. I wanted to know what the bishop had

said to him.

"He told me not to let you do it again," Hyrum said, and walked away.

"That's yours," I imagined Bishop saying with a man-to-man smile. "Let's keep it that way from now on, okay?"

The next Sunday was the first service of the month: testimony meeting. I walked up to the podium knowing I could say anything, and wanting to tell everything, just like I had in the bishop's office. I wanted to point to the closet and then point to Hyrum and expose all three of us. I wanted to uncover my secrets, our secrets—to bare them in front of the congregation—and I wanted the congregation to tell me that it was okay, and that I would be okay.

But I knew that I would reach the podium, adjust the microphone height, try to clear my head by clearing my throat, and say things I did not mean. My sentences would become hollow tubes that lodged in people's ear canals, not blocking them, but making everything else seem a little quieter. "I know this church is true, I know this church is true, I know this church…" they would hear, over and over, and they would believe me.

It was the meeting of my two testimonies—the one I had, and the one I had lost somewhere under the bishop's framed prophets. I would give false witness, the hardest kind to bear. It would be a greater sin, I felt, than any I had ever committed. Forpetuity seemed inescapable. I would pay permanently for this lie, for what Hyrum and I had done, and for the blank space I had left in the mirror.

My parents imagined the Celestial Kingdom as an eterever, but I had come to think of it as a place that did not need me, that did not want me, and that did not exist outside of my mind—an eterfinity that would be just fine without me.

I did not tell Sister Porter any of this before, during, or after her monologue about Joseph Smith's Restoration of the True Church. After the tour was over, I shook Sister Porter's hand and thanked her for showing me the grounds.

"I had forgotten what it was like," I said, "to be here, in this place."

"You're welcome," she said, and although she looked confused, she just smiled and said she hoped I would visit my neighborhood chapel sometime.

When I got back into my car, the inside was so hot that I felt like melting, but as I spun around the curves of State Road 96, the heat traveled from the driver's seat to my body and from the steering wheel to my hands, transforming me, restoring me.

On the plane from Boston to Orlando, Lilly is sitting in a row with a mother and her Gerber-faced child.

"Look, Daren! Listen! There goes the landing gear! Feel! Your stomach? That thing? We're going up! See the wings turn? Circles!" The mother narrates the entire liftoff experience for her child, occasionally turning prophetic ("Soon the captain will turn off the fasten seat belt sign!").

Lilly is jealous of the child, who is being told how it will all happen, how everything will go down, should the flight go as it ought to, which the mother assumes it will. Everyone may now use approved electronic devices.

When the mother reaches for something in her bag, Lilly whispers, "The plane could crash," to the boy, and the mother does not notice, and the boy does not know enough to look scared. She stays silent for the rest of the flight, satisfied at having spread the knowledge that the way life is supposed to be is not the way it always turns out.

"Bye!" she says to the boy as they travel down the walkway from the plane to the terminal. He stares at her for longer than would be polite if he were an adult.

Lilly ignores the weight of the luggage strap on her shoulder and forges through Orlando International Airport's central atrium, smiling at the indoor palm trees, the pale tourists, and the golf-shorted snowbirds. *It certainly is strange*, she thinks.

At the exit door, past the Disney store and the Sea World store and the Space Center store and the store that sells domestic objects found in shipwrecks, she does not pause. The sun hits her at the same time as the wall of humidity, and she feels like she is swimming through the air.

“Taxi,” she wants to say, like a fancy person, but she is waiting for the official shuttle to The Villages. Her grandparents have made a reservation. Her name is on a list. Everything is taken care of.

Lilly, 18, is on her graduation trip. Whereas most recent high school graduates go to Europe (if their parents have many dollars), go on a road trip (if their parents are lenient and they have a friend with a beat-up car), or go nowhere but places they can surf to from the couch, Lilly has chosen to visit the United States’ largest retirement community. She has brought her diploma along so that her grandparents can make a copy to frame and place in the guest bedroom.

When the shuttle arrives, a man whom Lilly has not noticed slides his hand under hers on the grip of her rolling suitcase. He is wearing a Hawaiian shirt with the top two buttons undone, revealing a chest that is either balding or poorly shaven. He wears shoes that suggest he is getting on a boat, not a bus, and he carries only a tiny overnight bag. Lilly suspects it could not hold much more than a shaving kit and an out-on-the-town outfit.

“Would you like me to put it in for you?” he asks, his hand still touching hers, trespassing on her luggage.

Not being versed in how to reject semi-sexual politeness, she says, “Sure.”

“Where would you like me to put it?” he asks. “There?” He leads his arm over her shoulder.

“That’s good,” she says, quickly, then thanks him, then fairly sprints to the bus’s entrance, which has been lowered hydraulically to lower the possibility of broken hips.

The driver checks Lilly’s name off the list, and she sits in the front. Even on a bus of retirees, she feels that she is not socially deserving of the back seats. The man sits in the seat across the aisle from her, and a woman he apparently does not

know sits next to him. *Drawn together by some inexplicable force*, Lilly thinks. Then, *Shut it, drama queen.* The shuttle transports itself through the maze of this-way-for-that-that-way-for-this airport lanes.

"We should be arriving at Lake Sumter Landing around four ten pm," says the driver.

Out the window, Lilly sees Sago palms and 7-11s. She tries not to turn and look at the man, who has told the other woman that his name is Bart, but he is the only person she knows here, and not looking at him feels like trying not to the look at the person sitting directly across the room in class. You have no real reason to look at them, but there they are, whenever you look up, there they are, and then you want to say, "You're just in my eyes' way. I don't want to stare. You are not important to me, nor do you have something strange on your face." And every time Bart catches her turning, she wants to tell him that there is no reason she watches him when he accentuates his speech by touching the woman's hand, but that would just be awkward and, she admits, untrue.

Jared sat directly across from her in Calculus. He often mistook her eye contact for something purposeful, and he thus smiled back. Sometimes he even waved, which made Ms. Eissler question aloud whether or not he was truly paying attention to the derivatives. Lilly was glad that now school was over, and she would not have to see Jared, across a classroom or across a dance floor or across his father's car's center console.

When she thinks about high school, which she does often as it only ended a week ago, one experience stands in front of the others, big and monstrous, blocking light from days spent talking to her English teacher about banned books and skipping class to go to lectures at the university downtown.

Two weeks before the dance, Lilly heard that Jared Adelman wanted to take

her to Prom. Though she rolled her eyes, she was glad that there was someone, however undesirable to everyone else, who desired her.

He:

- liked to wear black shirts with a) declarative statements (I see stupid people; my white shirt is dirty; can't sleep clowns will eat me; etc.), b) Star Wars collages, or c) Chinese New Year-esque dragons.
- carried around books about the potential use of black holes as time travel devices.
- had transition lenses perpetually stuck in that urine yellow phase.

She:

- wore skirts and cargo shorts that were the always unflattering mid-calf length.
- spent lots of time creating ponytails without flyaways.
- carried philosophical and/or dystopian novels meant to be seen by others.
- did not speak much because she was convinced of both her mental superiority and inherent inferiority, relative to others.

Their conversation:

J: Have you heard about Prom?

L: I'm alive.

J: Do you want to go to Prom?

L: No.

J: Me neither. I'm reading this book about black holes.

L: I'm not.

J: Your hair looks nice.

L: It looks like same as always.

J: I know. Want to go to Prom with me?

L: Okay.

The truth was that she'd always thought that Jared would make a good college boyfriend, and thinking about his future qualities—the ones he would have once his interests diversified a bit and his hand gestures became slightly less palsied—made her feel less antagonistic than she always acted toward him.

To Prom, Lilly wore a dress her friends called "grandmotherly" because it was not sleeveless or skintight.

"I look nice, though," she said to them, and when they laughed and repeated the word "nice," she laughed, too.

On Prom night, Jared said, "You look nice in a pale purple," in her ear, during the first slow dance, when his erection bobbed against her leg, and then he looked intently at the place where the wall met the ceiling, and he pulled his pelvis back.

Lilly felt powerful. The action—parallel close body contact—had led directly to its consequence—increased blood flow to Jared's private region. She hoped that while he had once had illicit thoughts about Carrie Fisher in that gold bikini, he would now sometimes dream of her in formal wear.

Once Lilly saw the dent disappear from his pants' spacetime, she again closed the gap between their bodies, and the same thing happened. Three more times she did this—enough experimental trials to be reasonably sure the result would always repeat itself, an endless loop of blueballed swaying.

"This dance is stupid," Lilly said.

"We can go if you want," said Jared. "But, I mean, only if you feel like

going, and I don't even know where we'd go, because not much is open right now, and I don't want to be back at home if I don't have to be, but if you don't want to hang out, that's cool, too, I understand, but if you do, I think there is a movie or there is always that park and sometimes the Steak 'n' Shake is—"

Lilly dragged Jared back to his father's car and began to do the things she suspected people did in this situation, a combination of her physiology's instructions and intimate scenes from books. Lilly and Jared's breaths could barely be heard, as they both tried to regulate the ins-and-outs to a normal, nothing-is-going-on pace. Lilly appreciated that Jared did that, that when she touched the button-fly of his tux, he did not jump or tense or gasp, that when she finally touched the thing itself, through the cloth of his underwear, he did not breathe at all, did not even close his eyes. He just sat frozen into the passenger seat, staring straight ahead at the school's administrative offices. Lilly did not turn toward him. She moved her right hand up and down and then in tiny circles, a penny at the bottom of a gravitational well. No one would have guessed that she was trembling.

They both faced forward and shook and thought blank thoughts and then, "Stop," Jared said. "It's—" and then it was over.

Lilly could not stand the look on his face when it happened. The way he didn't care that she saw it that way. She wanted to punch him.

From then on, whenever she looked at him, she saw that expression. If only they had done it in the daylight. His transition lenses would have adjusted, at least, and she would not have seen the way his closed eyes looked—concerned and innocent, like a stray dog that was being petted for the first time—though she would still have seen his mouth, which was loose, and his nose, rabbit-scrunched.

She hated that she had made him into such an animal, defenseless and invaded, a combination that she found insidious.

Hit him, something had told her. *Wipe that look off his face.*

So she did. She hit him, and then she got out of the car and ran home, biting her lip the whole time so that, with each step, her teeth dug a little farther in.

It could never happen again. After Prom night, Lilly would not look at Jared, or his black eye, so she did not know that whenever he said, "Hi," he was not looking at her, either.

A week later, after the bruise had yellowed, Jared approached Lilly at her locker and handed her a stack of papers with the title "An Explanation of My Feelings on the Matter via a Fiction about Luke and Leia."

He inhaled sharply as he passed it to her; his face tensed, tensed, then released.

"Bless you!" yelled someone on the other side of the hall.

The first page of the five-page metaphor was covered in snot—the clear, not microbe-hued, kind—the shine smearing the words of the set-up. But Lilly neither noticed nor cared, as her brain only had room for the generosity it currently felt for the sniffling, watery-eyed boy next to her. She wanted to nest in his "I do what the voices in my wife's head tell me to do" t-shirt, even as he looked at the floor and apologized for ruining her story.

After that, whenever a boy she found attractive sneezed, Lilly felt the same aroused, emotional tug, and that consistently led her to desire the boy. But then Jared's unguarded face always appeared in her mind, and she felt violence, hot as blue, rise through her arms.

She has been storing up memories of sneezing boys, sometimes men, and she plays these videos back to herself, at night, after she has warmed her hands.

She loves the tiny second of the actual sneeze, when the person's heart actually ceases to beat and his eyes close and he cannot stop the course of events on

which he has been set. She loves that something—a dust particle, a piece of dander, a mold spore—has invaded the man and caused him to lose bodily control and substance.

She loves that the "something" is not her, that the person's vulnerability is not her doing, or her fault.

She has not kissed anyone since Jared. The experience was singular. *A singularity*, Lilly thinks, now, smiling at her clever metaphor. Infinitely small but able to pull her in, stretch and then crush her. *Something even light cannot escape*, she thinks. Then, *That doesn't mean anything, stupid.*

At Lake Sumter Landing stands a group of widowers awaiting lovers and retirees awaiting out-of-state activity partners. This part of The Villages is meant to resemble a Cape Cod town—no, the vision of a Cape Cod town seen by someone who has studied the Encyclopedia Brittanica entry. The buildings are like jeans—artificially faded and worn, brand new but too cool to look it. Even the Starbucks has a chimney. A trash can—like an emergency phone on college campuses—is always in sight.

The people from the shuttle hug and backslap and how-was-the-trip their way to their loved ones' golf carts, which will carry them to plotted homes, to driveways with personalized concrete coloring.

"Hi, Grandma," Lilly says.

"It's been so long since we've seen you!" says her grandmother. "When will you be visiting again?"

"I haven't planned that yet," says Lilly.

"Well, work it out," says her grandmother. "We always want to see our perfect granddaughter!"

Lilly's grandmother does not see the parts of her that aren't good—the ones that punch little boys, the ones that want to slam the front of the golf cart she will soon be driving into the backs of the other shiny, customized carts, carts fashioned to resemble Ferraris and Dodge Rams—and she is at once grateful and sad that this woman can never truly know her.

They get in the golf cart, and Lilly drives it to the house, where she parks it in the right side of the garage, which has its own tiny automated door. When she walks inside, she can smell garlic and tomatoes and her grandfather's sweat. He wears a chef's hat and brandishes a santoku knife.

"Hi, baby," he says. "Taste this."

While her grandfather cooks, her grandmother goes to the piano, as she always does when her husband is cooking, and plays "A Wonderful Guy" from *South Pacific*. The two old people smile at each other, an easy admiration passing between them like telepathic waves.

"I'm as corny as Kansas in August," her grandfather sings. And he is, and they are, but that seems right, exactly as it should be. Things, for them, have gone just as they should have ever since they met: they met, they married, he lived on a submarine for six months until the war was over, they bought a house in the suburbs, they created children, and then their children did the same things, minus the part about the submarine. So far, Lilly is the only one who is not on the right track, but no one knows because she is not old enough to actually have jumped the tracks.

Out the back bay window, Lilly can see the tenth hole of the Glenview Golf Course. Her grandfather plays the full eighteen holes four times a week. When he first retired, when Lilly was young, he played every day, but he is a few years older now, has had few more melanomae and a few more doctors' warnings.

Lilly used to ask him if he would "go pro." She could not imagine anyone being better at golf than he was.

He said, "I don't know, but if I do, you can be my caddy." Lilly asked if this meant that, like a child star, she would get her education via a private tutor in a fancy tour bus. This was her main concern. "Yes," he said, "if that's what you'd like."

She thought for a moment, then said, "No, I want to go to the school other people go to."

"But you would get ten percent of my winnings," he said. "How could you turn that down?"

"Money ruins people, anyway," her grandmother said.

Lilly smiled and agreed, although she only got allowance and did not know, and although later she would suspect that things even more abstract than money ruined people, too.

"Not my Crampy Grampy," Lilly said. It was a name Lilly's grandmother called him sometimes. Lilly crawled onto Crampy Grampy's lap and said she would just come see him sometimes in between his competitions.

"I'll have to go on tours with him," her grandmother said. "I can't let him out of my sight for that long." She put one hand on his head and one hand on Lilly's.

Lilly knows now that her grandmother must have been smiling when she said that, though at the time Lilly thought it was all very serious and literal. She has observed that teasing is an important component of loving. She wonders if her grandparents have always been that way with each other, or if it is a learned behavior, and if it is a learned behavior, whether they only had time to learn it after retirement. Lilly is a sincere person, and although she sometimes says things that people think facetious, she is usually just serious and misunderstood. She wonders

if this makes her incapable of loving.

Lilly hears her grandfather beginning to grind pepper into the red sauce, and she says, "Are you grinding something?" in order to connect herself back to the present moment.

"No," he says. "Definitely not. Are you?" He smiles out at her, innocent and unaware of innuendo.

Lilly goes to the guest bedroom to unpack. She loves the guest bedroom. It has a white poster bed, grandchildren's framed school pictures (the old ones were never removed—third-grade Lilly sits next to high school graduation Lilly—as if none of them are allowed to forget themselves), a collection of coloring books that ninety percent of the grandchildren have outgrown but that Lilly still uses sometimes, filling the dinosaurs' outlines in with purple and turning the sky red. She puts her clothes in the drawers, even though she is only staying a few days, and she compresses the piles once they are in place, squeezing the air out so they are as invisible as is possible while they still have mass.

She looks up at the picture of her grandfather holding her above his head in her grandparents' pool. She is captured, in that moment, wearing a brightly patterned bathing suit and a smile missing two teeth. A second after that, she knows, she was scared and alone in the air. When she was that small and manageable, Lilly's grandfather used to toss her into the air above water and catch her just before she hit the surface.

"Don't mess up!" she said. "Promise, Papa?"

"Promise," he said, and because he was a man of his word, he stopped throwing her when she became unwieldy. Flying, he called it.

He taught me that you should fly only when you're sure you won't fall, she

thought. *Then, God, I sound like an idiot.*

If he were to throw her now, Lilly knows, she would crash into the water, but he would never do that, and she would never let him, because that was not the way flying was supposed to go.

"Put on a nice outfit!" her grandmother yells from the kitchen. "We are having a guest!"

Lilly has never understood this desire to look "nice" for people you don't know. Either they think you dress this way all the time (which you don't), or they sense your discomfort and know you would prefer something simpler than what is currently on your body. You're either fooling them or you're not fooling anyone. But she closes the door, and she is alone with the air conditioning noises that she used to imagine came from things wild and predatory. After putting on a sundress and some mascara, she goes back to the kitchen.

"Hello, Lilly!" says Bart. One of his elbows leans on the Formica island, its loose skin puddled away from the bone. "I live next door."

He has come, Lilly is informed, for the traditional "Dinner and Dead Bodies" night, when they all get together, eat, and watch formulaic crime dramas with swaggering detectives who are personally and emotionally affected by each case.

At dinner, sometimes her grandfather speaks, sometimes her grandmother speaks, and sometimes they both speak at once. Bart talks the most, and he laughs often (often at things he has said), but when he lifts the fork to take his last bite of pasta, his face wrinkles more than it normally does.

It seems, to Lilly, that everything at the table ceases as he sneezes. Conversation stops midsentence; forks stop midway to mouths; Bart's heart stops as his body forgets, for a moment, its purpose. Lilly thinks that surely he will drop his fork, but instead his fingers tighten around it.

"Oh, boy," he says when it's over. "Excuse me." He gets up from the table in order to obtain a tissue, leaving Lilly at the table with a low-down pulsing that feels like he has punched her below the belt, and like it will leave a bruise. Bart returns to the table, and everyone finishes the meal as if nothing important has happened. Lilly feels very alone.

When dinner is finished, Lilly, her grandfather, and Bart migrate to the living room in order to complete the "Dead Bodies" portion of the night; her grandmother insists on cleaning up the dishes, on washing them immediately so that "nothing gets sticky."

Almost as soon as the ba-boom opening theme song is over, Lilly's grandfather begins to snore. From the kitchen, a voice calls, "Typical!" and it is.

Lilly is sitting in the brown leather easy chair next to the brown leather easy chair in which Bart is sitting. "Hell of a show," he says, whistling at the television screen. "Hell of a show."

Then, as if she has not responded because she has not heard him, he says, "Hell of a show, isn't it?"

"It certainly is," she says, and she turns her head to face him when she says so, because that is the polite thing to do when speaking to someone.

She can see that he is looking at the zipper of his high-waisted golf pants, and it takes her a second to get past "Why is that part of his clothing so far above his body?" to the realization that he, like Jared, has an erection. Bart stops staring at his anatomy and begins to stare at hers, at the line her legs make where they cross.

"Yes, it's one hell of a show," he says once again, but more slowly this time. "Yes, it is." He looks at her expectantly, as if it is her duty to get rid of this thing that she created, a thing of which she is a little bit proud. And because she thinks, *Yes, I did this to him. I should deal with it*, she moves her hand toward him. But

then she hears his breaths ragged like the edges of clouds, and she sees, peripherally, the way his head has leaned itself back against the armchair's leather head rest. She sees him watching her, interested like she is giving a passionate lecture. She hates all of this, how open he are, how accepting of her and her presence, and it is this acceptance that makes her hate him.

When she feels her own hand, two inches from his body, tightening into a ready fist, she tries to relax it by telling herself that she can do this, that when it is over, it will just be like he has sneezed. Her poised hand relaxes a bit, but then she has to command her other hand to stay at her side, like a dog. Bart makes a tiny, low noise.

She knows his climactic moment will be repulsive to her, as long as she has some part in it. She knows that she cannot do this, that she can never do this, or anything like it. Lilly jumps up and smooths the skirt of her dress down.

"No means no," she whispers.

"You didn't say no," he whispers back. The animal in his trousers and the animal in his face are dying, though, so Lilly retires her hands.

Several minutes later, Lilly's grandmother emerges from the kitchen, kicks her husband's foot so that he wakes up. "Resting my eyes, just resting my eyes," he mumbles.

"What'd I miss?" asks Lilly's grandmother. "Is this that one about that pedophile?"

Bart grabs a tasseled throw pillow and places it on his lap in such a nonchalant way that this cannot be his first cover-up.

Her grandparents do not notice that anything is off.

We cannot conquer ourselves, she thinks, aphoristically. Then, *What is wrong with me?*

After the episode is over, Bart rises, pats his stomach, and says, “Well, it’s about time for me to be heading back. I had one hell of a night, though. One hell of a night.”

Through the window, Lilly watches the circle of his cigar as he crosses the kept grass.

The next day, Lilly and her grandmother are scheduled to go downtown. Lilly feels full, like crying might relieve the pressure, but she does not want to ruin her grandmother’s nice day, so she smiles a lot.

“I didn’t take a shower,” her grandmother says as they pull out of the driveway. “I thought about taking a shower. That’s enough for me.”

“You’ve earned that right,” Lilly replies.

“None of them look at me anymore, anyway. They’ll all look at you.” She adjusts the collar of her light button-up. “I hope you showered.”

They continue their drive past the neighborhoods—the villages—each named after either an idyllic setting or a professional golfer, each with its own same-named clubhouse. Glenview Champions, Hacienda Hills, Palmer Landing.

“I see you got a woman,” Lilly says as they pass the new Nancy Lopez Legacy Country Club.

“What?” asked her grandmother. “Who got a woman? You?”

“No, Nancy Lopez. The golf course.”

“Oh, because we were beginning to wonder about you,” she says. “What age do you want to get married by? I say twenty-five.”

Lilly does not know what to say, as she cannot see herself in a white dress, no matter how customized, and she has never really considered what appears to be the only other option. “No,” she says.

“Lighten up, kiddo!” her grandmother says. “You’re a modern woman! You can do this whole love thing however you want to, right?”

“Theoretically,” she replies.

Lilly and her grandmother arrive at the carefully constructed waterfront and step along the boardwalk. Behind them are machine-weathered restaurants that serve food with mild spices and souvenir shops that sell blown glass and matching his-and-hers golf clothes, monogrammed, of course. Below them are anchored boats owned by the city and used by no one. Across the lake is a neon golf green where people who have natural ability and time to practice can hit par, every time. Couples walk arm-in-arm down the boardwalk, smiling and depositing their cups in the proper receptacles.

Lilly imagines growing very, very large, so large that she shades a significant portion of The Villages’ downtown area. So large that she can crush the docks, which she does, sending both ice cream stands and cabana bars into the lake, where the patrons are devoured by the alligators that the city developers loosed back into the water two weeks after they transformed Swamp Sumter into Lake Sumter. Lilly does not see how that is possible, how you can just change something into something else. Something that it, inherently, is not. Surely, Lake Sumter is just fooling everyone, and, a few feet under the surface, it is growing the ugly, slimy plants that no one wants to see.

“Isn’t it lovely?” asks her grandmother.

“It’s perfect,” says Lilly.

SECTION TWO

In the beginning, there was a singularity, and it was hot. There was no space in the universe. No dimensions. No up, no down, no sideways, no time. Before the Big Bang (and "before" is the wrong word, since that would imply that there was a time period before time was created), everything in the universe lived in a space that did not take up any space. It was infinitely small, a size that our brains cannot interpret. The energies and forces that produced us were stuffed into that overfull nothing. We were in there, waiting.

Then it all banged. Big-time.

BANG.

Onomatopoeia is the best way to describe the first event in the universe. Our inadequate physics cannot describe anything from t=0 seconds to $t=10^{-43}$ seconds, which may not sound like a lot, so you may say it doesn't sound important. However, that is kind of like saying, "The moment right before I die? It's not important. I'm not really interested, because it will happen extremely fast."

From a large-scale, zoomed-out perspective, the universe is homogeneous, like milk or simple syrup. If you stood in the vacuum of space, everywhere your eyes wandered, and no matter how far you went from your starting position, the view would be the same: emptiness, for the most part, punctuated by galaxies grouped together and linked by filaments like fingers, or like dendrites.

Matter is done being created. What we have is all we've got. And

everything we've got is getting farther apart all the time. The pretty things—quasars and blazars and barred galaxies and nebulae and red giants and white dwarfs—have more and more space between them all the time. The ratio of stuff to not-stuff is getting smaller and smaller and smaller. We—humans on planet Earth in the Milky Way in the Local Group in the Virgo Supercluster—are at once becoming less statistically significant, more cosmically exceptional, and more alone.

The universe is expanding, has been expanding, and will continue to expand, at a faster and faster rate, like a bicycle going down a hill, a hill down which it has already been rolling for 13.7 billion years.

The diameter of the universe is approximately 156 billion light-years, meaning that if you shone a flashlight beam from one end, it would not reach the other end for 156 billion years, almost twelve times the age of the universe. This distance is equivalent to 1,3450,000,590,000,000,000,000,000 football fields.

In the beginning, the four fundamental forces—gravitation, electromagnetism, the strong nuclear force, and the weak force—were only one force, the fundamentalest force.

The forces were united for only 10^{-43} seconds after the Big Bang. After that, gravity and the strong force went off on their own, interacting with the others only when they happened to bump into them. Later, the other two fundamental forces also made themselves alone.

After the split, the universe doubled in size every 10^{-35} seconds. By 10^{-32} seconds after the Big Bang, the universe grew from a tiny 10^{-23} centimeters to a reasonable ten centimeters.

Ten centimeters. This is perhaps the first number big enough for the brain's fingers to grasp. It is the size of a long French fry, a short pencil, a toddler's Velcroed shoe, the diameter of an adult's fist.

Everything in the universe—all of the material that became you and became me and became stars and became galaxies—was no bigger than your fist. And, as they say in introductory biology and trivia game shows, your fist is the size of your heart.

10^{-32} seconds after the Big Bang, the universe could have been placed inside your chest cavity.

If I were a heart surgeon and could time travel, stop time, and stop our skins from vaporizing, I would go back to when time was only 10^{-32} seconds old, when the universe was young and tiny, and I would put everything inside of you. I would connect your circulatory tubes to the universe, and then I would stitch you two in together, and the universe would beat blood through your body.

Because the universe's inflation was so fast, we cannot see most of the universe. In any direction you can look, there are 64.3 billion light-years of space that none of us has ever seen. That none of us can ever see no matter how hard we strain our eyes and no matter how fast we make our flying objects. We are completely cut off from them. 64.3 billion light years is the height of 362,868,036,000,000,000 people (60, 478,006 times the population of the earth) stacked on top of each other.

Instead of feeling isolated, think of it this way: the atoms right next to you mingled with the atoms that became places you will never see.

Protons are decaying like radioactive atoms do. At the end of every

10^{32}-year period, half of the protons that existed at the beginning of that period will be gone. Luckily, we have not even reached the end of the first period.

But isn't it strange to think that everything around you, at even the atomic level, is slowly dying? Slowly changing form? Slowly becoming something you cannot see or recognize or interact with? Little by little, the universe is ripping itself away from you.

But for now it's here, and its protons are intact. For now, we can't feel our subatomics sloughing off. For now, in every direction, the universe is churning along, following its laws and being itself, and aren't we trying to do the same things?

After Ann Larsen was born and was placed into her mother's arms, the attending doctor noted that there was something peculiar about her eyes: they moved too much. They traveled up and down the pastel blue walls, swept the hardwood floor, paused on the low-light lamps and the crown molding and the sensor clipped on her mother's finger and, lastly, on the doctor herself, who stood slant-backed and cross-armed and sweaty at the foot of the Mansfield Tri-County Hospital's birthing room bed.

"I've never seen such an active baby," the doctor said.

Directly in front of Ann was a bay window, but the curtains were drawn, and because she did not know how either curtains or windows worked, she thought that this birthing room was the whole of the world, though she would not be able to say so for years, when she would have forgotten anyway.

Her eyes surveyed the world: armchair, bassinet, cords, defibrillator. Ann saw all of the medical equipment, but she knew none of its names, guessed none of its purposes, and was not even aware that she should care about anything beyond appearances.

Ann blinked at the parabolic Health-o-Meter Baby Scale, as if in optical Morse code contact with it. When, an hour before, she had been cradled in its curve, the doctor had slid the weight to 5 lbs, 3 oz, before it balanced. "A tiny thing!" the doctor had proclaimed as if some newborns were colossal and she was personally proud that Ann was not.

Ann's mother had cried then, upon hearing that this was the amount of matter in her daughter, that five pounds and three ounces were all that separated Ann from being nothing.

Roger and Clarissa called the doctor on the drive home from the hospital.

"Something's wrong," Roger said into his cell phone, which had a special local service provider because they lived so far into the mountains that national providers seemed convinced no humans had settled the territory.

"It is doubtful," said the doctor, a medical magic eight ball.

"The books said that the hum of a driving car would lull the baby to sleep, but she just keeps staring," Roger said. "It's kind of creepy."

"Roger, tell her that she's not crying," Clarissa said, hitting her husband. "*She's not crying*," she repeated loudly in the direction of the mouthpiece.

"Oh, you two," the doctor said, as she had experienced this overanxious behavior before, when Roger thought that second-trimester Clarissa was not urinating often enough, and when Clarissa thought that the seven-month fetus was not kicking hard enough and, thus, that she would have underdeveloped calf muscles upon birth.

"Call me if she stops breathing," Dr. D said.

As the car traveled farther and farther away from the birthing room, Ann's world expanded, the space that existed growing to encompass sagging double-wide trailers, vintage car collections with rusty wheel wells, feed stores, signs for towns with small populations. But these man-made objects were anomalies, and, mostly, Ann saw green.

Roger and Clarissa owned a simple little house on a simple little hill where they hoped to live the simple life. They failed to realize, however, that life is not made simple by lack of vehicle traffic or 250 television channels: it is made simple by lack of electron traffic on brain channels, a lack which both Roger nor Clarissa had, which they thus failed to pass on to their daughter. This inheritance became apparent as soon as Ann could speak.

Ann Larsen learned to read by picking up books, surveying their illustrations, deciding what she thought was happening, and narrating the events aloud.

"Listen to me read," she begged her parents while they sat in monochromatic armchairs and read their own books. She wanted to fool her parents into thinking she was a literate being, because she wanted to be and because she knew they wanted her to be. Ann sensed, already, at the age of almost four, that Roger and Clarissa thought her different from other children. She had heard her father talk about his friends' children, who fought over the white gummy bears and conversed primarily about who could build a better block castle.

"She is so beyond all that," Roger said, a twinkle in his eye like a rhinestone in a flashlight beam. But the truth was, Ann would have joined the other children in throwing pine cones at each other and repeating dialogue from animated feature films if she had been allowed to watch movies or had known some other children.

In truth, Ann knew only letters. She knew their shapes and their sounds, the atoms of language. Ann saw letters squished against each other, and sometimes she tried to sound out words, but she did so in a whisper, in case she was saying them incorrectly. Then, one day, like neural magic, she looked down at Peter Rabbit and whole words—not sets of letters, but something different—sprang into her eyes.

"Once upon a time there were four little rabbits!" Ann said. She jumped up and down and then stopped in case her parents caught her acting unlike them. Ann felt so full of letters that she thought she might burst. She could feel them pulsing up and down her arms, crossing the blood-brain barrier, sitting under the soles of her feet. She had, however, no other little rabbits to tell.

"Can I get some friends?" she asked her mother.

"Sure, honey," her mother said, but nothing happened.

Friends didn't deposit themselves on the Larsens' doorstep and ask about Ann's interests and well-being. She was forced, though her parents probably

wanted to sell it and thus would have disapproved, to talk to Rover, her stuffed dog.

"Today I ate breakfast, and then I played outside, and then I colored with my crayons, and then I ate lunch, and then I read about animals like you but who can talk, and then I came to talk to you," she said. "What do you think of that?"

He remained shiny-eyed and attentive and silent, like a pupil. But Ann didn't want a pupil, so sometimes she flicked his plastic nose or slapped his cloth cheek, but she always felt bad afterward. Rover couldn't help that his anatomy didn't allow interpersonal communication. She retained, though, some hope that he was alive, somewhere small inside the stuffing, and that he was just a really good listener.

"It's just that I want you to understand me," Ann said to him. "Blink once if you can understand me."

She waited, eyes centimeters from his, for a response.

When she went to sleep, she pressed her forehead against his brow and willed the two to meld together. That, she thought, was the only sure way to make a friend.

"Do you want to hear the alphabet?" she asked sleepily. "I know it all. Blink once if you want to hear it." He didn't blink, but sometimes she pretended she had seen a glimmer of movement, and she said the ABCs alone in a bed with an inanimate dog after bedtime.

"Is it time for kindergarten yet?" Ann asked on her fourth birthday when her mother was pushing her on the bucket swing that was in their backyard. Pushing a parabola through the air, she saw her Mary-Janed feet move from the ground to a point just above the mountains in front of her. She tried to pump her legs in the way her mother had shown her, but she could not get the timing quite right.

This was her first permanent memory: a feeling of frustration, an image of shoes above the treeline, the heady sensation of not knowing what was she was

moving toward but moving toward it nonetheless. The memory was more an atmosphere than a sequence of events, and because Ann did not have a sense of self-awareness, the memory did not contain a knowledge of Ann as a person with a body.

"It's almost time for cake," her father said as he came out of the back door, a chef's hat on his head.

While Ann's parents sang to her, she scraped her fingernail along the carved border of the table, getting dirt and crumbs under the crescent moon of keratin, because she did not like the spotlight, even when the audience was small and familiar.

"Do you want your present?" Clarissa asked.

"Yes, please," said Ann.

"You're going to pre-school!" Roger yelled.

"Pre-school?" she said. "What about real school?"

Roger and Clarissa laughed as if Ann were funny, but Ann was very serious. Sometimes, Ann felt the three of them were a unit, not labeled for individual sale. However, when fundamental differences in their perceptions of the world became apparent, Ann felt as if she were being taken from their package and set on a shelf of her own.

It was like they were all walking along the same path together, looking at willow trees and saying they looked droopy and at stick bugs and saying their camouflage was effective, and then Ann said, "Look at that pretty sparrow," and her parents replied, "That sparrow is ugly, silly."

On Ann's first day of fake school, Roger and Clarissa stood at the door of Step Ahead with their arms bracing the jambs. They were waiting for her to cry or express some anxiety at their impending departure, but Ann just said goodbye.

A boy threw an inflatable ball at her. “Catch!” he said, after it had already hit her in the head.

“Want to be friends?” the boy asked. “I’m Tom.”

Ann threw the ball back at him. “I am Ann,” she said.

Tom led her to a rug that looked like a town. It had roads with dividing lines, a school with a red roof, a church with a grey steeple, a playground with yellow swings, and houses of the same size and make. Tom grabbed a fire truck and began zooming it around, making siren noises without accounting for the Doppler Effect.

“You are not staying in the lanes,” Ann said.

Tom first handed Ann a school bus and then rammed his truck into its side. “Weeeooo weeeooo, out of the way!” he said.

As Ann pushed the bus slowly around the carpeted town, staying on the right and not ruining any of the grass, she said, “Wee. Ooo. Wee. Ooo. Wee.”

Tom laughed and said she was doing it wrong, but since he had laughed and she thought it was funny to be making the same noise as an official government vehicle, she decided everything was okay.

While paused at a stop sign that Tom had ignored at least four times already, Ann looked up at the letters on the wall. She remembered how wonderful it had been to see words for the first time, how it had felt to take them from the pages and put them inside her body. They had stayed inside her. All the words she read would always be with her.

“Do you want me to read you a book?” she asked Tom. A book: This would make him feel like it made her feel. This, she was sure, would make him feel like her friend.

“No,” Tom said.

Tom and Ann did not speak for a few minutes. Each child pushed a vehicle around the two-dimensional town, connecting at pre-determined intersections.

Ann decided to give Tom a compliment. “You are the new alphabet,” she said.

“What?” Tom said.

“The new alphabet,” Ann repeated. “It means I think you are the best because you are my best friend.”

“You’re weird,” Tom said.

Through Ms. Napier’s lesson on color, through the ensuing drawing time, and through snack time, Ann remained silent. When, at nearly one o’clock, Tom asked her if they were still friends, she said yes, though she did not think you could be friends with someone who didn’t understand what you were saying.

Tom said, “Come play stuffed animals with me.”

Ann walked with Tom to the pile of plush toys that sat in front of a full-length mirror. She watched the reflection as she and Tom settled down among their less animate friends.

“If you took a picture of us, we would look like a family,” Ann said.

“Look at my face,” Tom said, and Ann turned to him, but Tom was pointing at the mirror. He was trying to stick his tongue up his nostril.

“You live inside your face,” Ann said, quietly. She had never thought of it this way before. “And I live inside my face.” She knocked on her forehead, as if to see who was home, although she had just realized that she was the only person who could ever be at home there.

“You don’t live in my face,” Tom said.

“No,” Ann said, “you do. So I can’t.” It would have been like moving into an already occupied house, one with dead-bolted doors and an alarm system that required professional installation.

Ann moved her face very close to the mirror and looked at its familiar features as if she had never seen them before. “I am myself,” she said. Of all the

people she could have been, she was Ann Larsen. Of all the people other people could have been, no one else was Ann Larsen. “How did I end up being me?” Ann asked.

“You’re a girl,” said Tom.

Ann felt lucky and special to be herself, and to be here with Tom who was Tom, who was, she believed, her friend. Even though he was a different person who had his own life behind his face, he was also just like her, because she had her own life behind her face, too. They were, together, alone in the same way.

She thought about this for a while, and then she said, “Maybe we used to be one person.”

“Maybe,” Tom said. He put his tongue back in his mouth.

“Anntom,” Ann said. “I think Anntom is the new alphabet.”

“Yeah,” Tom said. “It probably is.”

In the early universe, it was dark, and the quarks were alone.

It's impossible to know what they were doing before they started coupling, but they did couple. Although nature does not, as Aristotle once thought, abhor a vacuum, it does appear to abhor isolation. The quarks came together when everything had cooled enough that the quarks could see each other's tiny, similar features and say, "I would like to stick on and with you."

Some of the quarks were tops, some bottoms. The charm quarks captivated the strange ones. The up and down quarks chased each other in different directions. When the quarks stuck together, they became something new, something with a new name: hadron.

Then there was a war in heaven. The anti-hadrons annihilated the hadrons (which was the point) and themselves (a side effect).

For every 10^{10} particles that met their ends, one particle remained. Each of these battles produced a photon, creating 10^{10} photons for every hadron that exists. The universe is much brighter than it is massive, more dazzle than substance.

When this prehistoric chaos was over, atoms could form. The already coupled quarks coupled with other already coupled quarks in a subatomic semblance of polyamory. Or, perhaps more aptly, polyaffinity, since love wasn't necessarily involved—just a kind of intangible attractive force, although that doesn't necessarily rule love out.

Every nucleus in the universe was formed in seventeen minutes. That is 10,063 fewer minutes than seven days, and the universe didn't

even rest.

If there had been more antimatter than matter, all the particles would have disappeared, leaving only light. Now that cosmologists postulate the existence of other universes, perhaps universes with different initial conditions, they say there could be a universe composed entirely of photons zipping past each other, wondering what they are there to illuminate.

At first, the atoms were positive but half-empty, missing electrons. Nature abhorred this, and the atoms waited, spider-like, in their webs of energy shells. Once they captured electrons, the atoms were stabilized and neutralized, though all subatomic particles retained their individuality, their charges.

This neutralization process is recombination.

During reproduction, strands of DNA split and then connect with new strands, forming a new kind of creature; this, too, is called recombination.

After recombination, the atoms ceased interacting with the photons. Like two train cars, they decoupled, 700,000 years after the Big Bang.

Only after this split between its parts was the universe transparent, meaning "able to be seen and understood."

It is true, in this case, that the beginning of one union signified the end of another.

Every time an electron fell in with a nucleus, the atom emitted a

photon, a piece of light like a wedding announcement.

Like with our marriages, forces that were not present during the honeymoon often ripped atomic marriages apart, or compelled them to change form. Fusion, fission, another particle, unexpected gravitational influence: all often ended in a violent outbursts.

The announcing photons are still all around us. There are $2x10^8$ of these photons per meter^3 of space. You are surrounded by the detritus of the universe's first relationships—the box of ticket stubs and symbolic knick-knacks and chapstick-kissed cards and photos still framed so that one day maybe she'll come back and then you can just set it all back up, just the way it was, or the way it would have been—that sits on the closet's top shelf, never quite thrown away.

THE EARLY UNIVERSE

Ann Larsen's eighth-grade physical science class was experimental. At first, she was not sure what this meant, as the course description only said that the teacher would employ “novel techniques.” Shining a laser in your eyes if you answered a question incorrectly could have been considered a novel technique.

On the first day of class, however, Ms. Dahl made the format clear: Instead of recopying the textbook’s glossary and answering the “critical thinking” questions (which involved summarizing a paragraph from each subsection), the class members were going to devise and perform their own experiments to prove to each other and to Ms. Dahl that Newton and Einstein and Bohr were right, even if they were dead.

“Don't take them at their word!” Ms. Dahl said. “Validate or invalidate them! I give you the power!” And then she tapped Daniel Cowgill with a ruler, as if knighting him. Although the students, in diffuse whispers, discussed her disrespect toward the most popular boy in school and mocked her solar system-themed jumper (focusing on the two asteroids flying across her breasts), they appreciated that at least one adult in the world thought they were responsible.

They felt mature and knowledgeable, and it bothered them that their parents complained “They think they know everything!”, because perhaps they did, and it bothered them that their parents analyzed the gel-penned notes left in their to-be-washed jeans' pockets and required passwords to watch certain sitcoms. Ms. Dahl, what a relief, believed that they were capable of having power without ruining their futures.

“Power,” Ms. Dahl said, “is the rate at which work is done.”

The students scribbled her words into their notebooks until Ms. Dahl walked to Ann's desk and slammed shut the cover of her Trapper Keeper.

“I hope that you little academic hamsters can generate a lot of power,” she said. “Now, go pick a table, and whoever is at your table is in your group.”

Ann sat at a table with Amelia. As far as anyone knew, Amelia had not spoken since fourth grade, making her, in Ann’s mind, the perfect lab partner. They both sat silently at the table and wrote in their notebooks. Ann tried to say hello, but she only succeeded in opening her mouth, because she was shy, and because someone yelled, “I claim Ann!”

Daniel Cowgill, the yeller, had a crush on her, or at least he had tried to put his foot between her legs under the lab table during Earth Science the previous year. She had turned to the side and put her heels up on the stool’s legs. Unaccustomed to attention at all, let alone illegal in-class come-ons, Ann had not known how to feel—how could she when there was no precedent? It didn’t really matter, though: She continued not speaking to him, and she allowed him to interpret her muteness and empurpled ears however he wanted. Because he was confident in his heartbreaker status, he said to his male friends, “Can you believe Ann Larsen wants me? As if.”

Daniel’s presence at the lab table necessitated Stacey’s presence: Stach followed Daniel. Daniel had clothes whose brand logos could be seen fifty feet away, and his facial hair would probably emerge sooner than any other boy’s.

The four of them were an unlikely group. Ann and Amelia sat hunched in a corner; Daniel pretended that his mechanical pencil was really his phallus; Stacy giggled. After a second, Ann joined in, just to see how it felt. Stacy stopped laughing and stared at Ann. It turned out that joining in felt like unwanted attention.

Ms. Dahl, about to explain their first “group exploration,” said, “What is funny?”

“They are pretending Daniel has a penis,” Ann said quietly, but everyone heard, and everyone who was not at Ann’s table laughed. It felt good. New.

“Unnecessary,” Ms. Dahl said. Moving on, she informed the students that their first experiment was architectural. “Using segments of wooden track,” Ms. Dahl said, “construct a roller coaster for a marble. Try to maximize its pleasure. Today, you plan; tomorrow, you follow through.”

When the students were set loose, Stacey said, “This is fucking stupid,” pausing slightly before and after the “fucking,” as if even she were uncomfortable with it.

“You guys can just, you know, place your heels up,” Ann said. “I’ll do all the work.”

Daniel put the toe of his Adidas against her calf and moved it up and down like wrinkling her jeans would melt her heart. “But we’re a group now,” he said.

“Yes,” Ann said. “Exactly.”

“Great!” said Stacy.

“I want to help,” said Amelia, using very few decibels.

“You talk?” asked Stacy. (Amelia nodded.) “Hi. I’m Stacy.”

“I know,” Amelia said. “We all know.”

“Well,” said Stacy, “you don’t have to be a bitch about it.”

“Are you sure you want to help?” said Ann. “It’s going to be pretty hard.”

Amelia nodded. “I like roller coasters,” she said.

Stacy and Daniel went back to their imprecise, unhoned flirtation.

Although Ann and Amelia drew separate plans, they compared the images, communicating with their fingers. A point meant “this corkscrew must stay”; a shake meant “the descent of that hill isn’t enough to compensate for the ascent of the following one.”

After they had been working for thirty minutes, the bell rang, and Ms. Dahl said, “Did everyone get a good start?” Few cared if they had, and the ones who did were quiet, so everyone who said something said yes. They were dismissed.

Ann panicked—they most certainly were not ready. As Ann's adolescent neuroticism made her prone to downward mental spirals, she thought the following: *Because I did not plan enough, tomorrow I will fail to make a great roller coaster, therefore I will also, in the future, fail to adequately plan everything, therefore I will fail to make a great anything, therefore I am not worthy of anything and therefore someday I will die from choking on the cat food I will be eating in my studio apartment where I will be living alone. Forever.* Then, *No*, she thought, and did something that would put a chink in the chain of events.

Ann flipped the lock on the window next to her so she could return that night after even the most dedicated teachers had gone home. No one would notice that the lock's lever was slightly up instead of slightly down.

"Give me your drawing," Ann said to Amelia.

"Why?" said Amelia.

"Because it's good," said Ann.

"How was your first day of school?" Ann's mother asked her when she got home. Ann had been giving her mother ESPN-worthy play-by-plays of her school adventures for eight years. Even in kindergarten, when Ann would not speak to anyone at school, not even if asked a direct question such as "Which one is the letter Y, Ann?", she came home and made hour-long speeches about who stayed awake during nap time, what transactions took place on the lunch table stock market, and how some people gave wrong answers to easy questions.

"Fine," Ann responded, starting toward the stairs. Though she expected her mother to pursue the matter and invite her to sit at the kitchen table and eat a healthy snack, Ann continued to walk toward the stairs unpursued, and no one knocked on her door, which had a newly added "Please knock to gain entry" sign at her mother's eye level. Ann did not return downstairs until dinnertime.

“Don’t you want to hear more about my day?” Ann asked at dinner.

“You don't want to talk about it, do you?” her mother said, and then looked at her plate, where her fork was reshaping piles of food. “I figured you were old enough to choose whether or not you conversed with me.”

Ann’s mother read teen psychology books: *Where’s Your Head*, *Why Do They Act That Way?*, and *Get out of My Life, But First Could You Drive Me to the Mall?* These sat on shelves in the living room, just visible enough.

“I guess I am,” Ann said, embarrassed by this fact.

Ann and her mother used to talk every night, and Ann had confessed things: I “checked” my answers with my neighbor’s on the math test; I want to be an astronaut, no a writer, no a muckraker; I have trouble sleeping sometimes, and when I do, to try to fix it, I imagine that a man is looking in my window and will come in and kill me if I don’t look like I’m asleep.

That night at bedtime, Ann put her mouth against her comforter and blew, glad to feel the blanket become warm as far as the air reached. “I wish I had someone to talk to,” Ann said.

“You’re talking to me,” her mother said.

“I’m not sure you count.”

Ann’s mother put her palm across Ann’s forehead, as if she could tell her temperature was not what it should be, and as if she could do nothing about it, and then she left, without even singing their song. She had never not sung their song before.

At eleven pm, Ann climbed out her window, conveniently located next to a tree she’d been climbing ever since she gained enough muscle mass to hold her head up, walked the mile to school, and climbed through the window of her first-floor science classroom in Building Five of Jackson Heights Middle School. It was

not hard to do, once she lifted the screen out.

Inside, the lab was dark, and Ann had to try not to trip over the outlines of stools. She understood then why people were always telling you to push your chair in.

Even though she was there for something specific and permitted (at least between eight am and three pm and under adult supervision), Ann was rankled by the school system's emphasis on precaution. Pre-anything, really. Even in this experimental class, they were limited by the supplies provided by an authority figure. Ann could perform only the experiments that had been previously approved. Even the scissors were blunt-tipped.

The necessity of safe, predetermined processes had bothered Ann ever since she had received her first chemistry set at age six. She had asked for one for her birthday, imagining the joy of turning her room into a tangle of beakers and pipettes and concoctions like soups that only she knew the recipes for. However, when she opened the gift, she found that it came with measured chemicals and set instructions.

"What is the fun of this if someone is telling me what to do?" Ann asked her mother.

"It's safer to do what they say," her mother said, "until you know what you are doing."

Now, at age thirteen, Ann was sure she knew exactly what she was doing, and not just in reference to building tiny roller coasters. She sat at the place she had chosen that morning and sketched a design that incorporated the best of both her own and Amelia's original drawings. When she had finished making loopy but precise No. 2 mechanical pencil marks, she went over to her group's cabinet and took out the allocated tracks.

Last year on a field trip, she had stood in line for Six Flags's Batman ride

seven times, running to the back of the line as soon as the harness hydraulicked itself off her body, catching her breath before making the corral's first hairpin turn. Her chaperone, a bleached woman who was more interested in buying stuffed animals ("As presents for next Christmas!") than in watching her charges, had said Ann could go it alone, repetitively, on the Batman. When, at the end of the trip, they all met up by the bus, Ann informed the chaperone, "I have been turned upside down 49 times today."

The chaperone said, "How many times have you been right side up?" and handed her souvenir bags to the school bus driver, who stared and said, "Lady, I am a school bus driver."

When Ann was finished with her marble-pleasuring device, she set the marble at the top of the first hill, and as it fell she listened to the dull scrape of the friction and felt as if she herself were on the ride. As if she herself were rolling along faster and faster until, through some natural but external force, she was thrown upside-down, and she felt as though it were the first time, although it would have been at least the fiftieth time, if it were happening at all.

As the marble arced off the end of the track, traveled through the air, and hit the wall before hitting the ground, Ann wished that someone had been there to share the success. Maybe Amelia could have been there. It would have been awkward, but even the awkward sharing of achievement is better than watching a marble alone in a dark room.

Ann put everything back where it belonged and walked home, planning to sleep well knowing that tomorrow's curves and loops were planned out in advance.

When Ann got home, her mother was waiting on the couch, a book open to the first page.

"Have you been drinking?" her mother asked. "Were you out 'partying'?"

"What? No."

"Well, what were you doing, exactly?"

"Building a roller coaster."

"Be serious, Ann."

Ann was silent.

"You used to talk to me, you know."

"Well, now you talk to me," Ann said. "Children and parents often switch places as they grow older."

"This change happened so suddenly. Are you unhappy?" her mother asked. "If you're cutting or something, I want to know. Is it drugs? You can tell me. I can help. You're so sullen. You're not supposed to be sullen until you're fifteen."

"I was just doing homework."

"At one am?" her mother said. "Even if I believed that, there would be other problems. A different problem set, but a set nonetheless."

"I'm tired," Ann said.

After escorting Ann to the bedroom, her mother said, "Well, um, do you want me to sing you our song?" She paused. "You don't have to tell me anything. As long as you're okay." She looked at her foot, which was moving the carpet around as if it were peas and potatoes at dinner.

Because Ann was a teenager, and teenagers are full of unexpected surprises, she said, "Yes, I do," because she did.

Ann's mother had begun singing her John Denver's "On a Jet Plane" when she was a baby and had just never stopped. When Ann was old enough to think so, she said, "That's a weird song to sing to your daughter at bedtime."

Her mother replied, "It's my favorite. I gave you half your genes, so I thought it might become your half-favorite."

The next day in physical science, Daniel kept putting a hand on Ann's every time she attached a new piece of track.

"I'll help you put it in," he said.

She inched away.

Amelia was busy making the chart for their data collection. Every few minutes, she kicked Ann's ankle. When Ann looked up, Amelia looked down and smiled at her graph paper. It felt like they were friends, and maybe they were, since they were working toward a common goal .

Ms. Dahl had prioritized their experimental objectives: make sure the marble doesn't careen off the track and die, make sure the marble doesn't stop in the middle of the ride, and make sure the marble has the most fun a marble can have. Once the students accomplished these goals, they were to measure and calculate. There was a rubric.

First, Ms. Dahl gave them the equations they would need and said, "I forbid you to balk, so you might as well skip that step and just get right to the math."

Ann and Amelia did the calculations separately but at the same time, checking their answers against each other's.

"Are you guys making fun of me?" Daniel asked.

Amelia shook her head, and Ann said, "No."

"You look like you have a secret," he said.

"Amelia," said Stacy, "do you have a boyfriend? Is that it? Amelia has a boyfriend!"

Red lines appeared on Amelia's neck, and she put her hand over them, even though she couldn't see that they were there, and shook her head.

"No," said Ann. "God, just leave us alone."

Ann saw Daniel's foot, like a heat-seeking missile that happened to be attached to his body, attack Stacy's tibia. She ignored it, though remarks could

easily have been made. There was science to be done.

They were to see if the experimental results of their roller coaster matched the theoretical results, and one expects, at least in eighth grade, that they will. This is the way ideas are tested. If something can't be put to the test with scales and stopwatches, the results are rarely as expected. Real life has an unfortunately significant standard deviation.

Each component was weighted differently on the happiness scale: flips, 4; corkscrews, 6; free-falls, 5; anticipating-building hills, 4. After determining the quantity of happiness the marble experienced, Ann and Amelia moved on to velocity, potential energy, kinetic energy, and the exchange between the two. In the end, they found that they had provided their marble with 51 units of happiness and converted its potential to action in a 70% efficient manner. When Ann finally looked up from experimentation, she saw that the other groups' coasters were looking good—looking a lot like her own.

"Everyone in the class has been staring you, Larsen," Stacy said.

"I sure have," said Daniel.

Stacy kicked him.

"Stop being such a gaywad for her," she whispered.

Ms. Dahl pointed at Stacy and Daniel and said, "Stop," before stepping to the front of the class. "Your roller coaster looks good, Eddy," she said to Eddy. "Where did you get the idea?"

"Oh, I just, yeah," said Eddy. "I just thought of it as I as going along."

"And you, Alex?" asked Ms. Dahl. "What made you decide to put these two small hills in a row?"

"You know," said Alex, "it just seemed like the marble would like it."

Ms. Dahl continued this interrogation until one member of every group had given a justification for their engineering choices. Then she said, "You're all lying,

and you're lying because you've been cheating."

The twenty-six class members who were not in Ann's group either looked down in shame or shook their heads in fervent, futile denial.

"This class is supposed to teach you the art of critical thinking," Ms. Dahl said. "The skill of creative problem solving. You apparently desire neither of those things, which means there is no point in your being in class. You are dismissed."

After turning their heads from side to side, around all 180°, as if a different perspective held the explanation to Ms. Dahl's proclamation, the students put their notebooks in their backpacks, their tracks in the drawers, and their stools under their tables.

In the history of JHMS—in the history of any public school, as far as anyone knew—no class had been sent to wander the campus between bells. The freedom, like many things (like roller coasters and growing up and failing) was exhilarating and scary.

Ann felt guilty, even though her group was the one that had remained true to the objectives of the class.

"I feel guilty," she said to Amelia when they were outside the classroom.

Amelia was leaning against the windowsill that Ann had molested the night before. "Me too," she said. "It doesn't make sense, but that's never stopped anybody."

"I like you," said Ann.

"What?" said Amelia.

"You're funny."

"No, I'm not," said Amelia. "I'm just normal."

"No, you're not," said Ann, "You're like me."

Amelia put the toes of one foot on top of the other foot's toes and then looked down, analyzing the results of her balancing act.

“Want to come over to my house tonight for dinner?” said Ann. Being around someone who had a looser grip on the social wheel than she did put Ann in the position of authority. She could afford to steer a little recklessly.

Ann’s mother repeatedly assured her daughter that dinner (meatloaf) would be “mouth-watering,” though no one had expressed any culinary doubts. Now that there was certainty, however, Ann imagined the opposite: mouth-dehydrating meatloaf.

“It’s so exciting that you have a friend coming,” said her mother, squirting ketchup atop the mass of meat. “You haven’t had a friend over in a while. I was beginning to think you were embarrassed by us.”

“Surprisingly, Mom,” said Ann, “it has very little to do with you.”

They were saved by the doorbell. Ann’s mother ushered Amelia in and complimented her on every article of clothing from her metallic blue Doc Martens to her oversized flannel over-shirt.

At the dinner table, Ann answered her mother’s questions—“Isn’t Amelia’s sweater nice?”, “Isn’t it neat that Amelia lives so close?”, “Isn’t it silly that you two have been in school together for eight years and have never been to each other’s houses?”—with quasiverbal mumbles.

“Amelia,” said Ms. Larsen, “it’s so good of you to be Ann’s friend.”

“Thanks?” said Amelia.

At the end of dinner, Amelia smiled at her shiny plate and said, “That meatloaf was truly delicious.”

“That’s sweet,” said Ann's mother. “Why don’t you two go upstairs and play?” She had not yet decided that Ann was old enough to be in a room in an unstructured way with another person.

Ann trudged up the stairs as if her feet were dense. “That was so

embarrassing," Ann said when they had arrived at her room and shut the door.

"Worse things have happened," said Amelia before it went silent.

Both girls looked around the room, searching their brains and the decor for something to talk about.

"So you don't have many friends over," said Amelia.

"No, not really."

"I always figured you would."

"You've thought about it before?"

"No, I mean. That's not what I meant."

"Do you?"

"Have friends over? What do you think? My mom thinks today must be the end of the world, in a good way."

Ann said, "Want to play an end-of-the-world game?"

"Like truth or dare?" said Amelia.

"People play that. I guess that's a good game to play."

"What about truth or truth?" asked Amelia. "Okay. What's the stupidest thing your mom does to you?"

After continuing to look around the room, which was more of a hobby than a habit, Ann said, "She sings me the same song every night before I go to sleep."

Amelia agreed that that was stupid, even though she thought it was sweet, because she thought Ann thought it was stupid, even though Ann didn't really think so. Teenage friendships are often based on mutual antipathy, which is often mutual admiration cleverly disguised.

"So we're friends now, right?" Amelia said. They were both glad to be young enough to ask direct questions.

"I would say that we are friends," said Ann.

The class's next experiment was biological: They were to determine the type of a sample of "blood." The "blood" wasn't really blood—it was hemoglobin-colored serum that reacted to tests the same way the real thing did.

Ms. Dahl gave each group six samples and one definite characteristic for each: One was definitely positive, one definitely negative, one definitely A, one definitely B, one definitely O, and one definitely a mystery. The students were to perform tests on the samples and determine, by comparing each reaction to the other reactions, the identity of the unknown.

"It's like being a teenager," Ms. Dahl said. "Get it? Because you are an unknown and you measure yourself against others and define yourself either in opposition to or in solidarity with them." Everyone blinked. "Never mind. Plan today; act tomorrow."

"Want to know a secret?" Ann whispered to Amelia, who nodded. "I can get us some extra planning time."

"Just us?" said Amelia.

"Just us," said Ann.

"I'm so glad you and Amelia are good friends," Ann's mother said.

"Yep," said Ann, who was gathering overnight items to take to Amelia's house. Amelia, in a different house, was gathering overnight items to take to Ann's house.

"I'm glad you have someone to talk to."

"Yep."

"Besides me."

"Yep."

"Although I'm a pretty good talker."

"Yep."

“Don’t forget about me.”

“It’s one night,” said Ann.

“Yep,” said her mother.

“Okay.”

“Want a ride?”

“I’ll power myself,” Ann said and began her walk to school, Amelia’s house, Venus, anywhere.

When Ann arrived at the classroom window, Amelia was already inside with a backpack full of pajamas and toothpaste.

“Are you ready to show this bodily fluid who's boss?” Ann asked.

“It’s fake,” said Amelia.

“You are?” said Ann. “You seem so real!”

“Shut up.”

“Make me.”

“No, thanks.”

“Okay,” said Ann. “Look at this banter we’re making!”

Amelia looked at the poster of the electromagnetic spectrum, the chemical hood, the defibrillator, anywhere, because she was about to say, “That’s what happens when you’re with someone you like. It’s how you begin to share your rich inner life.” She pushed hair that was already behind her ear behind her ear. “I read that in a book my mom gave me. *Prying Open Your Shell*.”

“I’d hardly call it prying,” said Ann. “It wasn't very difficult. But, anyway, we should get to work.”

From the cabinet, they removed the well plates; the five screw-capped cylinders of fake fluid; and the anti-A, anti-B, and anti-rhesus tests. Ann used the dropper to fill three rows of wells, each row containing part of each sample; Amelia

said nothing, just stared over Ann's shoulder. Her chin was just the right height to rest between the deltoid and the clavicle, and that could have been fine. Girls were forever linking arms and skipping, petting each other's hair like it was a nest of miniature schnauzers, and putting their heads in each other's not-yet-pillowy laps. Ann wished for all this, for a chin to fill the hollow of her collar, but none ever did, probably because she wished for it, and often you're only allowed to have things if you don't want them.

Amelia put her chin on Ann's shoulder. "Looks real," she said. She touched a sample and then put her finger to her tongue-tip. "Feels real."

Ann said, "Yes, it does," almost involuntarily, even though she hadn't actually felt it.

"Want to try?" asked Amelia. She held a newly bloodied finger out to Ann.

But something in the storage closet fell from its shelf, and someone said, "Shit!"

Ann walked to the closet, opened the door, and found Stacy under Daniel under a box of Kimberly-Clark powder-free latex gloves. Their mouths were more mouth-colored than normal.

"What are you doing here?" Ann asked.

"Experimenting," said Stacy, who raised her knees so that Daniel and the sanitary gloves fell to the speckled public school tile. She stood up. "What are *you* doing?"

"Experimenting," said Amelia.

"What?" said Daniel. "You mean you two are, wait, you don't look like, are you serious?"

"With the blood," said Ann. "For class. Science experiments."

Daniel raised himself and clasped his hands in front of his zipper—a choirboy, or a submissive banker. "This doesn't change my feelings for you," he

said to Ann.

Amelia turned to Ann. “What feelings?”

“Can you please just let us finish?” said Ann, who felt as embarrassed as Stacy and Daniel should have been. “There are no feelings. We’re doing science.”

“You can finish things up in here,” Daniel said.

Stacy, though, was already closing the door with the toe of her suede Puma. The door clicked shut, anticlimactically ending the encounter.

Amelia and Ann tried to get back to work, but neither said anything, which had become weird. Besides, the closet door was thin, and they could hear breathing. The sound felt like humidity in August: a brick wall. Though neither Ann nor Amelia acknowledged the noise, it hung there, as if it were made not of waves that traveled away and dissipated, but of clouds that stuck close to their source. When Ann could not stand it anymore, she began to hum “On a Jet Plane” to cover everything up.

“What’s that?” Amelia whispered.

“My mother’s stupid song,” Ann said.

“Yeah,” said Amelia, who continued to listen as Ann continued humming. “It’s pretty dumb.”

The experimental trials continued, and, using the scientifically deductive logic that was hardwired into their brains, Ann and Amelia determined that the mystery liquid was O-.

“Success!” said Amelia.

“Quite an achievement,” said Ann.

They high-fived each other and then bowed deeply, as if accepting or bestowing a Nobel Prize.

They had planned to sleep under their lab table and wake up before the teachers’ lounge coffee pot began dripping. They were going to brush their teeth at

the classroom's emergency eye-washing station. But Daniel and Stacy had not yet emerged, so Ann and Amelia could not settle down for the night.

"Let's do you," said Amelia, and removed an earring shaped like an ankh. "What's your type?"

"What?"

"Your blood," said Amelia. She flicked her earring. "This is a syringe," she said.

When she grabbed Ann's hand, Ann did not retract it. The earring's rod entered her fingertip, and a red, surface-tensed sphere appeared. She should have asked if Amelia's ears were currently or ever had been infected. But by then Amelia was already squeezing her finger, making the little globe free-fall into the plate.

"Now me," said Amelia, looking at the blood.

They switched positions and repeated the process, and Amelia's blood rose to meet them. Ann did not make it fall right away. She tilted her head to the side, and her pupils dilated to take in more of the photons. With a clearer picture, she would remember more. They both bent over Amelia's hand and stared as if a tiny circus were on her pointer finger. And, in the way that circuses are bright and unbelievable, it was.

"You're in there," said Ann in the voice that people use in church. "In that drop. Everything about you. Things you don't even know yet." She touched her finger to Amelia's blood, and then touched that finger to her mouth. "It's real," she said, smiling. Their faces were close, and maybe she wanted them to be closer. She wasn't sure, and she wasn't sure she wanted to be.

Just then, the door opened, and Daniel and Stacy waltzed out the door. Ann and Amelia were still holding fingers. A drop of Amelia's blood fell to the floor.

"You're bleeding," said Daniel. "I didn't know lesbians could bleed."

"Come on, Daniel," said Stacy. "Let's get out of here before someone sees

us."

"No, seriously. I didn't know. I've never met a real one before. Do lesbians kiss?"

"Daniel, let's go," said Stacy. For once, she was glancing nervously. "I'm leaving," she said. She did.

Left with no outside witnesses, Daniel said, "How about you kiss me and see if you like it?" He paused. "It'll be an experiment. You like those." He was walking toward Amelia like a robber walks toward a bank.

"Why do you think she's a lesbian?" asked Ann. "Why would you even think that?"

"You're one, too," said Daniel. "You don't even like it when I touch your leg."

"You don't know anything about anything," said Ann. "I'm not a lesbian."

"Well, why don't you prove it?" said Daniel. "I'll let you trade places with her. Kiss me, and I'll leave you both alone."

Later that night, Ann would tell herself over and over again that there was no other choice, it was the only thing she could have done, she hadn't meant to do anything wrong, she just didn't know what else to do. But she kissed him, and when she pulled back, Amelia ran out of the room before seeing that Ann spat Daniel's DNA onto the ground.

Ann moved to chase Amelia, but Daniel held her back. "Tell me. You liked it just a little, right?"

She slammed her knee against the place where Daniel's groin, and he fell over like criminals on television. "Get the fuck out of here," she said to him.

"Fucking lesbians," he said, limping away.

When Ann went outside, she could see the sleeve of Amelia's brown hoodie poking around the corner of the building. She walked over and touched it, and it

pulled itself away.

“I did it for you,” she said.

Amelia's eyes seemed to be busy distinguishing individual air molecules.

“So you didn't have to,” she said.

“Okay,” said Amelia.

“Look, it's not a big deal. It's over. Now he can't say we're lesbians.”

“I'm glad you got what you wanted,” Amelia said. She was crying.

Ann tried to use her own sleeve to absorb Amelia's tears, but Amelia turned her head away. “You can't have it both ways,” she said.

“I don't know what you're talking about,” said Ann, who now looked 180 degrees away form where Amelia was looking. She knew, or at least sensed, which is kind of like knowing without words or reason, that this was about potential energy between them. But it was as if Ann had been asked to give a class presentation before she'd expected to. The only thing she could think to do was say, “No, it's not my day, I didn't sign up for this, I'm not supposed to face the crowd yet.”

“I'll let you clean up our mess,” said Amelia, gesturing toward the lab. “I'm going home.”

“But our sleepover,” said Ann.

“I don't know what you want me to do,” said Amelia. She wiped her whole face on her arm and stood. “You didn't do that for me,” she said right before she walked away.

Just as soon as Ann had discovered something novel and unpredicted and without pre-prepared instructions, it was gone. Everyone was gone, and when she went back to the lab, it was dark and silent and scary, but there was nowhere else she could go. She knelt on the floor and separated Amelia’s dropped blood into four tiny samples. She carefully tested each of them, then each of hers, finding, in the

end, that they were donor-recipient compatible. Sample #1, Amelia: AB+; Sample #2, Ann: O-.

Ann used Amelia's toothbrush before settling down to sleep under the lab table. She wished her mother were there; she wished Amelia were there; she wished there was someone to talk to. But there wasn't, so she hummed her mother's song, and the notes blended in with the hum of the air conditioner, making an odd kind of harmony.

Later, whenever Ann heard "On a Jet Plane," she felt alone like she had that night, even when she was sitting right next to someone she loved.

The next day in class, the false blood reacted the same way their own had: It clumped, or not, depending. Amelia was not there to see it.

"Does anyone know where Amelia is?" Ann asked, though Daniel and Stacy had not cared about Amelia's location since elementary school.

Daniel just looked nervy, bouncing his leg like a jackhammer and apologizing. "I still like you," he whispered. "I'm sorry. I don't know. Don't break up with me."

But Ann ignored him. In fact, she did not respond to any stimuli. She just suctioned up the red liquid, moved the end of the pipette to a different dish, and squeezed, letting gravity drag the blood down discretely, one drop at a time.

"How did you figure out what to do?" Stacey asked. She handed her gum to Daniel, who put it in his mouth.

"Still has some flavor," he said. "Would you like some?" He shoved it under Ann's nose. "Just try it. Come on. I'm trying to be nice."

"I thought about it," Ann said. She pushed his hand back so that the gum hit him in the face.

As Ann walked her lab report to the front of the room, she heard the other

groups' chorus of "you're doing it wrong" and "it's totally my turn to pipette" and "you have no idea what you're doing, so you are an idiot" flatten out, and the quiet that was left sounded like a siren, like the ringing in your ears when you first walk into a library and the silence is alarming.

Then someone said, "Can't you just lecture us, Ms. Dahl?" and someone else slammed a pencil on the tabletop. "Yeah, it's your job to tell us what to do." They were handing back their power, one Watt at a time.

A voice began to chant—"Notes! Notes! Notes!"—and everyone joined in.

Ms. Dahl's "Order! Stop this entropy at once!" could hardly be heard over this racket. In fact, the only thing that could be heard were Ann's thoughts, from which she tried and failed to construct something coherent. There were only fragments, pieces, like "turned upside-down" and "it feels real," of a whole that she was just now discovering existed.

SECTION THREE

Sitting in one of this coffeeshop's many red velvet chairs, below local artists' paintings of human anatomy, usually eyes and aortas featured next to cut-and-pasted excerpts from the discount nonfiction section of the used bookstore, I feel that the body parts are staring, as if the artist imbued each of them with free will and thus with the ability to be creepy.

My leg is bouncing, almost without permission, and the woman at the next table says, "You look like you're about to blast off."

"Sorry," I reply. "It's one of my coping mechanisms."

Aware, looking at her laptop screen and noting that she is viewing and manipulating images of the Mandelbrot Set, that if the conversation loses momentum, she will go back to her fractals, which were more interesting and universal than I am, I say, "Because I used to be shy." The words sound like a confession. Confessions make people trust you. "But there were a lot of great things I could have said."

She replies, "I believe you," and the conversation has become suddenly serious.

"Do you maybe want to get coffee sometime?" This is a departure from the usual assumption that only people already at the Math Department's weekly coffee hour want to get coffee sometime.

"We already are," she says.

Blush, smile, breathe. She lifts her cup in a cheers-ing motion. The cup slips from her hand. The tablecloth turns a darker, hotter shade, and then her face does the same. Two hands accidentally touch as two people go for the napkin dispenser. Her mouth says, "I'm sorry—I'm a little clumsy," and you listen to yourself

respond, in a voice that sounds very far away, “It’s okay—I’m a little neurotic.”

Because she no longer has coffee, it is the perfect time to ask her out for more. It is funny. You are funny, and she says yes, she will, yes.

“I'm Jodie,” she says.

Later that day, at the graduate mathematics lab where you work, the air is filled with the noise of supercomputers and chit-chat, like it always is, but today is different: today your CPU adds to the former and your voice to the latter, like always, but your mind is separate from the scene, as if hovering above with a camera, recording the others, of which you seem to be one. Brain and body have become, suddenly, dichotomous.

“Hey, Dave,” you say to Dave, your lab-mate, in an effort to act extra normal and also to see if Dave can tell that you have to tell yourself to say hey to him.

“Hey,” he says. “Going to the colloquium?”

“Yes, Dave. I'm going to colloquium.”

This one is entitled “Equations Model Everything.” The talk has been advertised in the Math Department’s weekly newsletter, a publication the faculty thought themselves extremely clever for naming *The Differential*. Upon seeing the announcement, you thought, “Well, of course equations model everything. What else would they do?”

At the pre-colloquium cocktail hour (held to make people inhibition-less enough to ask questions after the lecture), you hold a pomegranate-flavored beer aloft and say, “How does the irrational number insult the imaginary one?” When your mouth speaks the punchline “At least my I exists!”, it is just that—a mouth speaking a punch line. This same mouth then smiles expectantly, waiting for laughs, before a hand falters and causes beer to drip down a chin. These parts are

all yours, but they do not feel like you.

You are both watching and instructing yourself, bossing your body around. Research done on your work computer after everyone has gone to the post-lecture cocktail hour says you might be suffering from "depersonalization disorder." You tell no one, not even your therapist, Dr. Howe, who would just say, "Why do you think you feel this way?"

Even though you have an answer, you don't want her to, so at your next meeting, steer the conversation toward your romantic life, which is usually antimaterial. Currently, however, it seems to be on an exponential upward trend.

Say, "I met someone. A Jodie."

"Why do you think you feel that way?" Dr. Howe prods.

"My pupils dilated around her, and my heart rate increased. I think we have a good statistical probability of being a compatible match."

"Does it feel like love?" she asks.

"It feels like a feeling," you say. "I would say that it is a feeling."

After the session, you go back to the coffeeshop where you met Jodie (in your mind, start to call it "The Coffeeshop Where We Met") and take notes on the other patrons. Your life has become an objectively observable phenomenon, so it only makes sense to give its secondary characters the same treatment.

You're ambivalent, unsure about whether to mind any of this. You are, perhaps, even a little excited about your self-diagnosed rare mental disorder.

You are now the proud owner of an excuse for your inability to relate to the outside world.

Jodie calls you on Sunday and asks if you would like to come over and have some Malbec, this great new wine she discovered that is cheaper because no one

has heard of the grapes that are fermented to make it.

"I could make a model of wine price versus perception," you offer.

She replies, "Okay, bring it," as if she does not know that a model is a formula and that one line of handwritten text will not be very interesting to look at.

As you are getting ready to meet her, look down on your body, which is standing in front of a mirror trying to choose clothing items that will convince Jodie to take some of them off. You have not been on a date in a year.

Upon arriving at Apartment 3A, you knock, and she opens: It's all very predictable. Your physical meeting looks like a scene out of a bad television series, one that features an ostentatiously awkward protagonist, an ostentatiously off-beat secondary character, and a trendy housing district.

"Do you believe in out-of-body experiences?" Jodie asks after a third glass of wine, when people's inhibitions about mentioning metaphysics are lower than they should be. Although she is referring to new-age spiritualism, she might be the person most likely to get what is going on in your head.

"My life seems like one long out-of-body experience," you say.

"That's very interesting," Jodie says, and puts her long-stemmed glass down.

You feel like a voyeur as your hands move over Jodie's body and the two of you slide around on the couch. You are creating a video of her. But that's all a memory really is, anyway: a video with feelings attached. Usually the video is filmed through your eyes, but in this case it just happens to be an aerial camera.

Sex seems different after you've observed yourself in the process. You've never thought of it that way—as an act. Logically, every action causes an equal and opposite reaction, but you don't think about that Newtonian fact as you stare at the clothes scattered on the carpet.

“That was transcendental,” she says, and curls her fingers in and out on your stomach, as if they are rays of radiation emanating from the center of her palm. Her fingertips should leave marks like the shiny paths snails make when they move: It feels like she is polishing you.

“Yes,” you say. “I wish I could have watched.”

She laughs because she thinks this is playful and fresh; you laugh because it is ironic.

Twirl her hair and tell her she is pretty and mean it, mean everything, and tell her the story about how you had to wear headgear for two months in third grade and how this was the character-building experience that produced your now charming if somewhat subsurface personality. Wonder how you can remember this story when your mind is busy listening to the things you say and thinking, “She’ll like that. Maybe 'that' can turn into 'me.'”

Not afraid of the dark, you lie in the field behind your house after getting home from Jodie’s apartment. Looking up at the stars in a post-coital haze, the blackness surrounding them surrounds you.

As your view lifts itself up and out of your visual cortex, you see first the firing paths of your neurons, then the lights of Collegetown, then the incandescent glow of the world’s bulbs, and then, finally, clusters of galaxies. These four images all have the same structure—long, stringy filaments crawling from dense nodes—a structure that can be explained by the simultaneous maximization of surface area and volume.

The universe is a 13-billion-light-year-wide brain, and the brain is a three-pound universe. You are comforted that, since the universe-brain must behave calculably, your brain-universe should do the same.

You are afraid not of the shadows between somas and galactic centers, but of the shadow that splits you (the space between your body and the electrical storm in your head), and of the unknowable distances between two people.

You fall asleep in the field imagining the $y=x$ line of Jodie's smile, the $y=x^2$ of her breasts, the $y=\sin(x)$ of her respiration, and the delta function of her heartbeat. The oak branches are backlit by the moon, but you don't notice. Fractal sets that could model them with negligible chi-squared error, but you don't calculate them. Not now. For now, for the moment, you notice only the speed of your body moving with the universe's accelerated expansion.

The weekend ends, but the disorder does not. What if, like the disorder of the universe—entropy—yours is destined to become worse and worse until you die? You resign yourself to the new calling (director of your own biopic), and resolve to embrace this point-of-view by investigate its oddness to the fullest.

In keeping with this resolution, Monday morning, while getting ready to go into the lab, you look down at your biological components and think, "Knees are very strange things, indeed."

When you get to campus, the head of the Department is sitting at your desk, which is decorated with your favorite comics, all of which exploit the humor of throwing social incompetents who speak in scientific jargon into situations with people who are neither awkward nor scientific.

"How are you?" the head asks.

"Why?" you ask, because she has never cared before.

"I was just curious," she says.

"Oh."

"Well, I'm fine," she says, smiling. Then, "I am writing a feature piece for

The Differential, an article that profiles our beloved graduate students. Would you be willing to answer a few questions for me?"

"Do you know my name?"

"We can start there," she said. "Who are you?"

Because the name sounds strange when it emerges from between your teeth and tongue, you stop and think, "I am that person. I am myself," which does not seem like it should be revelatory, but feels like it is.

"Well, now, tell me about the moment you first knew that mathematics was the one and only one true field for you."

Though this is a leading request, you oblige, but only partially. "Would you mind if I wrote it down and emailed it to you instead? I'm not really feeling well at the moment. I'm not quite myself."

She is used to antisocial requests, so she simply nods, draws a slow check-mark on her pad of paper, and goes back to her office that has a door.

If only your office had a door.

I begged my parents to give me some wood for a tree fort, and though they said, "No, it's too dangerous," I know now that they meant, "We prefer wooden structures that come with instructions," so when I came home from school on my sixth birthday and saw my father hammering away at a half-formed playground, a glossy booklet of numbered pictures weighted to the ground by nuts and bolts, I was happy enough.

Just before dark, my father finished his construction, and he called me away from the hand-carved kitchen table where I was drawing my own solar system, one with seven planets, one in which I dictated chemical compositions and flora and then invented aliens with physical features uniquely suited to the conditions of each

planet. A solar system completely different from this one, and completely determined by me. I hid the planetary drawings under the paisley seat cover and went to the swing set.

When I climbed aboard the swing, I imagined it might propel you into some unknown orbit, though now I know that exiting Earth's atmosphere is not good for human respiration. The wooden supports of the playset leaned slightly forward and back as the swing's parabola scooped through the air. To my father, I expressed concern that the swing set was structurally unstable.

"No, it's fine," he said. "I followed the instructions step by step by step."

"Could we tell how long I could swing before it fell down?" I asked.

"Probably," your father said. "I don't know." He probably lamented the innumerable ways I was harder to parent than other, less nervous children.

I got off the swing and, mumbling my thanks anyway, walked back toward the house. Having decided that collapses were okay if they were both predictable and predictable by me, I asked my mother to take me to the library, as I had some vague sense that numbers alone could tell me when the swing set would kill me, though at the time I could barely sum two-digit integers.

Becoming a mathematician was a step on my road to becoming a clairvoyant. Or, to put it scientifically, one who can determine events in a determined universe.

For years, you have ignored your discomfort about the implications of modeling, as you have been in control of the variables, forming them and testing them and tweaking them for a living. Now, however, writing about a time when you could not add things up and thought equations were relevant only to playthings, a horrifying truth is pushed to the foreground of your brain: The world

is fundamentally knowable.

"I have to go now," you say, getting up to go.

"Okay," says Dave.

"I knew you were going to say that." You prime your legs to run. But what if Dave knows knows your body is planning to run? You walk. But what if Dave knew you were going to change your mind? You stop. When you turn around, Dave is staring at you, just like you knew he would be.

"Hey," says Dave. "Take it easy."

When you see Dr. Howe that afternoon, she says, "How are you?"

"Paranoid," you say.

"And how does that feel?"

"Paranoid."

"Having paranoia makes you feel paranoid about being paranoid?"

"Yes, and having paranoia also makes me feel plain first-degree paranoid."

"Why do you think you feel that way?"

As you explain to her that it all began with the Big Bang, you are impressed with your body's autonomy and acting ability—it can speak and behave and gesture while you, you are someplace else. And Dr. Howe, resident medical expert on your brain, cannot tell the difference.

If Dr. Howe asked, you would say that this makes you feel alone, but, for once, she doesn't.

The rest of the therapy hour is spent in silence: You don't want to pull your own strings anymore, don't want to know what you'll do.

"Jodie," you say when she opens her door, just like she did last time. You've only been on one date.

She invites you inside, of course she does, because what else can she do?

“This is such a nice surprise,” Jodie says. Her apartment is full of books—books you've never read but she has—, and it is saturated with her smell, which smells like fragrance- and dye-free detergent, and it looks like it is not your apartment, and it looks like it is not your office, and it looks like she lives here, which is all you want, really.

You don't even know her.

“I wasn't sure you liked me very much,” she says. “It doesn't seem like I'd be your type.” She moves both of you, to the couch.

“Jodie,” you say, taking her hands in yours, “do you remember when we met? At the coffeeshop?”

“No,” Jodie says. “Every week my memory clears itself. Each Monday, I'm history-less. Just like my work computer's internet browser.”

“Oh, that's wonderful,” you say. “And I don't even know where you work.”

“I'm a graphic designer,” she says. “And of course I remember the coffeeshop. You were so jittery. It was only a few days ago.”

“Something happened to me there. Something changed. Since then, it seems like I've been living someone else's life.”

“Me too,” she says. She smiles.

“No, not like me.”

“How do you know?” she asks.

Water drips down the pebble fountain on a bookshelf; the tail of a clock-cat ticks the seconds; the muted television buzzes in that high-pitched way only certain people can hear. You hear it. Maybe she can, too.

You say, “I don't, I guess.” Though it is not your custom to become comfortable so early, or ever, you put your head against her chest and say, “You

should know that I am scared. Of pretty much everything. I used to be scared of swingsets."

You tell her about the swing set and determinism, though tou did not discover the word for it until age twelve, when you picked up a book called *Cosmological Theories*, read the text, and ignored the equations, which were over your Algebra-One-level head. From Chapter Two, "The Subatomics Chose for You," you learned that when all of the Universe's matter exploded from an infinitely dense point in space, events were preset in motion.

"And not just any events," you say. "All events. If we understood physics better, and if we knew the exact number of quarks and leptons, of protons, neutrons, and electrons, and if we knew the angles and velocities at which they whizzed away in the first zeptoseconds after the Big Bang, we could write equations to tell everyone how these particles would interact, indefinitely. The nebulae and quasars and blazars and pulsars and people they would become. When, and what, things would happen next. And even though those three 'ifs' are 'if and only ifs,' we know that when a tree falls in an empty forest it actually does make a pretty loud noise, and so the fact that *Homo Sapiens* cannot predict the universe means nothing, certainly not that the universe is un-predictable."

Blush, frown, breathe.

"It's just so unnerving," you say to Jodie's clavicle, "to think we're just watching it all happen."

Maybe Jodie understands, and maybe she doesn't. You'll never know for sure, not even if she says yes, she's felt unnerved by that a thousand times. You cannot know what she is thinking. You can't even know if she wants you here. Not really. You just have to trust her, trust that when she pulls you closer, that's where she wants you, trust that for some reason she wants you to stay and tell her these things,

your thoughts. She doesn't even know you. You don't even know her. But since no matter how well you know her, you can never know her completely, and this is as close as you've ever gotten, the two of you lie down on the couch. Her body feels like yours: parts.

“These are your veins,” you say. You travel your fingers along the blue highways on her arm. “And this is your wrist. Below this skin is your hemoglobin. Then your bones.” You want to know and touch and feel all layers of her, from her skull to her appendix, the necessary and the vestigial. You want to consume her. Make her parts part of you. Put pieces of her into your mouth and let your esophagus contract them down into your stomach. Reach inside her torso and pull out her right atrium. Hold it in your hands, hoist it into the air and rotate it in three dimensions. “This is Jodie's right atrium,” you want to tell everyone. “I know that for sure.”

Instead, you say, “Fractals could model your circulatory system.”

“I know,” Jodie says. “Trees and galaxies, too. See? We're not all that distant.”

You kiss her. You feel your lips feeling hers. This doesn’t feel like romance—it feels like history, the kind that is made. It doesn’t matter that billions of subatomic particles have known that this would happen for thirteen point five billion years, because it is happening now, to their sum. To you, and to her.

If the living room exploded, it would be cosmically insignificant, but it would matter to you, so you allow yourself enough narcissism to admit that this living room and you and Jodie are important.

You position your body parallel to Jodie’s; you pull it very close.

“What are you doing?” she asks, then laughs as your body wraps its legs around hers as many times as they will go.

“I want to be dense with you,” you say, quietly, afraid you'll be misunderstood, or mocked, or both.

Jodie, though, she says she wants that, too, and you believe her..

Your bodies are so close that the only space between your skin is the emptiness of the electrons’ orbits around their nuclei. You compress the electrons’ spinning. You push your atoms so close to hers that they reach degeneracy pressure and turn into some kind of post-human plasma: a thing with no consciousness, no imagined agency. A thing that simply interacts, with no concern for how or why or what happens next, a thing that exists only in the present tense.

At the airport a man with a "Hi, my name is" sticker approached me, told me he was the man named Sixto, and asked me if I was the woman named Amy. I was, and I got in his car, which had three wheels on the sidewalk and one wheel in the no-parking zone.

Death probably thought I was too cheap a shot, huddled against the "oh, shit" bar of a government van. I think that is the only reason I survived the hour and a half ride from the Luis Munoz Marin International Airport in San Juan to my new home. Sixto seemed to think that double solid yellow lines meant "please cross me."

Sixto caught the volume knob between the hairy knuckles of his second and third fingers. He turned down the talk radio and looked at me for ten seconds before speaking. "English is so confusing. For example," he said, picking up a printout of my flight confirmation, "how do you call this?"

"My flight confirmation."

"No, no. In *general*."

"A piece of paper."

"No, not that. Another word."

"A sheet of paper?"

"Yes. A *sheet*." He smiled and seemed not to notice when the car's wheels awakened cyclones from the side of the road. "So how do you know the difference between this and what you do in the bathroom?"

I paused, watching the primary-colored houses reflect against the peeling window tint and trying to think of an appropriate response. "I guess you just get used to it."

"English is so confusing."

When we arrived at Arecibo Observatory, I decided that the largest, most expensive telescope in the world looked more like the largest, most expensive skate park in the world. There was the 305-meter dish, listening to the universe's twenty-four hour broadcast, and all I could think was that I wished I had the coordination for extreme sports. I thought that maybe Dr. McLaughlin should have sent someone who could have come up with a better description.

I was a graduate student, and my advisor, Dr. McLaughlin, had applied for time on the telescope. He was the kind of tenured professor who had enough job security to say whatever he wanted about black holes, wormholes, time travel, and other astrophysical subjects of interest to the masses, so he was on sabbatical writing a sci-fi novel. Because he wanted the data from this project but didn't feel like taking time away from his literary pursuits, he used his NSF grant money to send me to Puerto Rico. I found it impossible to refuse two free weeks on a tropical island, especially since I needed glowing letters of recommendation from my benefactor.

Sixto removed my luggage, which held clothing I considered adventurous and books I considered grounding, and pointed at a woman sitting on the porch of Unit 4. Anya Dauren and I would be living and working together on the pulsar collaboration, he said. Anya was wearing a purple plastic bracelet with the word "care" stamped into the band, synthetic pants that zipped off into shorts, a t-shirt from the gift shop of El Yunque National Rain Forest, and a pair of rubber gardening clogs.

Sixto said goodbye with a pat on the back that felt more like a spinal aneurysm. His brake lights created a cone of red haze around us as the van slid down the mountain and the molecules of humidity trapped the light. Anya handed me a frozen drink.

"*Con*," she said.

"Cone what?"

"Just *con*. In Spanish, it means 'with.' In Puerto Rican, it means 'with alcohol.'"

We sat on the porch of Unit 4, which was a 2BD/1B box made of weather-treated plywood held together by creative combinations of two-by-fours. We listened to the *coqui* frogs, who are named onomatopoeically after the noise they make from 8 am-7 am We talked about magnetars and millisecond timing techniques and our limited Spanish vocabularies. We sipped our pina coladas *con*. She settled herself into the porch's red lawn chair, and in the light that came through the haze of moth wings, I thought she had caught fire.

Pulsars are formed when a massive star can no longer support fusion. The star collapses under its own gravity. The area around it is assaulted with enough radiation to outshine the other 100 billion stars in the galaxy. The star lights up places that have been dark since darkness existed. It goes supernova and never goes back.

Left in the middle of this expanding light is a ball the size of Manhattan with the mass of two suns, a sphere that spins 86,400 times as fast as the Earth and is made only of neutrons. Every time it rotates, we see one pulse of light. Thus, pulsars.

Pulsars are the most stable objects in the universe—the only thing that can change a pulsar's rotation rate is a starquake, which is a very exotic kind of earthquake that happens very far away. After the subatomics have settled, the pulsar is never the same.

Anya and I were at Arecibo to observe two pulsars that orbited each other. They had recently been discovered and creatively named (J0737-3039A and J0737-3039B). Together, they formed the first known system of this kind, although surely

there are millions of these binary systems at which we have simply failed to point our telescopes. I thought the most fascinating part about J0737-3039 was that A was much more massive than B. Its gravitational pull was stronger, its magnetic field larger. The power dynamic of this system was tilted in A's favor.

A and B were spinning so fast so close together that astronomers were already writing papers predicting their collision and subsequent merger.

The control room looked like a rocket's cockpit. Machines seven feet tall buzzed and blinked their communications. Wires seemed to come out of nowhere and then snake away into their hard drive holes. A huge plate glass window looked out on the white telescope. Positioned on this cliff, it looked like someone had spilled millions of gallons of paint into a valley. A beautiful mistake. In reality, the dish is made of 38,778 aluminum panels that fit together exactly. With a few keystrokes, I could control what all of that metal was looking at.

Anya and I sat in the control room on our first day, going over the plan we had made for the pulsars, when Richard came in. After observing Richard for the next two weeks, I realized that he had seven pairs of size twelve tennis shoes, but only one pair of shoe laces. I knew because the plastic ends of these purple laces were chewed off in exactly the same way every day. I was surprised he didn't have the days of the week written in permanent marker on his footwear. I guess he just kept track in his head.

Richard was our telescope "friend," the name given to people who work at the observatory full-time and help visiting astronomers navigate the $100,000,000 of equipment. I can't see why they didn't trust us on our own.

"Where is he?" Richard asked.

"Who?" I asked.

"The observer in charge," he replied. He cleared his throat, making a noise an

octave higher than I thought could come out of someone with such large feet.

"Anya," I said, pointing to Anya, "and I are doing the observations."

"Hm. Well. There were no first names on the schedule." He cleared his throat again.

Richard had jumped to a conclusion, and he was not happy to be wrong. Anya and I sat down to begin looking at the pulsars. Everything was going well until I dropped my pencil, and he muttered, "Can't do anything right," and pushed my chair away from the controls. He started typing, moving the telescope. "Just leave this to me. You two can go on and do…whatever you do."

I always remember the next moment in the way you remember an over-dramatized movie in which there are only three character roles: the villain, the victim, and the hero. I watched Anya tap Richard on the shoulder. When he turned, she curled her pointer finger in the come-hither gesture and whispered conspiratorially, "This *is* what we do."

Richard left and told the director that we no longer needed a "friend."

The karst mountains in northwest Puerto Rico were formed during the Oligocene epoch. Between twenty-three and thirty-four million years ago, the top carbonate rock was dissolved by the Caribbean Sea, leaving a section of island that looks like a crowd of giants wearing ghost sheets and growing tropical trees on their heads. Underneath these mountains is a cave network large enough to be used for nationalistic bragging rights, drug trafficking, human trafficking, and the kind of tours on which the guide points to the rocks (which are illuminated by Crayola-colored spotlights) and says, "Those are stal***ac***tites, not stalagmites. You can remember because ceiling starts with a 'c.'"

Traveling from Arecibo Observatory to anywhere else on the island requires driving from the top of the karst to the bottom, and it always felt like a trip from the

sky to the sea. The roads, on which no one found it necessary to paint lane lines, had an abundance of hairpin turns and a deficit of guardrails. There were no flat, comforting stretches, and there were no certainties. Were stray dogs congregating in the road around that curve? Would the car tailgating me down this 50% grade push his front bumper against my back bumper and propel us down the hill at unsafe speeds? These questions could never be answered until you either hit an animal or another car hit you.

Three days after I arrived, Anya grabbed the keys to a car, pushed them into my hand, and told me that all I needed to remember when driving through the mountains was that death isn't really that bad. She had spent a summer here two years before, and I assumed that gave her authority on this subject.

"If you want me to give you directions," she said as she belted herself into the passenger seat of the observatory's 1993 Chevy Cavalier, "you need to stop hyperventilating. You won't be able to hear me over all that breathing." I turned on the radio at volume 32—the highest it would go before the bass crackled and the left speaker only worked on every third beat.

We listened to WLYT, Your Station for Everything You Want to Hear, which was the most popular of five stations devoted solely to remixes of late 80s/early 90s adult contemporary billboard hits. *Unbreak My Heart*, *The Wind Beneath My Wings*, *Please Forgive Me*, etc. This music was the only kind I was allowed to listen to from ages 0-12, when my mother always played the "Lite Rock, Less Talk" station in the car. The musical experiences from my formative years proved (definitely for the first time) to be useful.

The song I knew best came on as we entered the one-bar town of Esperanza. When I was about to say that I could deliver the most rocking rendition of *Lady in Red*, she turned the volume up to 33 and showed me that mine was only second best.

“Do you want to be authentic, Amy?” she asked me after Chris DeBurgh was done crooning.

“Authentic like how?”

“See that unlit, unmarked highway about three hundred meters up? Turn there.”

I drove for a few minutes on the road least traveled before she yelled, “There he is!” and grabbed my wrist so hard that the steering wheel pulled us next to a van that said *Luigi’s* on one side and *Lugi’s* on the other. “Authentic like this.”

Lugi Luigi’s Pizza Parlor was a vehicle that had been in the same place for so long that I could see the passing of the seasons in his paint. The owner’s name was actually Madesio, and he had never actually sold a pizza in his life. He bought the van from a bankrupt roadside pizza chain, but he thought that people who stopped to buy pizza would be pleasantly surprised. His culinary specialty was the *pincho*—cubes of chicken or pork smothered in red sauce and placed on a stick, a piece of garlic bread impaled on the top. A totem pole of calories. A monolith of taste. I still do not know what the sauce is made of. It is the kind of unidentifiable combination of familiar ingredients that makes you say, “This tastes familiar, but.” The same way strangers can look familiar simply because their facial features are some combination of your third cousin and your best friend from third grade.

Madesio’s head was too large for his shoulders. It made him look like the food he sold.

“For here or to go?” he asked.

“Would you like to eat with us?” Anya replied.

Madesio pulled a folding card table from the space between the grill and the van’s center console and said, “Business is slow.”

We each stood on one side of the table, placing the plate of *pinchos* at the empty end. Anya made a rule that each time anyone picked up a stick, they had to

confess something strange they said, did, thought, or thought about saying, doing, or thinking. Something that would usually come out in late-night conversation when a friendship was a year or two old.

1. Anya read the CNN.com headlines every day, but rather than clicking on the serious news stories, she clicked on ones like "Shaken, not stirred— cocktail robots mix drinks" and "Emu on the run crashes kindergarten graduation."
2. Madesio was scared of accidents. All kinds. Because you couldn't see them coming but you knew that eventually, statistically, they would.
3. Every time I got the hiccups, I thought that the situation would turn into the world-record kind. There was a man who had the hiccups for 68 years.

If I have the hiccups now, why should they ever go away? Why should

anything change?

We ate and shared until the plate was a blank full moon, and Madesio said he had to go home and make dinner for his wife. We could stay as long as we wanted.

"Leave the table out. Someone might need a place to sit," he said and turned off the incandescent advertisement on the roof of his establishment. He walked to the house across the street, and we watched his shadow pull someone else's close.

We left a note on the table. It said only, "We'll be back."

I still have a hard time sitting in restaurants with cushioned privacy benches and piped-in easy-listening music. The whole time I think about how much I want to eat meat off a stick, hold a can of Medalla Light in a sweaty death grip, and look at faces visible only because they are reflecting the moonlight. I may not have found myself that summer, but I found a few other people.

The Tanama River is a forty-minute hike from Arecibo Observatory. When Anya asked me to swim up the river with her, I said no, because flash floods routinely caused it to double in volume in 10 minutes. That seemed unnatural to me. Anya didn't ask me again, but she did bring me a bagged sandwich and some water and say, "Follow me."

During the trek down to the Tanama, we assumed we only had to be careful to avoid wet rocks, wet dirt, and wet lizards. What we failed to consider were the chickens. While clinging to a tree in a particularly steep (and wet) part of the jungle, I heard the call of a rooster. I automatically assumed it was some eight-foot-tall doppelganger alien that used the cockadoodledoo to lure in its prey, which it would skewer and roast and feed to its doppelganger family.

"Holy shit, what was that?" My voice came out all uneven.

"That was a chicken." Anya's did not.

"Who let a chicken into the jungle. Chickens can't go in the jungle!"

"You're here," she said, then smiled with her head tilted down and her eyes looking up, the way people do when they want you to forgive them for something stupid. "The farmers around here don't keep their livestock in cages. It's a very adventurous kind of free-range."

I looked around and saw the domesticated bird sprinting through the underbrush. The three claws dug into the ground, and occasionally a leaf stuck to one for a few steps. The rooster saw us, panicked, and ran into a tree trunk.

When we finally got to the Tanama canyon, the whole scene was straight out of the Mesozoic Era. I usually don't associate rivers with amazing beauty (it's more like alligators and algae), but I felt like I should have brought a camera to film a dinosaur documentary.

The water was cold, a rarity this close to the Equator. Anya and I swam upstream a bit, and I tried not to think about the flash floods. The cliffs were

probably fifty feet above us, and when I floated on my back with my ears underwater, the only sound was flowing and the only color was green. The canyon's rock formations made me wish I were a geologist, simply so I could do more than mutter, "Awesome," over and over again. Water gushed out of holes in the cave systems surrounding us, and stalactites screamed, "We are so much older than you!"

"Can I take you somewhere?" Anya asked.

She took me to a place where the river was mostly blocked, and it fed a wide pool of translucent green water. A thirty-foot waterfall flowed out of the pool, crashing at a 30° angle against some rocks before continuing on to more rocks at the bottom. We sat on a safe rock and looked over the edge.

"They died here," she said, focusing her eyes on some distant point past the treeline. "They thought the water looked calm."

Anya told me about two other grad students who were at Arecibo during the summer she spent there. The three of them hiked to the Tanama. The two others, a man and a woman, were not thinking about the undercurrent that pulled water from the river, across the falsely placid pool, and down the waterfall.

Anya was taking pictures of the mountains, and she turned around just as the woman tried to grab a rock and stop herself from being pulled downstream. Anya's shock caused her muscles to tighten, pressing down the button on her camera. She has a picture of a woman, arms reaching upward out of the water, her head about to hit a rock at a 30° angle, her face registering knowledge of this. The press reported that the man's body was found under a rock at the bottom of the waterfall, but that the woman's was never located.

"That's why I don't read the real news."

Anya's tears mixed with the river water. When she spoke, she said that she was sorry, and it looked like the words were a line of blue jazz notes coming out of

her mouth. I said I was sorry too. I said there was nothing she could have done.

I felt her arms around my waist and the rock biting my vertebrae. My eyes were closed, and I didn't say anything—I only wanted one sense to feel this moment. If it were split between five, a part of it might be lost or the pieces might be separated. I knew her only as heat. I was sure one side of me would blister by morning. That was how close we were.

It couldn't last forever. "I think we should go get some *pinchos*," she said. "I need to get out of here."

That night we went back to Madesio's. I let Anya drive; she needed to fear death a little bit less. When we arrived, he said, "Ay, gringos!" and immediately brought out the card table.

"My wife bought me a new grill for our anniversary," he said. It was a nice grill. It had racks for the *pincho* sticks, a gas heating mechanism, and a control panel, while the old one was based on the combination of steel, charcoal, and a match.

"I love her," he said, "but I hate this." He kicked the grill and glanced across the street at his house. "This? Has too much power."

"You can always turn the gas down," Anya said.

"Yes, but will the gas listen, is the question." Madesio gestured toward the panel of knobs and then turned the flame from red to blue. "I like being able to put out the fire myself."

Anya said, "But you can control it."

"No, no. We are not partners. We are in this relationship, me and this machine, but I am afraid always that it will find out it has much more power than me. Do not tell it, and do not tell my wife."

I understood Madesio then. Empathized. But he laughed and said he was just kidding, that it was just a bunch of metal and that it had no thoughts and not to

worry. I did not feel like it was a joke. At least not a funny one.

For fourteen days Anya and I spent hours in front of four control room computer screens. For thirteen days we saw nothing interesting. Nothing worth writing either home or the *Astrophysical Journal* about.

On the last day, Anya left the control room and came back with two paper cups. The kind with windowsill flowers printed on the sides. The ugliest kind. Caffeinated steam escaped from the tops.

"They were out of Styrofoam," she said, handing me the one with unidentifiable flora the color of combustion.

"This coffee is too dark for Styrofoam, anyway," I replied. "It looks much nicer next to the flowers."

We drank until the caffeine made us dizzy with the feeling of being awake. Anya brought the coffee in new cups every time because she said that the sooner the supply was gone, the sooner the world would be a better place. At least the world inside the control room. I believed her.

We were slewing the telescope to its final rest position when Anya looked at Screen 3 and drew in so much breath I thought her lung would puncture itself to relieve the pressure.

"Amy," she whispered. "It's different."

I looked at the computer and saw that J0737-3039B's profile had changed. Anya and I would later write a paper describing how the starquake was caused by J0737-3039A's magnetic field. The powerful north-south magnetic lines had twisted around the smaller pulsar in a way that made its surface crack, shift, settle. But at that moment we weren't thinking about publishing.

I couldn't find any appropriate words. I had always thought, without ever saying so, that starquakes never actually happened, that pulsars remained always

the same. That the theorists who came up with the idea had botched a differential equation or, at least, forgotten to carry the one at some point.

The only thing that could have changed J0737-3039B was J0737-3039A. They had approached close enough to become gravitationally bound, and A transformed B. Was this power good? Was it bad? Or was A's potential for influence just frightening? I thought about Madesio's not-funny joke.

"Do you think J0737-3039A is scary?" I asked Anya.

"No," she said. "What do you mean?"

"Do you think it was J0737-3039A's right to disorient J0737-3039B's world?"

"Are we ascribing consciousness to balls of neutrons?"

"I guess it's more like a metaphor," I said, and turned away.

Anya pushed my ergonomic rolling chair into the window that overlooked the telescope. I thought I might fall through the glass, maybe just drift out and over the expanse of tiles. Get away. I wished that the binary pulsars had just collided and merged, like everyone thought they would. That would have been fairer. More balanced. If we were ascribing consciousness to balls of neutrons, that is.

"Let's go to Luigi's and discuss our discovery over some food and maybe some beverages *con*," Anya suggested.

"We've had more coffee than there is in water in the Caribbean," I said.

"Coffee is a stimulant; and beer is a depressant. I think we deserve to even things out."

When we arrived at Madesio's van, it was mostly gone. Everything was the color of his secret sauce. The flames ripped upward and sent their ashes to Madesio's roof. As we passed by, a piece of bread shot out of the roof and fractured. It looked like a flock of birds on fire.

The man sat cross-legged ten feet from his burning livelihood. Watching, just watching. His wife stood farther back and waved her hands at the fire as if that would make it stop. “She looks like the woman in my picture,” Anya said.

We did not stop.

I took Anya’s right hand in my left and moved my thumb north to south along her lifeline. Up and down. Touching the places hardship had washed away, feeling the karst topography of her skin. Seeing her sheeted ghosts.

Anya made a U-turn, and we went back up the sky without saying anything. *Lady in Red* was playing in my mind, and I could feel Anya’s hand shaking. A handquake, which is a very exotic kind of earthquake that hits very close to home.

Lauren was pregnant. She sat on the toilet and stared between her legs at the marked “easy digital early result one-step rapid pregnancy test.” The bathroom's fluorescent light was humming down at her, and she wondered if the noise could be heard inside her uterus, or if sound waves were smoothed by the amniotic fluid before they reached the not-quite-a-baby’s not-quite-ears.

At this point, Lauren asked herself one question: What am I? Twenty-nine. Michael’s wife. A biologist. A smart woman. A voting, tax-paying resident of West Virginia, at least as of one month ago. These were all facts, all equally true, but when she asked herself, “What am I?” the only answer her mind gave was “I am pregnant.”

Lauren heard those three words as if they were spoken by a chorus of barely verbal toddlers. She imagined fifty short, fat, thin-haired beings wobbling toward her, chanting in unison, “I am pregnant I am pregnant I am pregnant,” their arms outstretched in a gesture that could have been affection if it hadn’t looked like menace.

She took the offending white stick and stomped on it, threw it at the medicine cabinet, picked it back up and torqued it in half. She put the two pieces in her underwear and felt the tepidity of the plastic against her skin. Something about it was comforting. The sensation was so inhuman.

“Can you feel that, collection of cells that will become a person?” she asked, and pressed the pieces against the place she estimated was the center of the womb. “Your meiosis made this stick change colors.” She was placing a kind of original sin upon the proto-baby’s head. In its case, the sin was existence.

When Michael had said he wanted a child, Lauren had replied, “I want you to want to have a child with me.” It was true: she had blushed at the thought that he

desired to commingle genetic codes.

Michael had smiled the way always he did when he thought she was being coy, and she had hated him a little bit for not knowing that coyness was something of which she was not capable.

Lauren believed that the problems in her marriage were rooted in Michael's inability to make observations about her, which she found strange, given that he devoted his life to looking at things. He worked at Green Bank Observatory, two and a half hours from any road with a speed limit above forty-five. All the highways in and out and around the Robert C. Byrd Telescope were made of banked hairpins and road kill, one necessitating the other.

Michael still put mayonnaise on the sandwiches he made Lauren, even though she once took the glass jar from his hand, set it on the ground, stood one-footed atop its lid, and spoke down, "You are packaged colloidal fat, and when I smell you on my bread, bile creeps up my esophagus."

Michael laughed and said, "Come down from there and try this delicious roast beef bialy." She did not tell him that she was serious about the mayonnaise, because if he continued to slather her bread, she could continue to strike it against him, and then she would not have to lay the blame for her emotional distance somewhere else.

So Lauren added "mayo" to a mental list of Michael's missed opportunities, a list of little things that she had kept since the beginning of their courtship. And it *was* a courtship, and he was the courter and she the courted, in good, old-fashioned, parlor room style. This was the way it had to be, as he was infatuated with her inaccessibility, and so was she.

So when Michael said, "Let's make a child," it was not surprising that Lauren thought of the sex, and would later think of the pregnancy, as a biological experiment: something about which she should remain objective, curious, and

distant.

She had tried not to look at Michael's face when he finished his part of the child-making, but she could feel all his tiny organisms struggling at her cell barrier. She knew exactly when the strongest, or at least the most strategic, waved its unicellular victory flag and defeated her. She could feel the two seeds multiplying, taking over, expanding.

She had not worried, still did not worry, about the things potential mothers should—will this baby have fifteen toes, will this baby hate all the good books, will this baby become an accountant, will this baby eventually murder a woman and leave her in the woods beside a little-traveled highway?

Lauren had looked over at Michael's felled penis. She hated the way it was so vulnerable, so unapologetically external.

She hit it. Michael laughed and said, "Be nice, Mom!" a name she still could not imagine applying to herself. A month after this conception, Lauren and Michael had moved to the center of the core of the heart of the middle of nowhere. Here, Lauren had discovered her pregnancy before the boxes were even unpacked.

"West Virginia is a great place to raise a child!" Michael said when he saw the pink stick.

"I don't think anyone has ever said that before," said Lauren.

When Michael was accepted to the Green Bank post-doctoral position, Lauren had not said no. When she thought of denying him his right to live far from civilization and study things few people knew existed, she decided that there must be sacrifices. Sacrifices were, after all, some of the most important things people made for each other, and she wanted to be an important person for Michael. Perhaps this was the way. She looked over his shoulder at the watermarked acceptance letter, put her hand on his, and said, "We will go."

"But what about your work?" he said, grasping both her shoulders in both his

hands. The menace meant love.

"Your job is only for two years," she said. And because she knew martyrs were usually just self-important and -righteous, and she didn't want to be, she said, "Besides, I can write all those papers I've been meaning to publish."

He kissed her and then went to the store for champagne. "To life!" he toasted, when he returned. "To our life!"

Our life, Lauren repeated in her head. *Our plural life singular.*

Though Lauren did not hide the fact that she placed parsecs between herself and her husband, Michael believed that this distance was just a spore around her surely ocean-deep emotions. Lauren's stoicism, Michael thought, was further evidence of her brilliance, so he did not mind. Once, right before they had sex, he said, "Do you have Asperger's?" and when she replied that she did not know, he said, "I think you might," and kissed her.

Sometimes, Lauren opened her eyes so wide it looked like she had a thyroid disorder, and she said things like, "Studies in a number of vertebrate species have shown that the first step in anteroposterior patterning of the nervous system is the specification of forebrain identity." At those times, Michael closed his eyes and listened to the erudite polysyllables and the momentum her mouth gave them, and he felt glad that she shared her passion with him. He labeled this passion "love," both on his part and on hers.

At night, they curled against each other, and Lauren often clung to him in the way that a koala grips a eucalyptus tree. She liked the humidity of his skin, and the infrared radiation it put out, and the way his legs twitched while he fell into Stage One sleep. She wanted to feel as close to him as he felt to her, and since she knew that her brain was incapable of this, limbically, she pressed herself against his unconscious body and willed their skins to graft together, merge on the genetic level. They could be a symbiotic organism, a monstrous diploid animal with eight

limbs, two minds. This was the only impossible thing she allowed herself to believe in, this co-creature. She had to. The mixing of blood and tissue, the literal breaking down of barriers—this was the only way she could be married, in the oldest-fashioned sense of simply being joined, connected.

Although there were eight telescopes at the Green Bank Observatory, the smaller seven were mechanical eye candy—only one mattered. It mattered because it was the most useful, the most used.

Most of the astronomers lived within a two-mile radius of the telescopes; almost all of the houses in Green Bank had been built and were owned by the observatory. The area was self-contained, like a commune, though unlike a commune, it was not self-sufficient: day trips to the nearest grocery store, an hour and a half away, were a source of entertainment. The town with the stores, Elkins, had a mall that was really a strip mall with an Army recruitment center, a nail salon, and a two-screen movie theatre. Observatory families packed their cars with coolers for refrigerated goods and, when they got to "the city," smiled through the tinted glass at commercialism.

"Arby's!" the children screamed. "KFC! Wal-Mart! A *dollar* store!"

The colors and familiar logos were a relief after the sparse towns where the singular gas pump had an analog display, and where the four visible houses sagged into frowns and were missing half their shingles.

When Lauren and Michael first arrived in Green Bank, Lauren realized that the chain businesses they had passed hours before were the nearest ones, and though she did not consider herself materialistic, the world seemed very far away.

Not having seen their house yet, they stopped at the town's gas-station-essentialist-grocery-store-kitschy-souvenir-shop to pick up the first dinner of their West Virginian life. Lauren fingered the marbled t-shirts with silk-screened wolves

howling in front of American flags, and Michael picked out several canned soup options and a bottle of grape soda. They each held a handle of the grocery bag as they walked to the car. Michael pressed the “seek” button on the radio, and the tuner rolled around the dial twice before settling on a station of static. They smiled at each other, and Lauren said, “Let’s go home.”

Home was a modest house that was part of a square of other modest houses—called the Rabbit Patch—that they knew were occupied by astronomer families. Wherever Lauren was, she had no place for the community, so she figured it was only fair that, this time, the community didn't really have a place for her.

“They weren’t lying when they said that radio-emitting devices were restricted,” Michael said. He punched some buttons on his cell phone, sighed, and turned it off, per the regulations. The phone was useless anyway—no service, no outside signals coming in. The observatory tried to eliminate any earth-bound noise that would be picked up by the telescope, as it interfered with the data.

Their house contained a conventional oven, a refrigerator, and a television with no cable. The U-Haul behind their car contained boxes, mostly full of bound and unbound papers. These were the seeds that would grow into their life.

That night, Michael and Lauren sat on the floor and drank the soup straight out of the cans, switching with each other every so often. Lauren had never felt closer to Michael than she did then, cut off from everything else. She thought that she and Michael might have been, for once, equally alone.

A week after Lauren discovered her pregnancy, she and Michael were invited to the director’s house, across the Rabbit Patch. Greg Ballard handed them a channel guide pamphlet immediately upon arrival.

“We have satellite!” he proclaimed in a cavemannish voice.

“I was tired of only being able to watch sitcoms,” said Susan Ballard, the

other wife. “The canned laughter and unlikely marriages got to be too much.”

“Go ahead,” Greg urged, pointing at the pamphlet. “Choose a music station.”

“Nine fifty-six,” said Lauren, after a moment. “Cashmere.”

They all had a good laugh at the adult contemporary station’s name, and the soft sounds of mid-range singing accompanied them to the dinner table. Midway through the meal and all the way through a bottle of wine, Michael’s neck was splotchy, and he said, “Lauren is pregnant.”

Greg Ballard shook Michael’s hand and smiled congratulations as if to say, “Nice job passing on those genes.” Susan Ballard smiled at Lauren’s stomach for the rest of the evening, increasing her blatancy as Greg increased the amount of cab sauv sliding through her circulatory system.

“Sex?” Susan asked.

“I’m sorry?” Lauren said. She thought, *Yes, that was how it happened.*

“What sex is the baby?”

“I don’t know,” Lauren said.

“We don’t know yet,” Michael said.

“We don’t have any kids,” said Susan, as if no one had noticed. “You must be so happy. I would love to play with some kids.”

“Surely you get to play, though,” said Michael. “What do you do while Greg’s playing astronomer?”

“Well, I was a lawyer,” Susan said. “But Green Bank doesn’t really need lawyers.”

“I’m a biologist,” Lauren said.

They all looked into their glasses; Cashmere filled the airwaves; the collection of cells continued to pull blood and vitamins down its tube. Lauren wondered when it would have taken enough to kick so she could feel it.

“I tell you what Green Bank needs,” said Greg. More quietly, embarrassed

that his segue needed amendment, he said, “Well, what Green Bank used to need. Anybody know? Anybody? A structural engineer! Do we have a structural engineer in the house?”

Michael laughed and sheepishly raised his hand. A joke. He made jokes.

Greg stood up, centering the attention so that he could tell a story about the first Green Bank telescope. One day it just collapsed. Fell apart and to the ground. No warning. Someone was in the control room, which was a brick building underneath the telescope’s dish.

“The guy was in the bathroom,” said Greg. “Came out of the john, opened the door, and there’s just telescope parts all around him. Just like that.”

“They sell pieces of it in the gift shop,” Susan said.

“Won’t they run out?” asked Lauren.

“People don’t want them, anyway,” Greg said. “Most people just want to know if we’re going to find aliens and if we have extraterrestrial stuffed animals with embroidered observatory logos.”

“Do you?” Lauren asked. “I’d like to purchase one.”

Greg and Michael looked at her with eyelids lowered to defensive stance.

“It was a joke,” she said. “Michael told one.”

“We do science here,” Greg said. He put down his wine glass.

“You know the SETI researchers are crazy,” said Michael. “I’ve told you that. One of them only eats food made of potato products.”

Susan said that wouldn’t be so bad, and Lauren agreed, and Susan said that wouldn’t be good for the baby, and Lauren agreed. Greg, unamused, took Michael into the other room to talk about definitely not aliens.

Susan said, “Would you like to play checkers?” because the other option was making small talk.

You’re a little bit like me, Lauren wanted to say. *Isn’t that all anyone is*

looking for?

"Maybe aliens are a little bit like us,"she said instead.

"Maybe they are among us," said Susan. "They could look just like you."

Lauren jumped her checker out of the way of Susan's.

That night when Michael fell asleep, Lauren took the car and drove down Route 2 to Marlinton, the nearest town, to the caves where the high school kids drank Zima and whiskey and kissed and didn't tell anyone about either action. When she got close enough, she turned the car off and watched the kids come in and out of the caves, spilling their drinks on each other as they passed. Eventually, the kids drove themselves home, where they slept and would wake up and then, later, would sleep and wake again. Lauren had no feelings about their illicit behavior, no rush of protective neurochemical instincts. It was a shame, she thought, but not a surprise.

The front door did not creak when she returned, and the microwave did not shine a time, because there was no microwave. As Lauren slid into bed with Michael, she thought about the two other bedrooms in the house and wondered what, besides walking-talking beings, she could fill them with. She imagined one papered with small-circulation newspaper clippings about alleged UFO sightings, the other converted into an indoor Mendellian garden, a green room. She could live in these two, do whatever she wanted in front of their backgrounds, and step into the hallway only to cross between them.

She could sleeptalk to the soil, wake to a tendril twining itself around her fingers, roll over and steal the covers and not hear a sound from anyone. The room would take from her only carbon dioxide.

In their marital bed, where she had forgotten she was, Michael's black socks touched her bare leg, and his hair stuck in striations to his forehead. He

looked peaceful and childlike.

Lauren wanted to wake him and stop him from looking so defenseless and confess that she had no urge to caress the parasitic organism she was hosting. She wanted him to say that it was okay, because he was someone she could believe.

She couldn't, though. She could only want to. Her feelings for Michael were based on this desire for things. If she wanted to talk to him intimately, if she wanted to let him be part of her, it was almost as if she did and he was. Almost.

Lauren got up and walked to the kitchen, removed a permanent marker from the junk drawer, and drew a rocket ship flying into her belly button. “If you want to be an astronaut, you should actually be one,” she said toward her stomach. “You know, when you have enough brain cells to have free will. And astronaut is a stand-in. If you want to be a *blank*, you should be one.”

She had heard that some potential mothers put headphones against their stomachs so that the baby is born with ears and brain already primed for the complexities of classical music and Shakespeare, or Stephen King and black metal, depending. If it is possible for the unborn to absorb the audio, Lauren thought, then why not the visual? So she drew something she wanted the child’s life to be that hers was not, hoping the image would seep through her skin and imprint itself on the embryo.

When Lauren got into bed, she whispered, “I made something for the baby,” and pointed at her abdomen, or her “thorax,” as she sometimes called it when she wanted Michael to touch her. He did not wake up.

Lauren was wide-eyed about the telescope. She took lots of pictures, but none could elicit the same emotional response as the metal structure itself, with its full steerability, its 2,004 panels that automatically adjusted to disturbances to make sure that the telescope did not literally bend out of shape. Its one hundred-meter

dish looked up at the sky, collected information from wherever it happened to be pointed, and sent this information to be processed.

Lauren envied the telescope. It looked alien, but also strangely organic, rising up against the treed mountains, almost as if it had emerged from the earth's crust after some bizarre tectonic movement.

The morning after their dinner at the Ballards', Lauren looked out the window at the field that separated the houses in the Rabbit Patch. She considered going to see Susan, asking if they could listen to some 80s rock on the satellite TV stations. Maybe reminisce about some cultural experience they had in common. She did not, however, know how to make this casual afternoon companionship a reality.

"Hi, Susan," she practiced at the mirror. "Hey. Susan."

It sounded all wrong.

Giving up, she grabbed the permanent marker and walked out the door and toward the observatory, crouching behind bushes so that Susan would not see her and sense her failure.

She walked toward the astronomers' rec center, planning to take one of the communal bicycles and pilgrimage to the telescope. At the observatory site, she did not see anyone. The employees usually stayed in the offices, Faraday-caged, their personal radiation reflecting off the walls onto other walls.

When Lauren got to the bicycles, she chose the one with the highest seat, though this made reaching the pedals slightly awkward for her joints. She started down the path to the telescope, her legs and toes fully extending each time the pedals swung down.

Lauren liked being where no one knew she was—it felt anonymous, illicit, like she could rip off her clothes and scream the names of all the organic compounds she knew, and no one would care. Perhaps she could have done the

same thing at Susan's house, but she doubted her ability to get past a salutation.

As she traveled past the defunct, decommissioned telescopes, Lauren imagined that they were snapshots of the developmental phases that led up to a functional telescope, an astronomical version of the inaccurate models pro-lifers use at rallies to show that "a baby is a baby is a baby."

Lauren knew that this wasn't true—a zygote is not a fetus is not a baby, just like the 40-foot telescope was not the Geodetic telescope was not the Naval telescope. Lauren, pedaling past them, watched as they grew legs, sprouted arms, opened their eyes, and screamed, "Mama!" out of their receivers.

They wanted things from her. She pedaled faster, but their screams seemed to be coming from a place that did not recede. *Mama*, she thought. *That's not my name.* As Lauren accelerated around the curves and over the bumps, fleeing from telescopes no one else seemed to be scared of, she began to feel happy, and, she realized, aroused.

Lauren had heard about this physiological phenomenon, mostly through anecdotes about housewives and their affairs with stationary cycling machines; though she did not want to be categorized with these women, she continued to move back and forth along the banana seat. She tried calling it different names—Ohmichael, OhGreg, Ohsusan, Ohseat. She found none of these particularly exciting, and then she whispered, "Lauren."

She continued to say her own name, with increasing volume and frequency, until she and the bike fell into an oblivious tangle of metal and flesh in the grass at the top of a hill, next to the big telescope.

Through the neurochemical haze, she thought she felt her contractions turn into the wrong kind, thought she felt a pre-limb being pulled through her tubes. She put her finger inside herself and tried to push the intruder back up, but, of course, it was all in her head. Still, "Not now, thing," she said. "Ascend."

How strange, to have shared a climax with something that didn't even know what "climax" meant. She had never felt more connected to anyone than she did then, to it.

When Lauren got home, she took out the Sharpie and drew a name tag on her abdomen. "Don't forget who you are," she said, "when you are someone."

When Lauren got back to the house, Michael was home early and in a strange mood. He chased her with his arms outstretched and his hands positioned in a way that made it look like he was holding an ostrich egg. He grabbed at her midsection. "Can you feel it?" he asked. Then, "Can I feel?"

"No," Lauren said. "And yes."

He put his fingers flush against her shirt, and then he rested his ear between and above them. "I can't feel anything," he said.

"Neither can I," she replied, willing his fingers to push through her skin and into her warm insides, where they could wave hello to the small thing.

Though she knew it was impossible—the cells were not even eraser-sized yet—Lauren imagined that she felt them kick.

She shouted, and Michael jumped. "What?" he said. "What is it?"

"I thought I felt something," she said.

That night, Lauren again left while Michael was sleeping. She took a bike, swiveled past the closed gate, and headed toward the end of the telescope trail. She could smell the plants' consumption and release, and she coveted their cell walls.

What did she have to keep her together? Millions and millions of plasma membranes—skinny, small things that sounded cheaply made—and, on the outside, a layer of skin that was always in the process of falling off. It seemed inadequate, and she could feel herself evaporating, her cytoplasm leaking out into the world,

her reticula crawling off into the woods, and her skin, empty, collapsing to the ground to be passed tomorrow by the tour bus, from which patrons would stare, repulsed by her husk.

What would happen to the embryo? Would it, too, evaporate? She imagined it disengaging from her body, swimming through the air and up into space. It would surely find some other source of nourishment.

When Lauren got to the telescope, she leaned the bicycle against the support pillar and listened to the whirring of the motors. She knew that back in the control room, an astronomer was controlling the telescope's movements, telling it where to look and what to analyze, but since she was below the dish, she knew it would never find or understand her. She stood underneath the dish and waited for it to crack and crumple.

She wanted to climb up the stairs, walk to the middle of its surface, and position herself against its smooth, white panels. Her body would skew the data at first, but maybe, eventually, she would merge with the telescope, its atoms fusing with her atoms into some new hybrid molecule, and Lauren and the telescope could both, as one, look up at the sky and see strange things and tell Michael about them.

"Do you have anything to say about that?" she said, her voice directed down at her stomach. "Would that be okay with you?"

Lifting up her shirt and taking out her marker, Lauren drew one more picture next to the others. She pedaled home and went to bed in the bathtub.

When Michael entered the bathroom in the morning and saw Lauren sitting bow-backed against the bathtub wall, awake and staring at the door, he said, "Oh, Jesus, you didn't flush it, did you?"

"No," she said, pointing to her thorax. "It's still hiding out in here." She lifted up her shirt and showed him. "These are the things I want it to have," she said.

“These are the blessings I am bestowing upon my posterity.”

Michael traced his finger over a rocket ship, a name tag, and a stick person looking out the window of a doorless house.

“No one even tries to get in its house,” she said. “They all know better—it’s impenetrable.”

Michael lifted her up, pressed against her so hard that she thought she could feel the thing smashing against her vital organs. How would this room would fare if the rest of the house collapsed?

“So it’s okay, then,” Michael said, rocking them, the three of them. “It's okay.”

Lauren closed her eyes and did not answer and tried to imagine the cells dividing, being one and then being two. Parts of her DNA crossed over and recombined with parts of Michael's DNA. The best and worst parts of each of them were getting all mixed up. Spindles connected centromeres, connected them to each other, and to something new.

The alien inside of Lauren would form and flip for months, and although her respiration and circulation would sustain its development, it was a thing, a living thing, doing its living beneath her surface, and she would be glad when it pushed through. She would be glad when those three hundred fifty baby bones were out of her.

“Greetings,” she would say to it. “Greetings, Earthling.”

She turned to Michael. “Greetings, Earthling,” she said.

“Greetings,” he returned.

Tam and Ellie had last seen each other seven years ago, before Tam whisked herself away to Brown University's History of Mathematics doctoral program. At the time, it had been difficult for Tam to talk to Ellie, because where do you start when you've been living different lives for so long? And now it had been even longer, which meant it would be even harder, but that was why Tam was writing a letter. Letters are easier because you can say everything you want to say in just the way you want to say it, without the threat of interruption or the threat of your own vocal cords' sudden hesitance to vibrate.

She wasn't just going to write a letter, because letters were ordinary. Ellie deserved a communique that represented effort, sacrifice, and creativity. After all, Ellie's own writing surely represented all of those qualities. And besides, if you only make an impression once every few years, you'd better make a firm impression, if you wished to retain (or regain) a place of importance.

Tam owned copies of all Ellie's books—*Twice upon a Time*, *Bitterroot Seduction*, *Women of the Dark Otherworld*, and others—and had underlined passages on which she planned to compliment Ellie, when they saw each other again. Perhaps flattering her with "Your paragraphing here is excellent" or "I wish other people could wield adverbs as well as you do" would make Ellie suddenly realize that she wanted Tam in her life forever. Perhaps. But Tam realized she would have to lead up to all this. That was what the letter was for. That was why the letter was an extraordinary letter—a Sumerian-style letter, a tablet.

Tam had never made anyone a Sumerian tablet before, though she was the Math Department's specialist on the subject. She thought, though, that this was a particularly apt medium for telling Ellie that she was pregnant. The clay tablet would be sealed inside a clay oval, like a little word-baby. Ellie would have to

break the oval to see the message. It was a symbol. Surely Ellie, being a writer, liked symbols.

Tam was not crazy, an adjective that has little meaning, anyway. Outsiders, people outside Tam's head, may have judged her actions as abnormal, but outsiders didn't know about her actions, and absent external viewpoint and evaluation, the term “crazy” doesn't mean anything at all.

> ***Note to self:: How to get through your first winter in this town:*** *Behave like they do. Put on a scarf like they do, and tuck it into the breast of your coat, being careful not to let it leak out between the buttons. Wear tights under your jeans like they do, so that weather has to try harder to get through to you. Stomp the snow from your knee-high boots like they do before they go into a building. Like they do, wear a tasseled knit hat so you can walk with your head up. Keep, like they do, your hands balmed. Then, when you touch someone, like they do, your hands will feel soft, like theirs.*

Tam and Ellie had been childhood inseparables, and then they had grown up. Starting to communicate now would be like resetting: going back to the left-most side of the timeline, jumping to zero, where they would have to begin without assumptions. In mathematical terms, there were no lemmas, and Ellie found that lemma-less proofs were the most elegant. You, on your own, discovered everything needed to form a conclusion.

Before Tam took the authentic reed stylus and committed her letter to clay, she wrote many notebook-paper versions, changing the dashes to parentheses and swapping “I” for “me” in an attempt to decrease the formality of it all. She realized, however, that it was impossible not to seem formal when your letter has to be

heated and hardened before it can be delivered.

She wanted to explain herself in a way that both she and Ellie could understand, and she thought a theorem would be best, since she was a mathematician and Ellie was "a paranormal romance novelist, interested in the connections between worlds." The internet had said so. The internet had also said that Ellie was married, but people are occasionally friends with each other, and Tam thought that that would be fine.

Tablet 1:

Ellie,

Two numbers—A and B—are equal if all numbers that are less than A are the same numbers that are less than B, and if all numbers that are greater than A are the same numbers that are greater than B. I am not equal to you because some things greater than I are still less than you. However, I am doing my best to move up the number line toward you.

Tam baked the tablet and its container inside her kitchen's oven, where she also baked the frozen dinners that everyone else in the world microwaved. When the clay hardened, Tam packed it in a nest of corrugated cardboard and biodegradable Styrofoam and walked across town to the UPS store.

She had been copying—people, equations, conventions—all her life, long before she copied the Sumerians' correspondence preferences. She had become quite skilled at replication, to the extent that she could no longer tell what she had lifted from other people and what was genuinely her own. When it was very cold outside and she was bundled against the world, she suspected nothing was. It had never been cold outside where Tam was, before Tam came here, to this rural university town where she taught the brightest young minds a subject they found

more irrelevant than they found her.

Fact: Psychologists say much can be learned about your personality by asking you to draw your house.

When Tam was a child, her parents told her that she had been born in a house at the top of a mountain. She could not remember ever having seen a mountain, and she imagined all mountains as having triangular, snow-capped peaks. She wondered how a house could sit atop such a mountain, teetering on the point where the two lines of its incline met.

She sketched the house this way when, after a battery of multiple choice questions about her ability to understand the social nuances of eight-year-olds, the school psychologist asked her to draw where she lived.

"Asperger's," Tam heard the psychologist tell her parents. "She will have trouble interacting."

Tam's current house sat on a summit. Though she knew better, she would have drawn this house the same way as she had in the doctor's office: precarious, isolated, black and white.

Fact: When chemical elements have problems interacting, they are called "noble."

Tam taught Historical Mathematics to basement-floor classrooms of students who thought courses like "Eastern Mathematics: Not Just the Abacus" and "The Number Line: Where in the World Did Zero Come From?" would be easier because the answers to the problems had been solved long ago.

Tam's first speech of the semester was titled "Just Because Someone Else Could Figure It Out Doesn't Mean You Can." She found that this decreased class size.

Evaluation for professor of MAT3304 (Dr. Tamara Knight):

Did the professor effectively communicate with the class?

Well, she gave a lot of lectures in English, so I guess yeah.

Were the course materials covered in a clear and logical manner?

Well, she used a lot of big words and would not tell us what they meant but said we could look them up, but other than that yeah.

Did the Professor stimulate critical thinking and analysis?

Sometimes if we weren't thinking smart enough she stopped talking to us until we could prove that we were "worthy."

Did the professor respond adequately to student questions?

Too adequately.

Did the Professor tolerate expression by students of different viewpoints?

It's math.

Was the Professor accessible outside of class?

I never tried to access her.

Notes for Lecture Two:

In the beginning, mathematicians created algorithms—strict, repetitive procedures that worked every time—but either these others did not know why the steps worked, or they had not felt the need to tell anyone. Euclid was the first to give the algorithms reason. He put principles behind them.

Conversation from a department meeting:

Dr. Tom Carroway: How is your research going, Tam?

Dr. Tam Knight: My research is going well.

Dr. Myrtle Lewin: How is yours going, Tom?

Tom: Quite well, quite well. Moving right along. I heard you published a new paper in *Nonlinear Dynamics Quarterly*, Myrtle. Did you hear that, Tam?

Tam: I did. It was in the bulletin. Congratulations. A lot of people read *NDQ*.

Tom: Quite good, quite good.

Myrtle: Have you published anything lately, Tam?

Tam: Not since my piece about Godeaux for the Belgian government. But I'm doing some intriguing archival research.

Tom: Oh, archives.

Myrtle: Hm. Archives.

Tam: Yes, archives.

QED, Tam was no misfit.

Tablet 2:

Ellie,

It is possible you don't remember me and probable you are asking yourself why I am sending you carefully packaged pieces of clay. This carefully wrapped piece of clay contains the answer. If you would like to write back, please do, since I am about to make a confession, and confessions that go unacknowledged can float in the air until you ingest them like

bacteria and they make you sick. For your response, you are not obligated to use Sumerian envelopes; I know it is hard to find good clay (joke).

Here is my confession: If you have a 1 *and a* 1*, and you put them together, you have a* 1+1=2*, or a* 2=2.

I used to be a 1+0=1*, but for about a month I have been a* 1+1=2*. Or maybe more like a* 1+0.111=1.111.

What I am telling you is that I am pregnant. I can't really talk to anyone else about my condition, but years ago, I could talk to you before, so maybe I can talk to you now. There's that cliché "some things never change." Maybe our ability to talk is a subset of "some."

Whenever Tam went to the drugstore to get migraine medicine, she felt that her privacy was being invaded. The cashier could see her haggard face and the rattling medicine bottle and infer too much about her. What right did he have to know she had a headache?

If she told someone about her pregnancy, the listener would know she was pregnant, simple as that. He or she would picture a growing group of cells in her abdomen. The listener would also think about her having sex and might also wonder how a quiet woman who wore a bun long after that had ceased to be a popular symbol of professorial severity had ever gotten into that situation.

Tam had gotten into that situation the same way she had gotten into other situations: replication. She knew that sex was what other people had, so she decided to have it for herself.

She watched the female graduate students lean in and touch Dr. Tom Carroway's arm when they questioned him on the methodology of his latest paper about stochastic resonance. She noted the way they looked at his mouth while he said, "It was a silly little program, really. Only 10,000 silly little lines of code," and

the way they replied, “You know all of the undergraduates are in love with you.”

Fact: The physiological signs of attraction are the same as those of fear.

It had taken a significant amount of courage for eleven-year-old Tam to even move her fingers within an inch of Ellie’s. The episode of *Nova* was almost over by the time she had accrued enough energy to make the movement. She knew it was trouble (girls should only exchange excited glances while watching television, especially if the program is documentary), though she was not sure why or how she knew it.

When Tam’s mother caught her holding hands with Ellie under a pillow in their living room, she switched off PBS and whispered to her daughter, “Do you even think before you act?” She did, obviously, she thought a lot about it, but she didn't consult anyone before acting, so no one told her things were wrong until after she'd already done them. All her knowledge about social behavior was derived from posteriori logic.

When Ellie’s parents came to pick her up, Tam’s own father said, “It’s always the quiet ones.”

Tam, being eleven, did not know what had made her do it. She had simply felt close to Ellie and had had no other way to express this, since saying, “I feel close to you,” was beyond the emotional range of even normal preadolescents, who were barely past the if-I-chase-you-around-the-playground-it-means-I-want-you-to-stop-running-from-me stage of their lives.

Ellie appeared not to have known that anything was wrong, as she asked, “What’s up with our parents?” Soon she would have a boyfriend, so nothing would be.

Note to self:: How to become acquainted with someone: *Confess things the way they do, but only confess the kinds of things they confess. State your pet peeves like they do: as if the annoyances are tantamount to felonies. Say that you dreamed of curing cancer or creating a Grand Unification Theory, like they did, until you realized that everyone had those lofty goals, but no one succeeded. Tell them your sister was the favorite, your mother was overbearing, and your father was distant, like theirs. When they feel you have these things in common, you can say something that matters.*

After Tam knew enough about seduction, she and Dr. Carroway slept together. After they slept together, Dr. Carroway smiled at her in the halls, in the mail room, at colloquia. People smiled when they want more of something—more humor, more conversation, more food, more of you—but Tam's experiment was completed, and the results were conclusive enough that she did not need to repeat it in order to confirm her findings. She knew now that intercourse was not completely unpleasant, and that she was capable of feeling not unpleasant while coursing with another person. That was enough.

Tam also knew that she was pregnant, but when Dr. Carroway sat next to her on the day she found out, she did not say, "Just because I couldn't say 'condom' aloud doesn't mean you shouldn't have put one on," nor did she say, "The stick turned pink," nor did she say, "It's yours"—she just said hello with a straight-lined mouth, because she did not want him to think she wanted anything from him.

Note to self:: How to do things like they do: *Discover why your "how to" procedures work. With reason, the procedures will seem less like algorithms and more like living.*

Tablet 3:

Hello, Ellie. I hope you are doing well. I hope you do not mind my being pedantic for a few paragraphs before I get to my point. If you do mind, just tell me in your next letter, and I won't do it again.

Math used to be much more concrete. A person weighed as much as ten bushels of corn; a piece of wood was the length of two forearms placed finger to elbow; a cart traveled at the speed of one horse, perhaps two.

While kilograms and centimeters are theoretically based on water and pendulums, and while cars can have the power of hundreds of horses, these units are so far removed from their physical foundations that, for all practical purposes, the units have become abstracted.

I think that most adult situations progress in the opposite direction—from abstract to concrete, sometimes omitting the abstract altogether. For example, I tell you that I am fond of you, and then I bring you flowers. Or I just bring you flowers in the first place. I tell you I am pregnant, and then I let you feel my stomach.

If I pay you a visit, you will know that I care without my having to state it. Would you mind if I paid you a visit?

Tam had known since kindergarten that she would go into math. Given ten beans and told to "explore" with them (she had gone to a charter school), she had put one bean on top of the other and tried to press the top one into the bottom one. They did not snap together like she had hoped.

"When you put them on top of each other, they're still two," she had said to her teacher.

"You're adding!" the teacher had said. "One and one is always two."

Tam liked the sound of always, its implication that something would repeat

itself indefinitely given the right conditions.

Note to self:: How to connect to your body's partially formed replication of yourself: *(Note: I will call it a "she," though it is not really any sex yet.) Find the things you have in common. Like her, your cells are dividing. She consumes your food; you, too, consume your food. Your blood goes through both of you. Like you, her body simply follows instructions and makes copies. It is good at what it does, and so are you. One day, though, the child may be good at something else.*

FACT: The state of limerence, an obsessive and involuntary form of romantic love, can persist for years if the love is not mutual but the limerent person believes that it, someday, could be.

As Tam packed the fourth tablet, wrapping it in old editions of the departmental bulletin and centering it in a synthetic nest, she wondered if this was crazy. She stepped back to look at the situation.

"I have been writing secrets and feelings on clay, putting that clay in more clay, putting the sum of the clay in a box, sending it through a government agency to a woman I don't know who doesn't know me, and hoping that this will simultaneously comfort me and revive a relationship that was never quite what I wanted it to be in the first place," she thought. "My actions do, in fact, resemble those of an insane person."

These thoughts were smoothed by the sandpaper knowledge that people often acted irrationally when they have strong emotions. Maybe not "often"–maybe "always."

Tablet 4:

Ellie,

I am still writing you, though you have not responded. It is good to talk to you even when it feels like talking to myself. That's the way it is supposed to be with good friends, anyway, isn't it?

Because we are friends, I have been working on a new theory for you.

If A divides B, A is a part of B. You divide me (with you, I feel communicative and emotional, while out in the world, I feel the opposite), and therefore you are a part of me.

The fetus, too, divides me. Part of me holds a fetus and part of me does not.

In both situations, part of me is shared, and part of me is not.

I think I will come to visit. We have not seen each other in a while.

When Tam was ten, she owned a copy of Ellie's fifth-grade Personality Portrait. On Personality Portrait day, students brought physical manifestations of their hobbies or interests and had their pictures taken with saxophones, skateboards, scrapbooks, or Star Wars action figures.

Ellie had chosen a pencil. No one else had chosen a pencil. But no one else spent hours writing the first chapter of post-apocalyptic novel after post-apocalyptic novel.

Every night that year, Tam laid out the clothes she planned to wear the next day, putting Ellie's picture (which she had mounted on construction paper and then laminated with contact paper) into the front pocket of her jean shorts. She continued to do so for years, though she outgrew the jean shorts, even though she and Ellie grew up and apart. Sometimes she put her hand on her hip to feel the picture's corner, sharp as it was the day she sealed it off.

Note to self:: How to discover the basis of a procedure: *Look for the madness in the method. Look for the rhyme in the reason. Incorporate madness and rhyme into your life. Note that that when you do so, you will again be following procedure. Smile: you are a little bit like them.*

After two months of engraving letters to Ellie, Tam traveled to her house, as promised. She planned an opening line for herself—"Hi, Ellie. It's Tam. How are you? Remember our initial conditions? It is technically possible to start our system over."

But, "I'm pregnant," she said when Ellie opened the door. "It's yours. I'm keeping it."

"Tam?" said Ellie. She was wearing a mom's jeans and a man's T-shirt.

"I'm sorry. That was supposed to be a joke. I can't ever get the intonation right."

"What are you doing here?" asked Ellie. Her husband appeared behind her. His head was at the right height to be exactly above hers, and he was wearing a shirt the same size as Ellie's.

"Didn't you get my letters?" Tam asked. She peered around Ellie into the living room. The clay creations sat on a coffee table, a mantel, a dining table, and a bookcase. All were unopened.

"Do you like those?" asked Ellie, following Tam's gaze. "An anonymous fan sent them to me. I think they really pull the room together."

"You didn't open them? Didn't you hear something rattling around inside?"

The husband said, "No."

"Did I ask you?" asked Tam. "I didn't ask him," she said to Ellie. "Ellie," she said.

"Tam?" said Ellie. "Did you say you are pregnant? Congratulations! Come in.

Sit down. How have you been? Are you here on business?"

Tam did go in and sit down, because that is what one does when one is invited to. But that was as far as she could follow the protocol. Calmly, slowly, she picked up the nearest Sumerian letter and threw it against the wall. The shell broke, and the tablet fell to the plush carpet, leaving an empty space in the air where a climactic sound should have been.

"I should have sent you instructions," she said. "It's my fault." She picked up the tablet and pushed it toward Ellie's chest.

"Ron, this is my friend Tam," said Ellie, clearly trying to skim normalcy from something that had no top layer. "We lived on the same street when we were little."

"Hi, Ron," said Tam. She was still holding the tablet.

"How far along are you?" asked Ron.

"That is none of your concern," said Tam. "Could I please speak to Ellie alone?"

"Oh, now, I don't know about that," he said. "I love to hear all about Ellie's old pals."

"You can read all about it," Tam said, giving Ron the tablet. "If you want more information, destroy more of your decorations."

Ellie told Tam to sit down and slow down and start at the beginning, but Tam, her plan ruined, could only walk back out the front door. She closed it behind her and sat cross-legged on the green, warm lawn.

Its color and temperature seemed alien. The blades of grass pressed into her leg, and the discomfort felt right. Lying down, Tam maximized the amount of skin that was in contact with the small peaks. She waited and hoped to hear the cracking of the other three envelopes, but the house was too well insulated, and she could not tell what was going on inside.

Despite it all, Tam still felt close to Ellie. Things had not gone exactly as

planned, but Ellie had just misunderstood her—that did not mean she always would. Surely, once all the letters were revealed, Ellie would invite Tam inside (Tam and the unknown +1 that was hiding inside her shell). She would go inside the walls of Tam's house, where they would begin again, together like before.

Tam could see this as her house, too. She imagined that she was only outside to have her picture taken, to have a reproduction of this special day.

YOU MIGHT FEEL A LITTLE PINCH

Jane Cooper does not like her husband, and although she does not wish him dead, she is one smaller-than-average straw away from wishing someone would exile him. He is not important enough to be exiled, however, and this is part of the problem.

"Why aren't you more important?" she asks him.

He, sitting in her lawn chair while his hot dogs bubble and brown on the grill, pulls down his bottom eyelids and looks up at her. "To whom?" he asks.

His eyes have veins in the way that old people's (people older than Jane and her husband) upper thighs have veins. He lets his eyelids go, like a teacher lets the projector screen roll back into its home at the top of the chalkboard. "Are you high?" she asks.

"I'm not one of your students," he says. "Plus, I'm too important to be high. I have important things to do."

"My students are more important than you," Jane says.

"Don't I know it," her husband responds. He takes the hot dogs from the grill, deposits them on top of two nested paper plates, and pushes the food through the air at her. "Want some?" he asks.

"No," she says. "I don't want anything from you."

"Are we still talking about food?" her husband asks.

"Yes," says Jane, who then walks inside; stuffs three books, two shirts, one pair of pants, and four pairs of underwear into the middle of a rolled sleeping bag; and drives to the nearest motel, called "Happiness Hotel," though it is neither. Although each room has sliding glass doors, which Jane normally thinks of as leading to a pretty scene—why make them transparent if you can't see something

nice through them?—, the doors lead to dirt, a sign that says “sod coming soon” hanging from a chain link.

At the motel, she puts her clothes in the drawers beneath the television, goes over her lesson plan for tomorrow (she is teaching existentialism to eighteen-year-olds, with whom this philosophy, unlike most philosophies, sometimes resonates), asks for a 6:00 a.m. wake-up call, and spreads the sleeping bag on top of the floral comforter. She imagines this comforter is frequently defiled, and she does not want dead microbes sticking to her skin.

The home phone only rings half a time when she calls her husband. “Goodnight, Robert,” she says. “I’ll see you sometime.”

“Did you go to the hotel again?” he asks. “Dammit, Jane, I was just trying to share my dinner with you. Can't you just let things be what they are?”

“No,” she says. “It’s not important.”

Jane Cooper wakes to a phone ringing.

“This is a wake-up call,” says a pubescent male voice.

“Thank you,” she says. “I needed it.”

“It’s my job.”

“Then I guess we just helped each other out,” she says. “Goodbye.”

“See you on the other side,” the boy says.

Jane says, “Are you insinuating that I’m old? Is that what you’re insinuating?” but he is no longer on the line.

She puts on her pleated khaki pants and her white blouse with the ruffles that form a circle around her neck if she buttons the shirt all the way, which she does. She barrettes her hair in the front and center so it forms a small puff that she considers the only necessary accessory. Robert doesn’t like it that way.

"You look like a pioneer or a polygamist," he always says. "Or both."

"I think I look nice," she always says, and leaves.

It is the "always" part of this exchange that bothers Jane Cooper the most. She never thought she would always be doing something. She once imagined that she would be a dynamic person.

She undoes the top button of her shirt, stares at the ends of her collar bones.

When Jane Cooper enters Classroom 103 at Lake Brantley High School, she checks to see if any books are missing from the shelves behind her desk (all are present). Above the shelves is a sign that says "BANNED." Next to BANNED is a poison symbol crossed by a red prohibited symbol surrounded by a square of exclamation points. Still, no one but Jane Cooper would describe Jane Cooper as funny.

Maurice is next to *Lolita* is next to *The Handmaid's Tale,* ad infinitum, or so it seems, since administrations hate so many books. She loans these texts to students who express a true interest in literature, the ones who the educational system would say "need to be challenged." Jane uses her shortly fingernailed hand to wipe the dust from the spines. When she became a teacher, she had just wanted to change one life, that's all, just one, that's what she told people, and now she can't even do anything about her own.

The bell rings; the classroom fills. It is predictable.

"Welcome back to your favorite English class," she says, addressing them from behind. "Today, in preparation for the Stoppard play, we will be finding out why you think your lives matter."

She likes to look in their eyes when she speaks, because that is what you do when you love someone, even if they don't love you back and sometimes draw

pictures of you on the inside covers of canonical literature.

"Please write one page summarizing the purpose of your existence and your place in the universe. Go."

Jane walks the perimeter of the rectangle of desks. Every year, the crop of students is essentially the same, and the end-of-season yield the same size. The students all shuffle in right when the bell rings—the popular ones put together like Potato Heads, the sad outcasts branded by black clothing and accessory choices, the content outcasts marked by their tight bands of friends who wear too-high socks, the "badasses" covered by side-swept bangs and heavy eyelids—and then they stare at her. They simply wait for her to speak. On Jane's bad days, she wants to say, "Take a picture. It will last longer, and maybe the strangeness of using a camera during class will make you realize that passivity and adherence to convention are not always virtuous." Most likely, though, they would stare at that statement, too.

Jane has an average of one student per year who is genuinely excited about interpreting the literary canon, and to this person she gives the privilege of free non-canonical books. These students usually take a long time putting their papers in their backpacks when the bell rings, making them the last students in the room, and about twenty percent of the time, they have the courage to ask her a question. "Was Edna's suicide in *The Awakening* really a feminist act?", "How do we know that the authors intended the symbols we talked about? Isn't it possible that the text is meant to be straightforward?", "What made Emily Dickinson use so many dashes?" Sometimes, though, they just smile and say, "Goodbye, Mrs. Cooper," and she says goodbye and imagines her brain in their bodies. What would it be like to know, again, that you have so much life left through which you must impel your body?

In these students' yearbooks, which they always ask her to sign, Jane writes,

“It is not possible for you to imagine all the possibilities that are still possible for you. The number will decrease eventually, so make the right decisions now! You have been a valuable asset and a delight.” This year, so far, she has had no such students. This is the first year that she has been alone in such a way. She wonders if it is her fault, if she has changed somehow.

She looks around at the class. She could say the names—first, middle, and last—of each student. She could identify each of their handwriting samples in a lineup. She could tell you how many times each of them says “um” before answering a direct question. She could tell you everything it is possible for a high school English teacher to know about her students. These students, however, know nothing of her, nor do they care. She is not really a person to them. She misses being a person to someone.

When Jane first started seeing Robert, she felt accompanied. On her trudge up the hill of life, she had run into a hiking partner. When she said, “In high school, I was always reading, and my best friends were characters,” Robert said, “I understand.” When she said, “I wish I were prettier,” he said, “You are. But I understand.” When she said, “I liked growing up in a place with distinct seasons, acid cold and acid heat burning at different times of the year. It gave me a real sense of life and death and cycles in general,” he said, “I understand.”

Before Robert, Jane had never felt understood. This, surely, was love—having another person acknowledge that you were another person, one whose experience was worth experiencing vicariously.

Later, Jane wasn't sure whether Robert was misrepresenting himself during their courtship, or whether he really did understand, still does understand, and has just ceased to think of this comprehension as important.

Either way, she knows now that comprehension is not love. Comprehension

is comprehension. Love is apprehension: being taken, being scared, being perceived—all at once.

At the end of class, Jane collects the students' loose leaves scrawled over with existential thoughts. The office phone rings.

"I already paid for three days' worth of that room, Robert," she says.

"This is Principal Benson," says Principal Benson. "I'm going to pretend you didn't say what you just said, and you can pretend not to be embarrassed."

"Hello, Ms. Benson," Mrs. Cooper says. Since their affair, Jane can never use Judith Benson's first name. She fears that the two syllables will gain autonomy and shape themselves, somehow, into a suspension bridge.

"Ms. Cooper," Ms. Benson says. "I need to see you in my office. Immediately."

Robert had known about their relationship (though not about the way the government-supplied ergonomic office chair lent itself to liaisons, nor the way Judith used to hide Jane's students' papers in her shirt and say, "I think there's a C in here somewhere"). Perhaps if he had known, he would not have said, "You can do whatever you want with women. We're oranges and apples, and apples don't threaten me."

The affair ended for the usual reason affairs end, which is the same reason affairs are so fervent: They impinge on everyday life. But Jane had wanted that. The warmth of torment, the chest pains of impossibility. During her affair, Jane was more than people could see from the outside. It was true she would not leave Robert, not because she did not love Judith, but because she wanted to continue to love Judith the same way, the hard way.

She had never really loved anyone before, and she had never had an affair before. She had not failed to notice the correlation, though she had perhaps

forgotten that it did not necessarily equal causation.

"I'll be there," she says, pushing her shirt's top button back through its corresponding slit.

Last week, she had asked Robert which condiments she did not like.

"What kind of a question is that?" he replied. "In the unlikely event that I ever need to know, I can just ask you. It's an open-book test."

Jane thought that, like her students, Robert would be unnerved to see her at the grocery store. The thought that she could do anything human or substantial outside the confines of their house (or, in the minds of her students, the classroom) was outlandish.

"You never ask me about my day," Jane said.

"You never ask me about mine."

"You tell me about it as soon as I walk in the door."

"Well, I'm just saving you some trouble."

"I don't need you to save me from anything."

"Jesus, Jane, will you stop changing the topic in this particular sneaky way?"

They stormed to separate shelters at opposite sides of the house. They have been like this for a long time.

"Like what, Jane?" Robert always asks when she says so. "C'mon. Gimme a simile. Just one."

Principal Benson's office has a minimalist decoration scheme. Walls. A desk that holds up at least ten paperweights.

"We have a situation," says Principal Benson.

"Isn't everyone always in a situation?" asks Ms. Cooper. Because she is an English teacher, she is concerned with linguistic precision, and when she used to

send the principal notes via intracampus mail, she made sure her emotions were precisely rendered ("You make me feel like I have a warm mashed potato body with a microwaved marshmallow head, in a good way.")

"Capital S situation, Ms. Cooper. Mrs. Cooper."

They each look over the other's left shoulder as they speak, shelled and respectful.

"And?"

"I found one of your students using an illicit substance behind the gymnasium, and he claims that he has stored others in your classroom."

"Don't they have dogs for that?"

"They who? For what?"

"The authorities. Search and rescue."

"I thought we would try to keep this between us."

"There is a zero-tolerance policy."

"You never were one for compassion, were you?" Principal Benson says. "The child has a difficult home life."

"So do I," Jane says, getting up to walk out, but then she replaces herself because if one is going to abandon a situation, it had better be for the right reasons. "What's his name?"

Judith says she does not want to ruin Joe Lasseter's life. She says that they can rehabilitate him. She says meet her in the cafeteria tomorrow, Saturday, at noon; he'll be there.

"Please recover his cache of drugs," Judith says. "See you Saturday, Jane." She turns her chair to the left side of the desk, where, underneath a blown glass jellyfish, there are files that apparently need attention.

This is the second time Jane has wanted Judith to stop her from just leaving.

After school is over, Jane Cooper goes back to the Happiness Hotel, re-packs her belongings, and heads to the check-out desk. The boy is there. His voice led her to believe that he would be attractive, in the clean but greasy way of teenage boys, but his nose is at a 15-degree angle to his face, and he has a moustache that looks like it was transplanted from his genital area. Because she feels bad for judging the appearance of an incompletely developed person, she says, "Well, aren't you handsome, sir. Can I have my bill?"

"You reserved three days," he says, biting the bottoms of his facial hairs. "No refunds."

"Yes," she says. "You can donate the other two to the next customer."

He smiles and tilts his head. "Or you could come back here tonight," he says. "I get off at six."

The boy surely assumes that a) she is in a loveless, sexless relationship, b) his nubility is desirable, c) she will be flattered, d) a amplifies b, e) b amplifies c, and f) he has little to lose in the proposition.

All of the above are true, but, "You could be my son, if I believed in children," she says.

"If you don't believe in children, I'm an adult, so it's cool."

"I'm married," she says.

"Exactly," he says.

"Goodbye," she says. "I'll see you sometime."

She had considered it, for a second, for fun, but she could not bear the thought of any tenderness between them. She now imagines herself stroking his moustache. "This will fill out," she imagines herself saying. She imagines putting her hands along the length his body. "All of this will fill out."

But taking up more space wouldn't make him more of a person, or a different person, though it seems so in her invented scenario. Probably he will become less of a person as he ages, losing himself to family, job, primetime television. To modern subsistence: Get up for work, work, pay bills, wind down till sleep, sleep, get up for work. On a lucky day have a meaningful conversation with a family member, on a lucky day, because they are subsisting, too.

Maybe that is why people tend to get larger as they get older—to make up for the portions of themselves that have evaporated, or tunneled into their cells for hibernation.

Once, in a note to Judith, Jane wrote, "You make me feel like my DNA has thousands of newly activated bases, expressing and expressing and expressing themselves."

When Judith broke things off, she said, "I can't. I just can't. It's just—I can't. You'll never leave him."

Jane said, "I understand," and walked away, though she felt amputated and like she was shedding As, Gs, Cs, and Ts all along the administrative hallway floor, leaving her only-just-recovered parts for the janitor to sweep up, discard. As she does in all distressing situations, Jane pretended this one was like a shot: It would only hurt for a second, just a little pinch, just look at the wall and you won't even know it's happened when it's over.

"Think about it," says the boy. "Goodbye, hot stuff."

Jane can see that he is laughing.

Jane Cooper gets in her car and drives home, on autopilot because even the drive home from her motel is too familiar. She wonders, as she often does, why anyone would let her drive a car. Or why anyone lets anyone drive a car. Or why

people want to drive cars, when they think about it. If you think about it, she thinks, you are going fifty miles per hour and so is everyone else, and the smallest blip—in judgment, in reaction, in concentration, in roadside animal behavior—could cause Newton's laws to push the car's frame unnaturally into your body.

People were not meant to travel this way.

But she does love driving. The threat of even suburban streets gives her a thrill that then causes her to resent the many rest-pulse moments of her life.

When she arrives at home, Robert is sitting on the couch. He recently reupholstered it. He also cleaned out the garage, rearranging the like-new screwdrivers and drills and wrenches (she couldn't remember his ever having bought any of them). He also cleaned the gutters, the sludgy leaves falling like they would crawl away when they landed, and started an herb garden of just mint. "For juleps!" he said. "They'll be delicious."

Even in his career as an actuary, he has begun to lose focus and prudence, two things actuaries need more than opposable thumbs. He is the Risk Assessment Specialist for Supreme Fish Delight, a local restaurant chain. Two weeks ago, when asked to calculate the estimated impact of removing the Pirate's Prey Platter from the menu and replacing it with the Skinny Cod Wrap, Robert gave the CEO a presentation on the epidermal benefits of fried food. "In conclusion," he said, "you should not remove the Pirate's Prey, because our customers deserve to have lustrous skin." This conclusion, in addition to being irrelevant, was dubious at best. The CEO gave him "some time off" after that, but Jane does not think relaxation cures apathy, or antipathy, and she is sure he has both for both his job and for her. It's only fair, after all, that marital feelings be mutual.

"What did you do today?" she yells as soon as she walks inside, though she doesn't know where in the house Robert is.

“The internet,” he says as he walks into the foyer, adjusting the elastic waist of his monochrome boxers.

“I thought we agreed you would wear fun boxers,” she says.

“Jesus,” he says. “Already?”

“I just like to smile when I look at you, and your presence alone doesn’t do it for me.”

Sophisticated insults like this have been common in their marriage for years. “Barbs,” Robert calls them. “You’re putting out your barbs.”

The problem is that she has never taken him seriously. At first, that was a good thing. “He could just make me laugh forever,” she said to girlfriends. Only years later did she realize that joking was different from being a joker, or a joke.

“An orange solicited me at the hotel today,” she says.

“What?” he says.

“Also, a student hid some drugs in my classroom.”

“I know. Judith called,” he says. “Don’t worry. It wasn’t awkward.”

“I’m so happy for you two,” she says.

“Yeah,” he says. “Would you like to have sex tonight?”

“Why would we do that?”

“We always do it after we make up.”

“This isn’t making up. And if I ever hear you say ‘always’ again, I’ll divorce you.”

“You won’t.” Robert puts his hands on his hips and leans back like he's in his third trimester. “It’s that simple.”

Jane Cooper goes upstairs, turns on the shower, and stands in front of the mirror while it steams up, fading and fading her features.

Jane Cooper finds Joe's little, illegal baggie behind the banned book shelves. She would like to congratulate him on his cleverness, but thinks she will hold this sentiment back.

She also finds Joe's existential paragraph from yesterday's class, folds it to one-fourth its original size, and moves it toward her pocket. Her hands shake a little, making it hard for her to actually put the paper inside the pocket, as she has chosen her tightest pants that do not make any torso skin press against her shirt.

When Jane first and finally decided to try to attract Judith's attention, she wore these pants every day for a week. At the end of that week, Judith pulled Jane into her office and said, "I know what you are doing, and you don't have to."

"I'm not doing anything," Jane replied. She shifted around in the seat usually reserved for disobedient students, tugged at the bottom of her button-down. "We haven't done anything."

"Jane," Judith said. That was when the ball was set in motion and would tend, as Einstein said, to remain in motion.

There is something private about names, though they are technically a public part of one's identity. When someone says your name, and it sounds different than when other people say your name (and not just because of varying vocal cord lengths), you know that this person has already changed you, simply by changing the way that "Jane" hits your cochlea. You cannot imagine how she could change you further, but she can. She will.

"Judith?" said Jane.

"I like you," said Judith. "I mean, I really like you. Like, like-like."

"We've been working here too long," said Jane. She wanted to smile, but she thought the situation might be too serious for that. It felt serious.

“Jane Cooper, would you like to eat lunch in the teacher’s lounge with me? Would you like to go to the real lounge for a martini after school is out? Would you like to have dinner with appetizers and dessert? Would you like to watch concerts and movies and each other grow older?”

Judith always had been bold, though previously Jane had only experienced this in faculty meetings.

“Yes,” said Jane. “I do.”

It was all so sudden, as they say, but it had also been a long time coming, which they also say.

“When did you know?” asked Jane after the first time they had sex.

“A long time ago. The first time I wondered what you would look like with your hair down. When you wore those pants for five days straight and stood up straighter when you saw me, I took my cue,” Judith said. “When did you know?”

“I didn’t,” Jane said. “I’ve never done anything like this before.”

“Like what?” asked Judith.

Jane did not answer. She was, apparently, no good at similes.

“You be careful, Jane Cooper,” said Judith. “You be careful with us. We’re important.”

A few minutes later, Judith asked, “Did you love Robert?”

“I think that I was incorrectly informed of the definition of the word,” said Jane, “before you handed me a reliable dictionary.”

Though Jane Cooper walks slowly across the quad toward the cafeteria, she feels like she is breaking a speed limit. The cafeteria’s double doors seem to approach faster than her brain can figure out what to do with them. So, instead of opening them, she stands out of the long tables’ lines of sight, and she reads Joe’s

paper. This doesn't take long, as it is brazenly under-length.

> *I am important because I am a person in a universe that probably has no other people besides the ones here, and I am one of those people, and I am, in an English classroom, and even if an English classroom isn't important in the scheme, or in the history of the universe, being alive in this place at this time seems pretty important to me, I like being alive, so that's all I need to know.*

Choosing to ignore the misplaced commas and the meandering syntax, Jane Cooper finds Joe's viewpoint somewhat profound, if inexpertly articulated. She wonders if he was high when he wrote it, and walks inside.

Only sun lights the industrialized room, which is decorated with anti-smoking, anti-sex, anti-drug, anti-DUI, and pro-motivation posters. The one directly above Judith and Joe has a picture of raindrops hitting the surface of a pond. It says, "Knowing harmony is consistency. Knowing consistency is enlightenment –Tao Te Ching."

Are the circles radiating from the raindrops supposed to represent consistency? They're all the same shape, yes, but they are different sizes, spread at different speeds, and have different strengths, depending on the size and impact parameters of the raindrops. Additionally, if consistency is enlightenment, Jane Cooper thinks her banality should have given her some powerful knowledge.

"Hello, Mrs. Cooper," says Ms. Benson. She gestures toward the boy, who is staring at the tabletop's "Sally was here, and she's a slut" as if the graffiti holds secrets that will ooze up to his consciousness if he just concentrates enough. "You are acquainted with Mr. Lasseter."

Jane feels that she should bow; she does not. Instead, she behaves like a normal person and just says hello. Truthfully, Jane has never given Joe Lasseter

much thought. He seems bored, but not in the smart, needs-extra way. But he hasn't caused trouble, either, since trouble often takes two. She takes a seat on one of the plastic circles that is connected to the table.

"Joe," says the principal, "do you know why you're here?"

"Because I'm on the wrong path," he says, not exactly rolling his eyes but not exactly keeping them level with his lower eyelids, either.

"Well, technically, you could be on the right path," says Jane, "depending on where you want to go."

"Where are you going, Mr. Lasseter?" asks the principal.

"I don't know," he said. "Alaska. New York. Somewhere where I can just live freely. You know. For art."

"Perhaps there are more legal ways to reach toward that goal," says the principal, grabbing the baggie from Jane. "Being expelled from school is not the best way to become a creative genius."

"You gotta struggle against something," he says.

"He's right," Jane whispers to Judith behind a cupped hand. "He has a point."

"You think you're pretty smart, huh," says Judith. "You think you know a lot about the world. 'You have to struggle.' That belongs on the cover of a composition notebook, with each letter cut out of a different magazine. If something isn't wrong in a situation, then the situation isn't worthy of you." She looks from poster to poster as if for inspiration, smoothes her ironed skirt. "It's very adolescent."

"But I am," says Joe. "I'm only seventeen."

"Age is no excuse. Inexperience is no excuse. There is no excuse for throwing away something as important as this."

Jane sits board-stiff and -still and -silent.

"I'm not throwing it away," Joe says. "It's still here. I'm still here, aren't I?"

“Am I not,” says Jane.

“Just because you have life doesn’t mean you haven’t thrown it away.” Judith.

“It’s still here,” says Jane. “That counts for something. That means it can be revived.”

Joe looks at Jane. “You cryin’, Mrs. Cooper? Man, I didn’t mean for that to happen. C’mon, now, it’s all right.”

“It most certainly is not,” says Judith.

Joe looks from woman to woman, and neither of them moves or speaks, and he says, “I think I learned my lesson. Can I go now?”

“We can,” says Jane. She does not remove any tears from her face because if she does not acknowledge them, maybe they will go away. Even though that philosophy has failed her before, she cannot help but hang on to it. “Please follow me. If you don't, I might be tempted to give the campus police your bag of substance.”

In the car, Jane will not tell Joe where they are going, but she does hand him the paragraph he wrote and instructs him to read it. “You might learn something about yourself,” she says.

When Jane and Joe arrive at the Happiness Hotel’s front desk, the same boy-clerk is working.

“Hey!” he says, winking. “You cheating on me?”

“He does drugs,” says Jane. “Please give us a room.”

The clerk does, although he charges her again and pretends the credit card machine is “being all slow today.”

Finally, Jane and Joe enter the hotel room, and she leads him out the sliding glass doors at the back. On Monday she will give Joe a book. She does not know

which one yet, but it will be one he is not supposed to have. Today, though, she will give him something else.

Lowering herself to the ground, she begins digging. She can feel the dirt slipping under her fingernails, pressing against the skin underneath. When she is finished, the hole is several inches deep and wide. She takes the baggie from her pocket and dumps its contents into the earth, replaces the dirt and gingerly presses the top so that passersby cannot tell that there is anything underneath.

"That's not going to grow," Joe says. His hands are in his pockets, and he looks childlike because he is confused. "This isn't the right climate."

"Exactly," she says.

"You're crazy, Mrs. Cooper," says Joe. "Can I go home now?"

Backing away from her handiwork, she imagines new and exciting possibilities. In the wrong climate, the plant might grow into something it was never supposed to be. A fruit tree, perhaps, or a wildflower patch that will take over the seedy backside of this seedy motel and give its patrons an unexpected view.