

2012

Do Not Resuscitate and Other Imperatives

Stacy B. Harrison
Northern Michigan University

Follow this and additional works at: <https://commons.nmu.edu/theses>

Recommended Citation

Harrison, Stacy B., "Do Not Resuscitate and Other Imperatives" (2012). *All NMU Master's Theses*. 405.
<https://commons.nmu.edu/theses/405>

This Open Access is brought to you for free and open access by the Student Works at NMU Commons. It has been accepted for inclusion in All NMU Master's Theses by an authorized administrator of NMU Commons. For more information, please contact kmcdonou@nmu.edu, bsarjean@nmu.edu.

DO NOT RESUSCITATE AND OTHER IMPERATIVES

By

Stacy B. Harrison

THESIS

Submitted to
Northern Michigan University
In partial fulfillment of the requirements
For the degree of

MASTER OF ARTS

Graduate Studies Office

2012

SIGNATURE APPROVAL FORM

This thesis by Stacy B. Harrison is recommended for approval by the student's Thesis Committee and Department Head in the Department of English and by the Associate Provost and Dean of Graduate Studies.

Committee Chair: Matthew Gavin Frank

Date

First Reader: Matthew Bell

Date

Second Reader (if required):

Date

Department Head: Dr. Raymond J. Ventre

Date

Associate Provost of Graduate Education and Research: Dr. Brian Cherry Date

**OLSON LIBRARY
NORTHERN MICHIGAN UNIVERSITY**

THESIS DATA FORM

In order to catalog your thesis properly and enter a record in the OCLC international bibliographic data base, Olson Library must have the following requested information to distinguish you from others with the same or similar names and to provide appropriate subject access for other researchers.

NAME: Harrison, Stacy Beth

DATE OF BIRTH: March 11, 1982

ABSTRACT

DO NOT RESUSCITATE AND OTHER IMPERATIVES

By

Stacy B. Harrison

In this braided essay, I weave together the story of my grandfather's life and experiences as a ball turret gunner in World War II with autobiographical anecdotes about coping with my grandfather's aging and death, as well as research-fueled meditations on small-town murder, gravity, velocity, physics, astrology, bird-watching, and the odd histories of aviation. With personal, scientific, and historical evidence, I fuse the systematic and mathematical notion of flight with the unpredictable and unanswerable problem of death. In doing so, I attempt to solve, or at least investigate, the complex equation for coping with grief.

In *Do Not Resuscitate and Other Imperatives*, I turn away from watching my grandfather's dying and find solace in science, in mathematics. By examining the habits of dive-bombing mockingbirds, the formula for static thrust, the stars that form Orion, I attempt to uncover a statement about human nature: that the answers we most desperately seek are often the ones that do not exist.

Copyright by
Stacy B. Harrison
2012

In memory of Bing

Tack sa mycket.

ACKNOWLEDGMENTS

Sincere thanks to my thesis director, Matthew Gavin Frank, for his incredible guidance, support, patience, and good humor; my mother, Beth Henrion, for the company and expert deer dodging on countless trips to Marquette; my husband, Chad, for the encouragement and tolerance during the late nights and early mornings when I holed up at the basement computer desk; my sons, who make me strive to be better at all of this.

This thesis follows the format prescribed by the *Modern Language Association Style Manual* and the Department of English.

TABLE OF CONTENTS

I	1
II	10
III	21
IV	33
V	45
Sources.....	55

I

The stretch of the Menominee River below me was calm, in August of '99, slipping over the sandy riverbed, reflecting the sun and the rusty beams of the East Kingsford Train Bridge. Twenty feet above the water, toes curled around the sloping crossbar, I gripped a diagonal beam above my head, glitter nail polish chipping in the filtered light beneath the bridge. I was seventeen. I knew nothing of the man who would die downstream in Piers Gorge thirteen years later, of the battered yellow helmet that emerged in the foam and drifted down the river two hours before my friend Phil, a rafting guide, recovered his body from the funnel between Volkswagen Rock and Flat Rock. All I knew was that the adventure vans reappeared each spring and summer, bumping down dirt roads to the river on the outskirts of my hometown of Norway, Michigan, carrying tourists donning rip-stop shorts and water shoes, eager to drop over Mishicot Falls into the class four rapids, to ricochet off Volkswagen Rock and ride the foam into the Twin Sisters of Piers Gorge rapids, the deepest gorge in the Midwest.

From the bridge, I spotted an eagle's nest in one of the pines on the Wisconsin side of the river, the bird's dark breast and white head visible over the thick conical mass of twigs. The nest, dense and substantial, was unlike the delicate robins' nest in the red maple in my grandfather's side yard on Saginaw Street, nestled a few feet above the cylindrical feeders and cages of berry suet, unlike the nests in Mr. Zygiel's biology classroom, pinned above the black countertop where I sliced through a pig's lung with a razor blade, inserted a striped plastic drinking straw into the severed trachea and inflated the lung with my own steady breath.

The air was thick that August, the river driving a sluggish wind that wrapped my thighs and shoulders, providing no relief. "*Come on!*" someone hollered, and I looked to the Michigan side of the river. Matt and Charlene were on the bank, their swimsuits dripping with water, waving their browned arms and shouting "*Don't think... just jump!*" They belonged in a Sheryl Crow music video with their wavy hair and aviators, straight teeth glowing in the daylight. I remembered the time I leapt off the high dive at the Northern Michigan University pool during a youth rally. I was eleven. My dad tread water below me, his wet black hair stuck to his forehead, mustache sagging and shiny. I stood three feet back from the edge of the platform, knowing Sara Johnson and Kris Nault were behind me in line, expecting me to jump. I knew *they* would jump. I

looked at the lifeguard, a college kid slouching in the chair, sinewy arm draped over the red foam rescue tube printed with a bold white cross. He gave me the thumbs up, and I inhaled sharply, took two quick steps forward before my long legs cleared the platform, still making running circles as I plummeted through the chlorinated air.

Already we have showed that the power required for a man to leap is almost three-thousand times greater than his own weight; but with Birds it can be demonstrated that the power necessary for making a leap is in greater proportion still to their weight. For their weight is triply suspended in like manner and the leverage of their longer legs increases in much greater measure than in the case of men the motive force, which again is multiplied more than twenty times by the number of the muscles of the legs; and lastly the motive force will be increased by the violence and swiftness of the leap, so that it is greater by three-thousand times than the weight of the Bird which leaps.

From The Flight of Birds by Giovanni Alphonso Borelli (1680)

As I entered the water, I thought nothing of the number three, the number three-thousand, the concepts of weight, proportion, or leverage, or the difference between my own ordinary legs, and wings.

When my grandfather was seventy-five years old, he suffered a stroke that paralyzed the left side of his body. Mrs. Hogberg paged me to the office during sixth period my senior year, and I hurried down the gray berber carpet to Mrs. Berndt's room to tell her I wouldn't be at Drama Club practice that afternoon. It was her prep period. She looked up from her *Cold Sassy Tree* book, softened her eyes, pushed a box of Puffs Plus with Lotion toward the edge of the desk where I stood. The purple silhouette of a hummingbird hovered on the box, beak eternally submerged in an open hibiscus flower. I told her I didn't know much yet, that I was scared to see him. "I know," she said. "You have to go anyway." She placed her blue felt-tip pen on the desk beside a foot-shaped paper clip and a Snapple, squeezed my hand before I turned for the door. We both knew that up until this point, my life had been easy, all family vacations at Myrtle Beach and shooting hoops on the side street and watching meteor showers from beneath checkered blankets in countless Midwestern backyards.

The hospital room smelled of Bengay and carnations. My grandfather, big-bodied, filled the bed, yet he appeared childish, the big toe of his left foot poking out the end of the blanket, ruffled hair falling onto his forehead. There was no perfect wave above his brow, no crisp white swoop coaxed by a black plastic comb and held with a spritz of Suave Firm Hold Hairspray. I took his limp left hand in mine, rubbed my thumb back and forth over the pronounced knuckles and brown age spots. If I connected all those spots, would they form a picture? A diagram? A blueprint for some flying machine to get us the hell out of this?

I had never seen him in bed. He opened his eyes and focused on my face, tried smiling, but only half his face lifted, tried saying "Hi, Honey," but the consonants smeared together. His eyes were cloudy, like fingerprinted glass.

I kissed his right cheek, the one I was sure had feeling, pulled a chair to his bedside, found Wheel of Fortune on the television. *The category is "On the Map."* He muttered a few letters he thought might help solve the puzzle, tried to play along. I watched the gossamer of Vanna's gown rise, flutter, fall as she moved across the stage. Soon Grandpa snored beside me, the vast flesh of his chin and neck jiggling during breaths, less so between them. I stood to leave, pulled the woven blanket across his chest. The wheel clicked and beeped as a contestant named Ron clapped and hollered "Big money, big money!"

I remembered the yellow merry-go-round at Marion Park, my knobby knees bent, legs crossed beneath me. I'd wrap my hands around the steel bar and lean my body backward. *Faster*, I'd scream, and my hair would soar behind me as Grandpa planted his black Velcro shoes in the sandy path around the machine and with heaving pushes, whirled me until I felt the centrifugal force through my whole arms, my whole torso, and fighting against it, squeezed the metal bar as the maples, the baseball field, the tornado slide, my grandfather's face blurred into streaks of color which had no beginning, end.

When a plane nosedives toward the earth, passengers and crew experience a temporary paralysis, an inability to control the movement of their bodies against the force of gravity.

In April 2012, an air Canada officer grew tired in flight and requested the captain's permission for a nap, an accepted procedure called controlled rest. Upon waking from the nap, he felt unwell and became disoriented at a bright light straight ahead of the airplane. Radar showed an approaching C-17, and though the captain assured the officer that the plane was 1,000 feet below them, the officer, believing a collision was imminent, grabbed the controls and pointed

the nose of the plane down, plummeting 400 feet in just a few seconds. The captain regained control of the plane, ascending 800 feet to avoid the C-17 plane below, but not before the crew and passengers were thrown about the cabin, some of them slamming into the ceiling before crashing against their folded seats, the narrow aisles, Elbows, knees.

The officer who initiated the nosedive was embarrassed to learn that the bright light he tried to avoid was not an aircraft at all, but the planet Venus.

The December morning was drizzly, cold. I stopped at the Citgo station in Wausaukee for my usual coffee with one half and half, one Splenda. Six-thirty a.m., but already on my way to my high school English classroom in Marinette, Wisconsin, seventy miles from home. I turned onto County Road 180, flipped on the windshield wipers, defrost, a CD of Homer's *The Odyssey*, trying to get it together for first period mythology class. My brain switched to auto-pilot by the time I approached the section of road along the Menominee River near Bear Point, controlling the accelerator, steering, heat without really thinking about the stretch I'd driven dozens of times that school year. The road I found scenic in the fall was dreary in the winter morning, the pines shadowing any notion of dawn.

When I reached a clearing beside the river, the rear of my car swung in an arc across the road on a patch of black ice, then back again. I rehearsed the rules of ice driving -- turn the wheel into the fishtail, pump, don't press the brakes - - but when the third swoop across the highway whipped my car into the path of an oncoming pickup truck, I switched to a different set of rules, crying *HELP ME GOD HELP ME GOD HELP ME*. I was going to die. I saw my husband's green eyes and dark brow over the brim of a striped coffee mug, my father's right hand perched on the steering wheel of our family Suburban, my grandfather in the back row at church cradling an open hymn book, the swaddled bodies of children I'd never mother.

On a broad sweeping return to my lane, my right front tire found gravel on the side of the road, yanked the vehicle into the ditch, heaved through the crusty snow before mounting the embankment where a driveway crossed the trench. And then I was airborne. I didn't think of my family anymore, of my father's sermons on four-wheel drive, traction control, anti-lock brake systems. I didn't think of Mr. Madigan's physics diagrams on the dry erase board, the spittle launching from his tongue as he preached Newton's laws of motion, kinematic principles, the influence of air resistance on projectiles. I didn't think of Zygiel, of biology, of human anatomy, blue blood coursing through arteries, flexors and phalanges clamped around the steering wheel, vertebrae jamming

together as my skull slammed against the ceiling of the car, disorienting me for seconds before I saw the stand of white pines before me, the mound of plowed snow that slowed me to a stop in the shadows, inches from bark, heartwood, the pith.

II

The Northern Mockingbird, though only a slender two ounces, makes its presence known by sitting on high vegetation, eaves, telephone poles, or fences in suburban areas. An intruder entering the bird's territory, especially during nesting season, will likely hear a shrill alarm note before being dive-bombed, pecked by a thin bill as the bird flaps and folds its wings in bursts, flaunting white wing patches and outer tail feathers while flying slowly around the intruder with a bouncing trajectory. Mockingbirds regularly attack large predators like snakes, crows, ravens, hawks, cats, and even humans. A 2009 study at the University of Florida proved that mockingbirds even have the ability to recognize individual people and attack those who have threatened their nesting area in the past. Given this aggressive defense mechanism, it can be said that their penchant for "mocking" the voices of other birds and even mammals, is insidious at best. This has nothing to do with empathy.

After his stroke in 1999, doctors told my grandfather that he may never again walk unassisted. He practiced his leg exercises incessantly, heaved his large body from the beige La-Z-Boy, tied blue and red strength bands to doorknobs around the house so he could exercise in every room. He committed his body to relearn the motions, to cooperate with his brain, forcing his muscles to remember the steps. Never regaining his balance, he used a cane or walker to keep him steady and often fell to the ground, sending my grandmother into a panic when she heard him hollering from the bathroom in the middle of the night and found him with his cheek against the porcelain floor beside the analog scale.

Throughout these years, my grandparents tried to maintain a normal routine. They each went for coffee every morning, Grandma Lenore with her lady friends to Bernie's, and Grandpa Bing to The Rialto to perch between Pepper and Cracker in the dim bar area on a chrome stool with a red vinyl top. Faces illuminated by the light of the digital Keno machine, they made their predictions about the Knights' football team, the amount of snow we'd have in town that year, who would shoot the biggest buck in Hardwood come November.

One morning, fatigued, Bing stayed home from coffee but shoed Lenore out the door to go with her friends so she wouldn't fuss over him. He must have grown bored in his La-Z-Boy after she left, must have tired from tracking time, must have exhausted the possibilities of passing an hour with the items on his side table: remote control, ink pen, handheld mirror, nail file, Kodak disposable camera, scissors, letter opener, beard trimmer, fingernail clipper, Halls Mentho-Lyptus Cough Drops, blood pressure cuff and a notepad for recording the systolic and diastolic readings, the TV listings from The Iron Mountain Daily News, marked with a yellow Hi-Liter.

The phone rang at Bernie's. He had fallen in the bedroom and crawled down the hallway to the living room telephone. My grandmother hurried home, roused a neighbor to help him to his feet and made a to-do until Bing confessed that he had fallen trying to move the bed he thought crooked. I imagine him planting his suede bedroom slippers in the matted carpet, hunching rounded shoulders and heaving fruitlessly against the weight of the queen mattress, gasping, grasping for the hem of the green comforter as he slid to the floor.

A week later, he fell while leaning over his recliner with adjustable aluminum cane extended, fixing a vertical blind that was "funny". At our regular Wednesday night dinner at my grandparent's home, Grandpa sat quietly at the head of a table over a plate of Swedish meatballs as my grandma, mother,

and sister dealt the obligatory scoldings about taking it easy and not being as young or agile as he thought he was. He reached for his pill case, opened the “W” compartment etched with a blue moon icon, dumped capsules, tablets, gelcaps into the bowl of his right hand, popped them altogether into his mouth. He raised his glass, water sloshing, ice cubes clinking, took a sip, tossed his head back, swallowed a dozen pills in an audible gulp. He looked around the table, gave a slight shrug of shoulders. I smiled at him. That evening, when I kissed him goodbye on my way out the door, he winked at me, and I returned the gesture.

What was it that we had, that made us different, special? Was it the restlessness that we shared? The need to remain in perpetual motion? My Uncle Chuck tells the story of his first time deer hunting as a boy at Maple Grove, our family’s camp in Hardwood. My grandfather walked Chuck to his deer blind at dawn and instructed him to be still and quiet - - he would return for him at lunch. An hour later, Chuck heard a crashing through the brush and was sure the biggest buck in Hardwood was approaching his blind. Instead, it was my grandfather who stomped through the maples in his insulated boots and ribbed orange hat. He couldn’t sit still. He smiled bashfully as Chuck lowered his rifle. The two walked the trails the rest of the morning, talking perhaps about the Green Bay Packers, talking about poison ivy and black bears and Vietnam.

Talking about Russians and Americans shaking hands in outer space. Talking about The Who. Talking about Springsteen. Talking and scaring all the deer away.

What was it that we had? My grandmother called him *envis*, Swedish for headstrong. Neither of us appreciated advice. Or maybe it was just that everyone is after an old man to settle down, and I gave unspoken permission to fill his minutes with small and even meaningless activity, to dive-bomb the things in his life that kept pushing him into the recliner to track time until he died. Maybe I just kept my mouth shut and allowed him his boredom. Maybe that wasn't such a good thing. Maybe I wanted him to live long enough that my boys would remember him. Maybe that was a selfish want.

Still, I wonder what was at stake with that wink. I wonder if there was a complicity there that pointed us toward, and then tracked us, to his death.

At his June check-up with Dr. Leonard, the secretary called out "How ya doing, Bing?" as I wheeled his chair into the waiting room. He grinned, "Fantastic, unique, exciting, and fun to be with," then reached for the Sports Illustrated on the coffee table. In the exam room, a motherly nurse in Scooby-Doo scrubs checked his blood pressure then placed the stethoscope buds above her gold

hoop earrings, smiling politely and scribbling in his three-inch file as he chatted about the time he met Mike Holmgren, the westward smoke emissions from the paper mill, the big winner on *Who Wants to be a Millionaire?*

A poster on the wall detailed the respiratory system, the cross-section of an alveolus. Circular sacs of air. Dense, fleshy. Pink.

Alphonse Penaud, born in Paris in 1850, planned to join the Navy until he suffered a disabling hip injury that thwarted his plan. He turned to inventing a flying machine, worked methodically, studied the flight of birds, balloons, ballistics, rocketry, and aerodynamics, considered difficult concepts of stability and propulsion, perfected his machine at age twenty-one.

The rubber-band-driven model airplane had a wing, a tail, and a propeller among advanced concepts like retractable landing gear, an enclosed cockpit, instrumentation, and automatic pilot. He stood proudly in Paris' Tuileries Gardens as his invention took flight, delighted his audience of onlookers who watched the plane soar for twenty seconds. Perhaps the gardens fell silent save for the fountain spray in the reflecting pools, the steamships slogging up the River Seine. Perhaps a mother pulled her child from the path of pedestrians as he

stared at the plane, his red yo-yo dropping down its string and bobbing to a stop. A poodle may have tugged at her leash, whined, hid her face behind her paw as the unfamiliar object circled several times in the sky before falling gently to the ground near its starting point when the power of the rubber was exhausted. Penaud himself may have thought of his aching hip, of his own fragility, of all that was at stake, of the pieces of him that were exhausted.

By 1874, Penaud had created a rubber-band-powered helicopter that was stabilized with counter-rotating propellers, one above the machine, and one below it. The French Academy of Sciences was impressed with his work, awarded him a prize in 1875 for his brilliant thinking. But Penaud was determined to do more than think; he intended to fly. In 1876, with a mechanic named Paul Gauchot, Penaud patented a full-scale airplane. For the next four years, he looked for the means to build and fly the machine.

Another French inventor, Henri Giffard, had made the first successful dirigible flight over Paris in 1852. Penaud turned to Giffard for guidance in building a heavier-than-air craft, but Giffard dismissed Penaud, perhaps doubting Penaud's invention, or feeling threatened by his acclaim.

Penaud went home and built a small wooden casket. He put all his designs into it and delivered it to Giffard's house before returning home to commit suicide at age thirty. Maybe he had nothing else to offer. Maybe he had

built the flying machine because he was bored - - maybe that was how Penaud tracked time.

Despite his premature death, the intelligence of Penaud's work was imprinted on the history of flight, passed forth when Bishop Milton Wright bought one of Penaud's toy helicopters and took it home to his boys, Orville and Wilbur Wright, who were impressed that the toy did not simply fall to the carpet as expected, but flew across the room until it struck the ceiling where it fluttered awhile, and finally sank to the floor. Though the fragile toy soon broke, Wilbur and Orville never forgot it. They even attempted to build their own toy helicopters. In later years, Orville accredited this childhood toy as being the object that sparked his and Wilbur's lifelong obsession with flight, the fulfillment begotten from childhood curiosity, anxiety, boredom.

My grandfather hunted for forty-six years before shooting his first and only deer.

The night before our high school graduation, John, Kristen, and I drove my red Chevy Beretta up Pine Mountain Road, through the tunnel of conifers and bracken fern, beyond the wealthy subdivisions and the motionless ski-hill chairlifts to where the road turns gravelly and dead-ends at the top of the mountain. We parked in the rocky lot and stepped out into the shadow of the 175-foot ski jump. The early June wind whipped curly strands of hair against my cheeks, pasted them to my glossed lips. John extended his arms like the wings of a plane, stretched his neck and lifted his narrow chin, elongating his small frame. Kristen and I huddled together at the foot of the jump. She pulled her chin into the neck of her fleece jacket, freckled cheeks smiling even as she shivered. We turned our shoulders forward and pressed our chests to one another in an effort to block the chilly air from entering through our zippers and spreading over us. No one spoke.

We looked out over the land west of Iron Mountain, the muted lights from the homes and cottages surrounding along the Menominee River, the 600 feet of grass-patched landing hill before us. John crunched toward us on the dirt, took two steps onto the wood at the base of the jump and looked back, inviting us to follow. He resembled more of a movie monster than anything friendly, grandfatherly, and my heart quickened as he approached. I thought of climbing, and I thought of wind, of flying, or I thought of falling, and then nothing at all,

just stared at the valley, at the lights below us like downed stars. And above us, the jump - - iron, wood, steel. Then blackness, vastness. Not a single star, or plane.

When Dr. Leonard diagnosed my grandfather's failing reflexes and advised him to hang up his car keys, our family decided it was time to buy him an electric scooter suitable for the outdoors so he could tool around town and socialize with his coffee buddies and all the people he knew downtown. They would tell stories I had heard hundreds of times-- about when he was principal and pinned Jimmy Allan against the locker room wall for calling Ms. Hutchins a wet rag; about that fateful driver's ed. class in which he stopped the stick shift car at the bottom of the steepest hill in Norway, the one by Waldillig's house on the edge of the railroad tracks, and told the poor kid—some pimply boy, or girl with band-aids on her knees—to drive all the way up; about the time the Knights' football team, with his son as quarterback, made it to the state finals, and he put up a sign on the viaduct on the way out of town that read "Last one out, turn out the lights;" about the eye-rolling way he fired up the school at the pep rally, calling "Yo-ho,

the Knights!" or his stupid *Spaghetti and Meatballs* cheer in the huddle on the basketball court. It all seems so lovely to me now.

The scooter was navy blue with a cushy seat. There were two settings on the control panel; one represented by an icon of a turtle, the other of a rabbit. Every day until the snow flew, he'd run around town on that scooter - - to the Rialto, along the US2 bike path and the Myr Trail, out to Oak Crest Golf Course, down the alley of Iron Street to see if my sons, his great-grandsons, were playing in the yard. He'd turn onto my sidewalk and holler to us, stopping to report on who he'd seen in town as the boys giggled in the sprinkler and I tended the patch of thyme that crept over the garden border and into the lawn.

One Saturday morning, my mom and I saw him on the corner of Fourth and Brown, buying lemonade from two boys behind a card table in the boulevard, shaking their hands, then smiling as he pattered away, Kiwanis International cap propped sideways on his head, WWII Veteran button throwing back the daylight, sun-browned knees sticking out beside the steering column, American flag waving behind him as he cranked it up to "rabbit" and finished his route sipping lemonade from a styrofoam cup and pounding the Main Street drag.

III

The robins returned each May to the red maple in my grandfather's yard on Saginaw Street. The female would spend three or four days building her nest, mixing the mud and twigs, molding the materials into a bowl with her precise beak and careful feet. When satisfied with the shape of the nest, she'd turn up her ruddy breast, flap her wings, and descend to the ground to pluck a beakful of grass. Four or five times, she'd return to the nest with this grass, stepping and pecking to distribute the soft lining.

My grandfather watched for her. He'd stand beside the garage in his velour track suit, trowel in hand, scraping tent worms into a bucket of gasoline and windshield washer fluid, their black hairy bodies floating on the surface until, saturated, they sunk to the bottom of the pail. When the robin arrived, he'd pad across the sidewalk to the screened-in porch, ease open the door, close it behind him with barely a click. For days, he practiced this ritual, watched the female come and go, leaned over the nest to glimpse the blue eggs huddled in

the grass. He awaited the crackle of hatching birds, listened for their screams when the mother returned with a mutilated worm from the soil in the alley between the trash cans and lilac bushes.

What was the origin of his curiosity? Science, biology, life cycles? The beautiful violence of mothering? Of survival? Perhaps it birthed from lust, or only from monotony, the knowledge that the curtain was closing.

A few weeks later, the young left the nest. My grandfather pulled weeds from flower beds, shook his head as he flicked a chip of paint from his picket fence, watered geraniums from the olive green can with the tapered spout. He'd glance at the vacant nest, tilt his good ear toward the tree to listen for the rustling of slight feet, the bawling of hungry birds. But only a distant lawn-mower, a whirring vacuum cleaner from the Helgren's house next door. Tipping his face to the pale sky, he'd follow the path of a black fly, a jetliner, a monarch butterfly, of cumulus clouds and other things that fly, disperse, drift away.

There are, indeed, some [ornithologists] who imagine that Birds hover in the high regions of the air with less difficulty than when near the earth, because they think they weigh less there on account of being less attracted by the earth's magnetic force, which is the cause of

gravity according to their ideas; for just as iron when far away from a magnet does not feel its power nor is attracted by it, so they think Birds when high up escape from the force of gravity. And they imagine that this is why Eagles, flying high, are seen, as it were, at rest in the air with their wings spread and motionless for long periods, whilst near the earth when beginning to fly they are compelled to beat the air with quick recurring strokes.

From The Flight of Birds by Giovanni Alphonso Borelli (1680)

At the 2009 Continental Cup ski-jump competition at Pine Mountain, an Austrian teenager named Stefan Thurnbichler jumped 471 feet, breaking the previous record by three feet. When a reporter from the local newspaper interviewed him, Thurnbichler said, "At Pine Mountain, you have to be crazy because there is so much wind and you can jump so far. You have to push your jump into the air and just do it. Don't think about it. . . It's almost the same as sky-flying. . . The feeling is awesome."

In the last ten years of his life, my grandfather fell thirty-seven times.

One week before the outbreak of World War II, Germany flew the world's first jet aircraft. The engine was designed by Pabst von Ohain, a 25-year-old German scientist, while the body of the aircraft was produced by Ernest Heinkel, head of the Heinkel manufacturing company, the firm that financed the development of the He-178 without the knowledge or financial support of the Nazi regime.

The earliest successful flight of the world's first turbojet-propelled engine took place over a German forest on August 24, 1939, with Luftwaffe Captain Erich Warsitz at the controls. The tiny Heinkel HeS38 jet engine that powered the He-178 produced only 838 pounds of static thrust, but that was enough to push the single-seat monoplane to a speed of over 400 miles per hour. Even in its earliest test flights, the aircraft demonstrated performance superior to that of many operational fighters.

Despite the He-178's spectacular performance, the German Air Force at first showed little interest in the plane. It wasn't until October 1939 that high-ranking air force officers agreed to inspect it, and although the He-178 clearly had great potential, it was never produced in quantity. Slow to push

development work, the German Air Force didn't have an operational jet fighter plane until August 1944.

The primary fighter aircraft used by Germany in World War II, the Messerschmitt Bf 109, was one of the first truly modern fighters of the era with all-metal construction, retractable landing gear, and a liquid-cooled, inverted V12 aero engine. Although the Bf 109 was the most produced fighter aircraft in history, with 33,984 units created from 1936 to 1945, the plane had serious limitations. The Bf 109 was regarded with disfavor by test pilots because of its steep ground angle, which resulted in poor forward visibility when taxiing; the sideways-hinged cockpit canopy, which could not be opened in flight; and the automatic leading edge slats on the wings which could inadvertently open during aerobatics, possibly leading to crashes. This was later borne out in combat situations; the edge slats and ailerons fluttered rapidly in fast tight turns, making targeting and control difficult, and eventually putting the aircraft into a stall condition. In addition, Bf 109 series planes had fuel tanks of just eighty gallons, only allowing a maximum flight time of between sixty and ninety minutes, twenty of which was spent rising to altitude.

The Allied forces were aware of this time and fuel limitation, and used it to their advantage by instigating cat and mouse games with the Axis powers. Planes entered German airspace, but turned around after their detection initiated

the take-off of German aircraft. The Allied planes spent time in the air away from Germany, then returned to German territory in a surprise attack after the Luftwaffe planes had wasted fuel in takeoff and landing back on base.

Perhaps the outcome of World War II would have been different had the German air corps shown more interest in the He-178 upon its birth in 1939. The Luftwaffe would surely have had an advantage over the Allies with the first turbojet-propelled plane ever created.

But history is full of poor forward visibility. And almosts.

Static thrust is the thrust created by an airplane engine that is at rest with respect to the earth and the surrounding air. But if thrust is a force, how can something at rest have thrust? And how can something static be measured? At what point does our strength, or, at the risk of nebulosity, some cosmic—perhaps universal—strength, deteriorate to stasis?

At what point did my grandfather cease to be strong? In losing physical strength, did he lose also his thrust, or did his thrust become only static? Perhaps it's a mistake to associate stasis with loss. Perhaps, about my grandfather, about so many things, I'm mistaken. Was there a single moment in

which he transitioned from virile to fragile? Or did the forces of aging, of gravity creep in so slowly that they remained unnoticed until one day, we saw that he was weak? Did he realize it suddenly too, or was he aware of the process all along?

Gravity influences the human body constantly. Even the child I carry in my womb is affected as the head, the heaviest part of the fetus, sinks to the bottom of the uterus. When I placed my newborn sons on their backs and watched them drift to sleep, their bodies tensed as their arms shot out to their sides in an effort to catch themselves from falling. This startle reflex confirms, even in infants, the inborn fear of falling.

My sons, ages three and one, are thrilled by activities that play on gravitational forces – sliding, swinging, climbing, jumping, and especially spinning and falling. They spin on the coffee-colored living room carpet, arms at their hips, big heads bobbling side to side. They laugh as they bump into each other, as they veer around plastic dump trucks and Duplo blocks, as I warn from the kitchen not to bump their heads on the table when they fall. And of course they fall. It's part of the game, the challenge. Falling is how they win, how they can tell that the game is over. They like feeling off-kilter, outside of their own control. They fall, and stand up again, fall, and stand up again. And when they aren't dizzy anymore, when their brains have sorted out the messages from their

eyes and their feet that things are right, that their bodies are back in balance, they spin again.

Adults are no different, really. When my sister and I traveled to Australia, we went scuba-diving and hot-air ballooning, defying gravity first in the near-weightlessness of the Pacific, bobbing among reef sharks and clownfish, and the next morning in a wicker basket, trusting a nylon sack and gas-powered torch to keep fifteen of us safely suspended over the plains of Cairns. In my hometown are the ski-jumpers, the whitewater rafters, the bridge-jumpers; all their thrill-seeking activities necessitate the defying of gravity or yielding to it in a controlled setting.

But the effects of gravity are often more subtle. It is gravity that compresses the discs between our vertebrae and causes us to shrink. It is gravity that pulls at our internal organs and causes them to prolapse, falling from their rightful place in our bodies. It is gravity that takes a toll on our circulatory system, prevents blood from flowing freely upward, causing varicose veins and swollen limbs. It is gravity that imposes on us a slow process of deterioration, our slipping toward the static, that we don't notice until one day, stepping out of the shower, we glimpse our steamed-over reflection and wonder if we're old now. If we're weak now. In which direction, if any, we should move.

The pinkish fluid drained from my grandfather's pleural cavity through the silicone chest tube and collected in the measuring chamber on the floor beside his bed in the Intensive Care Unit at Dickinson County Hospital.

He'd fallen at home just before Thanksgiving 2011, but didn't think he was seriously injured. A week later, at our Wednesday gathering, he showed the bruising on his torso to my mother, sister, and me. My sister leaned over the recliner to see his back. Her mouth fell open. The rosette tucked in her curly bob drooped forward, as if frowning. My mom touched his shoulder and grimaced, "Oh, Dad." The blue pigment wrapped his abdomen, crept over his ribcage, and stained his lower back. He eased down the red fleece of his sweatshirt, shifted in his chair, stared at us, waiting for someone to tell him what to do, what not to do. For once, no one did.

On Thursday, he became disoriented while sitting in his living room, and fell out of his chair. When my mother told me about this on the phone, I imagined him on the living room floor beside the bookshelf, lifting his head and calling for my grandmother. I imagined his bifocal glasses crooked over his long

nose. I imagined his copy of *Twelve O'Clock High* open on the floor, his root beer spilling onto the carpet. Hanging up the phone, I tried to stop imagining.

He was admitted to the hospital where doctors discovered a commingling of blood and pus in his chest, surrounding his lungs. They immediately began treating him with antibiotics and draining the liquid.

We visited him daily, and felt reassured that he was still feisty, jovial. We watched him grin as the nurse took his temperature with a complicated-looking thermometer, when he asked if he could use that thing to call President Obama. We watched him say, "Never mind, he doesn't work on Saturdays." We watched him adjust the overstuffed pillow behind his thick hair. We watched him cough, spit into a tissue, and hand it to my grandmother. In our family, this is what we do. When there is a new baby, we circle around, watch the child squirm, eat, yawn, sleep. When a person is ill, we gather, watch them take pills, watch them sleep, watch them get better. In this way, he was our show. Our touchstone, our television, our fulcrum. He anchored us in our orbit. And so we watched him make small talk with a nurse about a roast beef sandwich. With Pastor Jim about the high school football playoffs at the Dome. With me about his great-grandsons. Is Reed eating hot dogs yet? Did Gray have a push job today? Which one looks more like Papa? He couldn't believe how busy they were. How big they were. Gray would be playing in the snow before long.

A week later, the doctor informed us that a person of my grandfather's age and health loses ten percent of their strength each day they spend in bed, and that we may want to consider looking into temporary or permanent nursing home care. We exchanged looks during our visits, made mental notes of things to discuss when we left the room, when we had finished our watching.

My grandfather became quieter. He drifted in and out of sleep, participated less in conversations. After nine days, we were quieter too. There were fewer of us by his bedside. We took turns sitting vigil, staring at the door, at one another, at my grandfather's shrinking profile. I thought of gravity, how it pulled him into the bed, into the earth. How it pulled the skin below his eyes, beneath his chin, the skin of his soft belly, of his wrist beneath the plastic Do Not Resuscitate bracelet. It was a plastic band, like the ones from the fair on bracelet night, the kind you poke through the hole and snap shut with the plastic snap. The phrase, the command, was actually printed on the bracelet. I wonder what he thought as he read and reread it.

I stared at his hands, the thin folded skin of his gray fingers, and at my own hands, at the scar on my right knuckle from where Morgan Eisele clawed me with her fingernail at the bus stop in fourth grade. The fingernail on my left index finger that grew back funny after Roxanne slammed it in the door of my

sister's Buick. A hangnail on my right pinky. The scar from the IV line after my c-section.

The board on the wall displayed a chest x-ray and a few days' worth of optimistic comments scrawled by a nurse onto the glossy white surface. *Great day, Bing...Improvement today...X-rays look good...2-3 more days?* Below the board, mounted to the wall above the soiled linens receptacle, were the twisted black propellers of the biohazard symbol, motionless on the red plastic bin.

IV

THREE KILLED IN BRIDGE SHOOTING

Suspect taken into custody this morning

August 1, 2008

IRON MOUNTAIN - Three people are dead after a middle-aged man dressed in camouflage shot at several Michigan residents swimming at the train bridge in East Kingsford late Thursday afternoon. The search for the suspect ended this morning.

Just before 9 a.m. the Marinette County Sheriff's Department, in conjunction with the numerous assisting law enforcement agencies, took a suspect into custody in the multiple shootings at the East Kingsford train bridge.

My husband Chad's cell phone rang at eleven pm on July 31st. We'd been bass fishing with my father at the Groveland Mine Ponds that evening and were now lying in bed in our underwear, ceiling fan and oscillating fan blowing heavy air over our sticky bodies. No way, he said. Do you know who the kids were, he said. So they're still looking for the killer, he said. When he ended the call, he rolled toward me and told me their names. Tiffany Pohlson, Tony Spigarelli, and Bryan Mort. The killer is still out there, he said. Did you lock the side door, I said.

"At this time the incident has shifted to a criminal investigation. We do not have specific details on the apprehension of the suspect," said Kathy Frank, public information officer.

Marinette County Dispatch Center received a call from Dickinson County Dispatch at 5:34 p.m. Thursday indicating shots were reported fired from the Wisconsin side of the East Kingsford train bridge in Breitung Township.

At 5:47 p.m., Marinette County Dispatch received a call from a residence on Bennett Road stating a male in camouflage clothing jumped out of the woods shooting at four people. Two of them got away to the residence on Bennett Road.

Tiffany's was my second-grade teacher's granddaughter. The last time I saw her was in the Fourth of July kiddie parade, being pulled in a red wagon with her sisters, her thick brown hair pinned up with red ribbons. Tony was a junior at Kingsford High School when I taught there. He played soccer and bounced when he walked down the hall, a half-smile on his face, even at eight a.m. Bryan was in my dad's auto mechanics class at the Vocational Center. He had freckles across his round nose. Red hair.

I imagined them there, kicking iron ore pellets with their flip-flops as they walked down the tracks to the bridge, scampered down the loose sand and thin roots of the bank to the river, tossed their towels in the tall grass before turning to scale the diagonal beams.

Further investigation revealed there was a group of nine young adults gathered by the East Kingsford train bridge, which is located on the Menominee River approximately three miles west of Niagara in Breitung Township.

The Menominee River forms the border between Wisconsin and the Upper Peninsula.

Four of the individuals were shot, three fatally and one with minor injuries, police said.

The victims have been identified as 17-year-old Tiffany Pohlson, 18-year-old Anthony D. Spigarelli and 19-year-old Bryan Mort. The injured person is 20-year-old Daniel Louis Gordon. All of them are from Michigan.

All night long, I imagined them at the bridge. Of them hanging from the beams with their suntanned bodies and sweaty necks and chipping nail polish. Hooting from the bank wearing aviators and giant smiles, knowing they had all they needed, the river and friends and Wendy's French fries and junker cars waiting in the dirt of the parking lot. I imagined their faces, heard their screams when the shots were fired, when the first one fell, and I tried to stop imagining a camouflaged killer as I turned toward my husband's body, as I made love to him in an effort to make something in the world right again, to reconfirm gravity as a positive force, as good feeling. I imagined them through the night as I stared at the winding crack in the ceiling, rubbing my index finger over the Velcro spot on my thumb where the smallmouth bass' teeth pressed into my skin that afternoon as I maneuvered the barbed hook from the flesh of his cheek, tossed him back into the water, watched the ring of his eye as he twitched and turned, then disappeared below the surface, as if falling.

After nine days in intensive care, my mother called Aunt Nancy from Milwaukee and Uncle Chuck from Minneapolis, told them maybe they should come soon. They arrived the same day. Nancy set up her knitting station next to my grandfather's bed, observed him as she pulled mottled green yarn over bamboo needles, rarely glancing down at her project. She'd done this before, a year earlier, watched her husband fade away in a Milwaukee Intensive Care Unit. I wonder if the room looked like this one. I wonder if Uncle Aaron wore the same plastic bracelet.

Chuck pulled the chair right to the head of my grandfather's bed. He kissed him on the forehead, then leaned forward in his chair, folded his hands, gave the close-mouthed we're-in-it-together smile to each of us who entered the room, until gravity once again made his mouth drop.

That evening, after we'd gone home, Chuck watched his father pick imaginary spilled pills off the bedsheet before dozing off. After a few minutes of sleep, my grandfather jerked, extended his arms into the air. Chuck looked at the dingy rectangles of the ceiling, at my grandfather's hands clenched into tight

fists, his thumbs slamming imaginary trigger buttons as he moaned and writhed in bed. Chuck asked him what was wrong, if there was any way he could help.

“It hurts,” my grandfather rasped.

“What hurts, Dad?”

“Bullet holes.”

The ball turret of a B-17 bomber is held to the underbelly of the plane by four bolts. Two fifty caliber semi-automatic rifles protrude from the front of the glass ball. Rotation of the turret is controlled by the swiveling of the guns. Most turret gunners were of slight build because of the crowded quarters, with no room even for a parachute. My grandfather, Irving “Bing” Soderlund, was over six feet tall when he descended thirty-five times into the turret during World War II. He showed up in England, a blue-eyed church-boy from a town of three-thousand, eighteen years old, with a widowed mother and five younger siblings at home, four of them girls.

What was he thinking as he walked through the narrow fuselage, when he squatted near the opening of the turret, when he crawled into the armor plate seat and closed the overhead entry hatch, when he peered through the round

glass window at the earth beneath him? Did he feel prepared? Frightened? Did any part of his body, however involuntarily, recall the womb? His Air Force training in the United States consisted of racing around in a truck with a 12-gauge, shooting skeet. How much courage did it take to board that aircraft? Surely he didn't wonder if he'd be spotted. He'd be spotted. He didn't wonder if he'd be shot at. He'd be shot at. But how much damage would be done? What would it sound like, the slap of shrapnel to the side of the plane, the zing of matter penetrating metal lining? Did he put it out of his mind that he might come down in a ball of fire? Did he sleep at all on the night the navigator and gunner from his crew were both shot and killed? The night a bomb lodged in the bomb-bay and a crew member, trying to dislodge the explosive, fell through the opening and plummeted hundreds of feet to German soil?

When my grandfather enlisted, he was told that he could go home after twenty-five missions. The number was later upped to thirty, and then thirty-five. Did he think of probability, of odds, statistics? Did he think of any kind of stasis? That he'd ever weaken? Did he think of gravity as a force enacted on the body, or as an equation, only numbers? Did he think of great-grandsons, scars, snow?

When given the opportunity for optional missions to get home sooner, he always declined them. What logic informed this decision? Perhaps he mulled it over and determined it less risky to take only the required missions. That to take

an optional mission would have interfered with providence. But did he consider my grandmother waiting for him in Michigan? His mother? Did he define and redefine and redefine and redefine *honor*? Did he, like my sons playing their game, only want to spin again and again, after having fallen?

One such optional mission went out over Germany and never returned. During one of his later missions, the aircraft was littered with twenty gunshots and ninety-seven flack holes, but was still able to land. On his final mission, the flight experienced mechanical issues, and he was grateful to make it back to base. Then he learned that if he had been on the ground near his barracks instead of on the flight, he would not have survived the crash of the B-17 that demolished and set fire to his quarters. That set fire to the green pillowcase that still held his drool. To the stuff he kept under his mattress. To his toothpaste, and his letters.

I wonder how he felt when he was discharged, how different was his return flight over the Atlantic. I wonder how his blue eyes appeared when he reunited with his family, with my grandmother, when he walked the short blocks of Norway, Michigan, when he passed the sixty-five foot milk bottle outside Asselin's Dairy after seeing the great big world from within a steel and glass bubble. I wonder if all the shooting and fighting was worth it when he enrolled on the GI bill in Northern Michigan University's school of education, what he thought every day when he passed the armored Knight in the hall by the

office at Norway High School where he taught for two decades. And what kind of stories he told in history class. In a town where the tallest building is a plaster milk bottle, what can we do, but close our eyes and imagine ourselves falling? Because even in falling down, at least in falling down, we are fighting stasis.

The thrust-to-weight ratio of an aircraft can be calculated by dividing the thrust (in SI units, or newtons) by the weight (in newtons) of the engine or vehicle. It is a dimensionless quantity.

For propeller-driven aircraft, the thrust-to-weight ratio can be calculated as follows:

$$\frac{T}{W} = \left(\frac{\eta_p}{V} \right) \left(\frac{P}{W} \right)$$

where η_p is propulsive efficiency at true airspeed (V), and P is engine power.

Propulsion by Propellers states that the thrust of a propeller is not constant for different flight speeds. That the static thrust of a propeller is not such a terribly important number for a propeller. That the picture of a propeller, working under static conditions, can be distorted and blurred.

When I pass Woodbine Street in Kingsford, I think of them. Of Tiffany, of Tony, of Bryan. I'll bet they took the same route to the train bridge as I always did.

Woodbine to Emmett to Skidmore. Surely, they passed the house with six rusty lawnmowers by the back shed; noticed the windsock embroidered with a ladybug perched on a daisy; the yard on the corner with the circular path where some dirty mutt's feet wore away the grass. I'll bet they too were listening to Kenny Chesney when they put the car in park, sat until their favorite song was over. The thimbleweed would be blooming along the tracks as they walked in, its prickly green seedheads bobbing and swaying on sturdy stalks.

I wonder if they climbed all the way to the third beam. If they jumped right away, or stood there, building up the courage. If the water looked clear and green from the bridge. If anyone screamed from shore. If a speedboat blasted down the river, its driver waving his hand in fast sweeps as he crossed beneath them. If mosquitoes buzzed in their ears.

I wonder if they were standing, leaping, swimming, climbing when the shots were fired. Did they think it was a prank, a hunter, fireworks? Did they squint to see the shooter and register his distorted face from passing him in

town, from Kmart, from the north side Citgo, from the 30-minute oil change express?

Did they cry out as steel entered shoulder, or thigh? As body fell to earth, to dirt, to grass, to water? Did they try to save one another, to pull each other's bodies across the bank, across the river, across the bridge? Did they notice how the wild celery underwater moved like hair? Did they have time to think it was beautiful?

Did they know they were dying? Did they take inventory of the last things they saw?

Blurred cumulus clouds over rusty metal.

A plane descending to Ford Airport.

A jack pine.

Red ants on the river bank.

A crumpled Trident wrapper.

A striped towel in a heap.

The fronds of a fern.

The plane touching down, the engines whining to a stop, the seat belt sign dinging off, the small carry-on bags flopping into so many smaller hands.

I wonder how long the car sat in the parking lot after they died. If the sunroof was open. If black flies landed on its warm metal hood, and coupled

there. I wonder if a tropical breeze air freshener still scented the interior. If a page of pre-calc homework was crumpled under the passenger seat. A prom picture pinned to the visor.

I wonder if their mom and dad and sister drove the car out of the lot. If they listened to the next track of the CD, or drove home in silence. If they took Emmett Street to Woodbine. Or Sagola to Campbell. Breen to Laburnum. Or Chestnut. Hoadley. Morrell.

V

Gravity compels. I lay awake staring at the fake wood-grain of ceiling fan blades, at pinholes of streetlight in my curtains where stitches passed through fabric, at my dog's legs twitching as he chased the Hongisto's white cat in a dream. Gravity compels my arms to stay on the bed, my dog to stay on the rug, particles of dust to stay on the lampshade. But what about internal gravity? Is the gravity inside us subject to the same rules as gravity outside the body? If gravity compels, and if compulsion is urge, in which gravity did this urge lie -- the gravity inside of us, or the gravity outside of us? In dream, my dog ripped the larynx from the cat, and I felt the urge to go to the ICU to visit my grandfather...

My mother called at 12:30. "The nurse thinks we should come"

"I'll meet you at Grandma's in five minutes." I ran the three blocks from Iron Street to Fourth to Main, the frost wetting my shoes as I cut through boulevards. We didn't say much on the seven-mile drive to the hospital. I

watched the speedometer, wishing for one time my mom would go fucking sixty in a fifty-five.

We entered through the ER, crossed the entire hospital, passed the empty lobby, the red dispenser with the paper number hanging from its mouth, the gift shop display of pink and blue teddy bears. We buzzed the intercom at the ICU entrance. In its static, cymbals, raindrops. Or nothing at all. The automated doors gasped, and in the short hall between the entry doors and my grandfather's room, a young nurse tried stopping my grandmother, who was faster than I've ever seen, her red quilted jacket a brilliant contrast to the sterile blues of the nurses' station.

"I'm sorry..." the nurse tried to say. My grandmother kept moving.

"Grandma," I said. "This nurse is talking to us." She kept moving.

Someone with a white sleeve grabbed her arm. She stopped. A stainless cart wheeled by. A latex glove snapped, its powder orbiting around her, settling in the creases of her face. The nurse inhaled.

"I'm sorry to tell you that Mr. Soderlund passed." She said something about fifteen minutes ago, about turning him, about coughing, about dropping blood pressure and heart rate. About peace. She kept inhaling and inhaling. She said something about sorry.

We entered his room. It was dark, except for the fluorescent light over the stainless steel sink. No machines. No bags, wires, diodes, monitors. No beeping. No Styrofoam cup or crumpled tissues on the tray. My grandfather's bed was a 45-degree angle. His arms at his sides. His mouth open, lips and tongue dry, like pulp.

We pulled chairs to his bedside, I to his left, my mother and grandmother to his right. I rested my hand on his, opened my Bible to the book of Isaiah. *They who wait for the LORD shall renew their strength; they shall mount up with wings like eagles; they shall run and not be weary; they shall walk and not faint.*

His spirit hung in that room. I could feel him around us and over us, in the movement of the air, in the words spilling from my mouth, in our breath, our lungs, against the hair of our arms and necks. He watched us, and was in us. I couldn't tell if it was his spirit, or I, who wanted to faint.

I didn't think once about urges, or compulsion, or gravity. About the places we land when we fall, face-first or belly-up.

My grandmother leaned over him, the red cloth of her coat bunching in her armpits as she kissed him on his right cheek and spoke loudly, the way she had to for decades. She leaned so close. She thanked him. She leaned closer. She thanked him.

I lifted his hand, felt the weight of his arm as I slipped his gold watch, still ticking, from his wrist. I returned his hand the bed, pulled the sheet to his shoulders, walked to the chair by the door and dropped the watch into the plastic guest bag of possessions with the snap-top handle.

My grandmother walked to the door, turned her back to him—the entire red coat of it—before stepping into the bright hallway light, her black pebbled leather purse dangling from her elbow.

We exited the Intensive Care Unit, crossed the dark lobby, the spotless drinking fountain, the gift shop window display of those fucking teddy bears, cartoonish Get Well cards, pots of violets wrapped in florist's foil and adorned with bows of periwinkle, emerald.

The long hallway was floodlit, yet dim. Framed portraits of doctors lined the walls. I silently read gold-plated names. John Groeneveld. Kristine Olson. Adam Ryan. Victoria Jakel. Stephen Leonard. Barry Johnson. My grandmother stopped. "There's Doc Hayes," she said, smiling politely at the bearded man who cared for her children and delivered her grandchildren. She smiled as if it were really him, and not his picture, as if her husband hadn't just died and she was greeting him at the door of a potluck. As if he was carrying a dish of mashed potatoes that was starting to burn his hands. She lingered before slipping her arm through my elbow and we continued down the hall, through the double

doors of the ER, to my mother's car, to the McDonald's for decaffeinated coffees and Fruit and Yogurt Parfaits that none of us could eat, drink.

Static thrust is measured in pounds. Pressure is measured in pounds. The weight of the human body is measured in pounds. My grandfather weighed nine pounds at birth. He weighed 300 pounds at his peak. He weighed 185 pounds at his death. His weight decreased thirty-eight percent from peak to death. If static thrust on an He-178 aircraft dropped thirty-eight percent, from 838 to 520 pounds, what kind of catastrophe would occur? Would the plane never leave the earth? Would it decelerate rapidly in flight? Would it fall from our sky?

Thrust is used to overcome drag. To overcome weight. To overcome pounds. I want to understand this. I want to study the equation for calculating thrust-to-weight ratio until it makes sense to me, until it's enough for me. I want this to have something to do with flight, with falling, with my grandfather, with my grandmother's final turning away from him in order to leave that room. But I've never been good at math.

Nevertheless, I say that the act of flying is not difficult; indeed it is very simple and very easy in the various possible ways by which it can be accomplished. And the reason why flying is not performed in the same way as swimming is that Nature does not work miracles; fishes can easily float in heavy water, but it is impossible that Birds, made of bones, flesh, and blood two-thousand times heavier than the air, can float in the air.

From The Flight of Birds by Giovanni Alphonso Borelli (1680)

When I walked home from my grandmother's house at three a.m., Orion was directly over my house, as if leaping from the green shingles of my roof. He was there all winter, with his sword hanging from a star-jeweled belt, club raised in the air, shield suspended before his vaporous body.

In the evenings, when my sons, still warm from their baths, were tucked beneath their quilts, I'd pad out to my front sidewalk to study the stars that formed the mighty hunter's body.

Of the twenty stars that outline Orion, Rigel, at the southwest corner, is the brightest. Rigel, the marker for the hunter's lower leg, is a dazzling blue. At

40,000 times brighter than the sun, it is still only the seventh brightest star in the heavens. No matter how many times I scan the night sky, my eyes cannot find even one of the six stars that are brighter than that at the foot of the hunter. As if celestial ants about to be stepped on by something even more celestial, we are our brightest, perhaps, when we're about to be snuffed out.

At the opposite side of the rectangle, the bright red-orange star of Orion's shoulder, Betelgeuse, is easy to find. It glows with a warmth that contrasts the cool hues of the sky, gives the eyes a place to pause, to find rest. Betelgeuse is a massive star that's burned through most of its fuel, but rather than just fizzling out, rather than just fading away, it will explode as a supernova that shines so brightly it will cast shadows by night and be visible during our daytime for weeks. Scientists predict this explosion may occur this year, or next. Or in a million years.

The prefix *con* refers to a coupling, an assimilation. The individual star must become part of whole if it is to be promoted from stellar to constellar. What happens when we explode away from the bodies who have forced us to assimilate? In the answer to this question lies, I suspect, the million-year old secrets, the linguistics of the stardust in our blood, the implications of whether we must accommodate the stars, or they us. The differences between assimilate,

and couple, stellar and dazzling, the graves in the earth, and the larger graves--
the open caskets of Orion and Artemis-- ever deepening over our heads.

The finches fight for the sunflower suet in the cage beneath the silver pine at the edge of my yard as I kneel in my perennial garden. Springtime. The unruly patch of thyme spills over the sunken borders and into my yard. It wraps the bases of phlox and delphinium, clogs breathing room between coneflower and bee balm. With naked fingers, I tear a handful of it from the soil, its thin, shallow roots dropping dirt on my thighs and knees as I fling the plant into a black trash bag. I tear another patch, and fling it. I tear every last root from the ground, then dig my hands in the brown earth, kneading the humus, the decomposed leaves, the ground rocks and clay. Air. Water. I sniff for some stellar detritus in all of it.

I long to visit him, but my grandfather's grave is empty to me. I find him, instead, on the Myr Trail where orioles perch on the dark, dense flowers of cattails and chimney swifts swoop in and out of the slatted roosting towers. I walk through the forest around Maple Grove Hunting Camp in Hardwood where the earth, damp and sour, cakes the treads of my boots, where from the spine of High Ridge I can see the worn gray wood of my grandfather's deer

blind, and, beyond, the ginseng sprouting in Wagner's fields. I park my car at the top of Pine Mountain, stand beneath the giant American flag, listen to its snap and crack as my eyes climb the diagonal iron supports of the ski jump that my feet will never climb again.

I lean back and close my eyes, raise my bare arms into the wind. Still, I can see myself there. I'm twenty feet above the river, seventeen, breathy and wobbly, toes curled around the rusty sloping beam of the bridge, wondering what would happen if a train passed over the trestle while I clung to the beam, if there were rocks beneath the surface, if my feet would slip when I tried to jump.

And in that moment I don't know shit about anything, not about those teenage kids who would be shot there. I don't know how their hearts behaved when the bullets came into their bodies, how, or if, their blood left them in beautiful, perfect arcs. This sort of gravity is tricky, but simple. I don't know about my car accident or my grandfather's stroke or how cold and bright the winter was after he died. I don't know that my friend Chuck would fall from his tree-stand but crawl back into it, then fall asleep and die from the type of bleeding that you can't even see. Or that some birds eat their own siblings, their own young.

I don't know about kisses that lead to marriages. I don't know that I'd have two sons, but wouldn't name either of them Irving.

I don't know about the grizzly that dragged the man from his tent a mile down the road from us in Yellowstone, that sleeping bag fibers and human hair were found in her excrement. Not about the life-sized Thomas the Train outside the church at little Owen Ellis' funeral or that my cousin Erik's aorta would explode while he made love to his girlfriend, that he'd be dead at twenty-five, on the brink of engagement, graduation, of everything.

I don't know that thyme is aggressive, invasive. That Orion is best seen in January, that one of the stars in his sword is actually a nebula. That Volkswagen Rock is slowly creeping across the Menominee.

I don't know that my high school friend would climb the mast of a boat in the shipyard where he worked, slip a rope around his neck, step off the beam. I don't know how gravity is related to grave. If wind is solid, liquid, or gas. I don't even know if I jumped.

Sources

- Benson, Tom. "Thrust to Weight Ratio." *National Aeronautics and Space Administration*. Glenn Research Center, 11 Jul. 2008. Web. 24 Oct. 2012.
- Borelli, Giovanni. *Flight of Birds*. *Internet Archive*. Cornell University Library, 17 Mar. 2010. Web. 28 Sep. 2012.
- Deuter, Ron. "Austrian Teen Wins at Pine Mountain." *Daily Press*. Daily Press, 16 Feb. 2009. Web. 24 Oct. 2012.
- Dillard, Annie. *Pilgrim at Tinker Creek*. New York: Harper Perennial Modern Classics, 2007. Print.
- "The Dream of Flight: Timeline of Flight." *Library of Congress*, 29 Jul 2010. Web. 10 Sep. 2012.
- Dwyer, Larry. "Messerschmitt Bf 109." *The Aviation History On-line Museum*, 15 Sept 2012. Web. 20 Sep. 2012.
- Fahey, Brian. "The Gravity Project." *The Back Revolution*. N.p., 2001. 12 Oct. 2012
- Hannan, Bill. "Biography of Charles Alfonse Penaud." *Academy of Model Aeronautics*. Academy of Model Aeronautics, Sep. 2010. Web. 12 Oct. 2012.
- "Heinkel HE-178." *Aeronautics Learning Laboratory for Science, Technology, and Research*. The Franklin Mint, 12 Mar. 2004. Web. 24 Oct. 2012.
- Hepperle, Martin. "Static Thrust of Propellers." *Aerodynamics of Model Aircraft*. N.p, 8 Sep. 2003. Web. 10 Sep. 2012
- Hoffman, Lisa. "Three Killed in Bridge Shooting." *The Daily News*. The Daily News, 1 Aug 2008. Web. 12 Oct. 2012.

- Lujan, Barbara, and Ronald J. White. "How the Human Body Changes in Space." *Human Physiology in Space*. National Space Biomedical Research Institute, n.d. Web. 12 Oct. 2012.
- "Northern Mockingbird." *All About Birds*. The Cornell Lab of Ornithology, n.d. Web. 24 Oct. 2012.
- "Orion, the Hunter." *Stardate*. The University of Texas McDonald Observatory, 2012. Web. 12 Sep. 2012.
- "Rigel in Orion is Blue-white." *EarthSky*. EarthSky Communications, 1991. Web. 15 Sep. 2012.
- "Sharkland: Animal Cannibalism." *Nature*. Educational Broadcasting Corporation, 2012. Web. 12 Oct. 2012.
- Strickland, Eliza. "Mockingbird to Annoying Human: 'Hey, I Know You.'" *80beats*. Discover Magazine, 19 May 2009. Web. 12 Oct. 2012.
- Ventrudo, Brian. "The Constellation Orion." *One Minute Astronomer*. N.p., 2008. Web. 15 Sep. 2012.
- Ward, Ric. "Pilot Sends Plane into Dive after Mistaking Venus for Oncoming Plane." *CNN Travel*. Cable News Network, 17 Apr. 2012. Web. 12 Sep. 2012.
- "Wright Brothers National Memorial: The Road to the First Flight." *National Park Service*. United States Department of the Interior, n.d. Web. 18 Sep. 2012.