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Spring 2021

Anxiety: Environmental and Otherwise

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Recommended Citation

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*Anxiety:
Environmental and Otherwise*

An honors in the discipline project by Aprille Noelle Mohn

Part One: Environmental

Introduction

I think I know who I am. In this fragile moment I believe I know who I am, even if I know I'm only that person for this moment. In a few minutes I may look up a word and end up becoming a new person, and then I'll need to relearn myself. Right now I'm a queer twenty-something who is too afraid of small matters and not afraid enough of larger consequences.

Then again, the world only exists as we perceive it. There is an objective reality, but no human can know what it is because we have defined the world. We can only know things because we perceive them, and yet because we are only knowing them with our imperfect perceptions they cannot be true. Not true, but never false. The trouble of bias is that if you believe something, it can be true even if it isn't. I say that fracking needs to be much more regulated, if we can't get rid of it completely. Someone else might say fracking is what has let us be a global player in the natural gas industry, and we need it. Which statement is true? Both, subjectively, or neither, objectively? Is there ever one truth?

If I think that I know myself then I do, but someone else who knows me completely differently is also correct. It's Schrodinger's identity, but my crisis.

Do I fight to be perceived as I see myself, knowing that no one will ever be able to grasp it in the same manner. Or is anything short of perfect understanding more harmful than beneficial. Is it a mark of arrogance to think anyone would want to devote a moment to understanding my truth?

I'm a bunch of imbalanced chemical impulses, attempting to artificially compensate with counseling and pills. I'm meant to be ashamed of that, but instead

I'm proud. I'm a collection of memories, and I'm forgetful. I'm an amalgamation of every song I've ever put into a playlist, long school bus rides, comments from dozens of teachers, and thousands upon thousands of pages of books. I'm a product of my upbringing, the internet, my poor mental health, and four school trips to New York City. I'm a cat owner, a writer unfaithful to any genre, and one breakdown away from a breakthrough. The picture most people see isn't inaccurate, but it's incomplete and misleading.

I'm a human, and I'm not sure who I need to apologize to for that fact. I'm more than eleven and a half million minutes. I've probably used less than a quarter of them for things I would consider worthwhile, yet I needed each one to be who I am in this minute. I can't even guess at how many of them I've dedicated to self determination or to being alright with what I've come up with.

Some of my pieces are easy to grasp, and I can just as easily be those pieces. I'm a daughter, a sister, a student, a friend. Being one dimensional is easy because it's not a case of changing who I am, but knowing that I'm being viewed like stars poking through the darkness of space.

However, whatever I am, for a few moments of your life I'm the focus. If all I am is a fifty page minimum of typed words after too many slipped deadlines, then these fifty pages are worth the same as my entire life. Take me as I am—pages full of nonfiction and fiction about the truths of the world I live in. Pages full of the ways these truths terrify me into living differently. Give a few moments to try and learn me, and I hope that at the end of this, you can relearn yourself in some new meaning.

Introduction part ii: an erasure piece

I know I am fragile. I believe I am a person. In a word I'm afraid. A larger consequence exists as we perceive reality, but no human can know because we have the world. We can only perceive imperfect perceptions. The trouble is if you believe something. I need to get rid of it completely. Someone else might be a natural, and I think that someone else is correct. It's my crisis.

I fight as I see myself, knowing that harmful arrogance would want my truth imbalanced. I'm attempting to compensate with memories I forget. I'm a song, long and unfaithful to any genre, and one breakdown away from inaccurate, but complete.

I need to apologize for more than eleven and a half million minutes in this minute. I can't even guess at how to be alright with what I can be. I'm a daughter, a sister, a student, a friend. Being one dimensional is a case of being viewed like the darkness of space. I am a few moments of life. If all I am is dead, then these pages are worth my entire life. Take the world I live in. These truths terrify me, and I hope that the end of this can learn meaning.

Fracking Hell

Hydraulic fracturing, more commonly known as fracking, is a process used to extract oil or natural gas from deep and impermeable rock formations. Across the United States, almost 70% of the domestically produced natural gas comes from fracking. Fracking is used in 21 of the states, largely to extract natural gas and oil from shale.

The day that I learned about fracking still sticks to the front of my mind with a clarity that doesn't grace many of my high school memories. However, among the hazy hours of classes, clubs, and community service that I can still half-recall, the memory of the very moment I was taught of fracking lurks in my mind like a tack waiting to be tread upon. The memory tends to draw blood every few months, but it's better ignored. Best to move past what is unchangeable, even if it hurts. Some matters are too large for one person to handle.

Shale is the most common sedimentary rock on the Earth. It is the last echo of prehistoric lakes and oceans vital to Earth during the Paleozoic and Mesozoic periods, between 66 and 570 million years ago. Shale is a source of hydrocarbons—organic compounds made up of hydrogen and carbon. Hydrocarbons are easily combustible—they go up in a flash, no problem. Hydrocarbons provide a majority of the energy used to create electricity, heat buildings, and fuel vehicles around the globe. The combustion of these hydrocarbons is also the leading cause of global warming.

In the United States, the states which produce the most shale oil and natural gas are Texas, North Dakota, Colorado, and Wyoming. Pennsylvania is not much lower on this list of “productivity,” though, since the state is settled partially over the massive Utica and Marcellus shale regions.

It’s a facet of being selfish, but people tend most often to notice what is around them. It’s closeness that adds urgency to the raccoons who get after the recycling bin at the neighbor's house even when there are multiple civil wars occurring at this very moment.

I first learned of fracking from a documentary when one of my teachers in junior year abandoned his lesson plan for the day. I cannot hold it against him. It was the second period of the day, which sets the time at around 8:30 in the morning. At that time of day some students are still working on becoming fully alert, especially since approximately 70% of high schoolers are sleep deprived on a regular basis. Some days are going to be lost causes for active teaching if the class is groggy. Better to put on a documentary, let the attentive students watch, and the exhausted ones close their eyes. I may have been of the latter category. After all, I spent a lot of highschool living on three to four hours of sleep per night. It was the closeness, though, that first caught my attention.

The documentary was “Gasland,” written, directed, and narrated by Josh Fox, a Pennsylvania native. Fox became interested in the topic of fracking after a natural gas company offered his parents money to lease their land for drilling. Companies make offers like this all over the country, and some families take them—seeing the

benefit of the money and not being properly warned of all the dangers. The dangers are what held my attention as Fox made a point of traveling across the country in pursuit of first hand accounts.

The scene I remember most clearly from “Gasland” is one in which Fox visits a family who allowed fracking on their property, and the owner mirthfully displays the way that their tap can now be lit on fire. This family’s well had been contaminated due to poor practice of the natural gas company in ensuring that the fracking fluid used in the process doesn’t escape where it is meant to be contained. Fracking fluid is made up of water, sand, and up to approximately 700 chemicals. Many of these chemicals are confirmed carcinogens and even more are suspected of the same. Such a substance is dangerous enough that it shouldn’t be used unless utterly necessary. It seems to me that it shouldn't be anywhere near an aquifer, that’s for certain, but it’s just a part of the process for extracting natural gas.

Beyond the pyrotechnics, the scene struck me because I could see myself in the homeowner. Laughing in the face of disaster has for a longtime been my defense mechanism of choice. In many cases I’ve opted for joyous hysterics when something in my life has gone completely wrong. When something is too large or concrete to be changed, all that one can actually control is their reaction. So, why would I ever opt to cry when I could laugh. While I cannot confirm it, I know instinctively that this man was laughing for the same reason. When he had tried to solve the problem with the company drilling on his land, he received indifference. Until the people in power

care, what can he do but decide to laugh or cry, and hope the toxins in his water aren't in his blood?

Natural gas refers to a combination of many hydrocarbon gases. Due to the low density of gas, it has the habit of floating upwards among the rock it is contained in. Natural gas will travel upwards in porous rock until it reaches the surface of the planet or a type of rock with low permeability. Due to the variety of rock types that are layered to create the Earth's crust, it is not uncommon for impermeable rock, in this case called a cap rock, to stop the upward progress of natural gas.

Through this process, reservoirs of natural gas or oil will form underground. These reservoirs are the traditional source for oil and natural gas suppliers due to the large amount of the resource that will gather. It is a simpler process to draw from these sources, however, it takes time for gas or oil to collect under a cap rock. For this reason, the process of hydraulic fracturing was invented to draw from the source rock, rather than waiting for the formation of a reservoir.

The lack of patience makes sense in the context of our society. We fall prey to the desire for instant gratification, and we aren't going to let a challenge stop us from what we want. Perhaps it would have been a good time to begin developing new technology that can run on renewable resources, or improve the current technologies at the time. Instead, man invented the process of fracking to allow for extraction of natural gas and oil without having to wait for reservoirs, so we can continue to live in our buzzing little cities.

While the process is a feat of engineering, I can't help but disapprove of the fact that we decided it was a better choice to use explosions to crack the ground we live on rather than come up with another solution to our energy needs. Burning natural gas is damaging our atmosphere, but the fact that we're damaging the physical material of the planet to get to it just feels sadistic and stupid.

Even worse, most often when something goes wrong with fracking it leads to water contamination. Water, the basis of life—so abundant, and yet less than 3% of the planetary water is potable. So when fracking is leading to water murky, contaminated with carcinogens there is a problem. When water leaves the tap alongside flammable natural gas there is a problem. When people and animals alike are falling ill, losing weight and their hair, there is a problem. And more than anything else, when the natural gas companies are being presented with the evidence and denying fault, there is a problem. When the representatives of the companies are being literally presented with the water they declare safe and refusing to drink, there is a problem. So... We have a problem.

Encountering this in junior year of highschool left me shaken. I felt sick to my stomach, literally nauseated. I said as much to my class and pointed out that it's like something out of a dystopian novel. I was terrified, because we are living in a capitalist dystopia, and the worst part was, most of my peers didn't care. I had just watched part of a film that changed my life, and they had watched something that was barely enough of a blip on their radar to prompt class participation. And that was just as horrifying as everything I had just seen.

That morning was a turning point in my educational career. I had always cared about nature. Like Fox, I had been raised next to Pennsylvania forest and my love for the natural world grew as I did. The Earth gives us every single thing we have. It feels like a cosmic miracle to be at the right distance from the sun, to have had an atmosphere to trap enough heat for life, for water to have arrived. To not be in constant awe of the planet feels sacreligious, and to opt to do something with the knowledge that you're damaging the planet feels criminal. Even from an anthropocentric perspective, if the people at natural gas companies cannot care enough about the people on the land they are fracking then I think they are criminals. Murderers. Monsters.

I understand most people wouldn't want to prioritize planetary wellness over the comfort of themselves. I don't expect selflessness from most people. I try not to expect much at all yet sometimes, like in class that morning, I am still disappointed in my fellow man. That isn't to say that I think the majority of people are callous and uncaring. I think there is often just a lack of understanding. It was luck of canceled lesson plans that introduced me to fracking, but the vast majority of people aren't still attending high school. They're normal people with their own lives, and unless someone finds a way to reach out and say "Hey! I think you should know about this!" then they might not know at all.

It was this class that made me think that perhaps I should be that someone. At the time I wanted to make fracking my primary focus. For a little while, during one of the darker points of senior year I decided I might like to make a career out of

martyrdom. To partner with a doctor and a nutritionist and demonstrate beyond all reasonable doubt that the water contamination caused by fracking was deadly. In moments I didn't want to live I thought I might help achieve some important legislation anyway. I've moved away from this plan, but that class pushed me to take AP environmental science, which translated to my majoring in environmental science now.

Though fracking isn't the only issue which motivates me anymore, I still detest the practice. Even if the only way I can get people to care is to emphasize the danger to human health, keeping contaminants out of the water is a positive that impacts organisms on all scales. I don't think we're ready for the potential consequences of our actions if we do continue to poison our water supply. Sometimes it is what seems like the smallest changes—just half a degree warmer—can actually be an issue of life or death. Compromising our already limited clean water supply is a doomsday scenario, and we need to clean up our act and our energy practices before it gets to that point.

Phenology / spring events

The planet is getting warmer. It is not at a constant rate, and it is not warming evenly across the entire globe, but the planet is getting warmer. People who are still unsure if global warming is real are closing their eyes and covering their ears to the facts. The increasing thickness of the layer of greenhouse gases in the atmosphere is old news. Just consider the Keeling curve, which shows the planet's rising levels of atmospheric carbon dioxide. The fact that our atmosphere lets short wave light energy through but traps long wave heat energy is old news. Global warming is real. Climate change is also real, but it's a propaganda phrase coined to keep people from worrying too much since change can be good. The word change doesn't actually give concrete information. So, just one more time for the people in the back: global warming is real.

The questions that should be asked are about what this means for our world and what we can do now. The planet may only be getting warmer by a fraction of a degree per decade, but the consequences are already beginning to make themselves seen. Polar ice is melting, which leads to less reflection of light off the planet's surface, only increasing the rate of warming. The ranges in which organisms are living are beginning to shift. Animals can move north or to high altitudes. Plants can... Well, plants that reproduce quickly can shift their ranges too. Large plants do not reproduce very quickly, so we can anticipate great loss of biodiversity in upcoming years as we see sensitive species dying out. We should be ready for many species of trees to become functionally extinct. Oh, and most migratory birds. Lots of flowering plants as well.

Let's talk about caterpillars. Caterpillars hatch from their eggs based upon a temperature threshold being reached. Around the same time caterpillars are hatching in our springtime, migratory birds are returning from tropical regions where they spent winter. These birds are flying from thousands of miles away, with some species flying several hundred miles each day. Migratory birds use a massive amount of energy during these flights, and depend upon finding a plentiful smorgasbord of food when they arrive. That's why they migrate, after all, for the sake of resources that aren't available in winter months. Caterpillars make up a significant portion of the needed food—they're soft, which makes them easy to eat, slow, which makes them easy to catch, and nutritionally right, which makes them perfect for re-energizing the body after flying across the globe as an animal smaller than a bread box. More importantly, caterpillars are an easy food for bird parents to feed their young after they hatch them.

However, let's say it's a little warmer this year. The caterpillars hatch just a bit earlier, maybe a week sooner, and begin their process of eating and eating and eating. Different species of butterflies and moths hatch at slightly different temperatures. Additionally different species of insects take different amounts of time to go from egg to chrysalis. However, while the caterpillars are hatching based on temperature the birds are not basing their migrations around this. When the migrating birds return there will be fewer caterpillars to eat. There will be more moths and butterflies, but with the increased effort needed to catch them a bird can end up exerting more energy in the hunt than it is going to get from the prey. This would lead to returning birds having to compete for the more limited resources. The

birds who win the competitions still will be worse off for having won than they would in a situation with abundant food because competition has an increased cost of energy exertion. So, even the birds which survive to reproduce may be less well nourished which can have negative implications for the young. Young at a disadvantage are in even greater danger since by the time they hatch more caterpillars will have gone into chrysalis. Parents will have to work harder for less in order to feed babies that already may have been weakened by lack of nutrition. The combination of these factors would ultimately lead to reduction in the populations of migrating birds.

Caterpillars are not the only type of organism that's reproduction depends upon temperature, however. Flowering plants also bud and blossom based upon temperature. If the flowering plants are more sensitive to the change in temperature than caterpillars we could have an entirely separate issue. Certain early spring plants very well may blossom and wilt before the caterpillars can become moths and butterflies to pollinate them. While some pollination can occur with wind, this is more common in conifers. The reason flowering plants develop such colorful and unique looking flowers is because of their symbiotic relationship with pollinators. Pollinators get a meal of nectar and the flowers are pollinated so they are able to reproduce. Different colors are meant to attract different pollinators. Some pollinators actually specialize in just one plant. Additionally, the reason that so many flowers are shaped like cups or cones is because that shape forces the pollinators to crawl inside the petals and get covered in pollen when they go to drink the nectar from the flower. So, if the pollinators' life cycles get out of sync with the plants they

prefer we will see a loss of pollinators as they have a decreased food source, and a decrease in flowering plants since they will be pollinated less. Without this vital pollination we see a reduction in flowering plants, which accounts for the majority of our fruits and vegetables.

Our warming planet is moving us toward the possibility that we would have to face a future where the spring seasons lack so many of their defining factors. A spring without birds coming back, a spring without butterflies, a spring without flowers. It's easy to take natural phenomena for granted. After all, we may go outside in spring and see the flowers, but how often do we think of why they are there? We may love to hear birdsong in the mornings, but how often do we think of what some of these birds are going through on an annual basis to survive? We need to find the motivation to do something about global warming before it is too late. Perhaps the motivation we need is the idea that we could lose so much of what we consider commonplace in our own backyards, right outside our windows.

Outdoor cats: a cat-astrophe!

My cat Gideon is my baby boy. My son. My precious bean machine. I could go on, but I'll spare you. I am just one individual that is part of the almost 80% of Americans who consider their pets family members, according to a survey conducted by pet food company I And Love And You in 2019. Nearly 70% of people also considered their pets to be people. I would like to say I don't belong to this group as well, but I've absolutely thought of Gideon as my favorite person within the last week. He's a light colored ginger tabby cat with striping most pronounced on his sides and tail. At a year and a half old, he's finally grown into his large ears but still hasn't lost those big kitten eyes that beg for attention.

Unsurprisingly, I'm often more attentive to his needs than my own and have found myself attuned enough to his catalog of chirps, squeaks, and the rarely heard actual meow. Of everything he says, nothing is easier to discern than his alarm call—a strained sounding, drawn out meow. I've heard it in three instances in total. Two of these times when I quickly clambered out of my campus apartment bed to peer into the dark parking lot the threat looking me in the face was another cat.

The campus stray was lovely—grey and white and sitting politely right outside the window in front of my desk. This stray had seen my son where he sat on watch in the window and come over. While my wayward son was having a conniption with hackles raised and in full hissing defense mode, this other cat just sat with its tail indicating a relaxed mood and watched.

I was moments from deciding to give in to my intense compulsion to go out with a cup of food for our visitor when it very calmly stood up and walked back through the row of cars. As you might guess, as a person who sees pets in the way I do, I was devastated to see the cat go. Logistically it was unlikely I could bring the cat inside. If I did I would certainly be breaking school policy which required a good bit of justification before they would let me bring my clean, vaccinated domestic shorthair into their residencies. Somehow I had a hunch my need for emotional support wouldn't extend to strays in their eyes.

Ironically, they couldn't be more wrong about my needs. When I had the opportunity to go abroad things were very good until they were very bad. It's not worth going into the full catalogue of symptoms, but when the nausea, the shaking, and the constant fear of betrayal were nearly too much I was held together by international stray cats. In London, Rome, and especially Athens it was only a number of friendly outdoor cats which kept me going. In the moments I felt most alone, it was often the strays who reminded me that I wasn't. It was rough, eager purrs reminded me of my kindness and my value as a person. Even if all I was able to do was take ten minutes to pet or hand off a few of the treats I had bought at the ASDA, their reactions indicated that what I felt was the least I could do certainly wasn't nothing.

Cats you may encounter outside fall into three cat-egories. The first is a pet cat. Some people allow their cats outside or will even have fully outdoor cats that they feed and water, but don't let into the house. The second sort is a stray cat. Stray

cats are socialized to people, and may have been pets in the past, however they are not owned by any person or family. The last type of cat is a feral cat. Feral cats may get along with each other but have an instinctual fear of people just like any other wild animal. Regardless of what sort of cat one encounters outside, they are all still a part of the same species: domestic cat. And all three types do still count as invasive species.

This may catch you off guard—after all, if you know about invasive species they can be devastating to the environment. They are, environmentally speaking and in the most technical terms, bad news. Invasive species, sometimes called introduced species, are any organism that is living in an environment it is not native to. Invasive species get such a bad reputation because their populations can get out of control very quickly. The best example in America may be kudzu, sometimes called “the vine that ate the south.”

Kudzu is a vine native to Japan and southeastern China. It was initially introduced as an ornamental plant by landscapers looking to stabilize soils and prevent erosion. Kudzu took to the American climate and rapidly spread. It gets its nickname from the way that the vine will climb up the sides of houses or other structures, and completely envelop them if it is not removed. This wasn't expected since there weren't any cases of this abroad in the plant's native range. The problem was that since kudzu was not from the southern United States, the insects and animals in its new area were not inclined to eat it. In Japan and China quantities of kudzu are kept under control by the kudzu bug which eats it. However, it's hardly a

solution to replace the out of control plant population with an out of control bug population. I'd go as far to say that an out of control invasive bug population is much worse than the plants because the increased mobility enables further spread.

What does this have to do with cats, though? You thought I loved cats! I said as much earlier. Well, that's still true. Gideon is lying next to me sleeping right now. I just gave his tummy a scratch and he made the sweetest little snuffle sound.

The thing is, cats should be kept inside. I'll grant amnesty to any farm cats who are in charge of keeping mice out of barns and stables, but other than that, we should be looking to reduce the number of outdoor cats.

I'm not upset that they don't have a natural predator in most places in America these days, because the idea of anything hunting a cat upsets me. That being said, cats are natural hunters. It's part of the reason they're as widespread as they are now—cats were once a valuable asset to ships in that they could keep mice and rats from foodstores. After all, our modern cats still have the instinct and ability to kill birds, lizards, frogs, chipmunks, squirrels, and even snakes. While it may seem unlikely that cats can really be such a big deal for ecology, it's true. Cats kill billions of small animals, and their populations are not being controlled. Okay, but people are often feeding the outdoor cats, so they shouldn't be hunting, right? Not quite, unfortunately. Cats are also notorious for killing and then not eating. Where else does the stereotype of cats presenting their owners with little gifts come from?

Moreover, providing the food for outdoor cats allows their population to grow. When a predator population grows larger than that of the prey, it is all too possible

for the predators to hunt the prey into extinction. Predator and prey cycles refer to an oscillating cycle in which two populations cause increase and decrease in the other. First, imagine abundant prey and few predators. Those predators are easily able to hunt and eat well. This leads to an increase in predator population. When predator and prey populations are both high the prey population decreases. This makes it harder for predators to catch the prey so the predator numbers decrease. When there are few predators and few prey, the prey population is able to increase because prey, as smaller organisms, reproduce more often and in larger numbers. So, the cycle resumes.

However, if the predator isn't relying upon the prey for a food source then declining numbers of prey does not lead to a decrease in the predators. Instead the predators just continue to hunt the prey until the population of prey is driven into extinction. This is an instance of local extinction, however, outdoor cats are hardly an issue of just one neighborhood. For this reason it is an all too real concern that we could very well lose local biodiversity just by letting cats outside.

With pet cats, the solution is easy—stop letting your cat out. They don't need to be out there! Or if you feel they do, then you ought to harness and leash train your cat, or build some sort of outdoor structure to limit them. There are also pop-up tunnels and tents online for this exact purpose.

For stray cats, it's not too much more difficult. Strays are often willing to approach a person if food is offered, or just for affection. Consider adopting a stray, asking around your friends, or taking it to a local cat shelter or foster home.

Feral cats are the most difficult. They want nothing to do with people, for good enough reason. They cannot be made to like people, and therefore cannot be adopted. It seems too cruel to put them to death. After all, we want to preserve life. For this reason there are trap, neuter, release programs or TNR programs. These are efforts by communities to safely trap feral cats, take them to a vet to have them neutered or spayed, and then released back into the wild to live the rest of their lives. It may not minimize damage done by those individual cats, but it does help prevent the exponential growth of the population and this is as reasonable a compromise as I can think of, short of creating a feral cat wonderland sanctuary. In other news, if anyone wants to fund such a thing, let me know because I'd love to be involved.

Swarm

They were first discovered to have infiltrated the country in Berks County, Pennsylvania. What seemed like a mild affliction—no real cause for concern—would shortly reveal itself to be an outbreak leading to hundreds of millions of dollars of damage. The outbreak expanded quietly, creeping across the east coast like mold on a sheet cake and devastating every inch. Most alarming was how long it took anyone to notice. Maybe if people had been paying closer attention. Maybe if someone had come up with a plan earlier. Maybe if, maybe if.

And then people noticed.

That's the trouble with them: if you see one, there's fifty, easily. The swarm had descended, speckling everything in sight. It became impossible to leave the home without a sighting, an encounter, or a death. So, if there was one death, there could just as easily be fifty.

It was out of hand by the time anyone took notice, and Berks County was the epicenter. More a ground zero than a hurricane's eye. Any seasonal abatement only allowed for false hope before the following wave struck, even stronger and more destructive than the last. There is no end in sight now, despite the efforts of experts with years of study in the subject, government agencies with vast resources at their disposal, and regular people driven by a passion to try and save us from the danger we now find ourselves in.

From Berks County and wreaking havoc. That feels... familiar. And so I find myself some sort of harbinger of the lanternflies.

Irrational, yes, but a little whimsy in the brain feels like choosing an optional spice on the recipe for altruism. This might be edging dangerously toward the argument that people who only act with their mind and never their heart cannot be altruistic. It also seems like I could be suggesting that people who never act altruistically are bad people. They are, but that's not a problem I'm able to solve, so it's useless to dwell.

Then again, I've no miracle solution to the ever-expanding problem of the spotted lanternflies, but I dwell on that for hours at a time.

Compared to many bugs, lanternflies are gorgeous. They have fawn toned wings, speckled with delicate black dots. When they fly, their wings reveal vibrant yellows and reds a painter might be envious of. There is nothing wrong with the spotted lanternfly, except that it is here. The lanternfly is native to China, Taiwan, and Vietnam and when it is there, there is nothing dangerous about it. It isn't behavioral, of course—a lanternfly in Vietnam acts no differently than the ones in my backyard. It's the context. Native species are exactly where they are supposed to be, with a secure place in the food web. Moored between energy sources and predators that would consume them for energy in turn, any generic species is unremarkable. Each species is spectacular in its natural histories and behavior and a dozen other facets, but unremarkable in the sense that any species generally has the same sort of interactions as any other species. Sure, plant species and animal species will differ in what their lives look like, but in a pristine ecosystem mountain laurel and mountain lions are the same in that they naturally prevail at numbers balanced by every other entity in the food web. (Aside: Much like a gladiator, I prefer the laurel to the lion.)

I've made it out to be hopeless, but we're not actually living in the doom scenario I laid out to start. Well, not entirely. What I said was true, but I definitely tried to frame it like the opening of a disaster film. Sometimes all there is to do in the face of a disaster is to salvage what you can and move forward. Lanternflies, though, are something that you personally can take the fight to directly. If it is beginning to sound like I am encouraging you to gear up for combat against an army of bugs, that's essentially what I am doing. Glad to hear I'm getting my point across.

Jokes aside, there is direct action that you can take if you live within the expanding range of the invasive spotted lanternfly. Unfortunately, it can be a little messy and a fair amount gross but it comes down to squashing some bugs. The bodies of the lanternflies are fat and delicate. It takes very little pressure and then they burst with an upsetting gush of opaque light yellow. Most people prefer to stomp on them, but you have to be very quick. Since they are leafhoppers they have an instinctual, almost spring loaded reaction if they perceive a threat. They can jump almost ten feet with one bound. They tend to jump and then flutter downward in a circular pattern to the ground. You can track the red flash of their underwings easily, so keep an eye on where it lands so you can give it a good stomp.

Since they need trees or vines to host them, you will typically see them up and down tree trunks. In my experience, in the reproductive season they tend to be in pairs or clusters. This does make them easier to spot, but if you try and get them all at once you're more likely to scatter them and lose track of some. For this reason, I've got a very specific strategy when it comes to lanternfly population control.

My recommendation is that you first use something to make a single lanternfly jump, follow it and crush it. They are not able to jump again for a few moments after they land, so it becomes the perfect moment to put your foot down, as it were. I've used my wallet and even my hand to initially trigger the jump, but I would generally recommend something with a bit more range. I've used an umbrella and a machete to do so, but I think the best choice might be the simple stick. If you can get your hands on a sturdy stick around the length of your arm, you should be set. You can spring the bugs or even use the stick to crush the bugs.

Typically I am a firm believer in the classic "take nothing but memories, leave nothing but footprints" philosophy. When it comes to the lanternflies I also take lives, and I try to leave no survivors. I've spent hours killing lanternflies at my home, at a nearby church park, and at the college. Admittedly after a while it does start to make me feel nauseated, but that's after around a hundred bugs.

What difference does that make though? Killing just a few individuals isn't going to resolve the swarms devastating Pennsylvania agriculture. Okay, that's true. However, if they're bad now imagine next year or a few years down the road. Bugs do not take a lot of energy to reproduce. Many eggs will not reach the point of hatching, so bugs need to lay a lot so enough will survive for the population to prevail. Without a natural predator we see exponential population growth, and that's not a good thing. Suspend your sense of reality for a moment. Each laying female can lay an egg mass that is typically made up of 30 to 50 eggs. Lanternflies don't have sexual dimorphism, so it's hard to tell females from males. That being said, to reproduce you need a male

and a female lanternfly, so 30 to 50 divided by two genetic material contributors equals 15 to 25 baby lanternflies that could be produced per individual. So, if killing one bug feels like a waste, you can think of it as some number between 15 to 25.

On the subject of eggs and egg masses, that is another way to take action. Equally messy and gross, but also equally important is scraping the egg masses off of trees in the fall after they are laid. While the cold turn in weather does kill off adults, the eggs are perfectly fine through winter conditions. The nymphs begin hatching in late spring. What this really means is that you have over half a year to keep your eyes open for egg masses.

The masses stand out against most tree barks which makes it easier to deal with them than the lanternflies. A mass of eggs certainly isn't able to jump. Egg masses appear in one of two visually distinct manners. The first way that you might see an egg mass is as rows of individually distinguishable eggs. The eggs are light brown and oblong in shape and will be placed in very clean straight lines. They may be single lines or in four or five lines cleanly arranged one against the other. More often you will not see the eggs themselves, rather a papery looking covering. The mass will be a streak of lighter brown, almost white, against the tree. The mass is nearly flat, only raised about a quarter inch off the tree. When you see an egg mass, all you need to do is scrape it off. The masses are delicate, so you can use something as flimsy as a credit card (or your Elizabethtown College ID card – I can guarantee that works). Your card will get covered in sticky gray colored bug liquid, so you might prefer to use something that doesn't go in your wallet. Most ideal is probably a pocket knife, but again, you can really improvise. All you need to do, though, is scrape the

masses off. This doesn't necessarily guarantee none of the eggs will hatch, but it's better than leaving it. If you would like to guarantee none of the eggs from the mass you've found hatch, you should scrape the eggs into a container – maybe a bucket, and then afterwards douse the lot in rubbing alcohol. That will fully ensure none of the suckers hatch in the summer.

Unfortunately, as I've said, they're swarm bugs. You will likely be dealing with them in the hundreds. Sometimes it is just too much. At these times, consider where you are. When I found a massive number of lanternfly nymphs on tree of heaven saplings at a little park next to a church on my road, I knew it was more than I could handle. However, it wasn't my property. Not my property, but I made a point of making it my problem. I ignored the awkwardness I was feeling and I called the number listed on the door for the church office. There was a man inside at that moment, and so I asked him to come out so I could explain myself. I told him who I was, why I cared, and what he could do making a point to walk him around to the worst of the areas. Because I had informed myself on the topic, even though I was barely a legal adult I was the expert in the situation and I was able to make the pastor aware of an environmental threat he hadn't heard of. He called me less than a month after I talked to him to let me know that the church had hired a company and they had removed all the invasive tree of heaven they could find, and tried to take as many of the lanternflies with it as they could. It still wasn't all of them, of course, but removing their preferred host tree reduces the likelihood they'll settle in large numbers at the church.

The lanternfly problem represents a self conflict. Maybe I'm not overly religious, but I believe that all life forms have value. The idea of extinguishing hundreds of little lives, and helping plan what amounts to a miniature massacre on church property weighs on me. Even with full and confident knowledge it's better for the local ecosystem to remove the lanternflies from this continent by any means possible, I feel guilty in doing it manually. Even so, manual removal still stands in my highest esteem compared to any sort of use of chemical removal. When it comes to it, I'd rather be individually responsible for each individual death than let someone else be in charge of the environmental devastation across trophic levels that comes with chemical pest control. So bring the guilt. It's a weight I'll carry for the sake of safer choices, rather than indirect guilt for letting others carry out their toxin-filled solutions and chemical daydreams.

Advocacy from the Depths

“So you do news right?”

The question comes while I’m locking my apartment door behind me on a Thursday morning. Startled, I look behind me and see a kid sitting criss cross on the floor right across from my door. He’s a little thing and it takes a moment to place him as one of the landlords’ kids. Their family lives on the first floor, so while that explains logistically how he came to be here now, it hardly explains what he’s doing on the third floor, especially since he’s no more than ten years old and it’s seven in the morning.

“I’m sorry?” It’s too early for this, not that I think there is a specifically sensible time for a kid to be turning up on my doorstep, clearly lying in wait for me to emerge.

“You do news, right?” He repeats slowly, like I was being dense. “Because my ma told me the American on the third does the news and you’re certainly the American on the third.”

“Oh, well, yeah. She’s right. I’m a writer for the city paper.”

He nods with the seriousness of a world leader. “Because I know something, and you’re going to want to talk to my older brother.”

I glance at my watch, deciding I wasn’t going to have time to stop for a bagel, but glad I’d made my coffee to go. I try not to look dismissive while I ask, “What’s the story about?”

He darts his eyes around the hallway at the other doors. “Not here. Not now. I’ll be in touch. But you’ll do it?”

Incredulously, I half stammer, “I can’t guarantee the paper will want to run any given story, but your brother can schedule a meeting with me and we can talk it over.”

“He doesn’t want to tell people, says it’s not safe, but it’s bigger than him.”

I hadn’t really expected anything from this weird encounter, but now I find myself hesitantly interested. I look down at him and juggle my thermos and cellphone to one hand, reaching the other out to shake his. “Could I trust you to organize a meeting then, Mr. Wood?”

He shakes my hand a little too forcefully, but I don’t suppose he’s done much business beyond trading snacks in the cafeteria or Pokémon cards on the playground. Do kids still like Pokémon cards, I idly wonder.

“I give you my word, Miss Bell. Now you should probably get to work,” he says as if he hadn’t been the one holding me up. Strange kid. I head for the stair landing, and he follows, presumably going back to his own home.

“Wait a minute! Shouldn’t you be in school?”

“Holiday,” he responds quickly before rushing down the stairs ahead of me. Somehow the date doesn’t strike me as anything I should remember. I weigh the odds I’ve just accepted Scotland’s youngest con artist as an associate, and decide that even if I have it’s not like I have anything he could scam me for.

It's not for a week and a half that I hear from my young informant again. I spent the first few days after the strange conversation half expecting to find young Mr. Wood outside the door each time I opened it to go somewhere. I wasn't to the point of feeling jumpy, but there was a quiet expectation that took days to fade. And then just when I've decided it was probably a strange prank here he is again. He isn't lying in wait for me this time, instead he goes ahead and knocks on the door. It's Sunday, around four in the afternoon, and I'm drinking a cup of coffee that I'm sure will keep me up too late. When I answer the door, little Mr. Wood is standing almost smack against where the door had been, looking as bright-eyed and bushy-tailed as he had at seven in the morning when I'd last seen him. Over his head I see the young man who must be his older brother, standing closer to the opposite wall with his arms crossed across his chest. I suppose that when I was told he would set up a meeting, I should have expected to be the one hosting.

"Mr. Wood, please come in." I step back and gesture into my apartment.

He immediately strides in, looking back over his shoulder at me as he walks, "Please, we're friends, feel free to call me Billy."

I sigh, glad to finally have a name for the little scamp who evidently I was trusting to provide me with something to give my career a boost. "Then you must call me Nathalie. Here, why don't you have a seat?"

Billy contentedly flops onto my couch, an overstuffed burgundy thing that I had got from a secondhand shop and which was scuffed at the edges to show. I turned back to see his brother, now hovering in the open doorway. I gave him an awkward smile, "I'm Nathalie. Please, won't you come in?"

He gives a jerky little nod, still not making direct eye contact. Even so, he shuts the door quietly behind him and says, "Henry" which I presume is his name and not the strangest greeting I've ever heard. He looks around my apartment, and I wonder what he must be thinking. My guess is that he's probably around seventeen, probably about to finish high school, or A levels, rather. It wasn't too long ago that I was in his position, and I think that perhaps now he's wondering if this is his future. A ramshackle little one-bedroom apartment with second hand furnishings and art prints tacked to the walls. Nevermind that, though.

"Can I get you guys something to drink?"

"Have you got pop?" Billy is quick to ask, perking up.

Henry scoffs, "You know ma's going to be on you as soon as we're back down."

"Not if you don't tell her, you great numpty"

"She'll know anyway. She always knows cause you end up bouncing off the walls the moment after you have half a sip."

I bite back a grin, the banter reminding me all too much of my younger brother, still over in America. "So, is that two caffeine free sodas, then?"

Billy grins and nods emphatically, and Henry gives a wry smile, so I grab two cans of pop from the fridge shelf and hand them to the boys before setting back down on another chair with my cup of coffee, now less than hot, but still warm enough.

"So, Henry, what can you tell me about this story you want me to write?"

He looks uncomfortable, "I still don't really think that it's any good sort of idea, but it's bigger than I am."

I have the strangest sense of déjà vu, recalling that Billy had said the exact same thing. It makes something in my stomach clench, the way he says it.

“Henry, are you in some sort of danger?”

His eyes go big, “No, nothing of that sort. At least, I don’t figure myself in any danger, but I also suppose I don’t hardly have half an idea what’s going on.”

“Why don’t you just start at the beginning, and hopefully I’ll be able to help in some way.”

“Tell her something, Henry. Just tell her what you’ve told me about it all,” Billy chimes in.

Henry’s hands clench around his soda can, making it crackle noisily. I’m getting increasingly nervous. For not being in any danger, evidently, Henry certainly isn’t being very forthcoming with his statement. I take a sip of my coffee, determined to wait it out. After all, if Billy has managed to wrangle him up here, he must want to share it in some capacity. A few more moments of silence and I can hear Henry audibly swallow, quietly saying “okay, okay,” to himself.

“I know it sounds crazy.” He starts and stops. Makes a face, and starts again, “It is crazy, and I couldn’t believe it. Wouldn’t have believed it if I hadn’t been there. Still hardly believe it,”

“Believed what, Henry?” I don’t mean to snap at him, but there is definitely a tinge of irritation to my voice. I immediately wish I could take it back, but I try again more softly, “I’m here to listen.”

“The Loch Ness Monster isn’t entirely a myth, it seems.” He looks at me as he says it, waiting for a reaction which I can’t help but give. I frown and he points at me, “Just hear me out. I swear to God I’m telling the truth, but it’s just the strangest thing.”

“He is telling the truth.” Billy adds, tone of voice purely helpful, “I’ve seen it and talked to it. It’s freaky, sure, but has fair enough manners.”

“I’m sorry,” I interrupt, “Are you trying to tell me the Loch Ness Monster is not only real, but is willing to stop for a chat?”

“Shut your gob, Billy, you’re making this even less believable.” Henry turns to face me, “It doesn’t speak, but... well, it can type.”

I raise an eyebrow, or try to anyway. I don’t think I really ever manage to actually just raise one, so I probably just look surprised, which is as accurate as anything else, anyway. “What does the monster use to type, pray tell?”

Henry shrugs, “My mate Kieran’s old laptop. I think that’s why it let us see it anyway. One day we were hanging about the Loch, just sort of hanging out.”

“Sneaking cigarettes,” Billy offered.

“Do you want to maybe stop ruining my life for just half a minute, or would that be too boring for you, you little weasel?”

Billy, admirably, seems completely undaunted by the threat. “I don’t tell Mom anything, but I don’t see why she can’t know,” he says, nodding at me.

“Regardless of what you and your friend Kieran were up to—”

“Oh there’s a whole lot of them beyond those two. Don’t let him tell you otherwise.”

“Billy!” Henry glares at him. “One more word and we’re leaving.”

“I appreciate that you’re trying to help, but I want to get the facts right. Henry, so you and your friends were all hanging out by the Loch, and Kieran was on his laptop?”

“That’s just it. We were sitting there and this chattering sound started up. Chattering and sort of screechy, and just generally unlike anything we’d really heard before. And it just comes crawling out of the water right toward us. I mean, it was startling, but it wasn’t moving very fast so we sorta just decided to stick around and see what happened. It came right out of the water almost right to Kieran and started chattering at him. I think Tam or one of the lads made a crack about it wanting to look something up, and it made the worst sound.”

“I’m sorry to interrupt, but you’re telling me the Loch Ness Monster used your friend’s computer?”

“Well, it’s not what you think it is. It’s really more of a lobster looking thing, but awfully big. Scarily big. It was all for a laugh, but when Kieran left the laptop on the rocks it moved faster than we thought it could. And then it started picking out words, spelled perfect and all, though it can hardly capitalize or use the shift key or the like. And we didn’t even half believe it at first, of course. Thought maybe we’d been given a funny sort of cigarette or something dangerous, but we went back another day and after a while it came again.”

I frown at Henry. “I mean this in the nicest way possible, but you’re completely serious right now? And you don’t think it’s a product of any sort of drug usage?”

He shakes his head frantically, glancing over at Billy while he does so, “It really doesn’t come down to anything further than a few cigs. Plus, I’ve got photos of her!”

I nearly sigh in relief. I wish he would have led with that. He pulls his phone from his pocket and taps around before pushing it toward me. I get chills the moment I look at the picture. After all, the photo is in fact showing what seems to be a massive crustacean sitting at an older model of laptop. I zoom in, and as far as I can tell it looks to be completely real. He leans over and swipes through several more photos which do all seem to show a littered bit of beach, other boys around his age, or this animal.

“So, when she was using the laptop what did Nessie tell you?”

“She just wrote that it’s time to tell the world. The time to hide is past, and the time to act is now.”

“And that’s when you decided to reach out to a journalist?”

“To be full honest I’m still not sure if it’s the right thing to do, just because it seems unlikely, so why should people believe, but then if they do I don’t want something to happen to her. It? Something right weird is happening, but I also don’t think it’s my place to argue with a giant lobster.”

“Right. So, what would you like me to do?”

“Well, I thought that should be plain clear. She wants to talk to you for the story.”

I pause at the doorway, giving myself a moment to kiss my reputation goodbye. It’s not that I believe Henry, exactly, but I also have that gut feeling he is

telling me his truth. So, even though I don't think this is going to be the expose on the Loch Ness Monster, just about a century late, I think it should pan into a piece worth publishing. Even if, and I hope it's not the case, it turns out to reveal some sort of substance problem in the local teens.

I can tell there's a story here, and I just need to trust my instincts on that, even if in the meantime I'm going to look a tad gullible. With one last deep breath I knock on the already open door.

"Come in," John calls, sounding distracted.

"Hey, John!" He looks up from his computer, his face lightening when he turns his eyes from the screen. I'd be more worried if I wasn't able to see the reflection of his computer monitor in the window. John seems to be struggling with a game of solitaire, but I suppose that's what a slow news week looks like.

"Nathalie! How can I help you?"

"I've got a pitch for a story. I'm not sure the time frame, so I'm not sure which issue it would go into, but I'm following up on a lead."

"Sure. What's the story?" He asks, looking back at his monitor.

"It's a piece on some recent developments regarding the Loch Ness Monster?" Somehow I don't quite manage the confident tone I think I was trying for, but I do get John's attention back.

He looks at me with what I can only describe as a balance between pity and embarrassment.

"Nathalie—" He starts before trailing off helplessly.

“No, hold on. I know how it sounds. I was approached by an individual who seems to hold the utmost convictions that something worth covering is happening at the Loch. I don’t know what the truth is, but I feel a story.”

“Nathalie, you do good work—“

Oh boy. Here it comes.

“But”

And there it is, I hold back a sigh.

“I think it’s all too possible that your contact is just trying to pull a fast one on you. It’s not exactly ordinary to have an American working for a small city paper as someone who is living here, and it makes sense that it would appeal to you as a story, but Loch myths are just overdone.”

“Shouldn’t I still go and investigate. What if something is going on? Or if it’s drugs. Wouldn’t that still be worth looking into?”

John sighs, “You’ve never come to me with something so off-base before, but I suppose I ought to trust that you know something of the trade by now. You can take the time to do your research, but if nothing comes of it I’m going to make you cover the city council meeting next week.”

I grimace. City council meetings are notoriously dull, and frequently go much longer than they’re meant to. “I don’t know what this will be, John, but you won’t regret it.”

“Alright, then, Miss Bell. You've got my blessing to go ahead with this piece, but I'm expecting regular updates on your reporting process. This is not going to be any sort of runaway train.”

“Thank you, John.” I'm quick to up and leave, heaven forbid he actually considers how ridiculous this notion is. Or even worse, processes how ridiculous it makes me to believe something could be going on. I'm only relieved he didn't ask about who gave me the lead, or I surely would have been laughed out of the space. Or maybe not, since as I glance back at him John has already gone back to scowling at his game of solitaire. Maybe an American making herself ridiculous is what his week needs.

It's a tense hour on the bus from Inverness to Dores. Or, it probably would be if it wasn't for Billy keeping up an enthusiastic stream of commentary on his current school projects, the scenery outside of the windows, or—if he can think of nothing else—then whatever it is he's playing on his phone. I get the sense he's just desperately happy to be along. Somehow I don't think Henry necessarily would have chosen to have him here, but with Billy's persistence it seems he either wore down Henry or one of their parents.

That's another matter: it would have been hard to explain going anywhere with one of the building tenants, so the day seems to be masquerading as a normal beach outing. I don't really expect that the boys will be caught out on a lie, but I've

been mentally rehearsing an explanation for their mother just in case she thinks something weird is going on.

Although, really, there is something weird going on. Fortunately it's much more a case of being unlikely than being anything remotely untoward. I can't help, but think that this would be far too much trouble for anyone to go to for a prank.

It's definitely not a prank.

After leaving the bus, having a good stretch, and finding a bathroom for Billy who had procured several cans of soda from his backpack during the drive, Henry gestures for us to follow him.

Instead of following the clearly marked path to Dores Beach he heads further left, down a footpath through a small copse of trees. After a few minutes we exit onto a smaller section of the stone beach, partially littered with empty beer bottles, cans, and cigarette butts. Henry looks appropriately embarrassed, so I get the sense that he has contributed to the beach garbage at some time or other.

It's mostly quiet here. Occasionally there are distant calls of children playing on one of the other beaches, but mostly it's just the sound of the waves and the wind.

"Is there anything we need to do?" I ask.

Henry shrugs while pulling the old laptop I'd seen in the pictures from his bag and opening it on the ground, "I don't think so. Just need to give her a few minutes. She knows what's going on, some way or other."

Billy, who has been bouncing on his toes and scanning the edge of the water frantically, accepts this and sits down on the stones, looking back at his phone. He might very well have the right idea of it, so I set my jacket down and sit next to him. Henry climbs up a small boulder and sets on top, his trainers thumping against the rock face as he kicks his legs in small nervous motions.

Henry is right, though. It doesn't take longer than five minutes or so before the water pulls back before a wave crashes, and in doing so reveals a massive lobster. Or, maybe not a lobster? I immediately jump to my feet, and watch in creeping horror as this massive lobster crawls out onto the shore, staying where the waves will hit it, but so it isn't completely submerged. It has to be around five feet in length, in a mottled light grey color. Its antenna twitch in the windy air, but it's the eyes that really bother me. They're just glossy black spheres. Nightmarishly dark, and without any hint of emotion. Nothing about it has a sense of emotion, and it crawls almost robotically making a quiet chattering sound.

I look back over at my shoulder at Henry, then back at our subject. "How should I even address her? I hardly feel we're on terms I could be calling her Nessie. For professionalism's sake!" I frantically rattle questions off to Henry, very intentionally keeping from looking towards those dark, intelligent eyes of the creature. "And what should I be using in print? Calling her Nessie is hardly going to lend credibility to the story, and we need all we can get considering she's... well, just considering a lot of things. Ms. Ness? Do we even know she's a she?"

With more of that ominous chattering she carefully crawls toward the keyboard again. After a moment, she stops and I nervously leans over to read the text written across the screen.

“I hardly have your human concerns over gender, Miss Bell. I’m a functionally immortal crayfish with what people find a troublingly cohesive understanding of human knowledge.”

I clear my throat, trying to maintain threads of my typical interview personality. “Right. Gender neutral pronouns then?”

They make no move to type, so I only nod at them and presume that’s fine by them. Clearly they have no issue in correcting me or in getting directly to the point.

“But, well. About addressing you. What would you prefer?” I switch back and forth between which eye she is attempting to meet. Slowly the crayfish reaches for the keyboard and steadily types.

“Loch Ness Monster is fine. Recognizable enough to draw attention.”

Without thinking, I immediately blurt, “but you’re not the Loch Ness Monster. Just look,” and gesture first at the crustacean and then a tourism billboard cheerfully advertising the location.

“She’s right about that, you know?” Billy chimes in from behind me. He seems to have been gradually edging closer, all excitement and no fear of something so otherworldly.

The fish takes several minutes to type out a response.

“No, I’m not that ‘Loch Ness Monster’ as in, I’m not some plesiosaur looking being. Firstly, whether people want to believe it or not, the 1934 photo is known to be a hoax.”

“So then why do you feel the label applies to you?”

“The easier portion is that I inhabit Loch Ness. That’s objective. The monster label is subjective, but I know enough of humanity to know that monster is easily applied to anything they don’t want to understand.”

“Does it hurt your feelings to be called a monster?”

“Don’t get caught up and personify me, Miss Bell. I don’t have human sensitivities over labels, especially since I know cases where ‘monster’ is much more egregious a misnomer than mine. I’ll repeat. I’m a crayfish with levels of intelligence beyond the scope of the human mind. That might as well make me a monster.”

“You’ve got a very,” I take a moment to consider and chew the cap of my pen, “self aware sense of humor. Why is it that you’re even trying to reach out to the human world?”

“The crux of it is climate change. The planet itself isn’t in danger, but if you humans don’t want to alter everything you view as normal then changes must be made.”

“And you think that your advocacy can be what finally gets people to listen?”

“If I cannot persuade people to make monumental changes very quickly, it will not matter for me. I have already felt the loch becoming warmer, and harder to breathe in as levels of dissolved oxygen dip lower.”

I bite my lip as they type this last sentence. It isn't a lack of empathy, but if I can even get people to believe the truth of this interview I still doubt they're going to change just because they'll kill one individual, quasi-mythical or otherwise. People certainly didn't work out any new solutions with the extinction of the polar bear. The moment stretches, and Billy fidgets next to me. He's been reading the messages along with me, seemingly hanging on every word.

"Well, what's the problem then, Nathalie?" He says, "That's a clear message if ever I've heard one."

I bite my lip again, letting out the breath I didn't realize I was holding. "I don't think people will care. This is just going to be one more casualty that won't impact people. Sure, some people will care and will make a big deal and protest, but I'm just not sure this story has the global reach we would need."

Without a moment's pause the creature gets back to its typing. I can't help myself, and lean forward to catch each letter as it's put onto the screen. "I've come to the same conclusion myself. Fortunately, that isn't all I have to offer. I've been conducting some calculations based upon my own observations, and with additional data I believe I could work with a team of scientists to develop some significant solutions. At the very least, I've already created some mathematical models that I hope people will find sufficiently frightening to motivate them into action."

When they stop typing I stand upright again, feeling more tense even as the practicality of the statement fills me with relief.

“You want to work with people then? Are you not worried they’re going to want to cut you up instead?” Billy gets to the point with less tact than I would have tried for, but certainly much more quickly. Now I hear Henry jump down from the rock he was still observing from.

“This is exactly why I didn’t want to do this. There’s no way these big companies would allow something like this to happen if it would get in the way of their making money in any way!” Henry sounds angry. I hadn’t realized how invested he actually was in the safety of the so-called monster he had stumbled across.

“It’s not your decision to make, Henry,” I turn to look at him, “I’m certain that they’ve been over all the other options and understand the risk involved.”

“No one should be expected to sacrifice themselves for our sake—”

I cut him off, “Expected, no. But this is an offer. They’re giving us a last chance to turn this around before it’s all too late. We can still save the natural world from being completely lost.”

“Maybe we deserve to lose it, then! Maybe we deserve to annihilate ourselves like we’re on the path to do anyway!” This has quickly devolved into a shouting match, one that I don’t foresee any easy solution to.

“Hey guys,” Billy picks that moment to chime in, “take a look at this before you start swinging.”

I blink, not even having registered that the creature had been typing. With an apologetic glance at Henry I lean down to look at the newest paragraph written across the screen.

“Oh,” Henry breathes out, “Well, that could work.”

“You can’t possibly be serious,” John said, standing from his desk. It looks like today he’s playing minesweeper.

“Completely serious, John. I know we have limited resources, but we’ve got the network.” I hold my hands out in what I hope is a placating manner.

“I mean, it’s the story of a century, and it’d be all ours, but... I mean we’d need a legal team. The multimedia staff, of course. A scientific staff, but I suppose we can contact the university. Christ. Alright, Nathalie. I need to make some phone calls. And send some emails. And book an appointment with the cardiologist. Christ.”

I give him my best winning smile, “Thank you, John.”

“Oh you’re gonna be cursing my name by the time this is up, but if it’s what you want. It doesn’t have to be you. Surely, you could stay with the paper and someone else, someone local, could try and take this on.”

“I’ve said all the same things, John. They’re not convinced. Evidently, I’m as good a choice for their representative human person as any they can conceive of. I mean, they did tell me at uni that a communications degree is good for jobs I wouldn’t expect.”

John shakes his head and sits back down, reaching for his computer mouse. “Aye, well, it’s certainly that.”

“No, Mom! It’s nothing like that! I didn’t just quit my job without any sort of plan.” I must have said the same thing five times now. This was exactly why I put off calling home, but I also know I definitely needed to tell her before the story goes fully public tomorrow.

“So you knew when you left the paper that a secret international organization would start writing your paychecks then, Miss Reporter?” Mom says and I can picture the exact face she’s making. She’s never had a problem raising one eyebrow and her gentle maternal skepticism is familiar to me.

I let my head fall back against my chair, “Just because we didn’t know about it that doesn’t mean it’s a secret organization, Mom. And no, of course I didn’t know, but when something like this happens you’ve got to follow it!”

“Easy for you to say! Your father and I have supported your every whim and—”

“And I appreciate that. I appreciate your support on this! I’m not hurting for money and somehow I’m not short on work. You wouldn’t believe some of the emails I’m getting, Mom. They’re going to be flying me out to the Great Pacific garbage patch and taking me down in a diving bell to parlay with... Well, I shouldn’t say, but I’m doing important work.”

“I still think you would have made an excellent doctor if you wanted to do important work.”

“Yes, Mom, I know. Anyway, I have to go. I promised I’d teach an associate about an organism classification system I used to keep up with. I’ll talk to you later!” I quickly hang up, knowing she’ll forgive me any abruptness eventually. In the

meantime, though, I'd promised to show Billy about how battling with Pokémon cards works and I'm eager to spend some time considering monsters that haven't become coworkers. Not yet, anyway. I shake my head and stretch. There's always something.

Veganism / Vampirism

The door swung shut behind him, closing the nondescript building off from the world without so much as a bell to chime a cheery hellogoodbye. Cole tried to appreciate as much as he could in life. He found comfort in the plainness of the building. He appreciated the door, with its oiled-to-silence hinges and a latch that caught with only the softest click. It was as blank-faced a storefront as Cole had ever seen, so dull most people could look right at it without seeing it. If it was a spice, it would be flour. Cole tried to make himself much the same when he needed to run his errands. It was just for the best, when drawing the eye would draw judgement, rather than questions.

Still, as much as he detested it, a necessity was a necessity. His doctor called it a necessity, and his therapist reminded him a necessity did not reflect upon his character in any way. So he made his inquiries and found a shop that suited his needs — his physical needs and his intense need for discretion in regards to the subject.

Inside the shop the space was largely blank. Patrons knew what they were coming for, therefore no need to attract attention and ask for trouble. Cole quietly

gave the man at the counter his name and passed over his ID. As the man passed back his ID, Cole put the cash for the order into his hand. It was incredibly uncommon to find shops these days who would accept paper money, much less require it, but untraceable transactions were just another part of the unsavory experience. After stashing the double-counted bills into a register drawer set into the counter, the man ducked into the back room, leaving Cole to fidget nervously on his own in the almost sterile seeming room. It was left white with potential, as if it were a place of beginnings rather than endings and dead ends.

Cole worked to count his breaths the way he had been taught. No use in panicking now. The nausea would stay with him for the rest of the day, and there was certainly time to bask in the guilt later. *None of that*, a voice in his head that sounded suspiciously like his therapist, Sarah, chastised him. He trusted her to be right. He might feel like a waste of space and a grade-A screw up, but Sarah worked hard to get where she was, and had enough degrees that he wouldn't dare imply that she didn't know exactly what she was talking about. She certainly had no issue telling him when she disagreed with him, so he knew she wouldn't coddle him. If Sarah said it wasn't his fault, then it wasn't, but that didn't keep him from hating every moment.

After what felt like an eternity (but his smartwatch informed him was about two and a half minutes) the man came back with a paper-wrapped parcel. Cole thanked him, his voice cracking stupidly as he did so, and slipped the package into his canvas bag. The man nodded at him politely, and settled back onto his stool behind the counter, already looking to his smartwatch. There was likely no such

thing as a busy day in this establishment, and yet Cole did not envy him the job. It was a bloody, almost accursed business as far as Cole was concerned, Sarah's opinion aside.

He took a breath in the silence of the shop, then exited to the quiet hum of the street through the wonderfully silent door with his head down. All at once, the quiet was decimated, cut through all at once like bullets from those antique, monstrous guns. Shouts came from all sides of him, simultaneous and deafening:

"Vampire!"

"Think about the future!"

"Monster!"

"You're destroying our planet!"

"Murderer!"

"VAMPIRE!"

Cole had only half a moment to think *oh shit* before he felt the impact of a sickeningly warm liquid from his left side, then another wave hitting from the right. He'd closed his eyes, thankfully, with the first of the shouting. While it means he hadn't caught even a glance of one of his attackers, it means his eyes were spared. Cole could make out the sound of pounding footsteps headed in several directions, even past the pounding of his pulse.

He had dropped his bag in shock, but it was hardly a matter of concern now. He wiped his hands against his jeans so he could try to clear the thick, dripping liquid from his eyelids. After he did so, he managed to open them a crack and looked

down at his person, immediately squeezing them shut again as he registered a sea of red he seemed to be drenched in.

Fuck. Oh fuck.

The image of the blood began to make his head swim dizzily and his stomach clench with nausea. It became difficult to think, or even to breathe. Forcing his eyes open again, he backed up so he could lean against the wall behind him. He cast his eyes about, and tried to focus on something else besides the gore coating his person. He needed to ground himself – needed to engage his senses with the real world. It was another technique Sarah gave him to stave off panic attacks. With his eyes drawn to the colors, Cole registered a mural down the street and gave a low, gasping laugh as he made out the words. “SUPPORT BILL 27535.” The law may not have passed, but the results were much the same and left him where he was now, hyperventilating on the street and covered in blood.

Then Cole faintly registered the itching of his skin and the way his throat felt like it was closing, not in the way it would from a panic attack, but rather from an allergy attack. His tongue was certainly too swollen for speech, but had it been otherwise he doubtlessly would have verbally echoed his recent thought—Oh fuck.

On the pavement in front of a nondescript building, an unmarked butcher shop, Malcolm Greene dropped just as lifelessly as the meat in the shop.

Cole regained his consciousness in a setting that was all too familiar to him the moment he began to register it. Even before he opened his eyes the sterile scent of the room and the comforting beeping and humming of machinery let him know that he was back in a hospital, almost certainly St. John's.

His skin still tingled in the way that meant there had been some severe swelling, and his throat felt raw in the way which meant he had needed the EI breathing tube. He felt fainter than he ever had afterward, unsurprising considering he had clearly been doused in one of his allergens. The real question was how he had possibly survived, since his allergies were severe enough to finish him in a matter of minutes, really.

He slowly squinted his eyes open to the brightness of the room, the nondescript hospital classic, but still familiar enough for Cole to confirm his suspicions that he was back in St. John's. Cole was content to just lay and wait for whoever would come to check on him, but only a moment after he opened his eyes he heard a loud gasp. He gingerly turned his head to see a vibrantly dressed young woman rushing out his door, on the way to find someone.

Barely two minutes later she returned to the room, following a woman he recognized from past visits, and immediately sank back into her visitor's chair, with her head in her hands. Concerning, considering his emergency contact was his older brother, Jon, and also, he was quite certain he'd remember if anyone he knew had vibrant blue hair. Something to figure out later, though. In the meantime, the fact that it was Dr. Patel checking in on him meant that he had been moved from

emergency to one of the general wings, which was excellent news, all things considered.

“Dr. Patel,” he gave her a little wave, “It’s good to see you again.”

The doctor made a face at him, “I’d rather see you much less often,” she said kindly.

“Ah, still got that excellent sense of humor, I see.”

Dr. Patel smiled at him, “Well, Mr. Greene, you certainly have a mixed bag of luck. The attack, of course, and the anaphylaxis on one hand, but Miss Carraway’s hasty intervention on the other. Today could have ended much worse.”

The neon blue-haired stranger in question, Miss Carraway evidently, now lifted her head out of her hands and grimaced. She looked barely out of high school, with her makeup done in a style of excess that Cole knew vaguely was the current trend. It looked as if she had been crying, unless smudged eyeliner was in again. The realization made Cole feel guilty and he looked away from her face. Now that she was sitting upward, though, it was easier to see that the sleeves and front of her shirt were in fact stained with the blood from the attack, and Cole clenched his eyes shut at the gore. His heart rate picked up again, and he heard it matched by the beeping of the heart monitor.

“Mr. Greene?” Dr. Patel asked, concerned,

Cole cleared his throat, “Sorry, doctor,” he coughed, throat still ragged. “It’s just the blood.” His eyes went back to the girl.

“Ah,” Dr. Patel paused, “well, the good news is that it wasn’t actually blood. We aren’t exactly sure what the entire recipe was, but it was decidedly not blood. Just meant to look like it, and be as upsetting as blood would be, which clearly it is.”

“Oh. I see. Do you have any idea what it is then, Doctor?” Cole cautiously looked over at Miss Carraway again, who looked as if she felt quite sick herself. He certainly couldn’t judge her without thinking of kettles and pots.

“Well, based on observations we made before we cleaned you up, we do think a portion of the recipe was some sort of cocoa powder, which is one of your many, many known allergens, hence the allergic reaction.”

Cole gave a wry, exhausted smile, “So, I got doused with chocolate sauce and nearly died?”

Dr. Patel chuckled, “Ah, but what a way to go Mr. Greene. It wasn’t just chocolate, that’s for certain. You smelled like some unfortunate type of garbage sundae. As I said, you’re quite fortunate that this young lady was around to call an ambulance within a matter of minutes.”

Miss Carraway let out a small, choking sob. Cole thought she looked almost in need of medical treatment herself, with how pale she looked.

Dr. Patel’s focus shifted away from Cole, “I’m sorry we didn’t think of it sooner, my dear, but let’s see if we can’t get you a change of shirt,” she said kindly to the younger woman. “If nothing else, I’ve got spare scrubs stashed away that should fit. You’ve had a hard day as well.”

“Thank you, ma’am,” Miss Carraway stood, shakily and followed the doctor out of the room, pausing in the doorway. “I’ll be back in,” she said awkwardly, and Cole nodded.

With both women gone he looked about the room. He didn’t see his phone, but hopefully it was with his street clothes, unless the hospital staff had thrown them out, in which case, he hoped it wasn’t with them at all. Nothing better to do, he looked around the room. It was an internal one, so with no window to occupy his attention, he started reading the posters. Pain ranking charts, calendars, instructions on calling the nurse, and to his delight, one poster on the best plant based sources of protein. He breathed a quiet laugh, then coughed again, swallowing painfully. If only it was as easy as the blue and green poster made it out to be.

Several minutes later the young woman returned, wearing what seemed to be a shirt for a previous hospital donation drive, but without the doctor who had almost certainly found the shirt for her. She hesitated awkwardly, but then returned to the same chair as before, pulling it closer so that he could see her without having to sit up.

“Um. Dr. Patel was paged, and she said that you’re stable enough to, uh, ‘survive without her immediate presence’ and that she’ll be back later to give you the full report and to check on you, Mr. Greene.”

He nodded, and then for lack of anything better to say, he shrugged and said, “You can feel free to call me Cole, Miss Carraway. You’ve already saved my life, after all, so you might as well.”

Unexpectedly, she burst into tears all at once.

Cole's eyes widened and he grimaced. "Or not, you know." He gave an uncomfortably laugh, "Uh. Mr. Greene is fine, that's my name after all."

She didn't respond beyond continuing to sob messily.

"Okay, bad joke. That's fair. Do you want me to buzz the nurse in, though? It seems you might be in a bit of shock."

Now she looked up again, her eyes wide, wild. "No," she said firmly. "Maybe it's shock, but that's hardly a reason to bother someone actually doing important work here." She sniffled.

"Do you want some water, though? I can't exactly get it for you, but I can give you directions to the nearest vending machine. Or if you want a warm drink I know where the café is in this wing." Cole felt useless and exceedingly awkward. It's not like he didn't appreciate his life being saved, but he'd never imagined she'd evidently feel compelled to keep an eye on him after the doctors had taken charge of him. "Or, I mean, if you need something to eat I can call up room service. Just, uh... Whatever you think—"

"Stop it." She cut him off, fiercely through her persisting tears, "Stop being so nice to me, okay?"

Well, that made even less sense. "I'm sorry?" Cole tentatively offered. "I swear I'm not trying to hit on you, or anything. That would be super awful, not that there's anything wrong with you, of course. Just, like..." His rapidfire babbling seemed to confuse her enough that she stopped sobbing for the moment, so Cole considered

that a minor victory. “Nevermind. Sorry. That’s not the point. I just feel bad that this happened to you.”

She teared up again, “That’s the thing! Nothing happened to me! Okay? You almost died, and it’s my fault and you need to stop being so damned nice about it!”

“My allergies are hardly your fault. You did everything right in the situation, and you can’t keep my allergy attack on your conscience.”

“I didn’t do everything right, though.” She swore and dropped her head back into her hands, starting to cry again.

“I’m sorry, but I don’t understand.”

She stood up abruptly, and began to pace a quick line back and forth across the small hospital room. Then, just as quickly, she stopped at the foot of the bed and met Cole’s eyes. “I wasn’t just walking by when it happened. I was across the street, filming, actually.”

“So you got the attack on camera? There’s nothing wrong with—”

“Stop! Fuck, just let me finish, okay? I didn’t just happen to get it on camera. I knew it would happen.”

Oh. Cole opened his mouth to clarify, because surely she didn’t mean what he thought she meant, but she shot him a look and he snapped his mouth shut quickly enough his teeth clacked painfully.

“I mean, I didn’t know it would be you, or when exactly it would be, to the minute. We just keep an eye on slaughtershop storefronts,” she paused and looked up at him, “Sorry. Butcher shops, which honestly doesn’t have a much better

connotation, but still. We wait for people to go in, and then when they come out we throw the blood on them, but like... it isn't blood, obviously. It's just to make them think about what they're doing and how it's killing the planet and that they don't need to be eating meat when most everyone else in the developed world has stopped. I've mixed the blood myself! It doesn't have anything dangerous in it! We don't want anyone to get hurt! You know that, right?"

Cole stayed silent for the moment. It was a lot to process that the girl who was responsible for his continued life was also part of the group that had just threatened it.

"It's just that—" she started to continue her rapidfire explanation, and Cole held up a hand to halt her. He took another minute to collect himself, and then tried to respond calmly. "You don't want to hurt anyone physically. I think you do mean to hurt people emotionally, because that's what scare tactics are for."

"Well that's not fair! It's just for people who deserve it!" Miss Carraway insisted.

Cole raised an eyebrow, "People like me?"

"No!" She rushed to say, then made a face, "Yes, actually. You know what? Yeah. The meat industry died because it was cruel and inefficient and we didn't need it."

Cole gave a bitter laugh, "If only that was true, Miss Carraway."

She narrowed her eyes at him, "If you're still eating meat you're way behind the times, and you're not doing any favors for your health or the planet! Look, I've been vegan my entire life, so maybe I don't get it. My parents had to quit, though.

They told me it was hard, but they managed, little bit at a time, because they knew it was the right thing to do.”

“I know it’s the right thing to do, but—”

“No! You agree! It’s the right thing to do and that’s all there is. Do you know how much of a waste of energy it is to raise animals to slaughter for meat? It’s called the trophic pyramid! You should look it up! Every single level on the food chain we go up we lose 90% of the energy, but just eating the plants is all of the energy! That’s the difference between 100% and potentially just 1%.”

“I’m glad you’re well educated, Miss—”

“Damn right I’m educated. Anyone with a brain is on board. It’s not just the energy! It’s the water too! Did you know that of all the water on the planet only three percent or less of it is fresh?”

“Yes, or it was before we managed to pollute half the groundwater with chemical waste from the natural gas industry.”

“Alright smart guy. Do you know how much water it takes to raise one pound of beef?”

“Around 2,000 gallons,” he answered flatly.

She immediately crowed, “As if! It’s almost 2,000 gallons.” Then, processing what he’d said, “Oh!”

Cole sighed, this conversation was becoming everything he never wanted to have to acknowledge.

She glared at him, "So you know the facts, but just don't care? That's despicable."

"Believe me, Miss Carraway, I care about the facts."

"Actions speak louder than words, *Cole*," she said his name like it was a curse and he felt his temper flare for the first time in a while.

"Well, *please*, forgive me for not dying for what I believe in, *Miss Carraway!*" He hissed, gritting his teeth, "It's not like I feel guilty enough about the way I'm living, already. *Anything else* you'd like to tell me, *Miss Carraway*? Since clearly I don't remember the protests or all the advertisements or the pamphlets. And the numbers? You seem a fan of the numbers! How about that it takes just over 500 gallons of water for a pound of chicken. Or that a pound of vegetables take less than 50 gallons, making it 10 times more water friendly to go vegetarian than pollotarian or 40 times more efficient to be vegetarian than someone who still eats beef. Or do you want to tell me about the health benefits of not eating meat? How red meat is *devastating* to the heart, so why kill myself and the planet at the same time? Any of that sound good, *Miss Carraway*? I'm ready to learn!"

As he had ranted, her eyes had gone wide, and filled with tears again. Immediately, Cole felt guilty. She was wrong, but she was just a kid. Probably just out of high school. And he shouldn't fault her for being passionate about something that was a vital topic. It was a complicated issue and him reciting facts like a tape recorder at her was immature, even if he felt he had clearly demonstrated his lack of

ignorance. He tried to think of something to say, but came up short, continuing to sit quietly, awkwardly.

“Maggie,” She said softly, her voice tearful.

“What?”

“My name is Maggie. I should have told you earlier, when you introduced yourself. That’s basic etiquette.”

“I think we might have slipped beyond basic etiquette, from even our earliest interaction, Maggie. But, I am sorry for shouting at you.”

She shrugged, but still didn’t meet his eyes, “I yelled at you too.”

“You did. I think neither of us has been our best self today, but I think the stresses of the day may have something to do with that,” he said, gesturing at the hospital room and the heart monitor still reflecting his reactions.

“I’m sorry I almost killed you.” Maggie said, somewhat sheepishly, “Start over?”

“Alright. Second chance. Hi, I’m Malcolm Greene, Cole usually, and I’ve got a large number of severe allergies. I’m sure this information won’t impact your decisions, but I would like to tell you, right now, as we are first interacting for the first time.”

“You act like my dad,” Maggie rolled her eyes. “But, I have a question then.”

“Shoot,” Cole said, easily, as if the entire day wasn’t something surreal.

“What did you mean about dying for what you believe in?”

“Ah. That would be the allergies again. I’m allergic to more than you would believe, including legumes which makes getting protein from vegetable forms very

difficult. When people began protesting the meat industry a decade ago, picketing and writing pamphlets to make sure people were aggressively informed, I was on board. I still am on board. I went cold turkey, pun intended, meat and animal by-product free. I kept going with it for a couple of years, and I could kind of tell that I wasn't getting everything I needed from my diet, but lots of people were struggling. Tons of vegetarians and vegans need to take vitamins and supplements and stuff to balance their diets. I figured it wasn't any different, but then I was hospitalized for what should have been a super minor virus. The doctors made me visit a dietician, and what it came down to was go back to meat based protein, or suffer the consequences.”

Eyes wide, “You’re telling me that you would literally die?”

“I mean, it isn’t a certain thing, but my immune system was fragile enough that the doctors really, really insisted that I reintroduce meat to my diet. So, am I more than you bargained for, yet?”

“Don’t go making classic rock based jokes at me, Cole Greene.”

“You don’t get to join terrorist groups and then complain about my sense of humor, Maggie Carraway.”

He instantly regretted the comment as her face shuttered and the light mood shattered. “Sorry, Maggie.”

She shrugged, “You’re not wrong.”

“What’s in the blood, by the way? When you mix it up?”

She just gave him a look.

“No, really. It’s really, uh. Convincing? Gross? I hate it, which means you’ve done your job.”

“It’s mostly corn syrup for body, cocoa powder for thickness, red food coloring for the red color, obviously, and onion flakes for grossness.” She still wasn’t looking at him.

“Ah. Well, I am allergic to three fourths of that recipe, so I guess we can see why today didn’t go so well for me.” He tried to keep his voice light.

If anything, she sunk further into her seat.

“Look, you’re trying to do a good thing, Maggie. But maybe go about it in a different way. Have you considered going into legislative work, instead of radical environmental groups?”

“I haven’t, but I could. It’s just... it feels better to see results right away.”

“No meaningful progress happens instantly. There’s always a lot more going on behind the scenes. So go be that instead of trying to change the few stragglers in a battle mostly won. There are certainly other issues worth becoming involved with. But not tonight.”

“Tonight?” She glanced at her smartwatch, “Oh shit! I should have been home an hour ago! My mom’s gonna kill me!”

Cole smiled as she frantically snatched her backpack up from next to the doorway. “She won’t kill you. You’re a good kid, Maggie, just grow up a little more before you make any choices that are going to ruin your life.”

She rolled her eyes again and snickered, “Yeah, okay Mr. sage wisdom over here. Who even are you Cole? What do you even do with your time?”

He grinned, “I work at the EPA.”

Part Two: Otherwise

Introduction II

Mental illness is a term that encapsulates many known conditions, and likely an even higher number of conditions we don't yet understand. The most common type are anxiety disorders like generalized anxiety disorder (GAD), obsessive compulsive disorder (OCD), post traumatic stress disorder (PTSD), or social anxiety disorder. Next are mood disorders such as major depression or bipolar disorder. After that the most common types are psychotic disorders, dementia, and eating disorders, each of which have many subcategories as well.

People are extraordinary machines, but there is so much opportunity for atypical functionalities in something as complex as we are. Many mental illnesses have to do with nerve cells which aren't functioning normally, but even this doesn't cover all mental illnesses. Plus, what causes one's neurotransmitters to function irregularly? Sometimes it's a genetic predisposition. Sometimes it's a severe infection or physical injury. Sometimes it's a birth defect or injury during childhood. Sometimes it's substance abuse or poor nutrition or exposure to toxic compounds. Sometimes it's abuse, neglect, tragedy, or simply too much stress. Causes are as numerous as types of disorders and just as varied as manifestations.

Some people experience physical symptoms like irregular breathing, muscle tension, trouble sleeping, having too much energy, or not having enough energy. Some people have involuntary habits like tapping their fingers, shaking their leg, or skin picking. People lose control of rational thought, have panic attacks, hyperventilate. Some people self harm.

There is no singular narrative to explain mental illness, or even one perfect example of any one mental illness. I've got generalized anxiety disorder and a recurrent problem with minor depression, but my truths aren't like anyone else's. This is a portrait of my anxiety, as interesting and terrible and defining it has been.

It's the moment in filling a latex balloon where the air just begins to exceed the ideal capacity. The point of bursting would be destructive and final, but it would be a release. These moments before simmer with a doomed tension. There is the expectation, the knowledge of what comes next, and yet, it doesn't come. A balloon can be tied off, filled with an amount of air just short of what would destroy it. This moment can be torturously isolated and sustained. It cannot be bottled and sold, even if it is also the moment after shaking hands distress a soda. The irritation renders it irreparable, irrevocable, regardless of all reason. It is a lawless moment — outside of the jurisdiction of any land or natural force. It makes a list of objective, immovable truths in an instant, and pours them into a cavity in the human chest — filling from the lungs and brimming at the cerebrum.

Introduction II part ii: an incomplete list of things that make me anxious

- Admitting when I'm not alright
- Answering questions
- Asking for help
- Asking questions in class
- Being better at certain skills than other people
- Calling people back
- Checking my email
- Disagreements with people I trust
- Disappointing people who expect things of me
- Failing at things
- Filling out paperwork
- Financial planning
- Getting food at buffets
- Having to ask people on the phone to repeat themselves multiple times
- Kahoot review games
- Knowing my pets will probably die before me
- Learning to drive
- Looking at my bank account
- Loud noises
- My cat swallowing a sewing needle
- My growing indifference to people I love
- Not being good enough
- Not learning to drive
- Opening letters marked urgent
- Organic chemistry
- People thinking I'm picking my nose when I'm adjusting my piercings
- Performing
- Playing board games
- Putting something off and not having the time to finish it
- Responding to texts later than an hour after I got them
- Salad bars
- Seeing people with guns
- Silence
- Smiling with teeth
- Sneezing when I'm somewhere quiet
- Talking too much in class
- Telling someone I made a mistake

- The congested way Gideon always breathes
- The idea of dying alone
- The idea of falling on my face and breaking my nose
- The idea that I'll never feel okay
- Thinking about the future
- Thinking of friends I don't talk to anymore
- Trying new things
- Walking across stages
- When my family talks politics

Breakdown Essay

The boy who cried wolf was taken note of the first few times, but when the threat proved false several consecutive times he lost credibility. The boy in the story had only sent up the warning call to distract him from the boredoms of sheperdom. When the villagers came post-haste for the sake of the flock, they found nothing but an insolent boy laughing at a friendly mass who thought to aid him. Then when an actual wolf set upon him no one came to answer his calls. The story is a fable (or parable or allegory) and the moral is not to lie so that when one is telling the truth they are believed.

In some versions of the story the boy loses most, or all, of his flock. In some versions the boy is also killed, just to reinforce the lesson: don't lie. More directly, the moral might be not to ask for help unless you really need it. Considering that, what if the boy wasn't bored and disrespectful? What if he was frightened, new to the job and jumping at shadows? Would the villagers have continued to come to check on him if he was frightened rather than mischievous? Would they have come if he hadn't cried wolf, but had simply cried? Or does the same message apply, that people only heed novel pleas.

We've all cried, and hopefully someone has come to offer comfort even if it isn't a matter of life or wolf-borne-slaughter. Small sadnesses deserve to be treated with tenderness and honey toast, and the large sadnesses should be treated with change. After all, it is the breakdowns that are most interesting. They highlight the limits of a person, and past the breaking point some of the best progress is made.

In my life I've had a small number of emotional collapses — moments where I suddenly am made to face the truth that the world is much too big for me. Yet these moments when I remember the world turns without me, no better or worse off for my existence, sometimes prompt the germination of internal growth. But even when a doomed seed falls on the rocky path, I hold these moments of eruption in my memory fondly, like photographs of a friend who has since betrayed me. The worst of the times, the rock bottoms, become flags to measure progress from, and to survey the landscape of my own personhood.

Unlike the boy in the story, I was never instructed when to cry for help. Falsehoods to follow set aside, the shepherd gave the boy vital advice. In the instance wolves would set upon the flock there would be no way for a boy to drive even one wolf away from the fold. It's a matter completely beyond his abilities and an attempt to resolve the issue alone could very well be paid in a pound of flesh. Such a case could be termed self-destruction. So the shepherd informed the boy that in the case of a wolf, the local farmers and villagers would come and drive the wolf off with no more trouble than loss of some minute's work.

Unfortunately, I am no shepherd boy. The wolves in my life don't stalk with purpose, all grey fur and panting breath over icypick grins. not been one to cry for attention, and for much of my life I wasn't one to cry at all. I found that tears could only overflow if I was in over my head.

The earliest incident that I can remember which I would term an emotional breakdown came in middle school, seventh or eighth grade and was about money, of

all things. My family is not wealthy, and money has always been something I was aware of in a dozen small ways, most of which I had no issue with. Wasting food is a major issue worldwide, so it makes sense we were careful to never waste. We never went hungry, so why should I be troubled if the dates on the food marked it as a thing of the past. Especially since “sell-by” and “best-by” dates have little to do with expiration. It didn’t trouble me that I had never bought clothes from the first-hand store. On a larger scale, though, I was terrified of the limitations.

I can remember sitting on the floor of my closet, crying over the phone to my best friend because I was certain that there was no way my family could ever afford to send me to college. Neither of my parents attended college, and they worked very hard to make sure that we could participate in extracurriculars, even if we couldn’t go to the movies or have cell phones. And those things were *fine*, but I was devastated by the facts and the idea that I would be trapped by (what wasn’t even actual) poverty.

Education was my primary focus from the time it had been introduced into my life at age five. I’d never done a sport or played an instrument. I wasn’t especially artistic or charismatic. School was all I was good at, and I knew I wouldn’t possibly be able to continue my education to the extent I wanted. College felt like the only choice for me, and I didn’t think I would be able to choose it.

So, not having done so for years, I cried. I remember it as a sobbing sort of cry, so I could barely speak. Funnily enough, it was speaking on the subject that left me so wordless. I had been talking to my best friend from middle school on the house phone and somehow the conversation turned to life after highschool. At an age

where I should have been more concerned with my ongoing journey through puberty, I was instead managing to drive my closest friend into her own tearful state. She was powerless to help me, and I was just powerless. I cried to her for forty minutes, legs pulled against my chest, on the floor of my dark, cluttered closet. I don't have a clue how that phone call ended, but I know I didn't tell anyone that it had happened. I didn't want to burden my parents emotionally any more than I wanted to burden them financially. It was an unproductive breakdown, because while I cried, I didn't cry for help. I cried out of fear, and for the need of venting it, but not to anyone with power to reassure in the situations. I didn't give my parents the power to chase off wolf shaped shadows, just tried not to think about my biggest fear: the future.

However, whether or not one thinks of it, though, the future comes.

Throughout highschool I cried for one reason, and one reason alone: my perceived lack of academic success.

As in middle school, my self worth was set quite in balance with my grade point average. I did not know what would happen if my gpa dropped below a 4.0, because in my mind that was the standard for acceptable. Disregarding the fact that a 4.0 is meant to represent perfection, with the weight added to honors and AP courses I continued to hold myself to this perfectly reasonable standard.

I can't recall ninth grade in the slightest, but in tenth grade I cried under a desk after I got a B on a test in AP World History. I still didn't mention to anyone the glaringly obvious fact that the B was proof that I was a failure. I didn't tell anyone outside of my friend group that I thought that I would somehow cease to exist

spontaneously if my weighted gpa dropped below the perfectly reasonable waterline of perfection. They understood, because we're of the same cloth. Too many honors kids in high school are the same sort of high fliers with minds steeped in the idea that an average result on a test was disastrous. Academic pressure was the only driving factor for life.

In high school I knew that I would go to college, if for no other reason than the fact that going to school was all I had.. I was still terrified of the price, but also felt it would be a waste to not continue to do the only thing I was good at, the only thing I was good for.

For my first three years of high school I averaged one ugly, public emotional breakdown per academic year. I called them as such even in the moment and noted the average when in senior year I had three public crying jags in the first quarter of the year.

I was depressed senior year.

I didn't have anyone to diagnose that in me at the time, but reflecting I can easily recognize the lack of motivation for anything besides schoolwork. I couldn't bring myself to look into colleges or apply because paradoxically, while I knew I would go I also knew it was impossible that I could go. Thinking of the future could cause my anxiety to spike and my pulse to race in a matter of seconds, so I just... neglected to do so. I got in a number of rows with my parents, but explaining my inability as something beyond simple indolence was beyond my reach, and even if it hadn't been, I'm not sure that would have been well received.

The one time I did cry for help in highschool and said I might like to see a counselor or therapist my father asked me if I was on my period. That was the end of the conversation, with that first reply. I forgive him, but I wonder if counseling would have made things better for me at the time.

The hardest I ever cried in my life was toward the end of senior year. My parents were frustrated with me because even though I expressed concern over money I was unable to motivate myself to apply for outside scholarships. It was perceived as some sort of lie, and we know the treatment liars receive. It was true, though, that I felt paralyzed at the thought of finding and applying for scholarships. While I didn't have anyone at the time who was professionally able to distinguish this as executive dysfunction caused by depression, I could still feel that it was more than a wolf-cry. My knowledge of this didn't convince anyone, and the clearest I ever came to truly showing how powerless I felt was when my mother tried to sit me down to talk about scholarships. She didn't understand, as I explained what I had time and time before, about my complete lack of motivation and the heavy dread I felt. This time, I reached a snapping point, though.

I cried like I was going to purge everything from myself in that unstemmed flow of salt water. I cried like a wolf was going to murder everything around me, and I was powerless. Thinking on it now, I'm almost impressed. I managed to cry until my throat was dry, my head was spinning, and my hands and feet were numbly prickling with pins and needles. It was a panic attack of a severity I'd never experienced before

then and haven't experienced since. I don't remember it being handled well, and I don't remember it granting me anything more than a few day's leniency.

Then college. It was everything I expected, but it was more. It was being repotted and given room to grow. It was the ability to pursue interests and to pursue counseling. That isn't to say it was a miracle solution — self growth is a long road, but I was no longer treading through quicksand. First year was building friendships and taking classes I could ace. First year was building my academic confidence and my self esteem in other, more personal spheres. Gently sloped linear progress isn't terribly exciting, though, much like watching sheep in a field for hours on end with nothing but a dog to talk to and a pan flute.

Sophomore year shook me up. Fall semester of sophomore year was the worst semester I could imagine, filled with tedious work that took hours and hours and still sometimes slipped past my notice. Fall of sophomore year had me strung out and nearly hyperventilating on the first or second night of the semester, reading through a Spanish syllabus. I was driven to enough distraction that early on that my neckline slipped past modesty, exposing an entire bra cup as I failed to notice in favor of reading the syllabus through blurred eyes. My roommate called it a "left titty out" sort of breakdown, and now I don't give it any more gravity than that title would imply.

What was a more serious matter was the breakdown I enjoyed later that semester. It was the night before homecoming, so I needed to be up early to help run the ecology club table. I needed to be up early, but I was up late, working on some

paper or other and something in me snapped. I cried like I had never cried before, not necessarily hard, but long. For nearly three hours I sobbed, scaring my roommates with the change from my typically devil-may-care attitude. Everything was too much, but I couldn't imagine doing less. Thankfully, one of my roommates was far more logical. She told me I should drop the Spanish minor. Her telling me I ought to do that was like permission to do so. It was a reminder that most people weren't so concerned if I didn't double major and get a minor. Afterwards I was able to make even stronger arguments for the case. The fact that the major focused more on literature than speaking, the fact that I could already speak fairly fluently, the fact that putting Spanish on a resume is easily verifiable even if my very expensive piece of paper doesn't say so. So I dropped Spanish, lightening my workload and my spirits.

The next day, on very little sleep, I ran the table for the club, performed in a choir concert, and participated in a poetry reading before riding three hours to a friend's home for a Halloween party (where I fell asleep in the hostess' bed shortly after arriving). I truly felt myself that day, because I was allowing myself to be who I wanted and not who I thought others would want to see, and this was just from dropping a minor.

In that moment I believed that fall was the worst semester I would ever experience. For spring, I was enrolled in organic chemistry. To say it challenged me in ways I'd never encountered would be an understatement. It wasn't a wolf, it was a whole pack. It was the single worst experience I have had to overcome, but there were no villagers who could chase off a graduation requirement.

I didn't sleep for the sake of staying up to do work. Without sleep I couldn't think clearly enough to even approach a subject matter so nebulous and complex. For three months I couldn't eat without being overcome with nausea halfway through the meal. I felt hollow and lost. I showed up to the lab with work I couldn't complete and shaking badly enough that I was delivered promptly to counseling services. I had meetings and study sessions and counseling appointments that led to very little. I had a manic break in which I cut my hair short and dyed it. Why? I still don't know. Perhaps for something I could control.

I got extension after extension, received grades that would have killed me in highschool, and then when it was all too much I made a doctor's appointment. Organic chemistry demolished who I was as a person, but I resurfaced with a D+, a prescription, and a new perspective.

If mental illness is a wolf, it is one that only the individual charged with care of sheep, or any other important responsibility, can see. Maybe the wolf was always real, but the villagers could not see what the boy was talking about, and as a result branded him a wrongdoer. In the fable, it doesn't ever explicitly say that the villagers ever saw the wolf. They saw dead sheep which were just failures of the boy. In some versions they saw a dead boy.

Mental illness often works that there is no evidence without the results of it, and they're not often pretty. My wolves might be invisible, but that doesn't mean they don't exist. A breakdown is a cry, and it is only that the villagers in my life don't dismiss my invisible wolves that I've been able to fend them off. Medication and

therapy have built me a fence, but it's one assembled through hard work of everyone around me, and if a wolf knocks it down, I know there will be people coming by with hammers and new planks as soon as I ask for them.

mental br8kdown, a playlist on Spotify



Sour Times — Portishead
Not Today — Twenty One Pilots
Creep — Radiohead
6/10 — dodie
Nobody — Mitski
Francis Forever — Mitski
Sick of Losing Soulmates — dodie
lavender blood — Fox Academy
Drown — Front Porch Step
Cherry Wine - Live — Hozier
The River Flows in You — Yiruma, Alex Christensen, Music Lab Collective
Nocturne in E Flat — Frédéric Chopin, Thomas Demenga, Thomas Larcher
Green — Cavetown
Give Me Novacaine / She's a Rebel — Green Day
I Kinda Suck — Human Kitten
I'm Not Okay (I Promise) — My Chemical Romance
Little Lion Man — Tonight Alive, Dave Petrovic
The Feeling Again — Brendan Maclean
Rain On Me — Benson Jack Anthony
Anxiety Song — Human Petting Zoo
Teen Idle — MARINA
Jim Bogart — The Front Bottoms
Someone — Daisy The Great
Humpty — Miski
18 — Anarbor
Bad Habits — FIDLAR
I Don't Love You — My Chemical Romance
Beat Me To It — Brendan Maclean
Neutral Spirit Hotel — Local News Legend
My Name Is Emily — Local News Legend
Mad World — Tears For Fears
Heart-Shaped-Hologram — Stephanie Mabey
Blonde Hair, Black Lungs — Sorority Noise
Girl Anachronism — The Dresden Dolls
Putting a Spin on Hey There Delilah — Egg
La Javanaise - Mono Version — Serge Gainsbourg
Night Shift - Lucy Dacus

Breakfast of Champions

I'm on a medication for anxiety, and chemically speaking it should also help minimize my depression. That is a fact.

I'm on a medication and I love that fact. Before you purse your lips and blink at the idea, I don't love it for the sake of the drug itself. I'm not on something habit forming, I'm not on something that gives an instant relief that I could become addicted to. I love that I am on medication, because it is a victory over the stigma against medication held in our society, in my family, and that I used to hold myself.

I used to fear medication, but perhaps for the wrong reasons. I was afraid that perhaps my mental illness made up my personality. I was concerned that if I tried to fix how I felt I might just erase myself. Feeling awful inside was central enough to my days that I mistook it for my personality rather than a hindrance to it.

My father did not want me to go on a medication, especially at what he perceives to be such a young age. He's been around for long enough. He's followed news of the opioid crisis and seen lives ruined. His second wife was a drug addict, the kind where the word junkie feels more appropriate. Even though those were her choices and not his, I think he's ashamed of that marriage. He certainly didn't tell me about it until I found the marriage certificate in a cardboard box in the basement. He still doesn't like to talk about it. My father seems to be afraid that because I take 75 mg a day of sertraline that I will be shooting up on street corners in the next few years. However, it wasn't his choice. Moreover, since he isn't good at expressing his feelings, I only found out most of his reactions from my mom.

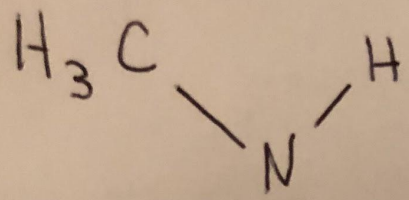
They had an argument over my prescription. My father said something to the effect of how this was the start of a bad habit, and it would be worse in five years. My mom told him that she'd rather I be an addict than have killed myself within the next five years. That argument sent me reeling, and I only heard it in a calm retelling. Somehow I had never imagined that my two options were drug addict or dead girl, but between these two life paths I suppose I'll opt for the first. I doubt my father has since changed his mind in the slightest, but he doesn't say anything if I mention my prescription. He just grimaces and tries to tell me nonverbally I'm ruining my own life.

In full truth, my mother wasn't in love with the idea either, but ultimately she's an empathetic enough person that once I even half explained to her how awful things were at times, she cried in the car and had no arguments. She did try and blame herself immediately—citing herself as a failure of a mother—but I shut that argument down promptly. There was no need for her to play martyr. It was my life and my choices.

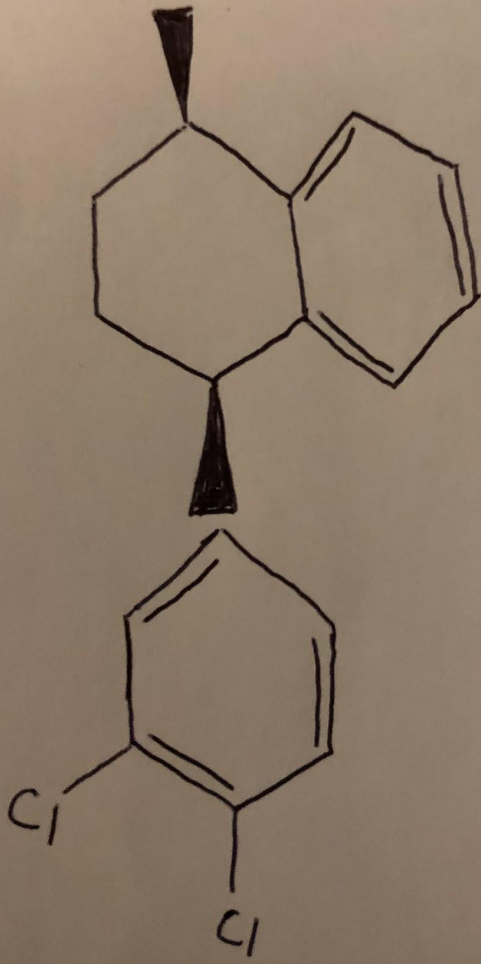
And when it came down to it I made my choice. I called and made the appointment. I walked to the clinic, met the doctor, explained the situation, and asked to try a prescription. It almost felt too easy after so many years of fighting for any sort of improvement for my mental health through my sleep schedule, daily routine, mental-grounding exercises, activities, and even my diet. I just told a man how I felt, and what I'd tried, and he offered me something new to try. Just like that I was able to get a prescription the following day.

This isn't a miracle story, though. It didn't help right away. Actually, it did not help in any noticeable manner for the entire first month. When I returned to the doctor to discuss how the trial period had gone the nurse asked me if my anxiety was completely gone, or just mostly gone. I felt bad to tell her nothing much had changed. It took a dose adjustment, but when my medication did start helping me I could tell. I woke up in the mornings without racing thoughts. I could fall asleep much more easily at night without my brain reviewing every conversation. The days weren't crowded with self-doubt or self-consciousness. Sure, I still had situational anxiety, but it was in moments that made sense. Gone was the continual background buzz of unease.

The need for the dosage change reminded me more than anything that what I was working to do was balance out a chemical imbalance. The choice to treat my anxiety with a pill was based in science. There is no morality to neuroscience or the way the brain converts one chemical into another. So there is no inherent wrong in wanting to take care of myself in such a way after years of failing to improve it in any other. So, I'm willing to apologize if I've upset my parents, but I won't apologize for the choice I am making.



Sertraline



SSRIs and the Brain

A selective serotonin reuptake inhibitor, more commonly referred to as an SSRI, is a class of medication that has been around for 50 years. It was initially developed as a treatment for depression, and is still prescribed for this, but has also been found to treat some anxiety disorders. It's all about serotonin, which is essentially the happy chemical.

Let's get inside the head of a person who is functioning without anxiety or depression. Serotonin is produced by the serotonin neuron and bounces around in the synaptic cleft, allowing for happy signals to be electro-transmitted from the brain. To prevent there from being an excess amount of chemicals in the brain a protein will take excess neurotransmitters and reuptake them into the neuron which released them. The medications do not force the brain to produce more serotonin, rather just keep it from reabsorbing the serotonin released.

Across the cleft we have the amygdala which evidently is fear central within the brain. Fear circuits allow your body to react appropriately when there is danger. Unfortunately, if we took a look in my head, the amygdala works a little too hard. For people with anxiety, the fear circuits are hyperactive. So, when something ordinary happens to me, like receiving an email, my brain goes into overdrive and generates the same chemical reactions in my body that it would if there was something imminently threatening. I've still got a deep hatred for email, but fortunately, SSRIs can help keep things in my brain and body a little less chaotic.

The way that SSRIs work is by blocking the reuptake proteins from reabsorbing all the serotonin. That means more serotonin bouncing around throwing out happy signals. More importantly, this serotonin is inhibiting the receptor sites on the amygdala, so with more serotonin in the brain, the amygdala cannot act as hyperactively. Thus, I am protected from the overwhelming feeling of anxiety that comes from threats such as electronic mail.

Family History

My favorite part about being mentally ill in high school was probably never being a hundred percent convinced that I am mentally ill. I find myself to be a fairly logical person, and so I have doubts. However, these hesitations don't come from any irregularity or gentleness of symptoms. The doubts spring from my knowledge that I am logical. I can look at an information set and draw conclusions. I am functional. I can perform tasks presented to me. I realize it's a circular argument, but how was I meant to know that just because I wanted to be dead in high school I was actually unwell? I still got a 4.0 on every report card. If I could get grades like that, then clearly any problems I had weren't severe enough to really be problems. Again, I know it doesn't make all that much sense, and it's all the more likely that I could have done even better in my classes if I hadn't been working against my own unfortunate brain chemistry.

At the time though, I spent half the time knowing something was wrong with how I was feeling and the other half telling myself I was just being silly or lazy or melodramatic. It was a self feeding pair of cases of imposter syndrome. I was sure that I was not really smart because if I was smart then why couldn't I motivate myself to complete my tasks or keep to a schedule like my peers. Clearly I couldn't be that smart, and something was off with what was stopping me. But I also clearly wasn't mentally ill because I was smart enough to do well at school. Because I was functional, at least from an outsider perspective, I told myself that there was nothing at all off about the internal workings of my mind.

It's also a daunting thought, as a teenager already dealing with the complications of growing up, to think that your body—your mind, even—was betraying you every minute of the day. The shaking, the racing thoughts, the inability to get out of bed. I wanted to be able to work on my assignments in reasonable timeframes, so why could I only manage to sit and read novels when the eleventh hour hit and I was startled into motivation by need? My own brain was working as a saboteur. I wasn't being sold up the river for pieces of silver, I was just plain shooting myself in the foot without having an ounce of control over it. It defies logic, so I dismissed it. It was more likely that I just wasn't good at dealing with what everyone else was doing naturally. After all, whenever I tried to express my own concerns over my behavior or how out of control I felt—how utterly terrified I was of failing (getting anything less than a 90) I was just complimented as a high achiever. At the end of junior year, my guidance counselor just told me to “try and relax this summer” when I tried to broach the topic with her. She reassured me that everyone feels a bit burnt out after finals, and not to worry about it, since she was sure I did fine.

I suppose it's easier to spin it into a positive than confront the negative, but I wish that at the very least my parents had listened to me more closely when I tentatively brought up mental health. Or, even if they hadn't listened that first time, I wish I had persisted in saying that something was wrong if I was spending half of any given day nauseated and that if I ate breakfast beyond tea and maybe toast then I wasn't able to keep it down. Even now, I hate to be an inconvenience to anyone at all.

It's hard to ask for help. It feels like a betrayal to imply that what my parents were doing for me wasn't enough.

The older I got, though, the more I realized there were small ways my mom had also betrayed me. I don't say it to make accusations or hurt feelings. I love my mom dearly, but if she had talked to me more openly I might not have been plagued by self doubt over the problems that were already keeping me from meeting my full potential. We had so many little discussions about being lazy, choosing to procrastinate, and my high standards. At every step of the way, she told me about how much she related to these things, but never considered them as symptoms of a larger problem.

What I only found out in years following my lowest moments in high school was that there absolutely is a history of mental illness on my mom's side of the family. She'd hate that I'm coming out and saying it like this, but I don't think my parents have ever really read anything I wrote, so I suppose I'm safe to say what I will. I can say it because it'll never be seen by my family but the trade off is that I'll never be seen by my family, either. Funny how you can be so isolated from the people you're closest to.

My mother has been dealing with anxiety for as long as I've been alive. Maybe for her whole life. That's not something we talk about though. It took me far longer to realize than perhaps it should have considering she raised me. However, the word anxiety never entered the conversation. My mom always "worried." She was a "worrywart" as she would say. In middle school, Mom let me go on each of the

annual choir trips to New York City and even paid for them. Beyond the money, though, she also spent time. Afterwards she would let me know that the entire day she just wondered what I was up to and where I was. This was before I had a cell phone, so I couldn't give her updates either.

She never really talked about how what she was feeling was a deeper sort of worry, or something that prevailed through everyday. Maybe this is too speculative to be fair, but the clues were there once I started understanding my own anxiety.

My mom didn't learn to drive until after she was married. She still hates it—hates driving at night, hates merging, hates driving in poor weather, hates driving anywhere she hasn't before, doesn't love driving places she has been hundreds of times. I can't compare my own experiences because I don't have any. I'm soon to be twenty two and I never even went to get my permit. It's easier to say I don't want to learn to drive or that I can't be bothered than to say I'm terrified. It's also easier to just say you hate it and do it anyway.

My mom is a case study in not taking enough for yourself. Being too selfless, or too afraid to challenge things. I like to say that my mom's life was ruined by nuns, and while it's an oversimplification I think it's true. My mom was a good student for the entirety of her educational career. She was a little shy, but always kind and very empathetic. When it came time for her to graduate from her Catholic high school, she, like any high schooler, had a meeting with her guidance counselor. If that meeting had gone well, I probably wouldn't be here today, wouldn't exist at all. Because what essentially happened in that meeting is my mom told the nun

presiding over the sessions that she wanted to go to college but needed help. No one in her family had done so before, and she had no idea how to start going about the process. The counselor, however, thought my mother would be perfectly suited to become a nun herself. I can't know how much my mother made an argument, but even at the time she knew she did not want to become a nun. She had aspirations for a family eventually, and so a life in the church wasn't for her. Unfortunately, my mother did not have the backbone in that moment to put her foot down and seize her own future, and I can't help but think it was due to her anxiety. To this day, my mom hates confrontation. We screen every single phone call that comes to our home phone. I've never seen her send back an incorrect item at a restaurant. If there is any issue over a product or bill, my mom gets my dad to call. So, in one of the most pivotal moments of her life, it makes sense to me that my mom's needs came second-to-nun rather than the alternate.

My mom did not become a nun and did not go to college. Instead she was trapped in the pattern of her family that she specifically wanted to break. Sometimes I imagine how I think her life would have gone if her counselor had listened to her rather than just pushing her own opinions and her agenda. I imagine my mom would have decided to do something to help people, because as I've said, my mom is compassionate and loving. I like to think she would have become a social worker or an occupational therapist or maybe even a guidance counselor.

Being in a college environment would have exposed her to different social opportunities and ideologies, and maybe she never would have met my father. Or, if

she did, she would have seen it was clearly a red flag that a man wouldn't tell her his age until after they were in a relationship. She would have known to be careful about a man going through his second divorce. She wouldn't have married him. Or, if she did, she wouldn't still be married to him. My imaginary college educated mom wouldn't be too afraid of the risks and complications to stay in a marriage that doesn't make her happy.

(It's probably a good thing my parents don't have the attention span to read my work.)

Both of my mom's sisters and her step sister and both of her brothers are divorced. Most of them are remarried and are happier, from what I am able to tell, anyway. My mom's parents are also divorced. They separated when she was young, but not little, and both remarried.

Anxiety can be taught based on the environment we are raised in, but to look at myself as a culmination it's biology we're interested in—it's blood, and indeed, the plot begins to run thicker.

Let's consider my grandmother, my mom's mother. Ladies first, as is said. My grandmother or, as we call her, Grammy is a complicated case. I do not have as much first hand insight since I am not observing her on a daily basis. I also do not have the training to diagnose something in someone else unless I can see parallels to my illness. Unfortunately, likely due to the stigma surrounding needing to seek therapy or counseling my grandmother is still not getting the help she needs. According to my mom, Grammy has tried counseling several times in the past, but stops going

because she doesn't like what the therapists say. She's also been on medications for depression, which worked, but only when she took them. Sometimes she would stop because she thought she was feeling better. Sometimes she stopped because she didn't want to spend the money on the medication. And sometimes she was just too depressed to even take the medication which would help her.

My grandmother has not held a job for around ten years, and before that it was sporadic. Working was too intense for her emotionally, and despite their need for the money she just isn't in the mental condition to work. Evidently, she is too sensitive to receive any sort of criticism, even if it's meant to be helpful, and is quick to blame herself for anything that goes wrong.

She ran away from home for a few days around two years ago. Everything turned out alright, and she was safe, but clearly she's deeply sad. It wasn't really something that was seriously addressed though, once she was back safely at home. I can't help but think this silence is more devastating than the alternates.

When dealing with my grandmother, she tends to either be chipper or completely miserable, and going from the first to the second is too easy. In one memorable instance, my siblings and I were playing monopoly with Grammy. My younger brother is notorious for being a cut-throat monopoly player. At the best of times, playing with him can be a bit miserable since most games with him end the same way—I'm thoroughly demolished, and he's smug. In this specific game, though, his casually caustic manner was far too much for our grandmother. The game ended

abruptly, with my grandmother in tears and she has been wary of my brother since then. It's been years, there is still a tension between them.

You can't interact with my grandmother without her profusely apologizing for... something. It's never really an apology for anything she's done, but more of an apology that she can't do more. She's sorry she doesn't see us more. She's sorry she couldn't make it to this holiday. She's sorry it isn't very much in the birthday cards. She's sorry she isn't more, or maybe she's too much? It doesn't seem to follow the most straightforward path, but it's heartbreaking nonetheless.

The only condition my grandmother is living with and that I can identify without a doubt is also the most prominent in my regard for her. It becomes very difficult to consider my grammy without at least briefly envisioning her house. My grandmother is a hoarder. Hoarding disorder is characterized by the American Psychiatric Association as a compulsion to save things that are typically perceived as worthless. It is distinctly different from collecting, in which items meet qualifications. Hoarders just seem to accumulate a lot of... stuff, and my grandmother is no exception.

As a child, I was delighted with Grammy's house. We never left Grammy's without fun, eclectic gifts and there were so many interesting old toys to play with. Even the fact that an entire hallway was blocked by a floor to ceiling pile of who-knows-what seemed almost magical. I wasn't allowed to see the upstairs for years, either, but when I did I thought it was like treasure hunting that each of the

rooms was so full of items. In the eyes of a child, filling the entire second floor of your house so it becomes nearly uninhabitable is weird, but not inherently bad.

Even as an adult recognizing the nearly suffocating wall of clutter as a sign of unwellness, I still can't quite shake the magic. It's also hard not to be intrigued by whatever she's acquired whenever we see her or thrilled when I leave with new pajamas and a blanket that were just in one of the living room piles, still packaged. I also liked the salt lamp I got (like the one she gave my sister and each of my cousins and two for my mom because Grammy had bought 12 or so). It was certainly convenient when I needed flip flops and she had bought 10 pairs in different sizes and colors and also matching hats, and I believe also sunglasses. I feel so guilty when we see her and none of the five parkas she has in her car are really my style or I unfortunately don't need another bag.

Additionally, while I love my grandmother, I can recognize she's not a good relationship partner. It's possible that she just isn't in a place with her mental health that she should be in a relationship, but that's also a very modern way of thinking. I don't want to call her a life ruiner, but I am concerned she might have brought more negativity than positivity to both of her marriages.

Grammy is still married to her second husband whom she married when my mom was a child. That's not remarkable in itself, but that's not all there is to it. My mom's stepfather, my grandpa is a very sweet man. He's typically fairly quiet, although I have heard him raise his voice perhaps twice. He used to be a mailman, but would take on other jobs to make sure they were able to . He wasn't always a mailman, though. He used to be a Catholic priest. Can you see what the trouble is

with that? Can you guess what happened? My grandmother did in fact seek comfort over the difficulties of her first marriage with the family pastor. She sought a little bit too much comfort from a religiously celibate priest. Unfortunately, this is another unspeakable topic. Ultimately, I know they were married. I know there were money troubles, and I know they moved into what had been his family's summer home—a log cabin situated on a dammed up creek. That is where they still live today, and it's really too lovely a property to be filled with junk and sadness.

This is only the latest in homes that have been filled in such a way. There was of course, first the marriage between my mom's mother and her father. There is my grandfather, my grandpop, to consider. Unfortunately, his is not a case of perfect stability either. I have gradually come to understand that my grandpop was once very severely depressed. I do not know if he is still struggling with his depression, and I don't think there's any reasonable way for me to ask without it being a case of prying. What I do know is that following the divorce my grandpop sunk into a depression. I know that my mother once found a suicide note he had written, although I do not know if he made an attempt on his life. According to my mother, he seemed to stay in this depressive state for months. Since I heard about it, I've wanted to get more details from my mom but there is no ideal moment to ask about something like this. Even if I could, my mom didn't have the full story. She was an observer, and she was also a teenager with less life perspective. Only last year my mom found out that her uncle, her dad's brother, had not died in a car accident like she had been told. He had taken his own life. My grandfather's depression all of a sudden seemed to be less a case of being brought on exclusively by the unfortunate

circumstances surrounding his marriage. In a case of two brothers with severe depression, it becomes clear it's more likely to be a family matter—a case of a heritable trait.

Learning the mental health aspect of my family history was like assembling a puzzle. All of a sudden I could snap together symptoms I had to their manifestations in the lives of my relatives. I could draw a line through my blood, back at least two generations and start to see the reasons behind my brain chemistry, even if I don't have lab results on hand with chemical level charts or brain activity scans.

It's a lot easier to realize I'm not somehow faking it, even fooling myself, when I can see I'm only the last victim in a chain of unfortunate mental health conditions. I can also see I'm the luckiest. I'm not afraid to confront my mental illness (after I told myself I was allowed to believe it to be true) because I know it isn't my fault. I don't feel my mother's guilt for not being happy all the time, or my grammy's sorrow for not being able to give us more, or my grandfather's penchant to suffer in silence. I don't *need* his brother's bravery to know what was too much. Because we're in a more forgiving social climate now, even if the older generations still don't want to embrace it. I don't want to celebrate my mental illness, but I'm not going to hide it and I'm not going to hide from it. It's just another aspect of my genetics that I'm dealing with. My brown hair isn't my favorite part of myself, so I take matters into my own hands with bleach and dye and impulsive, joyous choices. My mental state isn't my favorite part of myself either, so I take things into my hands with appointments with counselors, and prescriptions, and honesty. I choose to take an active role in deciding my life. It might take extra effort to fight off the trouble in my head, but I won't be caught

strangled by the double helix of my own genetic makeup, and that's a promise I make to myself and for myself.

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