

2016

# Muscle Memory: Stories

Hannah N. Bradley  
*DePauw University*

Follow this and additional works at: <http://scholarship.depauw.edu/studentresearch>



Part of the [Fiction Commons](#)

---

## Recommended Citation

Bradley, Hannah N., "Muscle Memory: Stories" (2016). *Student research*. Paper 42.

This Thesis is brought to you for free and open access by the Student Work at Scholarly and Creative Work from DePauw University. It has been accepted for inclusion in Student research by an authorized administrator of Scholarly and Creative Work from DePauw University. For more information, please contact [bcox@depauw.edu](mailto:bcox@depauw.edu).

# **Muscle Memory: Stories**

**Hannah N. Bradley**

**2016**

**Advisor: Joseph Heithaus**

**Readers: Andrea Sununu, Kevin Moore**



## **Acknowledgements**

I want to thank all of the friends and family that I dragged with me through every step of my writing process: all the shoulders I had to cry on and words of encouragement helped me complete the longest written manuscript of my academic career.

Professor Sununu and Professor Moore have offered wonderful inspiration. I apply lessons from classes with both of them to this manuscript, and their reading suggestions and ideas served as diving-off points for my creative process.

I would finally like to thank my advisor Professor Joseph Heithaus for having, as he puts it, “given [me] a quart of blood” every Tuesday for the past two semesters. He helped me recognize my strengths and weaknesses, pushed me to think about my characters as if they were real, and most importantly reminded me to trust in myself and my reader.



## **Table of Contents**

- I. Introduction**
- II. Three Days**
- III. SYM**
- IV. 614-5237**
- V. Impression**
- VI. Day Dream**
- VII. Running Ministries**
- VIII. The Veil**
- IX. Muscle Memory**
- X. Home**
- XI. End Notes**
  - i. Context Effects**
  - ii. Physical Characteristics and Memory**
  - iii. Mind Palace**
  - iv. PTSD**
  - v. Reruns and Recall**
  - vi. Religion and Memory**
  - vii. Facial Recognition and Violence**
  - viii. Muscle Memory**
  - ix. Alzheimer's and Attention**



## Introduction

This is a collection of stories derived from research about the psychological, evolutionary, and cultural constructs of memory. While my research inspires and forms the base of these stories, there is no simple equation between the two. My primary goal in this collection was to write stories that were centered on ideas and research about memory, but that would not talk about memory explicitly. I want the stories to challenge the reader to think about memory in different ways and to question their own beliefs.

Many of these stories touch on the perceived and real distinctions and connections between mind and body. Our memories are tied to identity and conceptions of self. Therefore, memories are often classified as a function of the mind, rather than of the body. However, it becomes clear that the body, mind, and memories are highly interconnected. Memories are what the mind does, which is to say that memories are what the brain does; and therefore the body. This interconnectedness can be frightening because it means memories are influenced by uncontrollable circumstances such as evolution, physiological changes, and properties of brain functioning. Indeed, our memories primarily consist of details and occurrences from the outside world, and associations between these different perceptual experiences.

However, memories are not confined to the individual body or mind; memories can be shared or collected as a social and cultural group. Factors such as information availability, technology, and social constructs—such as religion—impact the ways humans remember and forget. Cultural memory in return impacts individual memory, because it can tell us what information to pay attention to; and one of the most common reasons for an inability to remember is the failure to pay attention. Memory is culture, identity, and the fundamental basis for everything we know about ourselves and the world around us, but it is not perfect.



## Three Days

Thank the Gerent she still doesn't have to go into work today; Keely knew she hadn't only voted for him for those promised mandatory vacation days. Ironically, those people who only a few months ago won their strikes were the only ones mandated by the government to go back to work within three days. It did not matter what service job you had—anything from frying plantains in a swanky hotel or recollecting glass bottles was considered necessary. Everyone else was expendable: nonessential for the minimal operation of the city until they figured something out. No one really needs a hand-stitched bathrobe run to their front door by one of the postsoldiers during a time of social crisis. As an architect, she couldn't imagine that her services were at all necessary, because most of the city was re-built and remodeled already into the Neutramode.

Keely shuffles back into the living room to the silver desk prominently sitting square in the middle of the back wall. It softly reflects the shifting and shimmering jungle themed wallpaper she'd had installed last year. Black juicy beetles jolt up and down, and bright leaves and orange birds shuttle through the background of dense forest. It also came with a sound component, but she found the odd distant shriek disturbing. From one of the miniature-sized drawers along the back top of the desk she removed the coconut husk paper letter, the first one anyone in her generation had ever received.

The knock on her door frame had come just as she was getting up in the morning that first day, and behind the curtain of knotted silk was a young girl still dressed in her rooftop farming uniform of magenta overalls and teal billed hat.

“You will have gotten a notification on your monitor, but all of the MonietraX are temporarily offline. I am here to give you one month's wages just in case.” The girl had managed to squeak

out, and then turned around to get back into one of the glassed boxes that runs along the outside of the building, and stops at each apartment in turn. This was the first indication Keely received that something could be considered wrong.

The remaining funds and explanatory note were still in the vaguely fuzzy envelope, which had probably been stored in a warehouse for one of those special occasions that come along every decade or so. And she put the emergency-only gold money in her purse to exchange for credits this afternoon. Keely had not yet checked to make sure they were all restored once the system came back online, but she knew the number should be 3, 456, 221.78: quite an impressive sum due to her inheritances and meager way of life.

As a formality she pressed her palm into the top of her desk, which tickled the ridges as it read her prints, and a rectangular section swiveled up to face her, perfectly compensating for her terrible posture, giving the impression to an outsider that the two were peering at each other from a distance of three feet. Pressing the ‘money’ section of the screen, identified only by that word, she found that all of her monies had been returned or fully loaded into the repaired system.

The upper right corner, ‘social,’ slowly flashed in yellow, suggesting that Rena from MimosasNow had finally responded to her request for an analysis of her most recent article. The forum has grown up from the single page of continuous and fast-paced chatter to include opinion articles that were becoming more and more scholarly by the day, and encompassed so much more than advertisement politics. There had even been a call to change the name, which Rena vehemently fought against, because it was deemed too whimsical.

She thinks back over her last draft of the article, looking for anything Rena might oppose; it can be hard to tell just what opening sentence or choice of word would call on her censure. The words peel off of her mind in sheets that separate from earlier drafts that float in the background

ready for comparison. Keely opens her social center, but there is nothing from Rena, only a message employing the shield icon with dagger, proboscis, atom with rotating electrons, and lavender sprig denoting the Department of Internal Affairs:

Dear Keely of Apartment Ataraxia num. 833,

We finally have your personalized prompting input formatted for your use at any time to help reconstruct some of your missing information. Please download the attachment at your convenience and when you are in a controlled environment. As you know, two weeks ago many people experienced difficulty in bringing up the expanse of three days' time two weeks ago. But our triggers have been found to work, and we encourage you to report anything significant to our offices if it may help us build an outline of that time period.

Thank you,

Your IAT Repair Team.

Keely starts to download the attachment; she'd heard other people talk about theirs briefly online, but no one wanted to share too much. It's going slow so it must be rather detailed. The sun outside is dusting the furniture that is perfectly tailored to her flat 5' frame in orange. She should really turn on some lights, but even the Naturaglo ones bother her eyes: she prefers to see in the dark. Keely reads over her article while the trigger continues to download, it's far better than the others she posted years ago reporting on the historical clash between feminism and advertisements. Many had commented that bringing up the old sexist examples wasn't helping anyone: that there was no danger of those mistakes recurring now, since the current number of genders overthrew the bias that comes from clear divisions. Nowadays even if you thought you knew someone's gender, the only real way to find out was to ask, but this was considered very rude.

This article is far more current and polarizing: she argues that there should be more public disclosure on The Company and the government's research and general activities, not something no one else has argued for, but she wagers no one has done it in quite the same way. Keely knew once it was posted her inbox would be bombarded with protestations that the secrecy was "necessary for their own safety" and "its unnecessary information that will only slow us down": arguments that she simply would not have the energy to respond to.

### *Where Does the Polyfiber Go?*

*Every morning I crack open a fresh vial of milk, individual oatmeal packet, sugar bag, and vacuum packed fruit. After the 34 seconds it takes me to unwrap all of these things, I press the small oval button on all of our kitchen counters and these wrapping fibers are sucked down into the void and disappear seemingly forever. I know they are carried along the other matrices of tubes carrying other things in and out of my apartment building, I could even tell you exactly how all of these tubes fit together in the spaces between our cubicles. But beyond the span of the individual building, I have no idea whatsoever where these crinkly and shell-like fibers go or what happens to them, but I would like to. I want to know simply out of curiosity, not because I assume there is fodder for another conspiracy, we all know we don't need another one of those, but I just think it would be an interesting thing to know. Maybe the same fibers that are used to preserve raspberries can also be used to make carpet: I don't know! But I would like to know, and I believe we have the right . . . .*

The download burps three times, her chosen setting, to alert her that it is complete. Keely wriggles back into her chair and locks it from swiveling all over the place. She clicks the 'begin' icon and waits for the count-down. The desk monitor recalibrates to float directly in front of her face, so she cannot miss anything. The screen fills with an opaque yet silvery mist, which is

suddenly cut by the stark black lettering: February 6th 2178. Keely knows she is supposed to close her mind to everything else at this point, and solely focus on the images and ideas they are giving to her. But the upstairs neighbor is doing his running exercises above her desk, and the dull pounding of his feet hitting the floorboards carries her attention away. None of this sound-carry would be possible if the Insulation Displacement Contact were up to code. She becomes impatient and almost more concerned with the aesthetics of the trigger than allowing it to do its work. She thinks the mist is a bit of a theatrical addition, but eventually its unending swirling gets to her and she forgets all about trying to follow one strand to see if it is just an echoing clip.

Sensing her lack of conscious focus, the screen finally shifts into the main event, the last thing Keely sees on the screen is the first light of morning shining through her eyelids, the touch of crumpled cool sheets on her calves, and the feeling that only happens once in a lifetime: that today is February 6th 2178:

It's a Saturday, because her body knows when it's acceptable to ignore the rising sun: the only time she allows herself to enjoy the feeling of warmth. She always scoffs silently at the government statements pleading with everyone to wear sun protection at all times, and leave their blinds down until such a time as one's prepared sufficiently. Today she doesn't need to beat the sun, and right now it feels like her body is a rock absorbing heat until it radiates—vibrating like a cat. The sky-blue sheets crinkle coolly as her legs undulate toward the floor. Putting on a robe, she steps out into the hallway between her door and the glass elevator to find the skies, streets, and hall empty. Vectors of geese fly close enough between this building and the next that she could throw a teacup and hit one.

These images and feelings twist and warp in a way that would make her nauseated if she weren't so deep.

\*\*\*

Looking up through her camera's lens at the glass and platinum dome she helped design for the new public library, and while admiring the crisply fitted trapezoidal windows, she glimpses something indistinguishable. From this vantage point on the bridge overcrossing a channel parallel to the dome, the image or shadow is difficult to see clearly as it moves around lazily, and has no recognizable profile. She turns her body around to take a closer look, but someone yells and she feels a surge of energy: it is not fear that prompts this necessarily, but rather it feels more like an ancient instinct to play. Again these realities fade.

\*\*\*

Just like an old-fashioned bus station, but high in the air and uncovered, like her parents used to tell her about. A conscious jolt of surprise upsets the reality momentarily—she has never had cause to visit one before. The winds blow treacherously, almost swaying the slight landing pad and extended walkway that connects to the main station and other smaller stops all throughout the hub of the city. The whole structure is supported from underneath by a system of cross-vaults and ribs that fit together snugly, and with such strong material so that they would never fall down under the normal weight of use.

She moves up slowly to the edge of the main platform that is silver with burgundy trappings, unwilling to brave the thin strip; surely it is completely safe, but the architects who worked on this must have overlooked the archaic fear of heights. She stands here for what feels like fifteen minutes, fidgeting all the while, tromping around under the sheltering overhang and scanning the skies. A few more people gather around the same spot, watching.

At once a strangely shaped airbus slides into view; it appears to be a mix of flat pyramidal wing structures, rectangular body, and whip-like tail, and she finally decides it most

closely resembles a stingray. It lands like a butterfly at the end of the long stem of the platform. Doors striped with windows fold in on themselves, and air-drenched people pop out one by one to make their way, suitcases and purses heavy to steady them. An older person in a taupe bag-of-a-coat slips through the crowd and jog-walks up the platform to greet whoever they had been waiting for, who turns out to be a young blond man whose mouth wrinkles at the edges as it is too big for his face. One by one the people keeping her company with their shadows either walk out to meet an arrivee or skulk off with them once they've reached semi-solid ground. Before half of the passengers have departed she sees a brown coat with two large front pockets step quickly towards her and Keely takes an arm into the crook of her own, but the features of this person are unclear, as if they have been smudged.

\*\*\*

It feels like when she got her sinuses blown out, a scraped feeling inside her head. For some reason she is sitting on the cold floor of her kitchen and an implosive hunger makes her want to vomit. Achy knee joints complain as she lifts up, holding onto the rung of a stool. Digging her fingernails into a frozen lasagna dinner and bringing the crystalline chunks to her mouth doesn't help the headache. Her lips start to bleed.

\*\*\*

Keely pulls out of these relived memories, like a mental suction cup, because the trigger has timed out. At first her head feels very similar to the last segment; she decides to sleep in this very chair, perfectly molded to her body as it is cocooning her in its deep white folds of foam. Analysis of what she just experienced must wait until the morning; she wants to let it all sink in and settle down for a while. It wouldn't make sense for her to remember the whole time that was lost all at once, that would just make her lose another three days altogether, but these sections are

too disparate; The Company should have given her something for mental steadying. She has no way of knowing whether these are the most important episodes, or why were triggered for her, or how these images fit together, and why part of it was blurred.

\*\*\*

Morning and it's easy to watch them take down the signs from up here, trying to keep her mind off of last night, bright men in grey uniforms driving around and resetting the data chips inside all the projection screens and holograms around the city. Those ghostly moving invitations sometimes even send out scent or tactile waves causing the odd sneeze, but mostly they just shimmied through you the same way sound did. Rocking back into the window seat, which was positioned low enough to bar the view, her lips pursed, this must have been an executive order because she had never known them to change the advertisements without hearing about it beforehand.

It's not like Rena to stay silent for so long; she tracks the changes in media to find hidden messages and come up with a new theory every couple of days or so. Like the time they gloriously shut down the hosiery company that used images of old women's saggy bodies to scare people into buying their leg-lifters, which had gone out of fashion decades ago. There had been a small newsflash about the protestors hacking into the company workers' tech so that the infamous images of purple varicose veins or greige cellulite were locked onto their screens until the two sides came to an agreement. Keely could not understand why these advertisements were deemed so offensive, and personally felt sorrier for the women whose legs were being used as blackmail. But her online friends said it was the subliminal aspect that they were ideologically opposed to, as Rena had explained: "if I am going to buy hosiery, I want to know why!" Mostly the news piece just generated laughter and mild ridicule for wasting everyone's time.

According to chatter from her favorite platform, named Mimosa'sNow after an inside joke about a widely publicized service-sector strike, advertisements concerning the new airport being built and its fleet of jets, anything to do with hardware stores with their recycled fiber wood, and a commercial about allergy medication whose mascot was a giant talking bee that looked like an unfortunate balloon animal were taken out of the normal rotation. And it was about time, she thought: a large portion of her paycheck was taken out automatically to help fund keeping her sane; no excuse for how long it took them to figure out what was causing the anomalies. No one tried to explain it, but for two weeks there was an aberrant number of minor car crashes, tussles in the streets, and sudden lapses of sobbing from the regular pedestrian who encountered these images and clips.

A ripple of chills runs up from Keely's tailbone with the memory of last Wednesday when she had to cancel a trip to the grocery store. The longer she stayed outside, the greater the urge she had to take shelter in the nearest building as if its metallic spine were a magnet tugging at her. It was similar to the feeling she got sometimes standing too close to a ledge that maybe if she weren't paying attention her body would leap over the side. But this time it was the open air and moving people that made her blood pressure drop, arms come up to grip the handrails of the gently trundling sidewalks and stomach practice for the Olympics. Something about that day, and the sensory inputs all around fought against her subtle balance.

The water faucet pings and blinks three times in a pink shade that reaches all the way across the rough bamboo carpeting from the kitchen—it must be 5 o'clock. Shuffling upwards and setting into motion the tracks of the open Moroccan patterned room dividers, she takes up the blue cup and sets it under the faucet, which it recognizes, and lets it fill to the serving line. Last month Keely had to email the company to let them know she gained 5 lbs. 4.73 oz., which

she did reluctantly six months late because she had finally given up on her diet. And due to the daily and hourly fluctuations of body weight she had to wait until she figured out her new pattern before feeling confident enough to report an actual number. Buzz on Mimosa'sNow suggested that The Company had its ways of tracking these minor health changes, but she at least wanted to remain trustworthy. Mildly cool water runs down her esophagus and hits her stomach in a wave that makes it contract inwards; it is minty this time and leaves her taste buds wriggling.

The only meal she ate was the last three apples for dinner at 4:32 yesterday, and the liquid wallows around in too much space: she'll have to go outside again. The grocery store is only two blocks away, but it's also fourteen flights up--the real-walking kind of flights too, they always want to make sure your consumption is counterbalanced with unavoidable exercise. She'd seen the plans during her last year of school, the product of an incomprehensible algorithm ensuring that each grocery store was the same distance, and exhibited the same amount of elevation, from each residence—give or take a quarter mile and thirteen degrees.

Keely places the cup back into the sink, where it will be sanitized, and slinks back into her bedroom to dress in one of her purple sequined pairs of slacks and velvety mesh collared shirts. As an afterthought on her way past the desk, she picks up the remaining coins to spend rather than turning them in again: Keely enjoyed the physicality of these silky bronze-colored tokens with one bowed-out side wrought with the oldest, and now meaningless, symbols of the state—such as the wooden fences and extinct flowers.

After taking the drop down to the street, Keely closes her eyes and waits five heartbeats before walking toward the door that opens promptly. Going to work every day most people have the same schedule, so she learned not to notice the others on their daily business, but now almost no one has a schedule and the entropy is intoxicating. The wildness of not seeing the person who

usually passes her at Montgomery Ln. at half-past, who could be anywhere else right now, or the few new faces sitting or standing along the walkways or rare bench, staring up at the canopy of young trees that pellet the whole city. She's never seen so much idleness in her adult life, yet no one looks as concerned as she feels. Not doing anything, not having anything to do makes her feel like the air is made of carbon monoxide—like she can't breathe even though she wants to. The fact that going to the grocery store is the only thing Keely actually needs to do today means that a trip that used to take her twenty-two minutes might actually take her three hours now. To slow her heartbeat and the unfamiliar images flowing past, she steps off of the automatic sidewalk and onto the stationary ground, setting a less harried pace.

The fourteen flights of stairs are never easy and her knees pop every third step. She guesses that anyone who can't make it up anymore is impelled to move into the flatlands. But once she makes it to the top and into the halogen lights of the grocery store she vows to stay until the rubbery feeling in her kneecaps goes away. Because this building is abnormally short, there are actually skylights, but the displays are so bright that people only ever look up to rest their eyes in the blue. What she really needs is something to eat, the usual bundles of fairly balanced ingredients and flavors. Everything is good, and she isn't picky, so as usual Keely goes down the lines of frozen shelving and dried foods, tipping anything that doesn't contain celery into her rolling bag until there is enough for the next five days. But this takes no time at all and her legs are still sore, so she swings around to face the dessert and luxury aisles.

Right as she is in the middle of deciding whether to buy a silkier brand of toilet paper or to get those seashell shaped chocolates this time, Keely hears raspy whispering coming from the very back sections of the store. The word that drags her head in its direction is "forgotten," someone was saying "I seem to have forgotten . . . what I mean to say is that I don't have any

with me.” Keely softly sets the package of dented sweets back on the shelf, being careful not to rock the line of stock sitting behind it, and moves quietly down the aisle. The closer she gets, the more the silence spreads to other shoppers in other aisles. Keely stops just before reaching the end of her aisle, which is otherwise empty, and angles herself just perfectly to look toward the check-out line without being seen. Someone with short hair stands looking down into a mauve bag with a blank expression while the attendant shuffles around, trying not to look anywhere in particular.

She can see the auto-scan is piled high with what could be a month of frozen meals and high-end personal care items. There passes a thick set of seconds in which every person conscious of the situation contemplates the options. The person at the desk takes another meek look into the bag and just slumps into their spine. Keely waits another few minutes to see what the other four or five people she can sense in other rows will do, but she knows they will do what they would want anyone else to do for them: avoid the situation. But this person was clearly stocking up for something, maybe a large family or, an emergency in the face of knee problems coming on soon. If everyone else would continue to ignore the problem, Keely walks out of her hiding place, up to the counter, and hands her MonietraX card to the attendant who looks up at her in relief.

\*\*\*

The dark purple strobes and increasingly urgent beating of the faucet on her eardrums signal that it is past the lunch hour. Another fifteen minutes and the miniscule alarumbot would have detached from its place next to the sink and whizzed through the air to try and find her. Keely always tries to get up at least before then, because the little bugger would not leave her alone until she walked to the kitchen and held out her cup; it would buzz around her head so fast

that it almost made her fall over. She only let it happen once, but it was enough to teach her to get up on time. Some people found ways of getting rid of or disabling the bot, but she simply hadn't gotten around to it. She almost trips on her bed sheets, rushing to make sure it doesn't go off, the purple lights are so deep and bright they overwhelmed the natural colors of everything else in her house. The change to normalcy was so stark, when her cup began to fill, it was blinding.

Holding onto the mug of oatmeal she just heat-flashed on the stove and the mango that was dropped off at her door from capacity overflow, she heads into the living room and admires her interior decor while the oatmeal slowly congeals on her spoon and the mango juice runs between her fingers. But something is bothering her, as if something has been moved or shifted overnight by the slightest degree, and she knows this room like her mind. Keely slowly moves around with both hands behind her back like someone at a museum, something she did at an alarming frequency. She knows every aspect of her decor, every angle and edge, but that does not take away from the joy of experiencing it first hand, passively.

The sets of antique marbles are all perched on their steel prongs in an exact swirling pattern. Her fluorescent but otherwise realistic solar plant splays out in the same lazy way that almost makes her angrier on a bad day. But there is something jarring about the endless photo display that plays on her tv whenever it isn't turned onto a station. Each picture lasts only for a few seconds, but there are three sets of photos that turn her mouth dry and make her heart tremble whenever their turns come around.

Keely sits down on the big Tibetan pouf in front of the TV, elbows on knees, staring at the procession of images until one of the sets of electrifying ones comes into view. She doesn't actually know how to pause the display as it is on her TV, but she scrutinizes each picture as it

comes into view, not sure what she is looking for. It feels like something has crept up behind her and then scuttles away every time she turns to look for it. One set of pictures is from the office Christmas party held at their biggest client's building. The Company hired them to build it underground, but the festivities were held on the only above ground floor that was built to resemble a lotus flower. All twenty of her coworkers stood around awkwardly because they only ever saw each other in the hall on the way somewhere else. And the next set of photos is from her week trip down to the south of town to study their less sublime architecture, with their apartments that look like floating opaque bubbles, and the courthouse that resembles a fairy castle, because it is Keely's job to make sure her bureau stays ahead of the curve. Eventually she gives up scrutinizing the colors and speed of the show as procrastination, and swings in front of her desk to call up those three sets of pictures to look at them more closely. After calling up the file hidden somewhere in the depths of the machine, she flips through them slowly and sections off those few.

This picture Keely recognizes from a series Mom and Dad gave her when she moved to the city, mostly with her making painfully large smiles or sitting half-off half-on swings or racing water-discs. One is taken of a group of kids—it's Keely's eighth birthday, she knows this because the theme is purple for her favorite color. Her parents made her invite the whole class from school, even though she was friends with only a few of them, but as with all photos she can still recognize everyone. There is the little bright-faced girl whose curls Keely was still jealous of, the pale twins standing directly behind her and making googly eyes at the purple cake. There is nothing frightening about these children. Then she notices that the short pig-tailed figure at the bottom right corner peeking out from under the table has a face, but it is still somehow missing.

Keely scans the rest of the faces, and knows that everything about them is still in her mind, every sideways glance in class all the way up through Category graduation. She looks again at the pigtailed face, if it is a face, but it does seem to have all the requisite parts: eye, nose slanted down the middle, another eye toward the side, and two lips atop each other toward the bottom of the oval shape and random patches of freckles. But these features don't connect in her head, nor do they feel specific—they don't belong to anyone she knows. Keely's nose bumps into the screen, causing both her and it to jump back automatically.

Forgetting a person is not even mentioned in the emergency coding system, she doesn't need to look it up even though she's only read it once, nobody really knows what the numbering system means, but if it's not mentioned in the manual then it shouldn't even be possible. Maybe this is a one-time acquaintance, someone she did not need to remember, she hopes. She runs both hands through her hair, holding them together as they cup her crown, distracted by the thought that she really needs a shower. She won't tell The Company about this, not yet useful enough to bother them, and she will only consider it if things get worse. She remembers the pedestrians on her commute five years ago better than she can tell this person's identity or why they are in her picture. Keely goes ahead and takes a shower, her hands shaking now; steam climbs all the way up the tile walls and sprinkles the floor with hot water droplets as she watches them fall.

The respite of the mist calms her and she considers whether it's even worth looking to see how many more pictures there are like this one; what would be more dangerous? More than one picture with this person would mean she should remember them even more, or maybe she'll find pictures of other people she has also forgotten. A hundred years ago this would have been absolutely normal, she thinks with horror; the brain was not formulated to retain everything to the same level of importance. But now the water system is plugged with chemical enhancements

to keep the population as productive as possible, and as sociable. In the mess of this whole three-days-lost fiasco, this one little complication should not make much difference, but she needs to know if this is important, and possibly what else is missing. Sitting down at the desk once more she looks through the folder for any other striking photos.

She comes to one where she is older and standing next to a large rock with ‘Old Man’s Cave’ carved into its side. Her twelve-year-old self is wearing a lime T-shirt and ripped shorts and is standing next to another person whose face is likewise inexplicable. It gives her the same disgusted feeling to see the visually disfigured face, broken into pieces. Thinking back to the earlier picture, she tries to compare the two and it seems some of the patches of freckles may be similar, and the eye color is right, but the hair is slightly darker. Keely thinks back to the family trip to the nature preserve, but there’s nothing in her head about someone other than her parents. She does have the memory of holding a hand down a steep path, but when she looks to the side no one is there.

Going slowly through the rest of the album, Keely finds five more pictures with disfigured faces: it even appears that they are all the same person because of the unique patterning of features. She would like to ask Rena if she knows of anything like this happening recently, but there is no way to make her online conversation private. The only way to have a confidential conversation is to speak in person; no doubt the forum would be set on fire if she asked anything like this out in the open; not that it was illegal or anything: it simply wasn’t done, it would be like leaking your medical history or banking information to watch the chaos ensue (not that that wasn’t appealing). She could ask her parents if they were still alive, and she didn’t know how to contact anyone else from her childhood.

But it is time for the community meeting, so Keely picks up her mobile computer, lugs on a jacket, and heads out of her apartment down into the glass elevator. This is her favorite part of any day, going down the eight hundred flights of fire stairs in under two minutes of falling; when it rains she plays the game of trying to beat a particular cluster of raindrops to the ground. But she cannot get the broken face out of her mind. Not that she can truly see the actual features now, disjointed as they are, but it's a general strange feeling that the image is not a real person because it carries no significance to her. As if that face came out of a dream and planted itself into the photographs. But this cannot be true, it even appears as if this person grew up with Keely in a sense, was preset in varying stages of her life and Keely was always smiling beside her. But she pushes back the panic, because it would not be productive right now, she needs something else to help her figure this out.

This meeting is supposed to be in the basement of an old library, preserved for its historic value, offensively gender specific as it is, but Keely knows of plans for its demolition in favor of a borough-wide recreation center. Heading down the trundling sidewalks, she cannot tell who is in her borough this year, as it is the first meeting: the idea was that such frequent changes would allow someone to meet 5% of the city by the time they died. Most of the people passing by meant nothing to her; she knows them only from exactly the same experience she has of them now: passing by and not doing anything surprising. The memories of these people melted together in her mind and kept her from going crazy with all the past images of their walking quickly and swinging their arms.

The library is mostly dark, her echoing footfalls entering empty space. She had to search around for a while to find the stairs leading to the basement, and she rushed down them once she heard someone coming up behind her on the marble floors. Around the corner and down a

yellow lit hall is the open ‘community center’ area used for these purposes. It seems Keely is late, as most of the randomly collected chairs are filled, and someone at the front of the room is saying something about ‘dependency’ in slow, drawn-out sentences as if he or she is giving a lecture to first-year university students. Fortunately she recognizes someone in the crowd as someone who was in her grouping five years ago. She ducks down and scuttles toward them on bent knees, and finds a seat. This person looks up at her, and raises eyebrows in recognition. “What has happened so far?” Keely whispers.

“Oh, not much, this old bugger just got up and started talking before anyone could stop them,” Grett—Keely remembers—replies.

The gathering of approximately one hundred people tolerates the older person’s babbling for a time and then starts to get restless, at which point one of their friends motions for them to leave the stage. A mid-to-late eighties person with spears in their eyes sweeps up onto the ‘stage,’ which consists of an old bookshelf riser and a podium of encyclopedias.

“This is not a time for complaining and spouting your favorite conspiracy theory, people. What we need to do now is to pull together to make sure that our system does not break down.” It pauses to hack a resounding cough.

“No one denies that two weeks ago everything broke down, and the only reason we know of this is from our electronic calendars that told us it was three days later than we expected when we woke up that Tuesday.” Someone from the audience yells an unintelligible something, and the old lady holds up a translucent hand.

“I know there is other evidence, but my point is we would never have known to look for it otherwise . . . Anyway, I just wanted to say that I think it is in our hands to help The Company figure out what has gone wrong, and this is no time to hold back your experience out of

embarrassment.” A few sectors of the audience give some whoops and enthusiastic clapping. The person gives another despondent cough and descends after what Keely thinks has clearly been a much rehearsed outpouring.

Keely heaves a bellyful sigh and slips out of the conversation as soon as the next young lady to step up says “I think . . .” This person’s face appears clearly to her, with its flat cheekbones and wide lips, but she cannot even remember someone who must be very important to her, where face has been broken up into an inconclusive mess. She thinks maybe she will stop coming to these things, a thought she has had before, but always ends up coming to fuel further articles and compare notes on the forum. Semi-involuntarily she stands up, knocking her knees in the chair in front of her, and stumbles through the forest of legs to reach the front of the room. She gives a long hard stare to the person who is speaking until the voice drains away and it scrambles for a seat.

“We need to realize,” Keely begins, “we never do anything, they give us this time to gripe and plan and complain, but nothing ever comes of it. I don’t even want to know what went wrong anymore.” But everyone knows this is a lie, mostly because it comes out far too harshly and with a whiney crack in the middle.

Half jogging now Keely clatters down the hall and climbs the stairs, gasping with relief as she swings the glass doors open and steps onto the street.

Her mobile howls out into the cold night air, and Keely ignores it to look down the near empty sidewalks. Floating lights cluster around her and the one other walker is two hundred feet away; if there were more people they would divide themselves up accordingly. Breathing in the purified air and fleetingly considering going back, she heads off toward her favorite tapas bar near a spurting water fountain. Looking back down, her mobile lights up again with the unread

message: 'drop Samantha off at the airbus station tomorrow at 5:00.' Keely does not recognize this name, but she finds herself running in the direction of the station even on the moving sidewalks, which is explicitly against the law, hoping she will find something when she gets there.

## Sym

Devon didn't think about where he was going, because then Sym would also know, or maybe it already knew and wasn't letting on. He had to make the plan early this morning and thoughtlessly direct his legs down the correct path; that is all conscious though, isn't it? It is hot in here, very hot. Ironically, he works in Development, helping entire generations of Syms get started, making sure they are on the right track, and now there is something wrong with his. Maybe he hasn't been eating enough yoghurt, or legumes; it's such a picky eater.

*-Pardon?*

*Shit. Nothing, I was just thinking about someone else, as if it were me. You know? Like a simulacrum or something, impersonator. Someone who has that kind of problem; 'cause we certainly don't!* He tried not to harbor hope about successfully faking enthusiasm.

He had worked all morning smearing gel that mimics the lining of a mother's birth canal onto an entire fleet of infants, rubbing the lotion on their stomachs, and placing a small red tab of bacteria onto their tongues with a heavily gloved finger as each baby swung by slowly in his or her canvas seat. They all look the same with their thin lips loose and bulbous heads bending wildly, and yet the way they look at him makes his lips curl up and a coo come out of his mouth as each smiling or scared face passes his station in the large lab. He hoped none of the other workers could hear him over the hum of motors, or see him wave to the few enthusiastic babies' curled fingers.

*-You know half of those babies aren't going to make it past inspection, anyway.*

*Well, that's why I am extra careful to match the pill with their scan, so everything pairs up perfectly. If something goes wrong I can't blame myself, because something must have gone wrong down the line somewhere else.*

*-That's what you'd like to think. One wrong pill and you could have a whole day's worth down the drain. The sequence is so rigid you wouldn't know you were doing anything wrong until the very end when you'd be left with an extra or one too few.* Devon did not respond to this except for with a wave of nausea that should keep it quiet for a while.

The hall is long and round, wrapped in fiber-carbon steel and layers of plastic to keep the heat in while preserving coolness on the touchable surfaces. As Devon walked, the final layer of bunched-up taffeta and cotton that was draped and tied back to the walls that curved away from him swirled around his spongy shoes.

The soles are supposed to absorb their own movement: the same ones he wore through the nursery to avoid making tantrum-inducing noises and to prevent his ten hours of standing every day from ruining his feet. He thought it must be like the slight swaying and coaxed directions from a pinky on the steering wheel of their ship that caused this stir of wall-hangings. Such tiny movements paralleled the avoidance of an asteroid or the buffeting of wind leaking off a nearby planet. Even extreme evasion maneuvers might only translate to a single tipped salt shaker once they were dispersed throughout the ship of air-padded rooms.

*Is it just me or is it really hot in here?*

*-Yes it is, obviously. For the last time I don't know why you are asking me.*

*I wasn't, I was asking myself.*

*-It is very hard to tell, you know, 'cause I can hear everything. And I mean it.* Devon thought about a dramatic gulp that would pull his Adam's apple all the way up with a fantastic plunge of excess spittle.

*-Disgusting. We need to get off this damn ship; it's too cramped and smelly, and hot. And I'm telling you again because you haven't done anything about it, and we're both suffering here.*

It's going on fourth brunch so the hallways are nearly empty, but Devon slides into a shallow tube that filters into the main walkways. The angles take him there a fraction at a time, and the space gets bigger with tapestries that hang more heavily with stitching depicting the insides of a dissected frog and another of the equational flow of electrons through the solar system. A few more people pop out of oval framed rooms: both Kathy from water aerobics class and Steve from breakfast seating wave, and he nods back, hoping he looks pleasant enough.

*-You look like an idiot, you know. That new haircut you got makes you look like Kim Jong-un, a combination of crazy and childish all wrapped into one. You know, from the 21<sup>st</sup> century, you idiot.*

*But Marci told me it looked nice last week, that it made my ears look smaller.*

*-She was just trying to find something nice to say—no one cares what your ears look like.*

Devon gave up trying to gross his Sym into silence, and decided to try and get to the clinic as quickly as possible. Damn the consequences. His stomach gurgled angrily in response and it felt like something was moving around in there. You weren't supposed to be able to feel your Sym, but sometimes he could swear there was a physical presence, like a slug oozing in its dirt cave. He thinks the clinic is down to the left, past the largest cafeteria and near the Hiring Bureau. Devon would need to be stealthy about slipping into the waiting room without anyone from that office seeing and making a note of it in his file.

*-They're gonna fire you if they find out you're crazy. No more babies to smile at you. I'm not crazy. You're the one with all the problems. Damn, you're such an asshole!*

*-Oh, that's rich coming from you. Do you remember the time you left community session early so you wouldn't have to spend hours in the recycling workshop, because you have 'delicate fingernails'? How you always take extra dessert even though there is only enough for everyone*

*to have one? Or maybe the very fact that we are here right now because you didn't want to spend the rest of your life taking care of your Dad and his repair shop? Hmm? Who's the real asshole here?* Sym had been doing this a lot lately, bringing up old grievances like a spoiled child.

*You know I had real reasons for all of those, you're not being yourself. OK, I am not getting into this right now. I'm taking you to see the professionals.*

What had tripped Devon over the edge of action was an episode last night that lasted exactly four hours in which Sym kept showing his mother's last day before she died of dust-poisoning. Sym kept replaying that day and flashing those images into his head at ten-minute intervals. Devon even swore they were darker and grimmer than he had thought. Sym kept saying, "I'll see you tomorrow, I'll see you tomorrow, I'll see you . . ." And Devon could do nothing but sit on his bed and lean against the joint of two walls with his face turning purple.

Devon peeks around the soft, fabric corner between the hall and the circle of clinic-pods, where only a few people mill about, as they have completed their chores for the day already. The doorman, or spy, for the employment counselors turns around to speak with someone about their pay stub and Devon speed-walks, bending his knees slightly. He opens and closes the door quietly; thanking God that it doesn't have a bell.

*-Such an optimist.*

## 614-5237

I know many miles down this road to the East is a water park with waterfalls cascading with palm fronds man-made to feed into and spill over each other. I have to take intertwining overpasses so steep and narrow that the Studebaker is liable to tip off as it careens around shallow curves to get there. But that park far outshines the half dried-up splash pool behind the junk yard and kitty-corner to the laundromat closer to town, which reeks of scum and toenail fungus. But neither of them is what I am looking for in this sketched pirate's map, so I find the most general location and close my eyes.

Slowing down to a steady pace, I try to take stock of my surroundings, feeling out if everything is where it should be: where I put it. Up north is the suburban area of town that is permanently stuck in Halloween or fall themes; it feels like I am a child again every time I go there. The trees are unbelievably tall and looming—piling up leaves into obstacle courses. For some reason I can only go there when I am riding a bicycle, and none of the houses opens for me, because I was just playing around when I made them—no attention to detail—nonetheless it is one of my favorite places to go.

Right now I am standing in the section of town that feels the most real, modeled primarily after the geography of my actual home town. Except the neighbor's house is more of a mansion, which always catches on fire and there is an antique store across the street instead of a bank. In this store are floors and floors of unsellable knick-knackery—opportunity. I worked there for a while one summer.

To the south of the court house lies the land of Colonial America, complete with raucous shanty bar, flour-clouded bakery, and penny treats store. I don't go there much anymore because the path can be difficult and an infernal mist covers every street though sometimes they put on

great parades through the center of muddied streets and I hang from shallow balconies to catch a view.

But I turn to the West and finally catch sight of the candy-painted shingles and layered ginger-breading of a Victorian house that marks my entrance into that most expansive section of town. I have always admired the fantastically impractical architecture of the Victorians, and the deeper you go into these neighborhoods the more pronounced and extravagant they become, each bearing the freshly painted look of a Barbie dream house. The turrets, mini-balconies, and wooden flourishes are cat-calling each other in lime, periwinkle, and coral.

There is one house in particular I need to find: it is more sophisticated than the rest, built from dark brick, and rises straight up out of the ground to Maple height. My feet take me down the streets I need, walking steadily, no cars or people to slow me. At first I don't notice it, because I am mostly looking down, so I don't waste time by tripping on a cracked sidewalk. But as I step onto the curb after crossing the street, a dark swath of shadow covers my sneakers and is drawn across half of my face.

This sudden change makes me tip backwards on the curve of the sidewalk and I tilt back my head to find a momentous obstruction, a ceiling impeding my view of the sky, but I cannot understand how it is doing so; I only see darkness, an edge against the light behind me. I stride backwards and turn to catch the whole expanse of the structure. It is like a monstrous warehouse that covers at least five blocks of houses, its ceiling only a few feet from the tops of the tallest ones. Down far to the end of the street I can see construction materials, cranes, and cement trucks resting on their Sabbath, looking like toys in a sand box.

These streets must have been ordered quarantined; I haven't gone down here in a while so I had no idea: better hurry. I catch sight of the brick house on the corner one block away, so I

start jogging towards it. Once I am across the street, I can see the house more clearly just as I left it with a shallow stoop covered in grey slate and long narrow windows with dark green shutters. Even the small square attic window has a candle burning in it.

As I walk up, a teenager walks out leaving the door open and does not acknowledge me; her face is turned away and half in shadow. The address is 614 Poplar St, proudly tacked onto the door frame in bronze lettering that starts to fizzle, and sparklers pop out of the nail holes. I walk inside. Just as the façade suggested, the ceilings are impressively tall and the wallpaper sports darkly outlined magnolia flowers. They are more mauve and brown than the light pink and white flowers that grew outside my house, fading into the swirling design of the wallpaper climbing in vines up the wall.

The floorplan is very open, so I can see each room almost entirely, like a dollhouse that's just been cracked open. I am always drawn to the kitchen first no matter where I am, to see what's cooking. And it appears crisply white and industrial, straight from a magazine: each countertop appliance and decorative feature angled to make the best impression from one particular vantage point. No one would point all their pots' handles toward the side for a sleek profile. Subway tiles are trendy and clean, and a retro handle sits in the middle of the toaster's face. A bubbling hiss roils out from the direction of the stove, which is turned on high, causing chalky water to spew off the top of a pan and macaroni noodles to bounce feverishly. A large steel mechanical timer with chipped blue paint ticks away but stays on the marker for 5 minutes to go. This is exactly how my neighbor's house burnt down in the second grade, so I am tempted to turn the burner off, but there isn't time now.

All the secrets in a house are upstairs, where no one really goes unless they are close to the family, so that is where I go. Taking the stairs in threes, I am thrown under the pressure of 2

different radios blasting the same song, Celine Deon crying *It was so long ago, but It's all coming back to me nooow*, one of my favorite songs in middle school, but the two stations are offset by a few beats. The effect is rattling, but stops once I run into the master bedroom to switch off the matching grey radio-alarm clocks, one on each side of the bed. In the silence a splashing noise comes from the master bath.

I traipse over double-pile carpet in a swirling pattern to the edge of the bathroom: large and sage green. The gold accents clash with the color of the walls, which annoys me, but the main attraction is 3 puppies splashing around in the shallow Jacuzzi. I kneel on the laminate flooring gritty with puppy clippings and swirl my fingers in the water for them to chase and nibble. They are all identical in markings, grey and brown speckles with black eyebrows and a white patch down the center of their foreheads that wrinkle with joy. But I cannot stay long.

I catch sight of the window and the darkness outside due to the quarantine, unnatural for this time of day. No other houses are lit, illuminations only coming from outside the warehouse structure where the houses are not doomed to be enclosed. There is only one more room upstairs, so the last one should be in there—I just need one more. Running down the hall now, I step into the smallest bedroom. Deer and foxes run through a wallpapered forest scene, and every detail and piece of furniture is carved with such skill that it's almost disgusting that someone should spend so much time on a bedroom set, the kind only reasonable for a medieval prince. I turn around in the room looking for any clue, and notice there are two handheld abalone mirrors—one on the bed and one on the seat of the dressing table. I start looking for more: I find one in the curtained window seat, shoved into a pile of pillows on the chaise, and another nonchalantly hanging from a string in the closet. I am satisfied that I have looked through the entire room and start to leave, when my foot slips on something hard under the carpet and I feel a muted

shattering through the sole of my sandals: the 7th, sneaky me, the shards start to rip through the carpet as I move past.

I run in earnest now, down the creaking stairs and out into the stiff dark air. The construction workers have started up again on the quarantine down the block and are swinging a large cement block into place along the edge of the opening, casting a shadow down a whole new row of houses. Feet burning now, I skip the sidewalks and race down the middle of the street. The cheery, colored Victorians turn bright again in the sunlight once I get back into the open and then they peter out into the neutral tones of suburbia. I end up on the corner where I started, staring up at the house I grew up in, surrounded by the imaginary yet familiar places I have spent so much time exploring and creating.

The heavy jolt of a train stopping makes me grab onto the bar near my head so I don't slide out of my seat, before I even recognize that I am slipping across the slick surface in my new jeans. Pulling my flip phone out from my wind-breaker pocket, thinking 614-5237, 614-52 . . . until I can pull up the dialer application. I press the numbers feverishly all the while sneaking glances at the girl who sits two sections of seats away, whose face looks so familiar to me, hoping she will pick up her phone.

## Impression

Soon after birth, a blob of tissue blocks the normal draining from Mary's ventricles. Her head fills like a water sack: loose then taut. Blue veins worm themselves around her temples and wrapping between loose plates of skull. Doll rolls to one side of her hospital bed and lets go of one scream after they explain why Mary looks like a Kewpie doll without the patch of neon hair. Mary will get a tube pressed down through her head to drain the excess fluids into her stomach, an extra gurgling amidst the intake of formula and fried Bolognese. Brain juice sloughs off in a surplus trickle like a mountain spring, and its path changes or disturbs nothing.

Of course there were questions: How long, how much pressure before damage sets in? When will we know for sure? What should we do? The panic of parenting, of the first child, exponentially amplified by doctors' special attention and choices: Type of anesthesia? How much pain? Mary still dreams about those days, that surgery, but mostly the recovery that has lasted forever. She remembers the hushed voices around her room, the explanations, and the fights about school. Being told she was special. So she sat in the corner reading about magical swords and dragon's fire while the rest of her class colored the rainbow and urinated in their seats. They spoon-fed her own supposed frailty and fear in every sideways glance and chocolate cookie.

Each morning Uncle Bob sleeps in, holding onto his wife of sixty years who has lost all the trappings of her name, Doll. He listens to his first-born moan and threaten to stab him through the lip, ear, or spleen with the knives she has hoarded. She whispers with a gurgling purr, through a voice box walled in fat that mutes and reverberates; he is not worried the neighbors will hear. They've heard her for years through their plywood and stucco-walled ranch

that never gave them a lump of privacy. Not since they moved in after the first big snowfall of their marriage.

He can't cry now, his old comfort, the tears dripping jagged off his chin, or trailing themselves around his ears—this crime of sadness and ignorance. It was the tears and their stories that still hurt her.

“We were so afraid. You were so small, with your head all wrapped in bandages and tubes draining off of your tiny skull.” Each time she felt the fullness in her brain that pressed on all the important parts and the exit wounds of the scalpel. Real pain elicited from the words of loving parents. He cannot regret anything because there was no other way for him to react: he had no tools to deal with his own sadness.

Seeing Mary as an infant all shriveled and new with the stitches lined up against her fresh forehead, he had cooed and fed her one pea at a time on the tip of a pink Mickey spoon, splurging on gourmet mush. But she doesn't fit in the house anymore, knowing their sadness has changed somehow: a new fear that only responds to phantom drops of their own blood—a different kind of pain. Hearing them talk to and about her in whispers used to make her toes curl in pleasure: hearing her name spoken over the phone or across the coffee table when she napped. The loving palm set against her burning forehead.

But their love is not enough. There comes a screeched warning at eight in the morning that the usual fried eggs, bacon, and creamed coffee were bound to be late in another five minutes. Only two people ever dare enter her citadel fully, or as far as the piles of boxes and beanie babies will allow them. She sits on a stretched-out armchair, growing a bed of carbuncles and benign tumors in her flesh, so she can hear them whine about another doctor's office visit,

which she will refuse. Mary wants to give them something real to worry about, to make her nightmares real to them again. She wants them to share the load as they shared it with her.

The television never switches from the QVC jewelry counter, where she spends her social security check on baubles for her nieces. They only come around every couple of years to peek down the hall and bend their eyeballs around her doorframe, but she stays just on the fringe. Mary stocks up to give them bags full of mismatched pumpkin and star earrings with Christmas cards written in large, sporadic scrawl.

They all turn away because it is cramped, smells of human must, and because it is the only real way to end a conversation that turns in circles. She cannot follow them—or will not, releasing herself from the comfort of the chair only in emergency situations, and wishing she is still there while she is away. Even the toilet is too far, too much time spent away from the sweet voices of beautiful women selling brooches and lavender perfume: people who do not know her and cannot remind her of herself—or of the dreams.

Her closed lids are branded with pictures of sutures, white coats, and the wrinkles on her parents' faces. While sleeping she feels the suffocation of a padded chair mimicking her swollen brain. She sees a woman growing older, but with the face of an infant. Twin coffins roll past her window and someone comes to take her chair onto a moving truck. Mary looks in the mirror to find her head ten times its normal size, with grey water dribbling out of her ears and nose. Her eyeballs are bulging in their sockets, ready to propel themselves across the room. And each morning she wakes to find dampness on her shoulders and face.

## Day Dream

Freddy sees the post-it notes and lists tacked onto his fridge with smiley face magnets as his bike bounces in and out of the shallow puddles where the asphalt has worn away to grit. Today he thinks about taking them all down onto the kitchen card table and stacking them in short mountains, one for menus, and another for ingredient lists, and a third for budgetary concerns. But as he makes the last turn around the abandoned Family Dollar whose façade bears scars from crumbling bricks of a drunken collision, he can see down Heron St. and is assaulted by the spastic flashing of red and blue police car lights. They add to the brightness of early evening, competing with the sun, and bouncing off of rain-sanded siding and the dog's pupils across the street who howls in unison with the strobes. Three men stand outside his neighbor's house, their cars parked down the block. Only one of the cars' lights are on; the other two have officers waiting inside, dark immobile figures.

He hops off his bike too slowly, getting the frayed end of his jeans caught, and starts walking toward his house while paying extra close attention to the places where baby yellow paint is turning green from the damp and where the cement blocks that make up his front stoop are spreading apart. From a closer vantage point he can see one cop standing on his neighbor—whatshername's—porch the man had to stoop down because her roof sagged in the middle, the lights mixing purple on the mosses and tiny trees that had taken root there. Freddy's stride turns into a shuffle as he closes in on the front door, fumbling with his backpack, and searching for a key with two hands.

“Excuse me,” the oldest cop says, not harshly, but with an air of expectation. “Do you live here?” Pointing towards the slanting yellow house with a thick finger; Freddy nods and holds up his keys. “We are trying to get in contact with Miss Patterson. Would you have any idea

where she might be at this time?” The officer scrunches his nose and half-turns to look back at the squadron of grey cars, “We have been trying to reach her all morning.” He turns back with thick-drawn eyelids, a hand casually clasping his full belt. “Uhm, I’ve seen her—sometimes . . . All I can think of is that she might be at work . . . at Safelite?” Freddy replies; she works at their call center, probably. He saw her wearing the universal red and white polo once when he was running late for work, and she startled him with the slamming of her screen door, but this is all he knows. The officer nods, and adds a “thanks” before barking something into his radio and turning around to march behind Miss Patterson’s house, stepping over a small rusty bike and clumps of tall grass on his way.

Freddy drops his keys twice before getting in the door. Sar winds herself around his legs and swats the backpack that hangs from his left hand once he slams the door. The Caesar salad he had at lunch with Gale sends a weird froth into his mouth, and he curls his tongue out behind his teeth. He slaps the grey backpack onto the floor at the end of the gold-flecked white kitchen counter, grabs a pre-sliced hunk of Parmesan cheese from the duct taped fridge that shudders a bit on its hinges, and steps into the living room. He perches an arm on the overstuffed microfiber couch, now flat in the middle to cradle him, but the remote is not in its place shouldered between the nearest cushions. Before getting up for a physical search he surveys the room through squinted eyes, trying to ignore sharp corners or any color that is not a scuffed black. His calves begin their heave upwards, but he catches it perched on the back of the couch, almost right behind his head.

He flips to channel KGF 42 News, the smallest news station for the smallest county in North Carolina, and hoists his feet up onto the finger printed glass of the coffee table.

“It looks like there is a growing problem with head lice in the area,” the rubber-faced man says, and his co-host in her pink suit gives a little shudder, “with more than four salons reporting incidents with the nasty little buggers over the past month.” The woman chimes in, “Two elementary schools in Maysville have already been closed as a preventative measure.” Freddy tries to remember how many kids have come into the kayak shop in the past few weeks and drags his nails across the hairline of his neck.

Before he can switch the channel he catches the words “Heron St.” in the banner running along the bottom of the screen that flashes every few seconds into a pale amber color. He waits for the cycle to turn back to the beginning; piecing them together, he reads, “Local child goes missing from home on Heron St., Dalesville, early Thursday morning, no suspects. Have Information? Call .... He waits for the message to go around two more times before switching off the stand-alone set. Unable to picture a child living next door, he tries to summon up a face—but cannot get rid of the image of his step-brother’s face scrunched up with tears. He crosses the ten feet to the front door easily in two long lunges and peers out the tiny glass hole that makes their converging yards bowl up at the edges. There is the tricycle peeking from behind an outcropping of grass—it no longer looks like a strange lawn ornament left there by the previous renter, and something bright yellow that could be a sippy cup, its lip crusted over with mud, sits on the stairs. Freddy locks the door.

An image of a boy pops into his mind and pulls him back to the kayak shop two weeks ago; he’d just come back from spending break-time napping on the back office’s swivel chair. “What’s up?” he’d asked Gale, who’d nodded him towards a tiny customer, around 5 or 6 years old.

“He wants a ‘boat’ and won’t take a No.” Her fingers twitched at the corner of a magazine. He knelt down in front of the boy whose tiny face was twisted around to look at him with squinted eyes; they were brown just like the miniature Mohawk of hair spiked into his scalp.

“So, you think you are strong enough to go out on a kayak all by yourself, do you?” Freddy asked softly. The little boy’s fists were clenched onto a brown paper sack that was sagging and ripping at the edges.

“Well, we cannot sell you a boat right now, because you might get hurt, but I’ll tell you what . . .”

“Don’t you understand!” the boy interrupted loudly, then backed off into a whisper. “The British are coming . . . and I need to get to Boston to help fight!” And he stretched his arms out to both sides to show his size.

“Well, why don’t you just stay here and defend your hometown instead?” The boy’s eyes lit up, and he walked out after a large family. Freddy stepped back behind the counter.

“What was that all about?” Gale asked behind her magazine.

“Kid thought the American Revolution was still going on.” Freddy chuckled to himself. But they had given no description, and the boy’s face was inscrutable.

Sinking lower into his couch with its layers of crunched cheesy, ranch, and vinegar chips, which give it a slightly salty aura, he cracks all of his middle knuckles in a row. This couch, his emotional purse, the place he goes to forget about his coworker’s scraggly teeth at the Kayak rent shop, Al’s Boat-ique, or his mother’s calls. It is perfectly molded to his body—if not just a little bit moldy in general—he will stay here, hours passing the baton to the next, repositioning the sauce-stained cushions the better to support his forward jutting neck or hugging one to his body by the crooks of his elbows. Freddy’s smash-faced feline comes up to nudge his

elbow for a single scratch on the head or to check the status of his purring heart occasionally. The master cheat sheet says in purple-colored pencil that nothing good is on the usual channels, so he flips to the collection of documentaries, looking to beef up his trivia game.

His fingers know how to grip and slide onto the numbers and toggle down for upbeat animation, and even further down for weepy Hallmark specials. They make the decisions, but find nothing new. He flips the arrow key repeatedly, getting quicker as his eyes recognize the white costumes of the Honey Bee Crisis and the plastic caps of the Michael Phelps special. His lips clench with each button press until an unfamiliar scene of Louisiana shoreline and bright green title font appears and he lets out the breath from a taut pocket of his lungs.

Even when there's nothing on, the half-hour hand always turns. This doc is about the islands of trash in every body of water on the earth: the cameramen even zoom in on a rain puddle sullied with a red-striped straw. His blood pumps woozily at the helicopter perspective of waste, his waste: old trashy magazines, the netting from soda pop, bubble wrap from his amazon purchases, and those squarish pull tabs that keep bread bags closed just sloshing along, casting a cloud-like shadow.

“We humans are so greedy for oceanfront property, they have unconsciously created new islands. But they are not even livable—for now! We will talk to contractors who say they've considered the opportunity these landforms present, but I for one am not convinced,” gibes the narrator whose shirt is so tight his every undulation is visible. Clips appear from two sides of a debate about what to do with said trash; the blue-suited businessmen and hungry incinerators want to air-and boat-lift the trash out of the ocean immediately. But the green peace-y hippies want a more holistic approach to the whole problem and take into consideration the crabs, birds, and small fishes that now call the makeshift island home. Freddy thinks about making Easter

basket grass stuffing from shredded chip bags. He tried the Caveman diet for two days last week after seeing the stupendous results fourteen Swedish grandmas got after living at an organic farm for three months. Only, instead of eating raw and organic foods he substituted veggie straws for Lay's Ruffles and put a splash of cranberry juice into his can of Bud—until he realized it tasted like shampoo.

The episode comes to a conclusion with an image of a tiny trash island drifting further and further away from the camera, followed brightly by the airy pink voices of a cereal commercial. The set made a whispering laser sound as he switched it off; Sar meyawns and paws his grey sweatshirt. “Frankly, my dear, I don’t give a damn,” he says to her. Freddy remembers scooping her up one day as she was sleeping on a drain, crisp white teeth poking out of her maw, and chucking her into the shower. She had given him the same look from within the glassed shower that she is giving him now, pure contempt.

The grey hazy light changes the weight of his blinds. Out-waiting trouble—he is as tired as a heart surgeon would be after 18 hours of stitching. Feeling the chills he gets at night slip away with the growing orange of the world, Freddy slides his grungy socks along the couch, presses his head onto his right palm, and closes his eyes. After dreaming about finding the bronzed baby bib his mother had made in his bathroom sink stopping up the water, he wakes up to a rattling buzz that causes a pile of magazines on the coffee table to shuffle along on their own. Two of them fall onto the floor: a Bon Appetit showcasing a baked apple drizzled in nuts and honey, and the back of another that shows the hollow faces of a young boy in tattered shorts, holding onto a smaller girl whose hair was cut short, both standing on the doorstep of a mud house. Freddy imagines what the boy’s voice sounds like, and whether he could have heard a sound like it coming from next door, but he thinks that probably they wouldn’t sound the same.

After getting to the shop a half mile from his house by way of his red bike that squeals when he coasts, and snapping open the shop's beveled glass door, he finds the note Alice left for him as always taped onto the tiled wall behind the counter. Today it reads,

- “1. Set out the new shipment of mugs
2. Feed the hermit crabs, poke Sandra to see if she is still alive
3. Figure out how much money we've made/spent
4. Dust EVERYTHING.”

“Morning,” Gale breathes, her soft green eyes half-raised, clattering in the door with her industrial sized lunchbox that her husband won at work. “Hey—have you seen this pile of paperwork Alice left us?” Gale gazes at the box Freddy holds up; it contains what looks like crumpled litter. Her eyes widen as expected while Freddy tosses the box in his hands and begins to take the pieces out one by one to straighten them on the edge of the counter. Gale sits down heavily on the second stool behind the cash register to survey the small shop and drags her fingers across the bottoms of keys lined up on the peg board behind her—each corresponding to a kayak and pair of paddles.

A group of four walks into the door, looking distinctly middle-class with their naturally distressed clothes and champagne Honda ten summers old, with its Ohio license. The father is a soft-spoken man who asks prices first and then rents two canoes: his two tween daughters wearing pastels look more interested in the glittery gift shop than the imminent physical activity: one tugs at the end of her shirt and the other eyes the candy jar. They all walk out to the lot of parked kayaks in the silence of shuffled feet behind him. Freddy walks through the dusty side lot and hands each person an orange life jacket. He demonstrates the basics of maneuverability with

two Popsicle sticks that always get a laugh as he rotates them in midair, making sure they understand how paddling on the same side will make them go in tiring circles.

“Did you hear about that boy who went missing this morning?” the mother asks, looking up at Freddy through rectangular glasses. He half turns to meet her gaze, and catches her looking at her two daughters who are messing around the kayaks, trying to rock them. “Yes, I saw it on the news last night, anything changed yet?” He walks them to their canoes numbered 8 through 12, some of the newest because the last two were destroyed in a storm, and unlocks each from its post. “Nothing yet. It’s never good when a whole day goes by, I’ve watched enough Dateline to know that,” the woman sighs, looking down at her children’s shoes—jelly sandals that are sure to blister. “He lived next to me, apparently,” Freddy adds just as they were testing the weight of the kayaks in their hands. “I didn’t even know.”

He looks back at the shop and away from the mother’s gaze, but he chances a look and she has a slightly shocked look on her face. But she says, “It’s hard to be a good neighbor these days,” and adds, “I’m sure he just wandered off and is sitting in a tree house somewhere” as she scuttles off behind the small group that has started waddling off. He watches them move away with the kayaks dragging behind them. The two girls chuckle as they help their parents struggle to carry the awkward weight of the boats, understanding now what an ill-wrought idea this was for their skill set.

Freddy wonders how many seasons he can last here and heads back into the shop that is empty again. His mother has been asking about plans to get out of this town—the only one that accepted him right after one year of culinary school. Freddy remembers spending hours plugging information into different boxes, uploading resumes, and scanning for postings, half of which would already be filled. He dreads thinking about finding the time to get away if someone

actually asked for a demonstration of puff pastry or flambéing. But he can still see his mother's stiff face when she drove up to his new rental in her gunmetal Porsche: her perfectly preserved ringlets bouncing like the twenty-year-old her money says she is. Her voice was thin, saying, "I guess I will see you around Christmas time then. Remind me to send you all of our family's recipes you said you wanted to practice." She had leaned over the arm rest, platinum rings clicking on the wood veneer to kiss him scratchily on the cheek before sleekly gliding away.

This was the same way she used to bid farewell to him to go on a dinner date or brunch with her friends and come back hours later. Freddy would run to the house, waving his hands in half circles to the friends still sitting on the bus. Climbing to the front porch through a tunnel of stone and outdoor chandeliers, he would find his house empty. The only clue to her whereabouts would be the four pairs of heels strewn around the foyer, tossed under tables and plopped in the middle of the floor. He would build himself a sandwich of olives and leftover pasta sauce on a bagel, and sit down in front of the plasma screen.

In fifth grade this ritual continued, but instead of watching the same after-school specials about a renegade group of gorillas he'd stumbled upon the Iron Chef programming. Chairman Taga was dressed in a thick embroidered shirt and red-sequined cape and was taking a luxurious bite out of a bright yellow pepper. Taga closed his eyes and simpered with pleasure before turning suddenly towards the camera and grinning furiously as the shot panned over a sea of chefs in white coats, all waiting to beat out one of the iron chefs who stood in front of arcs of light. A gong was struck, flames shot up into the air. A panel of celebrities and hosts discussed what cut of pork was frying where, and how much lemon had been added. Tweenage Frederick sat tasting the marinated calamari and carved watermelon soup bowls from his spot on the carpet.

“Did you see *The Bachelor* last night?” Gale asks out of the corner of her mouth, turning his memory into a shadow.

“Yeah, I did” Freddy replies, because it’s Tuesday. Gale’s eyes narrow as if she is in the running to marry a richly coiffed twenty six-year-old from Baltimore.

“Don’t you think that boat ride down the Nile was just so awkward? Jessica just sat there like an idiot. And just because she’s worried about the two other girls . . . they sure aren’t wasting time like that!” But he doesn’t feel like hashing out all the details today. The women’s faces all melt together as he nods his head, and Gale flips open a *People* magazine. He looks at her contented face and thinks that she probably knows that her neighbors have kids because she can’t stand them. She makes him handle all the groups with children that come into the shop.

Only four more customers come through their door the whole afternoon, and Gale falls asleep behind the mountainous boxes of backlogged merchandise. At home Sar takes her fancy feast chunk by slimy chunk, even though it can’t even compare to the leftovers she usually gets of salmon and rice with chives. Freddy starts up the gas stove and slaps a few diced onions in the pan. He is just making an omelet tonight. The TV is already on, and he has edged it towards the kitchen using both thighs, but the screen isn’t big enough and he can barely hear over the sizzling and cracking of eggs. Rachael Ray is going out on a limb, trying to teach the general population to use more sophisticated sauces, claiming that it’s easy; every housewife and house husband can do the same.

“And look at that, beautiful creamy sauce you can put on practically anything and it only took you what? Five minutes to make? I bet even your children can make it,” Rachael opines from the living room. Freddy stares into her rich brown eyes and knows that he could do better; she is selling the culinary arts short. He switches off her buttercream smile.

Over the past week and a half, Freddy's mustard-colored fridge has been covered in scraps of paper with lists of ingredients, different table arrangement sketches based on weather, and fanciful menus themed after some of his favorite topics; space travel, medieval etiquette and gangster history in America. He writes two more: check Whole Foods pricing for duck eggs, call bank about interest rate options. Freddy sits down at the card table to eat his eggs, closing his eyes with each bite to picture his future restaurant downtown—somewhere.

Thwack! Freddy loses a clump of eggs off his fork because it sounds like someone just body-slammed the front door. Deep full-fisted pounds come next. They don't sound to him like the kind of knocks that will go away after a minute or two. He looks down at his plate that is only half empty, hopes the yellow peaks won't get cold, and takes small slow steps to the front door staying out of view of the open-blinded window to its left. But the knocking lets up by the time he reaches the door and he leans in over the peep hole to catch a retreating frame that isn't there. A sharp blow to the window pane hits him in the stomach, followed by, "HEY! I can see you." This from the head of a woman with dirty blonde hair cut to her shoulder that is staring at him from the vantage point of a child.

"Open the goddamn door!" Freddy hurries to draw the door chain through its channel of metal. He thinks better of it and pulls it free again, unbolting the lock.

"Hello?" he squeaks once the woman is entirely in his view, standing with her arms crossed under her chest, and lips rolled onto each other.

"Hey, I live next door . . .," gesturing a hand towards her house, and adding "I'm Natalie" when he does not respond.

"Hi, I saw the news, about your son." Freddy tries not to look at her face in case it holds the same emotion her hands had against his door. The house across the street from both of them

looks very far away, set at the back of their property and surrounded by a tiny fence for their toy dachshund. But her face is emptily looking back at him—‘spacey’, he thinks.

“The police asked me about anyone who might want to hurt Robbie.” Freddy looks at her fully now, just in time to catch her eyes flit back from the space behind him. “

“Oh?” he hopes that doesn’t sound guilty.

“Yeah, and that got me thinking about maybe my ex-husband. Like maybe he found me and carried Robbie off . . . to make me look bad.” Before he could say ‘Oh’ again she went on, “You haven’t seen any unfamiliar men around here, or a big Blue Nissan, would you?” She pauses; “it would have been around Sunday . . . I was out.” Natalie pulls on the collar of her red shirt.

Freddy heaves a long sigh: “No, I haven’t. I don’t really watch the road a whole lot; it’s just me and the cat over here.” Sar had prompted him by sticking her nose between his ankles and wrapping her tail around his calf. Natalie just looks at him, and turns to leave. “I’ll keep an eye out from now on, though,” but she keeps walking away; her too big synthetic black pants slouching over her body. Freddy closes the door and looks down at the orange fuzzy animal whose green eyes are squinting up at him. “What do you want from me?” he asks her, but she’s already walking away to her fleece-lined bed beside the TV. He goes back to his eggs, but with one poke he finds them clammy beyond repair. He looks at Sar falling asleep, which is the neatest part of his rental—the magazines on the floor, tan-stained slumping couch, and the balls of fuzzies of fur and fibers from the bottom of his socks balled up on the carpet. He thinks he should have asked for a picture.

Freddy slams the door behind his feet and passes the bicycle quickly, it is too noisy and he needs to think. All the houses around here are short, ranches and A-frames, so he can see the

sky. It is bright blue with the grey of evening cast over it. His jaw jostles around as he walks quickly and carelessly over the pot holes and almost twists an ankle on a curb. When his mother was out having fun with her friends and many of the boyfriends he always heard but rarely saw, he wondered where he would have gone. If the doors weren't alarmed and the community gated, he would have gone somewhere forbidden or secretive: some place that reminded him of Huckleberry Finn (1973), or Flipper, or Gilligan's island. He hopes Robbie is with his father, even if he's a bit off his rocker, which would always be better than the abductors, clown cars, or lethal roadway. He imagines a small boy tottering his way across oncoming traffic, the semi's lights flashing and horns blasting.

He finds himself walking towards the kayak shop down another long dusty lane of bleached houses. Freddy goes inside, takes a key off its nail, and heads back outside towards the kayaks. As an instructor he had been forced to learn how to kayak when he first got the job, but since then he had only used the Popsicle sticks. The boat wobbles into the shallow waters of the stream, but once he pushes off the side the body takes him in its arms, flowing steadily. Soon the little kayak comes out from between twin lines of trees and shrubs that line the channel of water, and Freddy is pushed softly out into the open expanse.

He is surprised to see no activity on the lake whatsoever, not a fisherman, heron or dredging team. Stillness, and stillness alone greets him in the waning light, distant trees illuminated by dock and back porch lights. There are bird calls and the buzzing of summer insects, the contented kind that comes after mating season has reached its peak. Freddy looks down at the base of his kayak in response to a whooshing and crackling sound that hits it repeatedly with the swaying of the dark waters. He reaches down to hook the shiny plastic noise makers. He turns them upside down to drain the excess water and pulls the ripped halves of the

two bags together. One contained gummy worms, and the other was once full of beef jerky, barbeque smoked.

“I’ll just walk,” had been the boy’s response, when Freddy wouldn’t give that little boy a kayak two weeks ago. He hadn’t thought anything of it.

He looks around the fading scene, edges of water and trees gathering together into an indeterminate darkness. He imagines he hears a voice but knows it is a far-off heron. He lets the swaying waters pull him into the center of the lake.

## Running Ministries

It starts with a vague pattering like a tea kettle boiling downstairs with bubbles only rising to the surface, one then three at a time. The squishy rubber ovals of padding on the bottoms of their shoes slap miniature wheat-rows of concrete on the sidewalk, and the twelve pairs of rounded nubbins for extra grip make the swish, swish, swish of a coral reef. Dan can feel this sound shellacking the back of his skull as it rests on his gel foam pillow with ergonomic curves. His neighbors in the cul-de-sac are probably still finishing up their dreams of pooping in a giant toilet or breathing in the silent snorts of their husbands and wives as they sleep in on this Sunday morning.

Dan turns out of bed in a huff, realizing he has left its softness too late. Taking no chances, he shuffles down the green carpeted stairs and nearly slips off the ends of a few due to his recent sock purchase: the synthetic fibers have not been worn down into a roughness yet. Cheaply framed pictures of his family are packed heavily into the thin strip walling in the staircase, hung there by his mother on her first visit a year ago.

“So you won’t forget any of us.” There’s even a collage of his little sister’s long-dead hamsters in their varied expressions of apathy and fear. He executes an artful slide across the hardwood floors onto the linoleum of the kitchen, only hindered by the speed bump of a metal floor divider, to lean over the sink and hook his middle finger around the pinstripes of his stiff curtains.

The slanted triangle of front lawn and sidewalk is empty only for a moment before the straight rhombus of bodies hurtles past at a steady, clipped pace. The blurred chunks of faces are all familiar, and he names them a second after they pass before him. A swath of almond hair:

Barbie. Lanky with sallow skin: Taco. Bright cheeks and round muscles: Red Hot. Towering above and voluptuous: Mama Kathy—the ones whose nicknames stuck.

And then there's Mark. Every week Dan hopes there would be a new hole in their march or a reformation on their horizon. He pictures sly footmen ducking out of the Crusades at night, slipping off to explore a mirage. Instead, he is leading them, head cantor for the week. Dan guesses it is some sort of incentive because Mark in his state should never have been out front; or at least not until he had kicked his 'Arby's in the morning, cheesy mac at night' routine. Mark's running sweats have turned dark grey in patches and to any other eye the rhombus looks freakishly clean, but Dan can see a slight bunching up of bodies behind Mark: some of the heads bob towards each other in unison with their frustration at the altered pace.

Mark's naturally low and commanding voice flutters in and out of focus as he pumps his legs up and down, bulk hitting hard on his feet.

“. . . Little boys came out of the city and mocked him, saying: Go up, thou bald head; go up, thou bald head.” Mark pauses to gulp down a ball of phlegm, “And looking back, he saw them, and cursed them in the name of the Lord: and there came forth two bears out of the forest, and tore of them two and forty boys. And from thence . . .” Dan thinks this must be the Second Book of Kings, somewhere around the second chapter, 2:23, because he was the one to help Mark map out his schedule and matched it up against The Objective: all 12 Google Doc spreadsheets of it. Dan scratches his left nostril, and considers buying some more Zyrtec. He can still hear Mark's muffled words bounce off the plastic siding of the neighborhood, becoming less and less recognizable. He looks up towards his neighbors' windows across the cul-de-sac and wonders how much of the group's message is actually being absorbed through those sheets of glass and skull as they hope, the way water is drawn up the fibers of paper. Stepping away

from the window now, his kitchen is filled with new light that filters through the curtains and gives the floor a checkered pattern of shadows.

He spends the rest of his morning recovering from a night at the bars by cleaning every inch of his body, and doing some relaxing yoga: *Three-Legged Dog*, *Bird of Paradise*, and then some he made up called *Splitting Spine* and *Flat Out*. He sidles outside after making himself a breakfast of shake pancakes poured from a plastic jug; the newspaper is lying next to the sprouting bag of grass seed, that Larry from next door kindly meant for those bald patches in his yard—whose wife put him up to it, no doubt. After removing, with a shudder, the thin plastic protecting the delicate pages, because the dewy slick texture rubs him wrong, he paces back inside to flip through the twenty-two pages of Greensborough social charm. Dan pages easily to the very middle where the police beat and ‘Dear Pam’ sections are.

He reads about a woman found asleep on her porch at two in the morning who was subsequently ushered inside by the officer on duty, and a domestic dispute that occurred after one child ate out of someone else’s cereal box, which set off a hoopla of hand waving and chucking of handfuls of FrootLoops from behind couches. He scrunches some edges and pages to the Art and Entertainment section, which is just another update on the community play *Bye, Bye Birdie*. It’s about how their director has agreed to come back after someone had falsely challenged him for the role. Dan just sees the pictures at this point, gearing up to watch some CBS News Sunday Morning, a ritual that usually assures him of the goodness of being alive and almost makes up for the other six days of bad news.

The thin pages flip slowly, and he has to beat at the middles softly with his fingers to make them follow the edges. And there on the second page, as an extended edition of this section, is Mark’s face smiling manically, which makes Dan cough on too much air. He reads in

the description box: *Local group the illustrious Running Ministries wins quarterly Bible Wars by a landslide.* It had been taken for the quarterly event, hosted by the Methodists and attended by every self-respecting Christian establishment in town. It has been a tradition of Greensborough for over a decade. And further down: The group's spokesman Gillian Smith, Red Hot, comments on their win, "It was no contest really, these other churches just don't learn the Bible like we do. As a living Bible we literally know the word of God backwards and forwards. Remember, we meet at the neighborhood arch outside of Green Gables, 7 a.m." Dust flies into the air as Dan slaps the paper onto the table after folding it twice to hide the group's picture between Classifieds and Sports.

From the times he spent sweating in the Methodists' church basement Dan remembers that contestants could sit all eight hours tensely in their seats, afraid to leave for a bathroom break, lest they miss a modern miracle. Old Joe retired last year, but for the past five years he'd been the reigning champion, he and his New-Age church of Christ. He would remember the excerpt and even recite a small bit of the homily given that same week to the onlookers' amazement and disgust. He would let no one interrupt him as he looked up into the ceiling and slowly pulled out decades-old phrases. No one could have replaced his histrionics.

The competition was so frequent and brutal that businesses and some households had taken to putting up signs with the rankings of the top four contenders in their front windows or taped next to the register. When he had first arrived in the town for his computing job, he asked a shop owner what the score board meant, thinking that 'Bible Wars' was a joke.

"What's that?" he'd put his two glass-bottled Root beers on the counter along with the box of tissues.

“Oh, that’s our board to keep track of which church is on top of the competition . . . it’s for Bible memorization,” the man in his body-length apron looked sadly at his wife who was standing beside him in front of another register. “ The Lutherans haven’t won for a while.” It was the first time he saw the name ‘Running Ministries,’ as it was tacked up in the first place slot on the metal frame.

Back home he used to listen in on his mother’s Bible-study group because she made him and all his brothers sit still and hold their thick books high in their laps. He loved the thin, almost translucent, pages filled with such tiny text—pages that held thousands of years and stories waiting to be read. Only on those Saturday mornings could he hear the words ‘damnation’ or ‘prostitute,’ but some of the passages still made his ears turn red and usually opened up more questions than were ever answered. Dan can still feel the weight of victory when he helped bring home the Running Ministries’ fourth gold-edged Bible, the only prize beyond pride that could be expected. But he enjoyed the phone calls back to his mother and brothers, retelling the room’s tension and giving them a shot at the same questions.

The last time he competed, the room looked the same but for a new coat of paint. Someone had decided to use up the old paint from the church’s remodeling, but the leftovers only coated three and a half walls out of the catacombs of rooms that mirrored those aboveground. Thick plastic-topped tables were arranged in an octagon and planted with as many chairs as possible, placing the ‘judges’ at one end and the interrogated at the other. Barbie, really Jessica, was up at the stand, waiting for Father Benz to find a suitable question for the final round in his Bible that was fanned out and stuffed with finger-frayed pages and odd notes that stuck out at angles. The skins of paper were bruised by the interplay of highlighter colors. It was the final question; going for the win. She gave the group a little wink for the benefit of her

collared ex-boyfriend sitting in the Catholic section, and she pressed both hands on outstretched arms across the expanse of the podium, leaning casually. Father gave a low chirp and held up a piece of paper rarely used; it was a napkin with a light smudge in one corner.

He settled his glasses down a little further on his nose and read.

“What is *the* shortest verse in the Bible?” He sank lower in his chair and looked out over the crowd above his lenses like a doctor who has just asked a young patient whether they were sexually active. The other seven teams shuffled their hands over their mouths and looked at each other, moving their lips under wrinkled palms. A swirl of dust and sightseeing leaves filtered around the floor as an ancient woman, stick thin and rubbery lips permanently upturned, cracked open the door and then closed it upon seeing forty pairs of eyes look up at her. Her white orthopedic shoes slapped up the short flight of stairs back onto the church level.

Barbie started to divide her curly hair by pulling apart a section of fifty-some hairs and smoothing them down with two fingers, head tilted towards the stained ceiling, and Dan knew they were doomed. That’s exactly what she did when he asked her to the movies one time and the first word of her response was “Well. . .” And that is what she said in front of the podium, only it wasn’t followed by anything but a drawn out ‘L’ that extended across her tongue and into her eyes, which she cast over to the table where her ministry sat, and searched for guidance. Mama Kathy was hunched over the table like Quasimodo, and almost standing. Her stubby fingers were twitching and tapping the air from side to side—flipping her pages. Mark sat next to Dan with a pleasant look on his face: soaking in the tension like a toddler who didn’t realize yet that his parents were fighting. Red Hot just stared ahead, temples bursting with ripe veins.

Dan looked through all of his pages, and quickly recognized that what he was searching for was not there. But he hoped the answer was not in Barbie’s section, because he knew by the

vague expression on her face that she didn't have it. The last time he forgot a section of his scheduled recitation they had descended upon him like horse-sized vultures on the feet of an adulterer—he didn't want the same for her. It happened second Sunday of December last year: he had just finished reciting Matthew 2:1-12, where the Magi come bearing scented gifts to the baby 'King of the Jews' when the next words disappeared. At first it seemed like a temporary pause as he collected his thoughts or breath to cross a busy street in the morning air that was heavy with frost, but then it stretched onwards for another minute.

“What's next, sweetie?” Mama Kathy asked first, whispering over his shoulder to the left: each word came out after a seconds pause to gather ammunition of air.

“He doesn't know,” Red Hot snarled at the very back of the rhombus of sweating bodies, and the group rustled audibly with discomfort. But Dan had nothing to say: his mind was unhinged from the tightly printed words of his heavily dissected Bible. The slickness of the road with its slushy puddles of root-beer snow heaped up against the sides of his sneakers and soaked into his socks at the edges. The tips of pale green grass were still poking through in parts of yards, where they had been tricked by the recent warm spell. A man was out crunching around his yard to check the strings of his winterizing burlap. A child in a cat-eared hat waved to him from the inside of a navy Accord. Dan almost waved back, but his hands were tightly gripped near his sides in correct running position.

Red Hot stopped jogging, and Dan could feel the group peel back from him in layers, as a sudden rush of immobility behind his blue wind breaker, the feeling of nearness gone.

“There's no point in us wasting our time.” Taco growled behind red cheeks and foggy glasses,

“It had better not be because you were reading other sections again.”

And “Don’t make me get out of bed for nothing, please,” smirked Paula from the back of the group. From there the group disbanded. Not used to looking at each other’s faces for so long, they scuttled off in their own directions, leaving Dan to wonder how to get home from this point on their run.

Barbie had been in the crosshairs at the competition, looking just like Dan had felt that morning, her face blotching with pink unevenly. Dan thought maybe he knew the answer, and not because he had been reading anyone else’s section. She had spoken the words on a Sunday morning like all the rest. But he had been caught up in the vision of a funeral procession that was slowly rolling down Main St. in a string of purple flags, like flowers in a carefully measured bed. This day dream had reminded Dan of his mother’s tubes knotted along a May pole of medicines after her latest surgery, and her face cracking a blistered smile when he walked in the room with chocolates and a thick grey paperback. The stone-faced driver contrasted with the family’s silhouettes in each passing car; someone lifted a tissue to their nose. He had been in the middle of the group that week, and he looked around to see if anyone else was watching the procession. But they were all looking ahead, listening to the words that came out of Barbie’s mouth one at a time.

“The shortest verse is in John 11:35, which says ‘Jesus wept.’” Dan said with a clear voice, and watched the priest look at his paper again and nod to the score-keeping committee of off-duty altar boys. Five tables of Christians let out a fatalistic sigh and watched as the Running Ministries jumped into the center of the room and clapped each other on their backs, for the third time that year.

After they stroked the leather covers and rippled the pages of their Bibles, someone remembered that Barbie was in charge of the Gospel of John: that she should have known the shortest verse, and that Dan should not have.

“But isn’t that the point, that between the ten of us we know the Bible? It shouldn’t matter who knows what.” But Red Hot had reminded them about how long it took him to map out the schedule, and the efficiency of specialization. He was expelled from the group on a temporary remedial basis. But he could never respond to their increasingly sweet and then embittered emails after his two weeks were up, because he’d grown used to his quiet Sunday mornings already. They accused him of stealing “intellectual property” and rescinded his Google Doc privileges.

Now they had won again, smiling brightly into the camera for the newspaper, making the suggestion that “maybe the Methodists should consider giving different prizes, because we don’t need any more Bibles—we’ve memorized it!” this from Spud. Dan groans internally, thinking about going into work on Monday and facing Mark who now turns away from him in the office’s cafeteria and asks other people to send him memos about the new account protocols. Mark no longer joined the office’s informal poker night because Dan would be there and sometimes held the game at his house. Not after he had called that one time to talk Dan into coming back, they were coming up on one of his weeks and didn’t have a replacement, and he had flatly told Mark no.

Dan doesn’t feel anything, not for setting them back another year, or for taking Nehemiah, Haggai, the Song of Solomon, and Timothy 1 with him. The words are already fading; he is no longer able to recite them for hours on end. He folds the paper back up and tosses it into the blue recycling bin underneath his kitchen sink, turning to switch on the black

coffee pot he got last Christmas from his sister. Dan watches as the water mixes with the grounds he measured out last night, creating a creamy brown liquid with just a hint of amber sparkling through as it drip, drip, drips.

## The Veil

Michael clasps my hand, and pulls me gently out of the chair where I must be sitting; it is covered in a light blue coarse plastic that drags on the legs of my fuzzy pants.

“How are you feeling?” I shrug my shoulders and hand him my sable leather purse to carry.

Michael says, “Well, you look a little like a chipmunk right now, but I’m sure you will be beautiful when it goes down.” He is careful to kiss my face right next to my ear, missing all the puncture holes covered with gauze. And I let him, but his breath drags on the white fibers and cheeks and my eyes prepare to wince, but cannot contract beyond an instinctive twitch: pools of gel fill space, and electric nodes counter-zap muscles. We go home to the fish tank and monogrammed towels, then Michael goes back to work, and I sit on the couch to wait. I am pretty sure the doctors told me it would take up to four weeks for the recovery process, and I am not supposed to do anything more strenuous than running the vacuum.

### Two weeks

Since the procedure, my face is an avocado: hardness just plucked from the tree. Maybe another two weeks of sitting on the counter top will make it soften, but I doubt it. This was the desired result. “Twenty-seven,” “Start now,” “never age again.” I remember the commercials on the international flights and at the hair salons, and the conversations with women in the apartment mixers. I counted how many women I knew who had already invested; it reached a critical mass that I could not ignore. Last year it was full body hair removal; my armpits still itch with phantoms of in-grown hairs and razor burn—replaced by a kind of burn that destroys the knowledge of growth. Michael keeps telling me that I look better every day. I think he is almost jealous, but guys haven’t started getting this done yet—maybe in another year or two. I cannot

let him touch my face as it is always stiff and feels bruised. I think he gets annoyed when I keep telling him and ducking away—he's really hard to read sometimes.

#### Six weeks

But I look more like myself now. Well, I look like myself a couple of years younger, and I almost can't believe how well it is working. Other than that, not much has changed. Brenda has stopped asking me about my pain levels and has decided to go into the clinic herself. She is quite the scaredy-cat, but I told her they give you great pain medication that kind of makes you feel like you're in a cloud.

“Now would you say that's a 2.5 or a 3 when it comes to rug-burn feeling? I hate rug burns.” She is so silly. I will have to visit her soon but not too soon, because then she will just complain to me the whole time and I will just say that I warned her.

#### Eight weeks

Michael is not Michael anymore. Something or someone has removed him from himself, taken his skin and wrapped themselves inside it. I have had this feeling for a while now, and it doesn't make any sense. He acts the same, says the same things he always does, but I would not recognize him on the street. Whatever is inside must have messed up his face because it feels foreign to me. But I don't know what I can do.

I used to watch the morning shows to learn about the news and keep up with the other wives' conversations about bands and the new fashions in collars. But the hosts' eyes can now see me through the screen, and they contort at strange angles like a kaleidoscope of eyebrows and noses. Their pores seep out towards me in high resolution to suck me up and turn me into yellow-black puss: swimming around and dissolved. The Michael that is no longer Michael places a hand on my stomach at night, and I don't throw it away from me as I do in the morning,

because it still feels like him. But his devil's-face wrenches and bubbles at my baggy PJ's and breakfast of soggy oatmeal; it is laughing at me.

#### Ten weeks

I went to see Brenda today and there is something the matter with her as well. She looks different. Maybe it is the swelling or the scabs that she unskillfully covered with makeup: it is lumpy like some taupe, Claymation landscape. Our conversation was flat and meaningless, and I just feel bored when she tells me about her life. For some reason, I don't care anymore. But her dog is the most wonderful little thing; he is joyful and pounced all around her apartment while I was sitting on the floor. Its black lips curl towards me in a smile that wraps me in warmth, and towards the end of my visit I could swear he was going to tell me something, but he was too shy. I should persuade Michael to let me have one.

#### Twelve weeks

The Michael who took me to art museums all around the city even when we didn't have enough money is gone: the one who taught me a little bit of French so I would be able to traverse the city for our honeymoon and took a job close to my parents. The man I live with is soggy and corrupt; everything he says cracks under the slightest pressure of my fingernail. He laughs at me because I refuse to go outside or visit friends. The last time I left it felt like I was living inside a zombie movie—the streets bare and swirling leaves scattered me into a jog. I cannot be the only one.

I got a dog, a cute puppy named Louie. He is a Papillon, which is a fancy French breed. Michael wanted to make sure he was pure bred, but I didn't care so long as he was a joyful little thing. He has white paws and follows me everywhere I go in the house just two inches behind

my heels. Sometimes Louie licks my face in the morning to try and get me to wake up and feed him, but I cannot feel anything.

### Thirteen weeks

The Michael that is not Michael, I call him Apollyon, is calling me.

“Sarah, I’m back,” and it sounds just like him so I turn around at my desk waiting as shoes are cracked off and jacket flung onto a hook in the mud room, but the footfalls turn a corner around the couch, and I can see it is not him. They got the voice right, but not the face—it moves around in forced smiles and gasoline tears. No one I can tell this to. I feel the same rush of adrenaline and fear as water breaking—this Michael must go away.

He stands taking up all four feet of the balcony overlooking the city, a cup of green tea in his grasp. To get up my nerve I have not spoken to him since dinner. I walk up silently behind the devastatingly familiar body, and hope bursts past my throat again, wanting to rip through in a squeal at his return. But he turns halfway to look at the source of my footfall, and I know what I must do. The forehead wrinkles up like an accordion of reptile skin and the eyes are framed in unused ladders of indulgence. It is hideous. And evil. The fading sunlight makes my tears invisible, and it turns back around, taking a long pull of hot tea followed by a shudder down its back. I put my hands on its back and hold for a second before pushing as hard as I can.

## Muscle Memory

She cannot read anymore. The notes just black dots, lines, and squiggles arranged in a pattern, like wrong answers on a multiple choice test: no rhyme to them, only a rhythm. Some strobing melody she heard years ago on the radio at the checkout in Community Markets, or on a date to the symphony in taffeta that wrapped her in turquoise folds. One of those songs, so “classical” no one quite remembers which composer actually wrote it either two or three hundred years ago in one or another smoky European city. Was this rolling yet staccato *pièce de résistance* forged on the beaten floor of a deaf man robed in legend, or pieced together by the aristocrat carefully proud of his commissions? She cannot tell you. Nor does she care to wonder as she sits separate from herself.

It is elicited like a wave by the moon; somewhere the name or groupings of three notes bouncing up the page trips a coil in her mind. Or it is the touch of ivories now long outlawed for their cruelty. Tusks slashed and placed next to the ebony of trees that once cowered in fear from the elephant’s root-snapping strength. She plays without feeling, without knowing how. Her long draping arms with sallow skin charge ahead like a lawn mower trailing black smoke, and it cannot be allowed to putter out, because they may never start up again. Sensing the urgency, her tendons and muscle fibers play as fast as they can after all these years: a sputtering of regret, an old dog taken out for his final walk. She cannot feel where these arms attach to her body; floating free, they are moving more than she ever does, and neither is under her control.

Jerkily like an oil drill, wrists follow fingers and drag along the elbows two seconds behind. The shoulders are downright stubborn. If deaf she would only be aware of an erratic twitching and a dull pain emanating from the place where her bones make sudden contact with the edges and shifting cracks between the keys. The tendons that still string her together feel

stretched through tight holes of bone in her wrists and elbows; they are used to tight corners and soft chairs. They are arms from another set of decades: ones that saw them pace over these patterns for hours on end, day after day. Breathing quick and shallow, she cannot stop playing with all the strength of thirty years' practice, giving herself a concert worthy of any audience—her body rewarding her at last for its education.

Unknowingly she was always preparing for something that never came to pass, like a rookie firefighter who trips over a burning beam on her first call. Only—it was less pronounced than that—she was never one for drama—only caring a little less each day. But her arms were restless all the while: holding onto a talent long unused, waiting for the time they could save the day for a niece's Birthday, Christmas carol, or to burn the loneliness of disuse. But the nieces moved away or grew up childless, and the young couples at St. Michael's only want to hear guitars during the Holidays, the choir learned new music or went A Capella. She sits alone in her apartment, wondering if the downstairs neighbors can hear—something to show that she is here. But maybe those unopened rooms and floors are as empty as they feel.

The pages of music are beautiful, covered in a hue of golden brown and decorated with ink-pen swirls: markings for artistic embellishment, or a reminder to get loud here or 'channel the rainstorm' for this Prelude. She looks at the piles of sheets stacked around the wooden upright—hands still jaunting along on their own—and wonders when this liveliness as well will disappear. Perhaps only when she is too frail to sit on the stool, or draw her wrists up to the bunny-paw position she was taught as a child. She embraces the keys, the music that cannot be held, because it stands between her and the empty spaces.

## Home

It's raining a special rain today; all the colors of the world have turned into a shade of blue or green or purple. Water droplets turn the orange flag on my mailbox teal, and the grey concrete periwinkle. I will have to call Katherina and tell her Grampa died today. It does not matter whether I call her in two seconds, fifteen minutes, or three days. He will still be dead at any time in the future. I begin washing the dishes from breakfast, eggs, toast, and coffee. I will also have to tell Grandma, but that certainly can wait.

And I can see the UPS guy coming down the sidewalk: he walks slowly because it's Saturday; the houses are close and the front yards shallow. I think his name's Jim, I remember from when he sent my lavender seeds to the wrong house. I'd felt old because he took me as an authority even though he was only about 25. This package is probably the two-story bird house I ordered for Grandpa for his Birthday in a few weeks. I need to send it back.

I just saw Grandpa yesterday; he'd served a personal rendition of high tea: black Lipton, crackers and cheese, and sandwiches with tomatoes grown in the garden. He had talked about the basket of treats the church sent over every month. I enjoy the sound of the mailman's shoes on the damp bricks that line my doorstep: a slick, gritty sound like all the times I danced through the borders of pebbles and broken shells in Grandpa's garden when I was a child. Its scrabbly earthiness is addictive, the same way some people feel drawn to bulk bags of pillow-y flour or the smooth curve of a bubble.

There is a soft thud and another set of slippery footfalls fading away. I put the frying pan away and lean on the sink with both palms, thinking of my plans for the day. Nothing needs to be done really, nothing urgent enough to postpone the phone call: my fridge is stocked and I

cleaned the house yesterday. After twenty some years of school, the stillness of weekends feels alien. Something somewhere must be due.

I guess I should call now. Katherina will ask when exactly I found out. She might be out at the beach today with Danny and Seth anyway, running after them both with sunscreen and floppy hats. There will be no funeral, no one to attend but me and some cronies. He knew a few older men from playing Euchre at the United Methodist Church, but they only met when the shallow burgundy bus stopped outside his house unexpectedly. He would think flowers were a waste of money, he'd probably rather have something nice like a tree planted in his name or a piece of gum stuck to a bar chair in his honor.

I walk into the living room, where my phone sits; any and all visitors comment that I am the only person they know who still has a corded phone in her house. I just like having something to wrap my fingers around when the silent spaces edge in or someone puts me on hold. I dial her number, and it rings four times before going to voice mail—"You have reached the Montgomery family. If you want to speak to Kathy, Danny or Seth please leave a message at the beeeep," with each child saying his own name louder than necessary.

"Hi, this is Reagan; I just wanted to let you know that Grandpops died today. They said it was probably a stroke. Hope everything else is going well." I immediately second guess this phrasing and choice to leave a message, but it is a lot easier to do than listen to her reaction or non-reaction first hand. She will have to call me back once she's thought of something to say. I would blame it on the grief if she gave me shit for it later: "Jesus, you could have had a little more grace."

We were always together for any other announcement of this kind: "I am sorry but your Father has passed. He went during the surgery and felt nothing, we are sorry for your loss." Or

some other bland statement they would pronounce; something the doctors and hospital psychiatrists had practiced over years. The dozens of other people waiting expectantly for their groggy but recovering loved one to be wheeled out in any second, becoming excited to see us pulled aside to a private room. Yes, I definitely should not have left a voice mail, but it is done now. I really hope she is out somewhere for a while, because I haven't talked to her in a few months. California to Indiana is too far to stretch a family of two.

And this is just the first step, Susan would probably help me clean out his house, but what would I do with all the stuff, his stuff: the collection of teacups he continued for his mother, the battered tin cup he used to go camping with as a young man, and the Elk head bust hanging above his chair—said to be the second largest in the state? And that is to say nothing about the books of 'rare' coins and pins he collected with his Military retirement money. I kept joking with him that by the time they appreciated in value he wouldn't be alive to collect the rewards. I can't believe he's dead.

I thought he'd live forever, the kind of person who might move to a foreign country and never be heard from again: assumed to be sitting on the beach with a fruity drink rather than rotting. Or burning in a square hole: I did tell them he wanted to be cremated, I think. Katherina had refused to be a part of the will, she said it would just make things more complicated for her—didn't want any of his old crap anyway.

When they called me this morning, the EMTs told me their theories, but they would need to order an autopsy to know for certain. But I cannot imagine putting him through all of that just to satisfy my curiosity, though it is hard to give him this final grace. I need to know why terrible things happen. As if I can somehow avoid what others cannot. When my cousin Stan died out on his farm, I was comforted by the notion that I would never have tried to mow such a steep hill

and been run over by my own machine. Grandpa had been so proud never to give us reason to move him into an assisted living facility. He stopped driving on his own and ordered everything he needed delivered straight to his door. Unlike Grandma who ran that red light and snarled at us when we mentioned ‘maid service,’ but that was a long time ago. He seemed fine for an 88-year-old: doing little to nothing but reminiscing as is the work of an elderly man.

A notification on my phone jerks me upright from the floor where I find myself. But it is not Katherina calling, just a reminder to go and visit Grandma sometime today. I look at the cross with ceramic flowers sitting on the end table to my right and scowl. The carpet is deep pile and velvety green, my ring finger gets caught in two tied strands and I pull them apart slowly. Going to Wesley Glen depresses the hell out of me.

“Do I know you from church? Are you the same lady that brought all those kids in here caroling last year?” It always starts the same, and I try not to roll my eyes up to the ceiling or sigh too deeply. But I cannot always help myself.

“No, I’m from the Center for Academic Integrity, it seems you started slipping sooner than you thought and wrote nonsense in some of your articles on Supernovas. We will take them away.” – or some permutation of that idea. She looked up once when I tried this, her patchy grey-black hair sorted into soft peaks at the home’s salon two doors down. I am pretty sure they just drag a comb with new gel through it a couple of times and then pat her on the back.

“Integrity?” She waffles out between the corners of a slightly chipped front tooth, as if she knew what that means.

“Do you need something? I don’t have any papers here . . . no pens. Do you need my name?” She dug her hands around the edges of her tufted cushion of the only chair in the room, looking for a tube filled with ink—it is dark grey, probably to mask Jell-O stains.

“That’s right we: are going to take all your authorships away. I guess it wasn’t worth leaving your family for after all.” But she didn’t even look up at this.

From my vantage point on the edge of her low bed the blue sky drifts past slowly into deeper violets, and I soon grow tired of her chattering and feeble attempts to pull the chair cushion out from under her. I wander over to the clip board on her door. Pinched behind the plastic face of Tweety Bird was a chart filled with blood pressures, weights, and a thick block for “daily speech patterns.” Many of the days were filled with N/A. There was a note in red letters, and circled for two days in the future, it said ‘Start Treatment.’ I thought maybe she had another stomach infection, and looked back at her with what I hoped were softer eyes.

I repeated this story, sans the last bit, to Grandpa the last time I saw him. He’d scoffed at me for teasing her, but I saw him smile as he turned to pick up the newspaper.

“It’s not like she’s going to remember it five minutes later. I just wanted to see what would happen”

“Well, I don’t think you should do it anymore. The nurses might suspect something if she gets upset again,” Grandpa sighed and held the pages up higher across his face. I would have tried to get a better reaction from her for him anyway. Katherina and I used to discuss their stories as if they were simple and settled facts, because old people never seem as complicated.

I roll up the garage door, letting a little flood of water trickle in, and hop into my leaf-green Camry. My mother used to be so afraid of driving in the rain, with her eyes so bad, but it doesn’t scare me—I am a careful driver. I throw my maroon bag onto the passenger seat and buckle it in for good measure, because the sensors think there is a small child or dog sitting there. The highway is pretty clear, the church crowds having gone to breakfast and come back home

already. But the rain out in the open is less magical, the bit of sun at home that gave the streets their sparkle is gone, and the blacktop is dull once more.

The way to his house is a straight shot, basically only one road, through the flattest parts of Indiana. When it doesn't rain this area looks like a desert of fibrous weeds and red clay dirt stretched out so far I can barely make out the trees banking on some stream across the fields. I burst into Maplebury and am greeted by two blocks of sparse houses, one church the size of some gas stations, and a welcome sign extolling my presence: "Where the Grass is Greener." His house is a peach ranch on the second road from the highway. I can see the thick tire marks from the ambulance and Susan's SUV, for whom he couldn't open the door this morning. For a second I wonder and hope she cleaned the house after they left with him, but I decide that would have been weird.

I open the door with the key he showed me was taped behind the welcome sign hung from the left of the door—it changed seasonally into a painting of scarecrows or snowmen: now it is a red bird holding a green sprig and clashing with the peach siding. Grandpa always plays records in the background of Classical Music or Rock and Roll, or has the radio going on Car Talk or NPR. The house has a pre-fab junky feel to it, more of a starter home really, but he kept it nice: the peach siding power washed and pressed wood cabinets polished. The tea bag sitting in a cup is now cold where he left it, and the daily newspaper is refolded haphazardly on the counter. I feel like I should cry, but everything feels mystical like he's been spirited away by Peter Pan or gone on a secret mission for the FBI. The house is the same as when I left him yesterday, tomato rinds still plopped and turning gritty in the sink drain. Mud from the driveway has dried in a swirling pattern from where someone must have tried to wipe some of it up from the linoleum.

I move to the living room and sit down on my ottoman and find a sleeve of whole grain crackers laid out on the coffee table just as they were fewer than 24 hours ago. I hadn't noticed any difference, any shortness of breath or dullness of spirit. The tears come now, the taste of the crackers bringing the difference between yesterday and today into my here and now. This food has more permanence than the man. I remember watching a Discovery channel program about archaeologists who found Egyptian pharaohs buried with their servants, concubines, and horses as well as a few years' supply of honey, bread, and alcohol. I found it appalling when the archaeologists cracked open the ancient pottery and dipped their fingers into the honey and dragged it to their mouths, after two thousand years, to find it well preserved and suitable for eating. I always thought it wasn't theirs to have.

By the time salty water stops pouring off my eyes they feel like two grapes with the skins peeled off. I have not stopped eating crackers all the while—shoving piece after piece through my quivering lips, though my jaw knows what to do instinctively. I shall have to be careful because I can put on ten pounds easily each time something like this happens. Grandpa wouldn't hold back mentioning it either: "I see you've been eating for you and that dead dog of yours." This makes one laugh burst out of my mouth, carrying a whole cracker of crumbs with it. I wipe them off of my shirt folds and from around the corners of my mouth.

I decide to poke around a bit. Maybe take a remembrance so an estate agent could come in later and do what he saw fit with the rest. No reason to keep coming back here like this, forget this small corner of the world exists. As I shuffle across the sculpted brown carpet the house follows my weight. First on my left is the bathroom fitted in grey tile, there are only some loose-fitting clothes, denture cleaner and the like all sporting the scent of his cologne, heavy on the musk. The little picture frame of a cowboy above the toilet stares back at me defiantly, I breathe

in deeply one last time and shut the door quietly. I have no idea what I should take; he was never one to mention any objects he might want someone to have after his passing. Mom's parents were always asking what any of us kids would like, so they knew someone would take their most prized possessions and not leave them out on the curb. From them I got a carved room divider and hideous blue plates to hang on the wall, both of these are stored up in my attic somewhere, still sporting the label-maker tags with my initials.

His bedroom is where I go next, because I don't think I have been in here since I helped him move in: I always assumed it was empty sans bed and slippers. The brown carpeting continues, but it is fluffier in here. Just as I expected, clean and comfortable, his bed made like he always taught us to do—another lesson from the army. Vaguely feminine plant-motif drapes shield the room with a soft green glow. I keep my notebook and mother-of-pearl fountain pen in my bedside table so I walk over to the side of the bed furthest away from me, looking for a low profile. There is a slight wooden table standing there, but it is open framed without any drawers. Two small pills, a gold stretch watch, and a picture frame sit on top with a brass wind-up alarm clock. I pick up the picture frame and expect to find a picture of me and Katherina dressed in pastels, but instead it is a picture of Grandpa standing in front of a wooden fence with my father, around twelve, each of their right legs propped behind them. The gold watch is scuffed from years of wear, and stretches out slightly like a slinky as I pick it up. I have never looked at it closely since I was a child when I would sit on his lap and twist it around his wrist, and he let me even though it inevitably pulled out a few hairs.

Maybe I will take this watch. At least it would be functional, the time still correct after all these years—something to keep him with me. I pull the flat, folded clasp apart and slide the hoop over my own wrist. It feels cold and rough, my skin not used to the metal mesh of the band, but

it's not too big for my right wrist, which is where he had worn it. I look closer to inspect the clock's face and find a small engraving on its side; it is the older kind of engraving that looks like it was carved out with a tiny chisel instead of laser-printed. It reads: *With love*, and I am glad to find it doesn't say something cheesy like 'For All Time.'

This feels like an accomplishment: finding something to leave with. As much as I hate to admit it, the coins and stamps don't matter to me because he was mostly done collecting them by the time I was old enough to understand. They were mementos from another time: nothing to do with me. I am thinking I will take this into the jewelry shop sometime and have them go over it, just to make sure it will last, when I hear my phone ringing where I left it in the living room, a soft buzzing mixed in with Chopin's Raindrop Prelude, which took me forever to pick out—the perfect blend of frantic and soporific. Securing the band with a click between the metal parts, I take a final look around the room and decide to close the curtains quickly because the afternoon sun is too cheerful for empty space.

Closing the door and walking quickly back down the short hall into the living room makes the sound grow louder, and I take a deep breath before accepting the call. It's Katherina.

"Hello?" I try to sound as normal as possible, but it comes out sounding a little accusatory.

"Hi. I got your message. You know you could have just called me back." She sounds tired and muffled, as if she were in a closet or bathroom.

"I know, but I just blurted it out." I said, convincing even myself. There is a short pause, which has become a tradition in all of our conversations—slow and methodical.

“How are you feeling?” She says quietly, as if I’d just been vomiting into a toilet for hours. I can hear screen doors squealing and shallow footfalls in an adjacent space, so the boys must be fending for themselves.

“I’m doing ok. Not sure that it has really hit me just yet, that he’s actually gone . . . I just saw him yesterday.” I say, hoping this doesn’t sound as abrasive as it feels. A Brillo pad coming out of my mouth.

“I know, he told me you were coming over when he called.” This is a shock. I did not know they were in regular contact. I never thought they might talk about me.

“He sounded good over the phone.” Her voice trailed off at the end, as if she had nothing else to say.

“He was his usual self in person too. I’m actually at his house right now; if there’s anything you want.”

“Oh, no. The boys might like the stamps, but they didn’t really know him.” There is another long pause.

“When are you going to tell Grandma about this?” acting as though she does not have a phone herself.

“I just figured I would the next time I go to see her.” I don’t tell her that that would technically be today. “But I don’t know how much good it will do.”

“What it is, I guess.” I can feel Katherina pulling away from the conversation as the muffled quality of her voice disappears and the boys’ chattering becomes clearer. One of them asks what is for dinner. She hangs up after telling me she will call back in a couple of days to check up on me, and we wish each other love.

The next week passes slowly, even though I am busy calling the estate agent and Grandpa's lawyer, the coroner. I don't go to Grandma's. I mention his passing to Marci at work, and the whole office signs a sympathy card. I found it resting between the keys on my laptop one morning when I arrived. The card was made of heavy paper with simply swirled letters and a background of demure purples that looked like splattered flowers in a watercolor ink. Everyone wrote their name in a regular pattern, covering the entire inside surface of the paper; making sure there was no blankness even if that meant writing each name a little too large—bearing witness to sympathy rather than accompanying it.

Before I have had time to consider my words, it is time to return to Wesley Glen. If I do not go again this week I may never return. Just like the last time I went to the gym regularly: one week of a sprained ankle and I couldn't bring myself to restart the habit or pay the fine. But it is Sunday after lunch, prime time for a visit, because the other patients will be ensconced in their rooms, taking naps, and I will not have to talk to anyone else's family or nurses who want to know how I am doing. They already know how Grandma is doing, and sometimes hope I can answer some question they have about her behavior or preferences. "Oh, well, she was bitten by a dog when she was pregnant with my father, so I wouldn't bring the therapy pug in her room." I had had to explain this after she started crying hysterically once the little chap pranced into her room expecting treats and petting.

I knock solidly on her door, having been waved through security and pressed my access code to this ward, not really waiting to hear a response. The nurses usually put up a sign on the doorknob if anything important is going on: 'spring cleaning,' 'nap time,' or just 'privacy.' The absence of any such sign lets me know that she should be sitting in her chair, staring out the window or with her eyes closed, hands clasped across her belly button.

But when I swing the door open and my eyes adjust to its darkness, I find her looking directly into my eyes.

“Hello” At first I cannot tell which of us has spoken, but then find my teeth clicking together in the aftershock of speech.

“Hi,” Her face is as wrinkled as ever, but without the scrunched muscles that normally accompany my visits. It usually appears as if she is in the middle of a very difficult test and is struggling to find the right answer. But today she seems more peaceful, and even though she does not speak my name, I can swear there is an expression of understanding. Perhaps she has finally gotten used to my visits; some small part of her brain has been recording the weekly appearances of my face and has ascribed it the label of normalcy. I am not sure how I feel about this.

“How are you feeling today?” I realize this is something she probably hears all day from different people who really mean: did you eat all your food? Have you slept well? But I can already tell that she feels better than I have seen her in a long time. I walk over to sit down on her bed that is firm and tightly made hotel-style. Up close the brightness in her eyes tells me I might not have to monologue a conversation to myself this time.

“The food here is terrible.” This is something she used to say a lot the first year.

“I know—.” She cuts me off: “It all tastes the same, and there aren’t any cookies.”

“Maybe I can bring you some next week,” and I suddenly feel guilty for having stopped this tradition. I look over at the table where they have placed her pictures and cards; there is one of her standing outside an academic building and waving to the cameraman—most likely her new boyfriend. A cloud covers the window and the room feels like it is underwater for a second before it passes to the other side of the sun.

“Isn’t that Arthur’s watch?” She holds a wrinkled finger up from her stomach slightly bent at the knuckle, pointing towards my wrist as it rests on the bedframe. And I turn my neck to look at it myself because her face is so incredulous.

“Did I give you that?” she looks up at my face now, kindly. I can see her thoughts shifting to her own generosity, and hoping that I have enjoyed the gift.

“I took it . . . because Arthur has passed away.” The look of confusion on her face is more familiar to me and for some reason I feel more comfortable with it.

“Are you lying to me?” My eyes widen automatically and I turn my head to the side, preparing to shake my head. She looks serious, too, with her jaw pulled out a little at the bottom not like when she jokes to protect herself from mistakes.

“No, he is dead. I spoke to the EMTs. ”I knew I might have to drill it into her at some point. She looks like she is about to cry for a second, but then that is replaced by confusion.

“Where is he?” looking as though she might get up to search the room.

“He wanted to be burned. He’s at my house.” It felt strange to say because I had only just picked him up five days ago. I hadn’t figured out where to take him yet. I try not to look at her, to blend into the wall of pillows on her bed, and I know the warmth of the room is doing its work. I sit and watch her sleep for a while. But I have completed my assignment so I slip out of the room. As I am leaving a nurse walks past and asks me how Edie is doing today.

“Surprisingly well, actually, she remembered more than usual.” Hoping the interrogation would be over soon.

“I am glad to hear that. It may be due to her new treatment. We just started her on a new round of anti-biotics and experimental medication that seems very promising.” I can feel myself bristle a little and straighten my posture.

“No one told me about any of that. As her only living relative I should have been told!” I have forgotten about Katherina for a second.

“Let me go check!” The woman has kind blue eyes and short brown hair, and I feel bad for half-yelling at her. But I want to know how this could have happened. Wasn’t there some sort of protocol? Rules to be followed, unless they thought they could just experiment on my family without permission.

I have often thought that I may get the same disease, because I researched the genetic possibilities online. So I want to know what they are doing to Grandma: what might be working on her could work on me. Maybe she would be a person again. The nurse has scurried off in the direction of the main office and I follow her ten feet behind, slowly gaining on her plastic-wrapped footsteps. We reach the connecting halls quickly and I can see most of the healthcare professionals standing around, checking charts or computer screens. The nurse I am following makes sure to start talking to one of the doctors first so I don’t have a chance to speak; they are talking lowly outside of his office and she points towards me as I stand near the receptionist who smiles at me. I purse my lips in response.

The doctor is an older, short man who looks something up on his computer and then comes over towards me, leaving the nurse behind.

“Hello, you are Edie’s granddaughter?” I nod in reply.

“Well, we have decided to put her on some experimental drugs for Alzheimer’s, and I can give you an information packet about what that means exactly.” I nod in acceptance, but am not quite satisfied.

“But who gave you permission to do this? She certainly can’t!” I feel like I’ve seen enough Hallmark movies and Dateline to know that the psychologically incompetent cannot sign for anything, not even a manicure. The doctor flips through another page in his file.

“It looks like her husband, an *Arthur Theo*, signed for it about a month ago when we called him in here to discuss everything.” He Adds: “Why?” when he catches sight of my expression.

“But they have been divorced for thirty years!” I am exasperated with the entire medical establishment now.

“Not according to our records—he is her closest living relative,” he states matter-of-factly.

“He just died a week ago.” But the doctor is not impressed by my words, even though he tries to slow down and look vaguely sad. He is legally in the right, and he knows it.

It has taken me a while to calm down after getting back from Wesley Glen, and the packet of research and online resources has not helped the process. It says something about infections mimicking the symptoms of Alzheimer’s or being a contributing factor. It also talks about the experimental drug that is supposed to regulate blood sugar or something like that. But I have no idea how those things can bring back memories that I had assumed were gone forever. Or what this means for me. I have stopped wearing his watch. I can’t believe Grandpa would have done something like this and not told me. It sits on my bathroom counter and every morning I try it on, but I always take it off again before leaving the room. It feels like a lie, or at least a half truth. Anyway, I realized that the gold has imparted a green tinge to the skin of my wrist. I try to imagine paperwork on his counter with grandiose WG letterhead, addressing my grandfather as a husband. But I can’t remember specific papers strewn in his house. At one moment I think I saw it and in the next I am sure that I did not; I assumed they were all crossword puzzles or AARP.

It scares me to think that Grandma might be coming back to me, and just when Grandpa left: a cruel trade. I have few good memories with her, because she was always away at a conference or moving to a new University. Grandpa was the only one who took me and Katherina to see her; now I think it was an excuse for him, and those times were spent sitting upright in chairs and talking about our academic goals. How were we enjoying geometry? Who can say? Our Father never went to see her because he had grown up without a mother and therefore had no need of one. And yet she is now the closest person to me in blood and space. Katherina never called back to see how I was doing but sent an email about some of Grandpa's old cuff links she wanted me to find for the boys.

It is raining again, and dark marbles of water roll off my roof into the street. I have just come back from visiting Grandma, and I almost did not recognize today as Sunday because Wesley Glen was not as gloomy as usual. Grandma was wide awake and busy asking me questions; she clearly does not remember very much still, but she knows when something is missing. When there is a hole in her history or a blank wall in the structure a memory she asks me what color her house was, or how old she was when first learning how to ride a bike. I cannot answer all of these questions, but I try to. The only stories I make up now are about how much fun it was for her to travel the world or how much people loved reading her articles.

I sat with her all afternoon making fun of the nurses in their squishy shoes and munching on chocolate chip cookies. She even told the nurse to go away when he knocked on the door to check her blood pressure, in the same tone she would sometimes use to scold me for running down the stairs or slouching in my seat. Her room is brighter even though grey-blue dust particles still float thick through the air—bisected by pie slices of sunshine. I try not to remind her that Grandpa is dead.

My phone rings and buzzes in the back pocket of my jeans. I am not expecting a call. The number is one that I only recognize for its pattern. I draw my finger across the bright green button to answer. The person on the other end is crying in a way that will not allow them to speak. I wonder how long they have been crying and why they are calling me.

“Hello?” I ask, while preparing my pointer finger to hang up.

“Rea?” The crying stops long enough for her to plead my name.

“Yes, Grandma?”

“I want to go home.”

“Me too.”

## Notes

I originally planned on consulting my research heavily during the writing process and noting down very specific details about how memory works in order to write an exhaustively truthful depiction of memory. However, as it turned out that is a very restrictive way to write fiction, so I found myself setting the research aside after reading it thoroughly and taking notes, in order for my pieces to be influenced by that research, but not to be constricted by it.

Therefore, the research I have done may only tangentially influence some of these stories, and some are the Frankenstein babies, or an unscientific-connection of two or more kinds of research.

At the same time, because I set the research aside in order to write more fluently, the process of rereading the research has been a practice in reconstruction. I needed to draw parallels between what I ended up writing and the inspirational research. Therefore, the following short essays are the best reconstruction of my creative process and what I was thinking about while writing. However, I will not try to draw parallels too closely between the research and my stories because as a creative work those connections may be more metaphorical or symbolically described. The following essays support my stories by portraying my research and helping me explain some sources of inspiration.

## Context Effects: Three Days

When it comes to memory, context matters, because some environments are more conducive to remembering certain kinds of information than others. According to a study conducted by James S. Nairne and Josefa N.s. Pandeirada, “fear-inducing stimuli” are more easily remembered than other kinds, but stimuli that are similar to ancestral environments and fear-inducing are even more easily encoded (Nairne and Pandeirada 18). This may be because humans have “inherent cognitive biases . . . to threatening stimulus” that were built into our brains “during the Pleistocene,” or the “environment of evolutionary adaptation” (Nairne, Pandeirada 2). Fear is a very strong and important stimulus, and “what matters to retention is how people process information” (2). Not all experiences are encoded into long-term memory, because the salience of an event impacts its level of encoding.

The researchers tested people’s memories for stories that involved either more ancestral or modern fear-inducing stimulus; such as a growling bear versus a speeding truck. They were very surprised to find there was “no indication that survival-based processing produced any mnemonic advantages in the modern scenario” (Nairne and Pandeirada 6). This research indicates that it may be easier to associate evolutionarily-salient stimuli to bad outcomes than modern ones. They conclude that “any stimulus bathed in the spotlight of survival processing will receive some kind of mnemonic boost” (Nairne and Pandeirada 18). This conclusion makes sense, but has interesting implications when a majority of humans live in comparatively ‘modern’ environments. Is it possible that our memories are inherently weaker now that we face fewer ancestrally life-threatening scenarios?

A big element of modern environments is the use of technology, and specifically social technology. Sarah Elwood and Katharyne Mitchell describe how technology can function as a

form of memory archive that can “frame and direct” our attention (148). Technology in a way is an extension of human memory that serves as a “durable life log that alters what and how it is possible to forget” (Elwood and Mitchell 149). When there is a permanent record of the past on some forms of social technology, such as Facebook, it can be impossible to forget or escape personal histories. But they can also lead to a certain kind of informational-hoarding. The ways technology impacts memory can “shape not just interpretation of the past but collectively held imaginaries of possible futures” by “impos[ing] ordering structures that force these self-representations into pre-scripted and immutable forms,” such as strict timelines (Elwood and Mitchell 149, 151). Their article also talks about how the ways businesses use technology to remember and suggest preferences might impact or change those preferences: the technology in a way reveals a person’s identity and preferences.

## **Physical Characteristics and Memory: SYM**

Humans have an impressive ability to hold information in their long-term memory; in fact, there is no estimated limit to this capacity, no upper bound on information storage. However, it would be impractical, and adaptively detrimental to remember all of this information at the same time. Therefore, a selection process helps us determine what kinds of information are most relevant at a given time so we can use information effectively. Two of the concepts that shape memory recall are the Pollyanna Effect and Mood Congruence. The Pollyanna Effect is the idea that human brains have the “tendency to process positive information more easily than negative information” (Matlin 137). In other words, people are most likely to process and recall the positive aspects of their world more often. In a way, we are wired to remember a past that is happier than it might actually have been.

Mood congruence is also a tendency of the brain that makes it easier to recall information when the mood during recall and encoding of the memory are similar (Matlin 140). For example, if a person studies for a test while he is melancholy it might actually benefit him to be melancholy while they are taking the test due to encoding specificity. In other words, the more details that match the moment of retrieval the better, because those details can help trigger memories. But these concepts mostly hold true for people who have normally functioning brains because people who suffer from depression have been shown to experience differences in memory function.

Indeed, one of the hallmarks of the disorder is the recurrence of negative thoughts and the inability to find the silver lining, so to speak, because they are caught in a loop of memories that is the veritable opposite of the Pollyanna Effect. Indeed, people with Major Depressive Disorder are sometimes characterized by an “Elevated level of the stress hormone cortisol,” “recurrent

depressive episodes and memory dysfunction . . . [and] reduced hippocampal volume is one of the most consistently observed structural abnormalities in MDD” (Halvorsen et al. 352). People with depression have differences in their memory structures and in the way they experience memory in their daily lives.

I wanted to consider the ways memory dysfunction may either lead to depression or increase its severity. I could imagine someone being pulled into a cycle of negative thinking: one from which it would be almost impossible to escape. Halvorsen et al. collected data about verbal learning functions in young adults and compared these findings to data collected nine years earlier. The subjects had either never suffered from depression, were depressed at one point, or were currently and consistently depressed, and it was found that there was no significant difference between the groups’ ability to perform on the California Verbal Learning Test. However, these results do not change the evidence about other types of memory lapses for people who suffer from Depression, but rather suggests that “verbal memory function may be spared at least in relatively well-educated young adult subjects with normal to good intellectual functioning characterized by a mild to moderate unipolar depression” (Halvorsen et al. 353). These findings, to me, suggests that the memory differences in MDD patients may be more closely tied to other kinds of encoding such as emotional memories, because the study only touched on non-emotional recall involving vocabulary.

I decided to combine this information about memory and depression with information from another article about the brain-gut connection and how it can affect cognitive function. I was inspired by the Star Trek character Jadzia who is in symbiosis with a very old creature named Dax with whom she shares her consciousness: their memories and personalities are meshed. In my story I liken this type of Jadzia and Dax relationship to the brain-gut axis that can

impact cognitive functioning and depressive behaviors. The brain-gut axis is the “complex bidirectional communication system linking the central nervous system and the GI tract,” which can “play a role in early programming and later responsivity of the stress system” (Moloney et al. 51, 49). The condition of this bodily system impacts cognitive and emotional states.

For their research, the scientists compared the effects of different bacterial compositions and introduced imbalances in mice with both natural bacterial makeups and lab-grown Germ Free mice. Their results show that “chronic treatment with [a certain kind of bacteria] induced region dependent alterations in GABA receptor expression in the brain and reduced stress-induced corticosterone and anxiety-and depression-related behavior” (Moloney 52). In other words, this bacterial therapy served as a sort of treatment for depressive symptoms. There is also evidence that the Germ Free mice have an impaired ability to distinguish between known and unknown mice, which means that their memories are not functioning well enough for recognition (Moloney et al. 70). The researchers came to the conclusion that gut microbiota “may play a crucial role in . . . metabolism and consequently impact central serotonin concentrates” and that serotonin is involved in mood regulation (Moloney et al 53).

According to this paper, “the link between infection and psychiatric illness has long been known,” and Moloney et al. predict that “psychobiotics may emerge to treat stress related psychiatric disorders” (53, 61). I imagined that the brain-gut axis was animated and could actively remind someone about negative memories just like an imbalance in gut flora might lead to depressive symptoms and altered memory patterns. I tried to weave details into the story about the factors that might influence the Sym, such as “maternal separation, restraint conditions, crowding, [and] heat stress . . . [that] have all been shown to alter the composition of gut

microbiota” (Moloney et al. 60). Few people might consider that the organisms living in their bodies could alter their mood and possibly, in extension, the way they remember.

## **Mind Palace: 614-5237**

Mnemonics are defined as strategies people use in order to remember information more easily or accurately. Matcheri S. Keshavan describes mnemonics as an integration of “dissociated ideas, by connecting . . . [them] in some artificial whole, the parts of which are mutually suggestive” (117). In other words, when people arrange information into meaningful patterns with easily remembered characteristics, they are probably using mnemonics. The purpose of such a practice is as an aid to “trigger . . . constructs and memories,” an example of which would be an acrostic of terms (Keshavan 118). People use these strategies because “proactive and retroactive inhibition effects are notably absent when encoding” (Keshavan 117). In other words, the information is less affected by past or future information-overlaps, because the organization is so unique and therefore unlikely to be overwritten by related concepts.

One of the most successful types of mnemonic is the use of visual imagery because it requires deep and complex encoding, that involve multiple areas of the brain (Matlin 115). Humans are very visual creatures and the use of visual mnemonics, such as mind maps, can be an effective means of encoding information, and I wanted to explore one such creation. A mind map is an organization of a “series of familiar locations” used to host mental images of items to be remembered (Matlin 180). One memory champion who spoke on NPR’s “All Things Considered” discussed his process of creating a mind palace and inserting relevant information into it by using unique and often shocking images as triggers for unrelated information, such as a string of numbers. On air he remembered a large series of numbers by using this method, which involved an image of a cookie monster acting strangely in one room of his mind palace. This is one of the most effective methods of memorization, because as Joshua Foer says, the goal is to

“transform the kind of information we're not very good at remembering into the kinds of visual spatial memory that our minds are actually built for” (Foer).

What inspired me to write this story is my own experience with extremely vivid dreams and awareness that visual memories are by far my most accessible. The places I take the reader in this story are recurring spaces from my own dreams, which are organized on many levels; for example by time period and spatial relation to each other. The speaker is looking back into her mind map to find the phone number of a distant friend she thinks she sees on the subway, and I describe her memory of that number through the use of a mind map. I think that this kind of representation is fitting because as Marlene Behrman notes in her article “The Mind's Eye Mapped onto the Brain's Matter,” the structures in the brain that are responsible for image-creation are often the same structures that are responsible for perception (Behrman 50).

Not only are visual imaginative and perceptive pathways similar, but so are those for auditory, tactile, and motor perceptions. This is because “during mental imagery, the same long-term representation of the visual appearance of an object are used to activate earlier representations in top-down fashion through the influence of preexisting knowledge” (Behrman 50). The brain works to make associations between past experiences or memories and current visual perceptions, and in mental imagery the same memories are influencing the creation of images. Imagery, therefore, is highly connected to memory because imagery requires prior experiences of perception to use for the building of new images and for reconstructing those memories in new forms.

However, the overlap of perception and imagination-via-memories is not clear cut. One patient described in the scientific literature was capable of copying elaborate designs if he could see them but was unable to complete simple shapes if he was not shown an example of the

finished product (Behrmann). His case shows that there is a necessary element of memory and retrieval in imagination. In other words, imagining requires some constructive input that searches for the correct visual-code to send to the visual cortex and therefore to stimulate that specific kind of image. This means that anyone who uses imagination or recalls an image, might first have to create a thought-construction of what that image should be in order to search for it in a long-term memory store. Therefore, the path of retrieval is a very structural and constructive journey through memory.

One question that arises due to the similarities between processing of actual and imagined images is how people can distinguish between what is real and what is imagined. This is particularly interesting because “functional imaging studies show identical activations during hallucinations and perception,” but some theorize that such a failure of perception could be attributed to an inability “to self-monitor an inner voice” from the outside world (Behrmann 53). Image-driven mnemonics are very active because they require construction and manipulation of perceptual memories, and a mind map or palace is multi-dimensional because it involves motor, visual, and spatial imaging.

## **PTSD: Impression**

Whenever I thought about Post-Traumatic Stress Disorder I most often imagined soldiers returning home from war and experiencing flashbacks or changes in behavior, but there is a whole spectrum of trauma and of its long-term sufferers. In fact, as many as “two-thirds of U.S. adults and youths will be exposed to a lifetime traumatic event,” but with so many instances of trauma it is surprising that there are not more cases of PTSD (McLaughlin et al. 834). Even if their trauma consists of a singular event, people can still suffer from its effects for many years or even their entire lives, because the memories associated with that trauma alters their behavior and emotional states.

I wanted to explore the boundary lines between false memories of trauma and how those might lead to a semblance of PTSD. In the case of single-event trauma the only real difference between real and false trauma might only be the event itself, because the memories for either could be identical. False memories can feel just as real as factual ones, so I imagined that my character Mary might suffer from induced PTSD without actually being able to remember the traumatic events of her surgery and recovery. In particular, I saw the role of her parents as formative in her memories of trauma and subsequent symptoms. The idea for this story came from a distant family member who is very similar to Mary, and who went through the same surgery for Hydrocephalus as an infant.

This woman has no mental deficiencies that can be determined by tests, and she could not have been able to remember the events of her surgery as an infant. However, she exhibits many of the same symptoms of a person suffering from PTSD. So I tried to explore the links between imagined memory and the real experience of trauma. I considered the ways children might pick up on the experiences and memories of their parents, and how those could be internalized,

especially if parents are not particularly able to control their own emotions or to “restore [the] parental hierarchy” (Falasca and Caulfield). Mary in this story is similar to the real-life inspiration, because they both grow up to be emotionally unstable and dependent on their parents.

Mary experiences PTSD and flashbacks from an event she never truly remembers, but this does not make her experience any less real. The factuality or truth of a memory does not always matter when it comes to sensory memories: the everyday perceptions and experiences of living. According to Richard A. Bryant in his article “The Complexity of Complex PTSD,” some therapies for the disorder involve ‘imaginative exposure’ therapy, where patients are directed to imagine certain situations for which they would have a negative reaction so they can work through their emotional responses” (880). This type of therapy was found to be very effective, because it helped create new memories and coping mechanisms. In a way, I took that beneficial practice and turned it upside down. I constantly exposed Mary to the negative imaginative stimulus of her parents’ memories and descriptions of the trauma to make predictions about its effects on her.

During the research process I realized that there is not one side to PTSD, but that it is multi-dimensional and can be influenced by many factors. I found it particularly interesting to learn that “what may be traumatic for one child may actually be growth-producing for another,” and that internal and external environmental factors play a large role (Falasca and Caulfield). For example, one important aspect following trauma is the availability of an attachment figure for the child to look up to and trust “as a support system and as a means to healthy development” (Falasca and Caulfield). But parents can sometimes fail to provide these things due to their helplessness or “restimulation of the caregivers’ own childhood pain and fears” (Falasca and

Caulfield). I wanted to describe all of the characters as somewhat childlike and unable to cope in order to create the most realistic situation for my story: the kind of family that could create or build trauma for itself.

I decided to use the true occurrence of Hydrocephalus as a way to create imagined pain because trauma is diffusely defined, but one description is “a sudden or extended threat to the child's life” (Falasca and Caulfield). These memories can be brought up by related images or circumstances, and they can be remembered as an entire traumatic event, usually if there was only one event or as fragmented memories from a series of prolonged events. Because Mary’s trauma was extremely prolonged and was based on no real experience, her memories are very random and interspersed, and she remembers the many different images and ideas they told her over and over. According to Falasca and Caulfield, “memories have an important role in shaping the child's expectations regarding the reoccurrence of threats, failure of protective intervention, and feelings of helplessness. These factors can become so pervasive that they “govern the child's emotional life and behaviors” (Falasca and Caulfield). Memories are what tell us how the world works, and the only basis we have to predict what will happen next.

According to a recent study, there may be a way to determine chances of developing PTSD given a person’s exposure to a traumatic event. The researchers compared data from students “who previously participated in a neuroimaging study,” and had them “complete a survey assessing posttraumatic symptoms related to [a] terrorist attack” (McLaughlin et al. 839). The study suggests that “elevated amygdala reactivity to negative emotional information could represent a neurobiological marker of vulnerability to traumatic stress and, potentially, a risk factor for PTSD” (McLaughlin et al. 840). This finding is very interesting because the amygdala

is also involved in processes such as long-term memory potentiation, empathy, and classical conditioning such as with fear.

One of the symptoms of the disorder is the inability to cope with emotions; some “report increased reactivity to stimuli” or hyperresponsivity, while others experience “elevated tonic levels of emotional intensity but not increased reactivity” or hyporesponsivity (Falasca and Caulfield). In other words, some people experience more intense emotional states and therefore exhibit more extreme behavioral shifts, while other people are more emotionally closed and shut down behaviorally when they experience tumultuous emotions, and some have a mix of the two. I wanted to explore the possibility of connections between false memories of trauma and PTSD, not in order to invalidate anyone’s experience of the disorder, but to push the boundaries of what it means for a memory to be ‘real.’

## Reruns and Recall: Day Dream

In Bill McKibben's book *The Age of Missing Information*, he talks about the relationship between technology, information overload, and memory. It is his contention that humans, and especially Americans, are bombarded with information. Technology alters the ways humans interact with information and use it. Technology is a rapid development that has stepped between us and our natural ability to understand the world around us. Not only have we lost some of the skills necessary to live in the natural world, but we are also affected by the ways technology alters information.

McKibben gives the example of reruns on television and news programming on the radio because they both alter the ways humans view the world. He argues that reruns are proof that we have not made as much progress as we believe we have, because "you can watch TV shows that are thirty years old without any real culture shock" (McKibben 113). On the other hand, news programming gives people the impression that they are much more up to date than they probably are. McKibben himself attests that he "spoke confidently as everyone else" about particular political concerns in the Middle East even though his only information came through the unreliable source of his radio (McKibben 150). Therefore, our memories of these events and historical circumstances can become skewed.

Television programming can give a feeling of timelessness because episodes from one decade are very similar to current shows, and it may actually function as a hindrance to positive cultural movement. McKibben believes that television choices can impact people's opinions and their views of the world because it repeats certain themes or ideas over and over. For example, people who see many shows about a certain era or one opinion could be subtly swayed into

thinking that those ideas or concerns are the most important, or it can make certain periods stand out more in their memories.

For example, WWII is a highly represented in historical media, but other wars and social concerns are virtually ignored. The drama of television is not conducive to representing the more subtle concerns that could actually turn out to be more important. Media and differences in access to media impact how people view the world, because they are constantly being reminded of certain historical events or concerns, and are oblivious to others. McKibben uses this construct to argue that humans in general are more oblivious to the negative impacts they make on the world, such as social and environmental concerns, in part due to media that ignore those issues. Repetition priming is at play here because the recall and encoding of an idea or set of images grows much stronger when it is repeated (Matlin 196).

Television programming also influences people differently depending on their age, because they are more likely to remember certain aspects rather than others. This is primarily a difference between adults and children of elementary-school age. According to one study, “with age, recall of televised stories increasingly center on the events that play an important role in the causal structure of stories” (Broek, Lorch and Thurlow 3023). Action is more “concrete and often very vivid,” which may makes it easier for younger viewers to pay attention to (Broek, Lorch and Thurlow 3023). Likewise, children are less able to remember causal chains of actions and goals because those memories require more rehearsal in working memory, and children may not have the brain-power required to replay the action-memories over in their minds to create such chains. However, the ability to “understand how events influence each other allows a child—or adult—to successfully negotiate his or her world . . . a crucial step in interpreting one’s experiences, in predicting what will happen in the future, and in deciding how to plan one’s

actions” (Broek, Lorch, Thurlow 3026). Televised stories may be remembered differently depending on the viewer’s age and therefore influences how those stories change their world view or inform their own actions.

## **Religion and Memory: Running Ministries**

I have always been amazed by people who are able to recite parts of the Bible, or who can easily tell me exact locations of specific passages, because I have never felt that my memory could work that way. I wondered whether people with that kind of memory for religious ideas and texts would implicitly have a greater religious experience. In this story I wanted to explore the connections between memory and religious experience, and to do so I considered evolutionary memory theories and ideas about cultural memory.

Emmanuel Tannenbaum theorizes that religious inclinations stem from a projection of self, or the idea of a soul, onto the world at large, and that this progression all depends on the establishment of an idea of self from the collection of memories. He argues that “self-awareness is essentially a learned behavior, [which] emerges in organisms with a sufficiently complex and highly integrated ability for associative memory and learning” (Tannenbaum 415). He explains that the only way for an adult human to be able to identify a childhood picture of himself or herself is through an association between the person’s present characteristics in comparison with memories of who they once were (Tannenbaum 416). As an extension of this idea, it might be theorized that the greater capacity an organism has for memories, the greater the depth of self-knowledge that organism can experience.

The establishment of a self-image through “associative memory and learning . . . combined with language can facilitate the emergence of various existential and religious concepts associated with self-awareness” (Tannenbaum 419). Tannenbaum believes that mirror neurons are “the key building blocks” that lead to existential issues because they help the organism to recognize the similarities between itself and other organisms, and therefore to realize that other organisms are likewise self-aware (Tannenbaum 418). From this conclusion,

organisms might try to label that self-awareness by using words such as mind or soul, ideas that are distinctly experienced by select physical objects. Therefore Tannenbaum argues that humans culturally started using non-physical words for self-awareness, such as mind and soul, because this distinction between two kinds of physical objects—one of which is conscious, and other of which is not—leads to another distinction between body and mind (421).

In continuation of this theory, Tannenbaum believes that humans translate the perceived separation of mind and body to the world at large, leading cultures to draw a parallel between their self-awareness or ‘soul’ and physical manipulation of the world, and more generally to create the idea of an all-inclusive mind or ‘god’ that manipulates the physical world (Tannenbaum 422). In other words, the human-created deity could be a projection of individual feelings of self-awareness and recognition of others’ self-awareness onto the physical world that may also possess characteristics of self-awareness such as changes in weather: the seeming manipulation of physical objects perceived as emotion. These characteristics would be indicative of a ‘mind’ entity that “has no physical form, since it itself creates the reality” (Tannenbaum 422). The seeming non-physicality of self-awareness is translated into a ‘religious’ ideation of a non-physical essence from which all reality is derived.

Joseph Bulbulia talks about different connections between religion and memory in his article "The Cognitive and Evolutionary Psychology of Religion." Religion impacts life experiences and may alter memories; in fact, he states that “for religion to happen at all, there must be an active distorting and biasing of experience strong enough to erect cathedrals and to bring people to their knees” (Bulbulia 680). In an evolutionary sense, religion functions to encourage people to put the needs of the community above their own: to forget their own survival requirements. Bulbulia suggests that religious thought may be hardwired into our

genetic makeup because children have a “bias to favor teleological explanation” (Bulbulia 675). For example, children are prone to give explanations for events or physical realities that give non-conscious objects or events qualities of intent or personification. For example, children might explain that a rock is sharp to discourage animals from sitting on it, rather than a more logical explanation. Bulbulia suggests that “it may be that a child’s default theory of the world includes an ‘intuitive theism’ . . . that children are endowed with all possible religions, acquiring their religious idiolect largely by forgetting” (Bulbulia 677).

Memories also serve to perpetuate religious feeling because religious rituals are memorable either for their drama or for their frequent repetition. As Bulbulia states, “you would forget your mother’s name before forgetting the day a knife was taken to your genitalia” (662). These two kinds of memories make religious practice “believable and normative,” and yet few analytical scholars of religion “end up worshipers of Zeus” (Bulbulia 662). Religion may be derived from a projection of self-knowledge, but it often functions in society to put the community above the individual and maintains its power over groups of people through vivid and repetitive memories of rituals. Humans possibly have a natural tendency to ascribe meaning to the universe, which only becomes specialized through culturally-pressured forgetfulness.

## **Facial Recognition and Violence: The Veil**

Capgras Syndrome is a disorder characterized by the patient's inability to recognize faces that should be familiar to him or her. According to Dominique Bourget and Laurie Whitehurst, "it has been suggested that CS may result from disruption of pathways connecting the face-processing areas of the inferior temporal cortex and limbic structures, which mediate the generation of affective responses accompanying face recognition" (721). In other words, there might be a disconnect between new information, such as current images of faces, and old representations, or the emotional memories or pathways associated with those faces. Interestingly, the subjects usually do not exhibit memory lapses of past events but merely miss the emotional 'memory' that should be attached to recognition of a familiar face. And this detachment from memories for close family members can be a catalyst for very extreme behavior.

Capgras Syndrome symptoms are also often accompanied by delusions or hallucinations about the subject's relatives and him or herself that can lead to violence (Bourget and Whitehurst 11). For example, people with Capgras "may experience facial changes in themselves" and blame others, and "they may also see facial changes in others and become fearful that the alleged new identities may attack them," but the factors that lead to violence in sufferers of Capgras is mostly unknown (Bourget and Whitehurst 12). And yet, according to Carabellese and Whitehurst, patients with Capgras are more likely to participate in violent acts such as patricide, because they no longer see the individual as someone they know personally or have any emotional attachment to. One man with Capgras Syndrome reportedly saw "people as if they were wearing masks, behind which, in reality, the devil was hiding" (Carabellese and Whitehurst 10). And another man who had murdered his mother claimed that he had simply been purging

the world of evil because he was Jesus Christ and she had been an “evil French man” (Carabellese and Whitehurst 10).

The delusions that some sufferers of Capgras Syndrome experience can be extreme and even involve hallucinations that command the hearer to be physically violent with others. Even though many of these mechanisms are not fully understood, I find it fascinating to think about how our emotional memories are important for social interaction and functioning: that we might be rendered insane without emotional connections to images of something as simple as a familiar face. I wanted to write about this kind of experience but in a way that might be more accessible to the average reader, so I wrote through the lens of another study that analyzed the impact of facial movements on our ability to mimic and therefore understand other people’s emotional states. I drew a parallel between the concepts of Capgras Syndrome and “Embodied Emotion Perception[s],” because they both involve reading faces and recognizing some emotional connection or sympathy (Neal and Chartrand 673). Even though there is definitely a scientific gap between these two concepts I decided to use one as an illustration and as a tool to approach the concept of emotional memory itself.

D. T. Neal and T. L. Chartrand conducted a study involving the “facial feedback signals generated when we automatically mimic the expressions displayed on other’s faces” (673). Apparently this bodily reflex creates an “afferent muscular feedback signal” that is subsequently sent to the brain and analyzed to determine what emotions are being displayed (Neal and Chartrand 673). During this process there is activation of mirror neurons whose purpose it is to mimic the outside world, and usually other people’s behavior (Neal and Chartrand 674). Neal and Chartrand decided to study patients with temporary facial paralysis from Botox injections because the restriction of movement of facial muscles dampens signals about other people’s

emotional expressions from a subject's face to his or her brain. In this part of the research they found that Botox paralysis "reduces afferent feedback from the injected muscles to the brain," and therefore the "subjects' emotional perception declined significantly" (Neal and Chartrand 674-75). On the other hand, in a second part of the study they placed a type of restricting gel on other subjects' faces in a way that would increase afferent feedback, because their muscles would have to work harder to mimic the expression they saw. And this second study revealed that the subjects experienced "improved emotion perception" according to the RMET (Reading the Eyes in the Mind) test (Neal, Chartrand 676).

At the end of their paper, Neal and Chartrand had some very interesting ideas about the implication and possible future studies that can be done with these same ideas. For example, they state that it is unclear whether prolonged use of Botox would "increase or attenuate the perceptual deficits" and that "future research might explore possible effects of reduced facial feedback within social interactions and close relationships" because Botox might dampen emotional understanding by negatively impacting a person's ability to mimic others' expressions (Neal and Chartrand 676). Emotional closeness or sympathy plays a central role in relationships, and without the ability to perceive the emotions of other people you are left emotionally blind, which could negatively impact those relationships when it translates to behavioral changes.

The scientists' closing hypothesis and questions are what led me to imagine a scenario where mimicry and emotional understanding were dampened so much that I could draw a parallel to behavioral changes that people with Capgras Syndrome experience. Since Botox is much more familiar to a general audience, I could use it to demonstrate the same behavioral and cognitive changes that occur when someone does not feel emotionally connected to a most loved relative: when those emotional memories are effectively lost or disjointed from the appearance of

that loved person. A failure of retrieval for emotional memories of loved ones might render their faces unrecognizable in ways that could change everything about the relationship.

## Muscle Memory

Most people forget that their every conscious thought is the product of living tissue, and muscle memory is a phenomenon that makes clear the connections between mind and body. This kind of memory is often overlooked because it can be so automatic, something that we take for granted. As Qiang Liu and Erik Jorgensen say, “no one doubts the heart keeps its own counsel” (775). But I am talking not just about the simple pumping and inhaling that keeps us alive, but also those detailed and complicated motor-tasks that our bodies seem to remember through years of stagnation. For example, we do not have to direct our limbs consciously down the exact height of familiar stairs because they remember patterns of motion. For this story, I was inspired by my own experience with twelve years of piano lessons, and the deterioration of my skills when I came to college. In this story I try to imagine myself as an old woman.

Muscle memory has been described as a “gradual adaptation of muscles over a period of time to perform a new movement or action,” and as of 2011 the “precise mechanism” was unknown (Hassanpoor, Fallah and Raza 770). According to Hassanpoor, Fallah, and Raza, Astrocytes are likely involved in the processes of muscle memory because they are one of the most common types of cells in the Central Nervous System and “play an associative active role with neurons in learning and memory” (770). The repeated use of neurons for movement leads to the creation of pathways, so that “without active or conscious involvement of brain, the same motor action can be performed” (Hassanpoor, Fallah and Raza 770). These researchers believe that they have modeled the process by which muscle memory may occur, and how through “rapid communication” with neurons through gap junctions, they can “synchronize the acquired motor and sensory information at a speed faster than chemical signaling which is necessary to perform rapid motor actions” (7Hassanpoor, Fallah and Raza 74). This study suggests that

muscle memory is separated from the regular functioning of the Central Nervous System in a way because it involves pathways that are closer to the muscles themselves. I tried to play up this idea in my story by making sure the character's mind and body felt separated.

I wanted to know more about how muscle memory might work specifically, so I read another study that looked at movement in a type of parasitic worm, because they “do not need a brain to move” (Liu and Jorgensen 775). Apparently, “muscles can fire action potentials and produce rhythmic contractions without neuronal input” by “generat[ing] spontaneous voltage spikes independent of the nervous system” (Liu and Jorgensen 775). The muscles themselves can generate “oscillatory contractions” and send them down to either end of the worm (Liu and Jorgensen 775). The study concludes that muscles may be able to direct some of their own movement, but may “still require neuronal inputs to initiate and shape the pattern of muscle action potentials” (Liu and Jorgensen 776). In other words, even though muscles may be able to generate motion on their own, that motion may not be very precise.

Muscle memory is different from and yet similar to other kinds of memory. Though unconscious, our daily activities can become memories that may show up unexpectedly at some time in the future. I think this idea draws an interesting parallel between the mind/body division in the ways people think about memories and self, and their physical bodies and sensory memories. Muscular Memory is a smaller-scale example that establishes the plausibility of the idea that memories are all physical, so that it may be applied to conscious memories, those memories more closely tied to ideas about self, and the physical brain.

## **Alzheimer's and Attention**

Alzheimer's is a recognizable disease that affects memories and a person's ability to remember everyday activities: it is a degenerative disease of the Central Nervous System. However, the "syndrome is not a single disease caused by one pathway," which can make prevention and treatment difficult (Launer 872). For one thing, the disease "starts much earlier than its clinical symptoms," but many of those symptoms are too subtle to recognize early enough (Launer 872). And this problem is growing because "as population lifespan increases, the number of AD affected patients will triple by 2050" (Zhang 333). Currently, there are few treatment options that promise many results in the short term, and the disease is caused by different factors in each patient. I wanted to compare this devastating and high-profile memory disease to a more mundane kind of forgetfulness that most people recognize—the kind of forgetting that comes from inattention.

The only real way to encode information into long-term memory is to bring it into the working memory, rehearse, and then retrieve that information. However, many times the initial and crucial step is not begun, because people are not able to pay attention to everything all at once. Some details about any scene or event can be ignored, either because they are too normal to change the meaning of a perception, or because a person's attention was called in another direction. I find this idea very interesting, especially because I am guilty of inattention more often than I care to admit. Thinking back over a memory, makes it easy to find places where the outlines or ideas are fuzzy, most likely because there was a lack of attention. But I wonder how these experiences of memory 'loss' compare to the devastating diseases of the mind. Both involve large swaths of 'forgetfulness' but one is considered normal, while the other is highly feared, and I wonder what this says about the different ways we value memories. (Matlin 70-89)

## Works Cited

- Behrmann, Marlene. "The Mind's Eye Mapped Onto the Brain's Matter." *Current Directions in Psychological Science Current* 9.2 (2000): 50-54. *JSTOR*. Web. 5 Apr. 2016.
- Bourget, Dominique, and Laurie Whitehurst. "Capgras Syndrome: A Review of the Neurophysiological Correlates and Presenting Clinical Features in Cases Involving Physical Violence." *The Canadian Journal of Psychiatry* 49.11 (2004): 719-25. *JSTOR*. Web. 6 Feb. 2016.
- Broek, Paul Van Den, Elizabeth P. Lorch and Richard Thurlow. "Children's and Adults' Memory for Television Stories: The Role of Causal Factors, Story-Grammar Categories, and Hierarchical Level." *Child Development* 67.6 (1996): 3010-028. *JSTOR*. Web. 06 Apr. 2016.
- Bryant, Richard A. "The Complexity of Complex PTSD." *American Journal of Psychiatry* 167.8 (2010): 879-81. Web. 2 Feb. 2016.
- Bulbulia, Joseph. "The Cognitive and Evolutionary Psychology of Religion." *Biology & Philosophy* 19.5 (2004): 655-86. *JSTOR*. Web. 5 Apr. 2016.
- Carabellese, Felice, Gabriele Rocca, Chiara Candelli, and Roberto Catanesi. "Mental Illness, Violence and Delusional Misidentifications: The Role of Capgras' Syndrome in Matricide." *Journal of Forensic and Legal Medicine* 21 (2014): 9-13. *JSTOR*. Web. 6 Feb. 2016.
- "4. Elisha and the Two Bears (2 Kings 2:23-25)." *Bible.org*. N.p., n.d. Web. 12 Apr. 2016.
- Elwood, Sarah, and Katharyne Mitchell. "Technology, Memory, and Collective Knowing." *Cultural Geographies* 22.2 (2015): 147-54. *JSTOR*. Web. 6 Apr. 2016.

- Falasca, Tony, and Thomas J. Caulfield. "Childhood Trauma." *Journal of Humanistic Counseling, Education & Development* 37.4 (1999): 212-24. EBSCOhost. EBSCO Industries. Web. 2 Feb. 2016
- Foer, Joshua. "Memory Champs? They're Just Like The Rest Of Us." Interview by Robert Siegel. NPR Books. NPR, 24 Feb. 2011. Web. 9 Apr. 2016.
- Hassanpoor, Hossein, Ali Fallah, and Mohsin Raza. "New Role for Astroglia in Learning: Formation of Muscle Memory." *Medical Hypotheses* 79.6 (2012): 770-73. Web. 4 Apr. 2016.
- Halvorsen, Marianne, Knut Waterloo, Kjetil Sundet, Martin Eisemann, and Catharina Elisabeth Arfwedson Wang. "Verbal Learning and Memory in Depression: A 9-year Follow-up Study." *Psychiatry Research* 188.3 (2011): 350-54. Web. 5 Apr. 2016.
- Keshavan, Matcheri S. "Mnemonics for DSM-IV. Part I. Diagnostic Criteria and Psychiatric Assessments." *Asian Journal of Psychiatry* 2.3 (2009): 117-18. JSTOR. Web. 5 Apr. 2016.
- Liu, Qiang, and Erik Jorgensen. "Muscle Memory." *The Journal of Physiology* 589.4 (2011): 775-76. WorldCat. Web.
- Matlin, Margaret W. *Cognition*. Hoboken, NJ: Wiley, 2013. Print.
- McKibben, Bill. *The Age of Missing Information*. New York: Random, 1992. Print.
- Mclaughlin, Katie A., Daniel S. Busso, Andrea Duys, Jennifer Greif Green, Sonia Alves, Marcus Way, and Margaret A. Sheridan. "Amygdala Response To Negative Stimuli Predicts Ptsd Symptom Onset Following A Terrorist Attack." *Depression and Anxiety* 31.10 (2014): 834-42. Web.

- Moloney, Rachel D., Lieve Desbonnet, Gerard Clarke, Timothy G. Dinan, and John F. Cryan. "The Microbiome: Stress, Health and Disease." *Mammalian Genome* 25.1-2 (2013): 49-74. *JSTOR*. Web. 12 Mar. 2016.
- Nairne, James S., and Josefa N.S. Pandeirada. "Adaptive Memory: Ancestral Priorities and the Mnemonic Value of Survival Processing." *Cognitive Psychology* 61.1 (2010): 1-22. Web.
- Neal, D. T., and T. L. Chartrand. "Embodied Emotion Perception: Amplifying and Dampening Facial Feedback Modulates Emotion Perception Accuracy." *Social Psychological and Personality Science* 2.6 (2011): 673-78. Web.
- Nairne, James S., and Josefa N.s. Pandeirada. "Adaptive Memory: Ancestral Priorities and the Mnemonic Value of Survival Processing." *Cognitive Psychology* 61.1 (2010): 1-22. Web. 10 Apr. 2016.
- Tannenbaum, Emmanuel. "Speculations on the Emergence of Self-awareness in Big-brained Organisms: The Roles of Associative Memory and Learning, Existential and Religious Questions, and the Emergence of Tautologies." *Consciousness and Cognition* 18.2 (2009): 414-27. *JSTOR*. Web. 4 Apr. 2016.
- Xu, Wei, Jin-Tai Yu, Meng-Shan Tan, and Lan Tan. "Cognitive Reserve and Alzheimer's Disease." *Molecular Neurobiology Mol Neurobiol* 51.1 (2014): 187-208. *JSTOR*. Web. 10 Feb. 2016.
- Zhang, Zhi-Gang, Yan Li, Cheung Toa Ng, and You-Qiang Song. "Inflammation in Alzheimer's Disease and Molecular Genetics: Recent Update." *Arch. Immunol. Ther. Exp.* 63.5 q (2015): 333-44. Web.

## Works Consulted

- Antia, Rustom. "Models of Immune Memory: On the Role of Cross-Reactive Stimulation, Competition, and Homeostasis in Maintaining Immune Memory." *Proceedings of the National Academy of Sciences of the United States of America* 95.25 (1998): 14926-4931. *JSTOR*. Web. 03 Feb. 2016.
- Asimov, Isaac. *I, Robot*. New York: Bantam, 2004. Print.
- Atwood, Margaret. *The Handmaid's Tale*. Boston: Houghton Mifflin, 1986. Print.
- Baxter, Charles. *The Business of Memory: The Art of Remembering in an Age of Forgetting*. Saint Paul, MN: Graywolf, 1999. Print.
- Boruch, Marianne. *Cadaver, Speak*. Port Townsend: Copper Canyon, 2014. Print.
- Colombetti, Giovanna, and Tom Roberts. "Extending the Extended Mind: The Case for Extended Affectivity." *Philosophical Studies* 172.5 (2014): 1243-263. Web.
- Dick, Philip K., Andy Hopkins, and Joc Potter. *Do Androids Dream of Electric Sheep?* Oxford: Oxford UP, 2000. Print.
- Dybek, Stuart. *The Coast of Chicago*. New York: Picador, 1990. Print.
- Fregni, Felipe, Paulo S. Boggio, Michael Nitsche, Felix Bormpohl, Andrea Antal, Eva Feredoes, Marco A. Marcolin, Sergio P. Rigonatti, Maria T.a. Silva, Walter Paulus, and Alvaro Pascual-Leone. "Anodal Transcranial Direct Current Stimulation of Prefrontal Cortex Enhances Working Memory." *Experimental Brain Research* 166.1 (2005): 23-30. *JSTOR*. Web. 12 Feb. 2016.
- Gibson, William. *Pattern Recognition*. New York: G.P. Putnam's Sons, 2003. Print.
- Ingalls, Rachel. *I See a Long Journey: Three Novellas*. New York: Simon and Schuster, 1985. Print.

Kafka, Franz. *The Metamorphosis and Other Stories*. New York: Barnes & Noble, 1996. Print.

Kandel, Eric R. *In Search of Memory: The Emergence of a New Science of Mind*. New York: W.W. Norton, 2006. Print.

Keyes, Daniel. *Flowers for Algernon*. New York: Harcourt, Brace & World, 1966. Print.

Kundera, Milan. *The Book of Laughter and Forgetting*. New York: A.A. Knopf, 1980. Print.

Launer, Lenore. "Preventing Alzheimer's Disease Is Difficult." *The Lancet* 14 (2015): 872-74. *JSTOR*. Web. 9 Feb. 2016.

Márquez, Gabriel García. *Chronicle of a Death Foretold*. New York: Knopf, 1983. Print.

Michaelian, Kourken. "Is External Memory Memory? Biological Memory and Extended Mind." *Is External Memory Memory? Consciousness and Cognition*. Elsevier, 2012. Web. 04 Feb. 2016.

---. "Is Memory a Natural Kind?" *Memory Studies* 4.2 (2010): 170-89. *JSTOR*. Web.

Munro, Alice. *The Love of a Good Woman: Stories*. Toronto: McClelland and Stewart, 1998. Print.

Orwell, George. *1984*. Ed. Mike Dean. Harlow: Pearson Education, 2003. Print.

Ramachandran, V. S., and Sandra Blakeslee. *Phantoms in the Brain: Probing the Mysteries of the Human Mind*. New York: William Morrow, 1998. Print.

Sacks, Oliver. *The Man Who Mistook His Wife for a Hat: And Other Clinical Tales*. N.p.: Summit, 1985. Print.

Saunders, George. *Tenth of December: Stories*. New York: Random House, 2013. Print.

Solomon, A., F. Mangialasche, E. Richard, S. Andrieu, D. A. Bennett, M. Breteler, L. Fratiglioni, B. Hooshmand, A. S. Khachaturian, L. S. Schneider, I. Skoog, and M.

Kivipelto. "Advances in the Prevention of Alzheimer's Disease and Dementia." *Journal of Internal Medicine* 275.3 (2014): 229-50. *JSTOR*. Web. 11 Feb. 2016.

Vrettos, Athena. "'In the Clothes of Dead People': Vernon Lee and Ancestral Memory." *Victorian Studies* 55.2 (2013): 202. Web.

Watson, S. J. *Before I Go to Sleep: A Novel*. New York: Harper, 2011. Print.